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EMPIRICAL STUDIES ON FIRM STRATEGY AND PERFORMANCE UNDER GEOPOLITICAL RISKS

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Empirical Studies on Firm Strategy and Performance under Geopolitical Risks

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Abstract

This dissertation investigates how multinational enterprises navigate operations and develop strategies amid geopolitical conflicts, using the 2022 Russo-Ukrainian War as the empirical setting. Through three interconnected studies, this dissertation examines firms' strategic choices, performance consequences, and the underlying mechanisms shaping these outcomes during geopolitical turbulence. The first study presents a systematic literature review synthesizing how geopolitical hazards influence firm's strategic decision-making, operational performance, and supply chain resilience, establishing theoretical foundations for subsequent empirical investigations. The second study examines firms that "locked-in" Russia despite escalating conflicts. Grounded in resource dependence theory and employing propensity score matching combined with difference-in-differences analysis, the findings reveal that locked-in firms experienced significant profitability decline. This study further uncovers heterogeneous moderating effects of market dependency and organizational slack on this relationship. The third study examines market exit as an alternative strategic choice. It reconceptualizes Russian market exits as a form of corporate sociopolitical activism. Drawing on instrumental stakeholder theory and expectation confirmation theory, the difference-in-differences estimation reveals that activism-oriented exits generated significant gains in brand equity and profitability. These benefits were amplified under conditions of normative, reputational, and temporal alignment. The findings remain robust after addressing endogeneity concerns. Collectively, this dissertation advances theoretical understanding of firm strategy and performance under geopolitical risks while providing practical insights for managers navigating an increasingly fragmented global business environment.

Keywords: Geopolitical risk; Firm performance; Resource dependence theory; Instrumental stakeholder theory; Expectation confirmation theory; Difference-in-differences

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The road has been long, winding through seasons of doubt and discovery, yet here I stand at last, at a destination that once seemed distant. I could not have made it here without the support of many people.

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To my beloved parents. I owe more than words I can express. Thank you for the values you instilled in me since childhood, for your endless support, and for always believing in me. Everything I have achieved is built upon the foundation you gave me.

To my husband, Dr. Jin—my partner, my confidant, my fellow traveler on this thorny road. We have faced challenges together and supported each other through every

difficulty. Thank you for walking this path with me, and I look forward to creating brighter future by your side.

Lastly, I want to thank the one who has walked every step of this journey without respite: myself. Thank you for not giving up, for pushing through the hard times, and for holding onto a childhood dream all these years.

Yet this is not an ending. It is, as all true conclusions are, a beginning—a threshold to cross into new adventures and unwritten chapters. As I step forward, I carry with me the lessons of the path behind, the gratitude for those who shaped me, the humility of how much remains to learn, and the resolve to honor this journey by continuing to grow.

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Chapter 1: Introduction

1.1 Research Background

The global business landscape has experienced unprecedented geopolitical turbulence in recent years, fundamentally reshaping how multinational enterprises (MNEs) operate across borders. The U.S.-China trade war that intensified since 2018 disrupted established supply chains and forced companies to reconsider their manufacturing footprints (Flaaen et al., 2020; Fan et al., 2024). Brexit created regulatory uncertainties and supply chain disruptions for firms operating between the United Kingdom and European Union (Dhingra et al., 2017; Moradlou et al., 2021). Most recently, the 2022 Russo-Ukrainian War triggered a massive wave of corporate exits from Russia, with over 1,000 international companies suspending or terminating operations. These events have compelled firms to reconsider long-held assumptions about the stability of international markets and the reliability of cross-border operations.

The 2022 Russo-Ukrainian War is one of the most acute geopolitical events in the contemporary business environment. After the outbreak of the war in February 2022, Western governments froze Russian central bank assets, excluded major Russian banks from the SWIFT payment system (Collins et al., 2022), and imposed export controls on critical technologies (The Economist, 2022). These measures created immediate operational challenges for multinational enterprises with Russian exposure. Beyond government restrictions, firms faced intense pressure from stakeholders to voluntarily withdraw from Russia. Consumers, employees, investors, and civil society organizations called upon corporations to demonstrate solidarity with Ukraine by suspending Russian operations (Tsougkou et al., 2025). Social media amplified these demands, creating reputational risks for firms perceived as insufficiently responsive to the humanitarian crisis. Both regulatory constraints and stakeholder expectations produced an unprecedented wave of corporate exits from a major economy.

The fashion and textiles industry provides a particularly instructive context of these dynamics. Within weeks of the conflict, leading global brands announced the suspension of Russian operations. H&M, the Swedish fast-fashion retailer, closed its

Russian stores and halted all sales in the country (BBC, 2022a). Nike suspended operations through its directly owned stores and announced leave Russia permanently (BBC, 2022b). Inditex, the parent company of Zara, temporarily closed its Russian stores. Luxury conglomerates including LVMH, Kering, and Hermès shuttered their Russian boutiques (Biron, 2022).

These phenomena in fashion industry reflect several sector-specific characteristics. Fashion brands maintain high visibility with consumers and depend heavily on brand equity for competitive advantage (Bridson & Evans, 2004). Fashion companies also tend to operate extensive retail networks that create tangible symbols of market presence, making their continued operation in controversial markets particularly salient to observers (Castelli & Brun, 2010). Furthermore, the industry's reliance on social media marketing and influencer relationships amplifies reputational risks associated with perceived ethical lapses (Kim & Ko, 2010).

However, not all firms followed the path of exit, and strategic responses varied considerably across industries. Some multinational enterprises maintained Russian operations despite international pressure. Pharmaceutical companies including AstraZeneca and Pfizer continued supplying essential medicines, citing humanitarian obligations to patients who depend on life-saving treatments (Sagonowsky, 2022). Beyond humanitarian justifications, some companies faced practical barriers to exit, including contractual obligations, asset immobility, or regulatory constraints on divestiture (Dai et al., 2013, 2017). Manufacturing firms with substantial fixed investments in production facilities confronted particularly difficult choices, as abandoning these assets would result in significant write-downs (Dai et al., 2017).

The observed heterogeneity in corporate responses underscores the complexity of strategic decision-making under geopolitical uncertainty. This variation in strategic responses raises important questions about the subsequent performance consequences for firms adopting different strategies. How do firms that remain locked into conflict-affected regions perform relative to those without such exposure? What organizational resources and capabilities enable these constrained firms to buffer against adverse impacts? Conversely, for firms that choose to exit, does strategic withdrawal generate

value beyond merely avoiding losses? Under what conditions can market exit serve as a legitimacy-building mechanism that enhances brand equity and stakeholder relationships? Understanding the performance implications of these divergent strategic paths—and the mechanisms through which firms can manage the consequences of their respective positions—represents a critical frontier for both scholarly inquiry and managerial practice.

1.2 Research Motivation

Despite the growing prominence of geopolitical risk in international business, scholarly understanding of how firms respond to and perform under such conditions remains limited. This gap between practical urgency and theoretical development provides the primary motivation for this dissertation.

The academic literature on corporate responses to geopolitical events remains at the initial stage. While researchers have examined how firms manage exposure to country-specific political risks (Henisz & Delios, 2001; Li & Vashchilko, 2010), less attention has been devoted to understanding strategic decision-making during acute geopolitical crises. The limited existing research tends to focus on macro-level patterns of foreign direct investment flows rather than firm-level strategic choices and performance outcomes (Witt, 2019). This leaves practitioners with insufficient guidance on how to navigate the increasingly complex geopolitical landscape.

The theoretical frameworks commonly applied to risk management may inadequately capture the dynamics of geopolitical crises. Traditional perspectives emphasize risk mitigation through diversification, political hedging, or government relations (Holburn & Zelner, 2010). However, this perspective implicitly assumes that firms possess the strategic discretion to reduce their exposure when risks materialize. In reality, many firms find themselves locked into high-risk regions due to sunk investments, asset specificity, contractual obligations, or regulatory constraints (Dai et al., 2017). The literature has largely overlooked how these constrained firms manage operations and sustain performance when the recommended strategy of reduced

exposure is not feasible. This gap motivates the need to examine adaptation mechanisms for firms that must remain operational within conflict-affected regions.

Additionally, geopolitical conflicts increasingly require firms to take explicit positions that align with or oppose the stances of particular nations or stakeholder groups (Bhagwat et al., 2020). This politicization of corporate strategy suggests the need for new theoretical approaches that address the intersection of business strategy and sociopolitical engagement. Recent literature has called for greater attention to foreign divestment as a strategic phenomenon (Sethuram & Gaur, 2024). While traditional perspectives have portrayed market exit negatively as strategic retreat or failure correction (Boddewyn, 1983; Sousa & Tan, 2015), the mass exodus from Russia suggests that exit may function as proactive risk management that creates value rather than merely reactive actions. Understanding foreign exit as a potentially value-creating strategic choice—particularly when motivated by corporate sociopolitical activism—represents a significant departure from conventional thinking.

Locked-in firms face constraints that limit their strategic options, requiring them to adapt operations and leverage organizational resources to buffer against adverse performance consequences within conflict-affected markets. In contrast, firms with strategic disengagement choice in pursuit of legitimacy gains and stakeholder approval, potentially converting market exit from a defensive necessity into an offensive opportunity. These two scenarios represent fundamentally different strategies—adaptation under constraint versus proactive repositioning—that contribute to our understanding of geopolitical risk responses in distinct but complementary ways.

The Russo-Ukrainian War provides an exceptional empirical context for advancing understanding of these issues. The conflict generated clearly identifiable strategic choices as firms decided whether to exit or remain in Russia. The extensive media coverage and stakeholder scrutiny surrounding corporate decisions created rich data on firm actions and their reception. The ongoing war also permits examination of performance consequences over a meaningful period.

This dissertation is motivated by the conviction that rigorous empirical analysis of firm responses to the Russo-Ukrainian War can provide insights applicable to future

geopolitical disruptions. As tensions between major powers persist and new flashpoints emerge, multinational enterprises require evidence-based frameworks for strategic decision-making under geopolitical uncertainty.

1.3 Research Objectives

This dissertation addresses three fundamental questions about firm strategy and performance under geopolitical conflicts:

First, what does existing research tell us about how firms manage geopolitical risks in their global business, and what are the impacts of such risks? Despite growing managerial concern, the literature on geopolitical risk management remains fragmented across multiple disciplines including international business, supply chain management, and strategic management. A systematic synthesis can consolidate current knowledge, identify key themes, and reveal gaps for further empirical investigation.

Second, what are the performance consequences for firms that remain locked into high-risk regions during geopolitical conflicts, and what factors moderate these effects? Resource dependence theory suggests that firms with substantial operational ties to a particular market may find exit economically infeasible or strategically undesirable (Pfeffer & Salancik, 1978). However, we know little about how different types of market dependencies—subsidiaries, suppliers, or customers—differentially affect performance during conflicts, or how organizational resources like slack can buffer against adverse impacts (Kovach et al., 2015).

Third, can foreign market exit create value when motivated by corporate sociopolitical activism rather than poor performance? The traditional view portrays market exit negatively, as strategic retreat or failure (Mata & Portugal, 2000). However, the mass exodus from Russia suggests that exit may serve as a legitimacy-building mechanism that strengthens brand equity and stakeholder relationships (Donaldson & Preston, 1995). Understanding when and how CSA-oriented exits enhance performance could advance how scholars and managers view foreign market exit.

1.4 Research Design and Methodology

This dissertation employs a mixed-method approach combining systematic literature review and quantitative empirical analysis. The first study conducts a comprehensive review of research on geopolitical risk management in global business, synthesizing findings across disciplines to establish theoretical foundations and identify research opportunities.

The second and third studies use the 2022 Russo-Ukrainian War as a natural experiment to examine firm responses and performance outcomes. Both empirical studies focus on U.S.-listed firms to ensure data availability and comparability. The second study examines firms that maintained operations in Russia post-invasion, employing propensity score matching to construct appropriate control groups and difference-in-differences analysis to estimate causal effects on profitability. The third study analyzes firms that exited Russia, similarly using difference-in-differences estimation with entropy balancing to assess impacts on brand equity and financial performance. Both studies address endogeneity concerns through various robustness checks. Table 1.1 summarizes the designs of the three studies.

Table 1.1 Summary of three studies

Aspect	Study 1	Study 2	Study 3
Research type	Literature review	Empirical study	Empirical study
Research method	Citation network analysis	Propensity score matching, difference-in differences	Entropy balancing, difference-in differences
Sample data	Management related articles from UTD-24, FT-50, and ABS4 journals in OSCM	U.S. listed firms with 5,435 firm-quarter observations	U.S. listed firms with 4,244 firm-year observations
Theoretical lens	/	Resource dependence theory	Instrumental stakeholder theory, expectation confirmation theory

Robustness check	/	Parallel trend test, placebo test, sensitivity test	Parallel trend test, placebo test, instrumental variables analysis, stable unit treatment value assumption test, generalized synthetic control method, lagged variable regression, double/debiased machine learning, alternative measurements, inverse probability weighting
Further analysis	/	Subsample analysis on fashion and textiles industry	Subsample analysis on fashion and textiles industry

1.5 Thesis Outline

This dissertation comprises five chapters. Following this introduction chapter, the remaining four chapters are organized as follows.

Chapter 2 presents a systematic literature review on geopolitical risk management in global business. The review synthesizes existing literature on how geopolitical risks affect firm strategy, operations, and performance. The chapter maps key themes in the literature and identifies critical gaps that motivate the subsequent empirical investigations. In particular, the review reveals that existing research has predominantly adopted a risk-aversion perspective emphasizing exposure reduction, while underexploring adaptation mechanisms for firms constrained from exiting high-risk regions. Additionally, the review highlights emerging calls for greater scholarly attention to foreign divestment as a proactive strategic tool rather than merely a reactive response to failure. These identified gaps directly inform the research questions addressed in Chapters 3 and 4.

Chapter 3 presents the first empirical study examining firms locked into Russia following the 2022 war. This study responds to the gap identified in the literature review regarding firms that cannot reduce their exposure to geopolitical risk and must instead

adapt to adverse conditions. The chapter begins by developing theoretical arguments grounded in resource dependence theory regarding why locked-in firms experience performance deterioration and how market dependency types and organizational slack moderate these effects. It then describes the research methodology, including the construction of the matched sample of locked-in and control firms, the operationalization of key variables, and the difference-in-differences estimation strategy. The results section presents findings on the main effect of lock-in on profitability and the moderating effects of subsidiary dependency, supplier dependency, customer dependency, operating slack, and unborrowed slack. The chapter concludes with a discussion of findings and their implications for theory and practice.

Chapter 4 presents the second empirical study examining market exit as corporate sociopolitical activism. This study addresses the gap identified in the literature review regarding foreign divestment as proactive risk management. The chapter develops theoretical arguments drawing on instrumental stakeholder theory and expectation confirmation theory regarding why activism-oriented exits generate performance benefits and how alignment conditions moderate these effects. The methodology section describes the sample construction, variable measurement, and analytical approach. The results section presents findings on the effects of exit on brand equity and profitability, as well as the moderating effects of normative alignment, reputational alignment, and temporal alignment. It also provides multiple robustness checks to address endogeneity concerns. Additional analyses examine industry-specific dynamics in the fashion and textiles sector. The chapter concludes with a discussion of findings and their theoretical and practical implications.

Chapter 5 provides the conclusion and discussion to the dissertation. This chapter synthesizes the contributions of the three studies and discusses their collective implications for understanding firm behavior and performance under geopolitical risk. It discusses theoretical contributions to supply chain management, resource dependence theory, stakeholder theory, and the emerging literature on corporate sociopolitical activism. The chapter also elaborates practical implications for managers and

policymakers navigating an increasingly complex geopolitical environment. It also discusses limitations of the dissertation and directions for future research.

Chapter 2: Geopolitical Risk in Global Business: A Citation Network Analysis and Systematic Review

2.1 Introduction

The global business landscape is undergoing a profound transformation because of the escalating geopolitical tensions, economic nationalism, and the structural reshaping of international economic relations. The liberal international order that facilitated decades of globalization, cross-border investment, and the expansion of global value chains is increasingly challenged by trade conflicts, technological rivalry between major powers, and policy shifts prioritizing national security over economic efficiency (Petricevic & Teece, 2019; Luo, 2022). Events such as the United States-China trade war, Brexit, Russo-Ukrainian War have fundamentally altered the risk calculus for multinational enterprises (MNEs) operating across borders (Caldara & Iacoviello, 2022; Geelen et al., 2024). These developments have prompted scholars to reconsider longstanding assumptions about the relationship between firms and the political environments in which they operate, generating renewed interest in understanding how geopolitical risk shapes corporate strategy, operation decisions, and organizational performance (Henisz & Zelner, 2010; Jiménez et al., 2021).

Geopolitical risk, broadly defined as the risk arising from political events, tensions, and conflicts between nations that affect economic outcomes (Caldara & Iacoviello, 2022), has emerged as a central concern for both practitioners and academics. Unlike traditional forms of political risk that focus on host-country instability or government expropriation (Kobrin, 1979; Henisz, 2000), current geopolitical risk implies a broader array of phenomena including great power rivalry, techno-nationalism, economic sanctions, trade policy uncertainty, and the weaponization of economic interdependence (Luo & Van Assche, 2023; Li et al., 2024). The consequences of these risks extend beyond individual firm performance to affect global value chain configurations, foreign direct investment patterns, and the fundamental structure of international commerce (Antràs, 2020; Gereffi et al., 2005). For MNEs,

navigating this environment requires not only complicated risk assessment capabilities but also strategic agility in reconfiguring operations, managing relationships with multiple governments, and balancing legitimacy concerns across diverse institutional contexts (Teece, 2025; Edman et al., 2024).

The growing importance of geopolitical risk has catalyzed a substantial expansion of scholarly research across international business, strategic management, operations management, and related disciplines. Researchers have examined how political risk affects firm valuation, investment decisions, and capital allocation (Bekaert et al., 2014; Hassan et al., 2019; Pástor & Veronesi, 2012). Some scholars have also investigated how trade policy uncertainty influences supply chain configuration, sourcing decisions, and the geographic distribution of production activities (Handley & Limão, 2017; Benguria et al., 2022; Fan et al., 2022; Grossman et al., 2023; Fan et al., 2024). Others have focused on how MNEs respond strategically to rising nationalism and deglobalization forces through corporate political activity, diplomatic engagement, and organizational adaptation (Lubinski & Wadhwani, 2020; Bucheli et al., 2024; Perchard et al., 2025). Despite this rapid accumulation of knowledge, the field currently lacks a comprehensive literature review that systematically synthesizes these research streams and maps the structure of this important domain.

This systematic review addresses these challenges by providing a comprehensive analysis of geopolitical risk literature in global business research. We employ citation network analysis (CNA) as our primary method, which enables us to identify distinct thematic clusters (Zupic & Čater, 2015). Our analysis proceeds in three stages. First, we search and identify a set of publications addressing geopolitical risk in global business contexts based on Web of Science (WOS). Then, we employ citation network analysis to cluster and identify distinct thematic groups within the literature, providing detailed analysis for each cluster. Finally, building upon our systematic analysis of the existing literature, we develop a future research agenda that identifies promising directions.

2.2 Methodology

2.2.1 Data Collection

To ensure the quality and relevance of our literature sample, we focused our search on leading journals. Specifically, we included management related journals from widely recognized quality lists: the University of Texas at Dallas (UTD) 24 journal list, the Financial Times (FT) 50 journal list. Given our particular focus on OSCM, the four-star journals in this field as classified by the Chartered Association of Business Schools (ABS) are also included.

Then, we developed a set of keywords. Our search strategy employed two sets of keywords connected by the Boolean operator AND, requiring that articles address both the geopolitical risk domain and the business or firm context. The first set of keywords captured the various manifestations and conceptualizations of geopolitical risk. This set included: “geopolitical risk” OR “geopolitical uncertainty” OR “institutional risk” OR “trade war” OR “sanction” OR “tariff” OR “war” OR “armed conflict” OR “terrorism” OR “nationalism” OR “protectionism” OR “deglobalization”. The second set of keywords ensured that retrieved articles focused on business and firm-level implications rather than macroeconomic or political science perspectives. This set included: “corporate” OR “firm” OR “company” OR “enterprise” OR “business” OR “multinational”. By requiring at least one term from each set included, our search strategy identified articles situated at the intersection of geopolitical phenomena and business research.

We conducted our search using WOS, which provides comprehensive coverage of high-quality academic journals (Donthu et al., 2021). The search was applied to article titles, abstracts, and keywords to capture relevant studies. The initial search yielded a preliminary sample of articles meeting our keyword criteria within the specified journals from 2000 to 2025. Then, we manually reviewed each of the titles, abstracts to assess whether the articles substantively addressed geopolitical risk in a global business context. Through this process, we identified 144 articles for further analysis.

2.2.2 Descriptive Statistics

Before proceeding to the citation network analysis, we present a descriptive overview of the 144 articles. Figure 2.1 illustrates the annual distribution of publications about geopolitical risk in global business from 2000 to 2025. Prior to 2019, research attention to this topic remained relatively sparse, with annual publication consistently below six articles per year. This limited output during the earlier period suggests that geopolitical risk, while recognized as a relevant concern, had not yet emerged as a major focus. The year 2019 marks a notable point in the publication trajectory, with a sharp increase in research output. This timing corresponds closely with several significant geopolitical events. The escalation of the United States-China trade war brought geopolitical risk to the forefront of managerial and scholarly attention, as firms faced unprecedented tariff escalations and technology restrictions that disrupted established supply chain configurations (Fan et al., 2024). This recent surge reflects the compound effects of multiple geopolitical disruptions, including the implementation of Brexit, Russia's invasion of Ukraine and the subsequent economic sanctions, escalating techno-nationalist policies, and growing concerns about potential conflicts in other regions. The cumulative impact of these events has underscored the importance of geopolitical considerations to firm strategy and performance, prompting sustained scholarly engagement with this phenomenon. The temporal trajectory underscores the timeliness and significance of our systematic review.

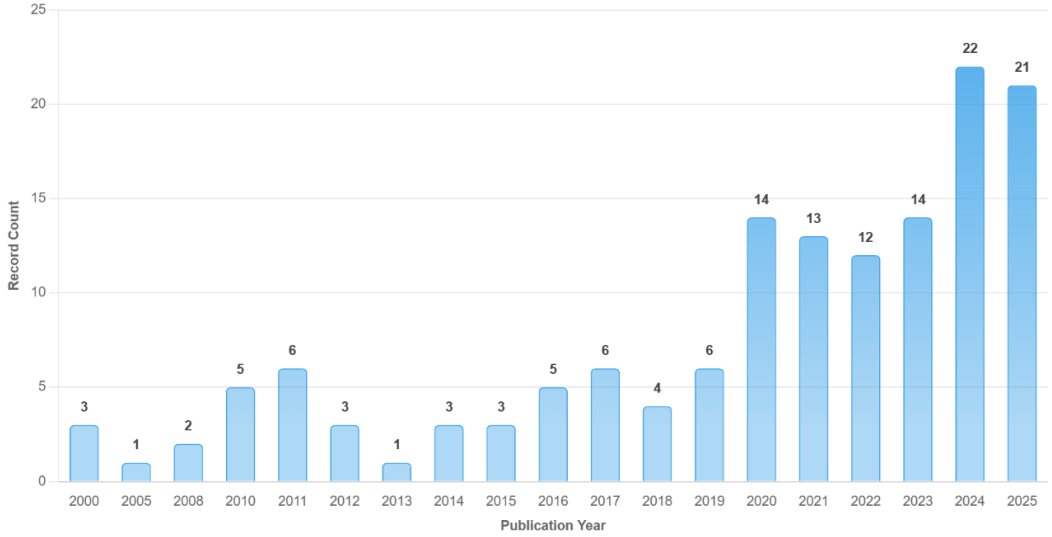

Figure 2.1 The distribution of publications by year

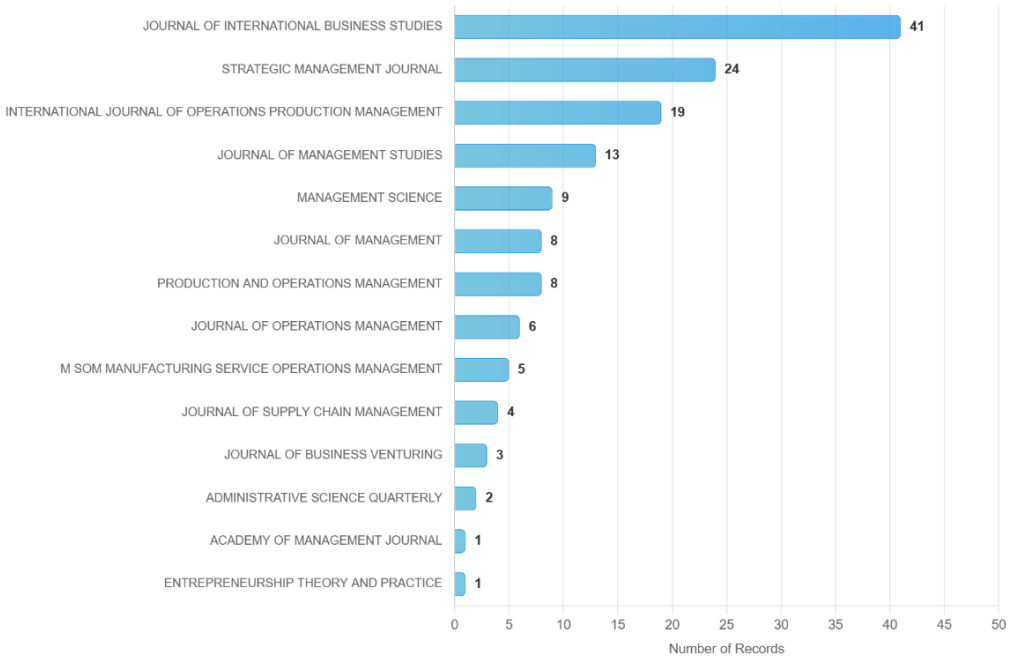

Figure 2.2 The distribution of publications by journals

Figure 2.2 presents the distribution of articles across journals. The *Journal of International Business Studies* emerges as the domain for this research stream, having published 41 articles (28.5%). Geopolitical phenomena fundamentally shape MNEs' operating environment, affecting their entry mode decisions, subsidiary management, international diversification strategies, and the configuration of global value chains. The large representation of geopolitical risk research in the *Journal of International Business Studies* indicates that the field has recognized this topic as its important agenda. The *Strategic Management Journal* ranks second in publication volume, contributing 24 articles to our sample. This representation reflects the strategic implications of geopolitical risk for firm competitive advantage, dynamic capabilities, and corporate political activity. Additionally, the *International Journal of Operations and Production Management* has also published many articles in this domain. The proportion of geopolitical risk research in this journal reflects the profound operational implications of geopolitical disruptions for global supply chains. Operations and supply chain management scholars have contributed valuable insights regarding how firms build supply chain resilience, reconfigure production networks, and develop operational flexibility to cope with geopolitical volatility.

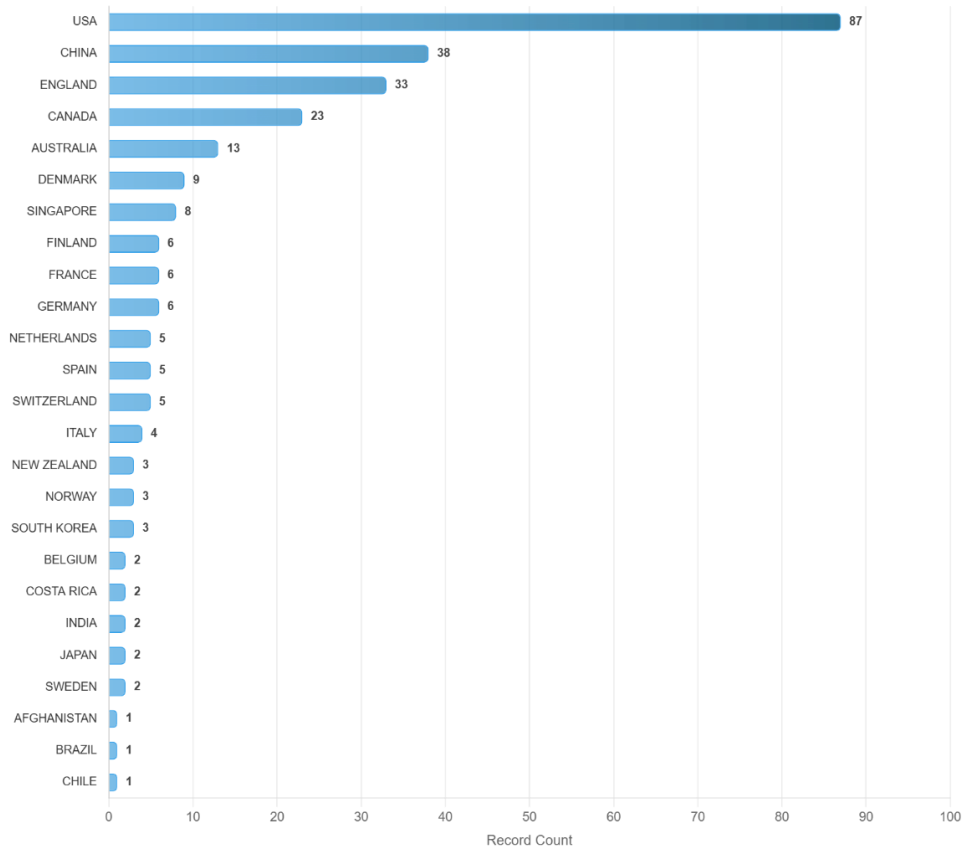

Figure 2.3 The geographic distribution of publications by author affiliation

Analysis of author affiliations reveals geographic patterns in the scholarly community engaged with geopolitical risk research. As shown in Figure 2.3, scholars affiliated in the United States represent the largest group, with 87 articles involving at least one US-based author, accounting for 60.4% of our sample. China represents the second largest source of contributions. The followed are scholars from United Kingdom and Canada.

2.2.3 Citation Network Analysis

CNA is a bibliometric technique that examines the citation relationships among publications to reveal how knowledge is organized, transmitted, and developed within a field (Zupic & Čater, 2015). Unlike reviews that rely on the reviewer's subjective interpretation and organization of themes, CNA can summarize the structure of the field from scholarly communication.

We conducted the CNA using CitNetExplorer, a specialized software tool designed for analyzing and visualizing citation networks of scientific publications (van Eck & Waltman, 2014). The software employs a clustering algorithm that groups publications based on their citation relationships, placing articles that frequently cite each other or share common references into the same cluster. To ensure that identified clusters represented meaningful sizes, we imposed a minimum threshold requiring each cluster to contain at least 5 articles. The clustering analysis yielded three clusters with 111 articles. 33 articles were not assigned to any of the four clusters due to minimum size requirements. Figure 2.4 shows the CNA results. Table A.1 in Appendix A provides detailed information of these clustered articles.

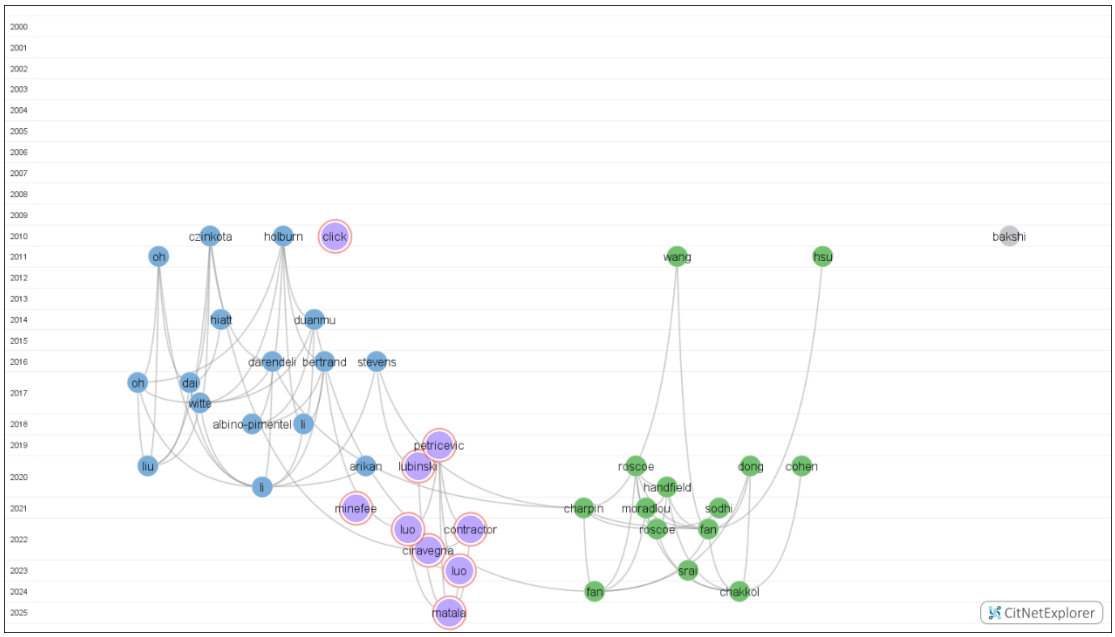

Figure 2.4 CNA Results

Notes: Cluster 1 represented by the blue dots is classified as MNEs' Strategic Response to Political Violence and Volatility. Cluster 2 represented by the green dots is classified as supply chain management under geopolitical risks. Cluster 3 represented by the purple dots is classified as nationalism and deglobalization. The detailed analysis of these clusters is presented in Section 2.3

2.3 Cluster Analysis of Geopolitical Risks Research

2.3.1 Cluster 1 - MNEs' Strategic Response to Political Violence and

Volatility

A significant portion of the cluster examines the direct effects of violence—ranging from terrorism to civil war—on international business operations. Czinkota et al. (2010) established a foundational research agenda for terrorism and international business, conceptualizing terrorism's effects on MNE operations and performance, while identifying critical areas including organizational preparedness, supply chain vulnerabilities, and human resource implications. Dai et al. (2017) extended this line of inquiry by examining MNE subsidiary exit decisions from war-afflicted countries, decomposing firm vulnerability into exposure, at-risk resources, and resilience dimensions. Research has also examined how firms learn from and respond to terrorism exposure. Li et al. (2013) investigated new venture survival amid political and civil violence, finding that operational planning becomes more beneficial whereas strategic planning becomes less advantageous under violent conditions. Branzei & Abdelnour (2010) offered a psychological perspective on enterprise resilience under terrorism, explaining how terrorism conditions create incentives for entrepreneurial persistence.

More recent literature has investigated the social amplification of terrorism threats. Park & Rogan (2022) demonstrated that MNEs obtain relevant information from peers' actions under terrorist attacks, finding that MNEs are more likely to divest when peers also divest. Liu et al. (2023) drew on construal level theory to show that the association between terrorism exposure and divestment likelihood depends on executives' social proximity to the affected country.

Moving from non-state violence to state-level geopolitics, a subset of articles analyzes how bilateral political relations between countries affect MNE strategic decisions and outcomes. Bertrand et al. (2016) demonstrated that political affinity—defined as similarity of national interests in global affairs—significantly affects acquisition premiums in cross-border deals. Li et al. (2020) extended this logic to post-acquisition performance, finding that MNEs from countries with greater political affinity to host markets experience superior integration outcomes. Darendeli et al. (2024) introduced the concept of volatility in political affinity, showing that instability in

bilateral relations impedes subsidiary investments beyond the effects of affinity levels alone. Trade wars have emerged as a particularly relevant context for studying geopolitical impacts. Deng et al. (2023) analyzed the 2018 US-China trade war's effects on Chinese listed firms, demonstrating how event space proximity—both geographic and product-market—shapes market value losses. Relatedly, recent work by Nguyen et al. (2025) explored how third-country MNEs can capitalize on competitive opportunities created by trade conflicts between other nations.

Finally, the articles explore how firms employ non-market strategies to mitigate political hazards. This includes the "dark side" of international business, such as bribery (Dimitriadis, 2024). Firms also seek legitimacy to counter the "liability of Foreignness." This is achieved through lobbying (Kim & Siegel, 2023) or through corporate social responsibility (CSR) and ESG activities, which act as an "insurance" mechanism against geopolitical tension (Kim et al., 2023). Several articles also investigate how firms develop and deploy political capabilities to manage institutional risks. Holburn & Zelner (2010) provided foundational evidence that MNEs from home countries with weaker institutional constraints on policymakers are less sensitive to host-country policy risk, suggesting that political capabilities developed at home can be leveraged abroad. Albino-Pimentel et al. (2022) demonstrated that firms with political connections or competence are insensitive to bilateral investment treaties when choosing investment locations.

Emerging Themes and Future Research Agenda

Literature is shifting away from viewing ESG initiatives solely as ethical imperatives or value-creation tools. Instead, they are increasingly treated as strategic instruments for managing liability of foreignness under geopolitical strain. When geopolitical tensions rise, the liability of foreignness transforms into a liability of origin. In this context, ESG becomes a critical signaling mechanism used to decouple a subsidiary's identity from its home country's political baggage. Future research could examine the boundary conditions under which ESG strategies effectively mitigate liability of origin. Scholars should investigate whether certain ESG dimensions, such

as environmental initiatives versus community engagement, prove more effective in specific geopolitical contexts. Research should also explore the authenticity and credibility challenges firms face when deploying ESG strategically, as stakeholders may perceive such initiatives as opportunistic rather than genuine. Finally, longitudinal research tracking ESG investments before, during, and after geopolitical crises would reveal whether strategic ESG deployment yields sustained legitimacy benefits or merely temporary relief.

Another emerging theme involves attention to foreign divestment (FD). For decades, globalization was treated as an inevitable progression, with FDI as the primary metric of success. Schmid & Morschett (2024) called for elevating FD research to equal status with FDI scholarship, arguing that neglecting divestment leaves international business theory incomplete. As geopolitical conflicts and deglobalization trends fracture the global economy, divestment is being reframed not as a failure, but as a necessary strategic capability equal in importance to investment. Future research should develop theoretical frameworks that conceptualize divestment as a proactive strategic option rather than a reactive response to failure. Scholars should examine the organizational capabilities required for effective divestment execution, including stakeholder management, asset disposition, and knowledge preservation during exit processes. Research should also investigate the reputational and relational consequences of geopolitically motivated divestment, as firms exiting politically sensitive markets may face backlash from both home and host country stakeholders with conflicting expectations. Additionally, studies comparing voluntary strategic exits with forced divestments due to sanctions or expropriation would reflect different processes and outcomes associated with various exit pathways. Finally, research examining how firms maintain optionality for re-entry following geopolitical normalization would provide insights into managing the complete lifecycle of international market engagement.

2.3.2 Cluster 2 - Supply Chain Management under Geopolitical Risks

Unlike Cluster 1, which focuses on political risk's effects on multinational enterprise strategy and performance at the firm level, this cluster centers on operational and supply chain management decisions, including sourcing strategies, network configuration, inventory management under geopolitical uncertainty.

Early contributions focus on tariffs, taxes, and export-oriented industrial policy as key drivers of supply chain configuration. They established analytical frameworks for how taxes and tariff rules influence optimal supply chain structure (Hsu & Zhu, 2011; Wang et al., 2011; Chio et al., 2012). Recent literature extends the geopolitical lens beyond classic trade policy instruments to encompass econo-political and regulatory risks, sanctions, and political instability. Davarzani et al. (2015) introduce "econo-political risks" (EPRs) through an in-depth study of an automotive supply chain under sanctions. Roscoe et al. (2020) examined Brexit as a major geopolitical disruption in the pharmaceutical sector, highlighting how firms formulated strategies under prolonged uncertainty by deploying intangible (managerial attention, information search) and tangible (redundancies, new assets) resources. Moradlou et al. (2021) similarly focus on Brexit, using a Delphi study to explore manufacturing location decisions by UK multinationals and showing that market- and efficiency-seeking advantages drive relocation of plants and distribution centers. Charpin et al. (2021) look at political risk at the host-country level and how perceived political risk shapes foreign subunits' supplier development strategies, identifying archetypes of self-centered, collaborative, and voluntary legitimacy-seeking strategies.

Another major theme concerns the impact of trade wars and tariffs on firm performance, sourcing patterns, and network design. Fan et al. (2022) empirically examined the 2018 US-China trade war's impact on US firms with Chinese suppliers, finding decreased inventory and profitability performance. Lam et al. (2022) analyze a quasi-natural experiment in US tariff reductions and find that increased foreign competition can degrade domestic firms' product quality. Jacobs et al. (2022) studied stock market reactions to the 2018 US government ban on ZTE, revealing cascading effects throughout the supply chain networks. Chen et al. (2022) developed game-theoretic models analyzing how tariffs and consumer preferences for locally

manufactured products affect multinational sourcing decisions, demonstrating that excessively high tariffs may discourage local sourcing. Wu et al. (2024) examined competing firms' decisions to develop new contract manufacturers outside China, finding that firms prefer development when tariffs rise moderately rather than sharply.

Firms increasingly adjust their operations strategies and global supply networks to cope with geopolitical risk. From a supply chain management perspective, these responses are primarily related to the structural redesign of global supply chains. Firms reconsider manufacturing and sourcing locations in light of tariffs, sanctions, wars, and policy uncertainty, often shifting capacity and inventory closer to key markets to reduce exposure to cross-border frictions and custom delays (Moradlou et al., 2021; Srai et al., 2023; Free et al., 2025; Golgeci et al., 2025). At the same time, they reconfigure their supply bases by reducing exposure to specific high-risk countries, seeking an appropriate balance between diversification and concentration (Paulraj et al., 2025; Zhu et al., 2025). While diversification can mitigate dependence on any single vulnerable location or supplier, it increases supply base complexity. Empirical studies highlight that such complexity is double-edged: more suppliers and locations can provide alternative sourcing options and enhance resilience, but they also raise transaction costs and may amplify disruption propagation (Fan et al., 2022; Kim et al., 2025).

Emerging Themes and Future Research Agenda

First, there is a clear shift from viewing global supply chains primarily as efficiency-seeking systems toward treating them as socio-political and adaptive systems. Future research is needed to build dynamic, process-oriented theories of how firms transition through phases of conservation, release, and reorganization in response to compounding geopolitical shocks, and how these adaptive cycles differ across industries, firm sizes, and institutional contexts (Roscoe et al., 2022; Miller et al., 2025).

Geopolitical tensions are also triggering a set of structural redesign moves beyond simplistic reshoring narratives, including regionalization, friendshoring, and parallel supply chains (Day et al., 2025; Charpin & Cousineau, 2025; Moradlou et al., 2025; Golgeci et al., 2025). Future research could therefore move beyond binary

onshoring/offshoring framings and systematically examine hybrid spatial strategies (e.g., regionally embedded or multi-regional networks), friendshoring and "in-market-for-market" designs for cost, innovation, and sustainability (Moradlou et al., 2025).

In addition, a growing body of work examines the sociopolitical embeddedness of supply chain decisions (Charpin & Cousineau, 2025; Golgeci et al., 2025; Paulraj et al., 2025). Future research may deepen this perspective by integrating institutional theory, international political economy, and supply chain network analysis to study how macro-sociopolitical forces cascade into interorganizational structures and managerial decisions. Research could also explore how firms deliberately use supply chain design choices, relational governance, and broader legitimacy strategies to manage political risk, shape regulatory responses, and even influence policy outcomes.

Finally, capabilities and digitalization emerge as critical factors for navigating geopolitical disruptions. Recent studies highlight that firms' ability to cope with geopolitical shocks not only on where facilities and suppliers are located, but also on how effectively firms can sense, interpret, and respond to rapidly changing conditions (Zhang et al., 2020; Sodhi & Tang, 2021; Roscoe et al., 2022). These findings suggest a promising research agenda on how digital technologies and organizational capabilities jointly manage supply chain resilience under geopolitical shocks.

2.3.3 Cluster 3 - Nationalism and Deglobalization

A dominant theme in this cluster is the rise of techno-nationalism and the deglobalized economy. Petricevic & Teece (2019) and Luo (2022) conceptualize this shift, arguing that the global order is moving toward "bifurcated governance" where states view technological interconnectivity not as a source of mutual benefit, but as a zero-sum security vulnerability. This theoretical stance is empirically supported by analyses of specific policy interventions. For instance, Luo & Van Assche (2023) and Li et al. (2024) examine the U.S.-China rivalry, highlighting how instruments like the U.S. CHIPS and Science Act effectively weaponize global value chains. These policies

force MNEs to navigate a landscape where cross-border acquisitions and technology transfers are scrutinized through the lens of national security rather than economic efficiency (Godsell et al., 2023; Li et al., 2024).

The literature presents an intensive debate regarding the trajectory of globalization in response to these pressures. Contractor (2022) proposed that despite predictions of post-pandemic decoupling and deglobalization, changes induced by increased nationalism and protectionism would be marginal rather than fundamental, arguing that the world economy will need even more globalization. Ciravegna & Michailova (2022) offered a contrasting view, arguing that rising populism and inequality are driving a long-term structural fragmentation of the world economy. To survive in this "fractured world," scholars propose novel organizational frameworks. Nambisan & Luo (2021) proposed the loose coupling perspective to address MNEs' organizing challenges in managing relationships with global platform and ecosystem partners amid rising deglobalization forces. Teece (2025) emphasizes the need for dynamic capabilities to manage the systemic risks introduced by digitalization and geopolitical disorder. Furthermore, Yang et al. (2025) demonstrate that U.S. firms are actively adjusting their supply chains in China, balancing the need for political legitimacy at home with the economic efficiency of established supplier networks.

Beyond structural adjustments, this cluster emphasizes the critical role of corporate diplomacy and historical adaptation. Researchers increasingly turn to historical analogies to understand current deglobalization trends. Studies by Lubinski & Wadhwani (2020) and Bucheli et al. (2023) reveal that MNEs have historically engaged in "geopolitical jockeying," aligning themselves with host-country nationalist goals to delegitimize rivals or protect assets during periods of weak bargaining power. Matala and Stutz (2025) and Bucheli et al. (2024) are also advocated this historical continuity. They illustrated how MNEs act as diplomatic brokers between hostile states to secure their license to operate. However, this engagement is risky. Cai et al. (2025) noted in the context of Taiwan, firms must use CSR as a hedging mechanism to survive radical political transitions and regime changes.

The cluster also extends the analysis of nationalism from state-level policy to the micro-foundations of organizational behavior. Edman et al. (2024) and Ertug et al. (2024) argued that nationalist sentiments permeate organizational boundaries, influencing governance choices. This sociological dimension of nationalism also affects market performance. Yue et al. (2024) found that firms may endorse nationalist movements to maintain legitimacy with domestic customers, even at the expense of foreign relationships.

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While recent work shows that nationalist sentiments affect governance choices, market bias, and corporate side-taking (Fischer et al., 2022; Edman et al., 2024; Ertug et al., 2024; Yue et al., 2024), we know less about the internal micro-processes through which managers perceive, interpret, and strategically use nationalism. Future studies could examine how managerial identities, political orientations, and intra-organizational power dynamics shape responses to nationalist pressures, and how firms manage trade-offs between nationalist signaling and global legitimacy.

Another emerging theme concerns the rise of techno-nationalism as a distinct form of geopolitical risk. Luo (2022) and Luo & Van Assche (2023) have proposes how techno-nationalist policies represent a paradigm shift from market-oriented liberalism to intervention-oriented state capitalism. Future research should examine how MNEs develop capabilities to navigate techno-nationalist policies. Scholars should investigate how firms balance compliance with competing regulatory regimes when home and host country technology policies conflict. Research could also explore how techno-nationalism reshapes innovation networks and R&D location decisions, particularly for firms operating in strategic sectors such as semiconductors and artificial intelligence.

2.4 Conclusion and Discussion

This study employed CNA to systematically review the recent literature on geopolitical risk in global business. By analyzing 144 publications and identifying three

distinct clusters, we have mapped this research domain and traced its evolution from early attentions of terrorism and political violence to contemporary examinations of techno-nationalism, trade wars, and deglobalization.

Our analysis reveals that geopolitical risk research in global business has developed three interconnected trajectories. Cluster 1 focuses on MNEs' strategic responses to political violence and volatility, examining how MNEs navigate terrorism, armed conflict, bilateral political relations, and trade wars through entry mode choices, divestment decisions, and non-market strategies. This cluster has evolved from foundational work on terrorism's effects on MNE operations toward sophisticated analyses of how firms leverage political capabilities and ESG initiatives to manage geopolitical uncertainty. Cluster 2 addresses supply chain management under geopolitical risks, investigating how firms reconfigure sourcing strategies, network structures, and inventory management in response to tariffs, sanctions, and policy instability. This stream has progressed from analytical frameworks on tax and tariff effects toward comprehensive examinations of structural redesign, including regionalization, friendshoring, and diversification. Cluster 3 examines nationalism and deglobalization, exploring how techno-nationalism, economic nationalism, and deglobalization forces reshape the global business environment and MNE strategies. This cluster features intensive theoretical debates regarding the trajectory of globalization and emphasizes the critical role of corporate diplomacy and dynamic capabilities.

The integration of multiple theoretical perspectives in literature has strengthened the analytical toolkit available to scholars. Real options theory, the resource-based view, institutional theory, transaction cost economics, and network theory have been productively combined to explain how firms make decisions under geopolitical uncertainty. At the supply chain level, scholars have drawn on adaptive systems perspectives and socio-political embeddedness frameworks to understand how macro-level geopolitical forces cascade into interorganizational structures and managerial decisions. This theoretical diversity enables scholars to address different aspects of geopolitical risk across multiple levels of analysis.

In addition, literature has evolved from viewing firms as passive recipients of geopolitical shocks toward recognizing their agency in shaping and responding to geopolitical environments. Research on corporate political activity, corporate diplomacy, and non-market strategy demonstrates that MNEs can actively leverage geopolitical tensions for competitive advantage, and develop capabilities specifically designed to navigate hostile political environments.

Despite these advances, there are several limitations in current literature that directly guide the empirical investigations in subsequent chapters of this dissertation. First, the literature has predominantly adopted a risk-aversion perspective that emphasizes reducing exposure to geopolitical risks (Caldara & Iacoviello, 2022; Fan et al., 2024). While this prescriptive guidance is valuable, it implicitly assumes that firms possess the strategic discretion to disengage from high-risk regions when threats occur. In reality, many firms find themselves locked into conflict-affected markets due to sunk investments, asset specificity, contractual obligations, or supply chain dependencies that preclude rapid exit (Dai et al., 2017). The literature has overlooked how these constrained firms manage operations and sustain performance when the recommended strategy of reduced exposure is not feasible. This gap motivates the second study of this dissertation, which examines the performance consequences for firms that remain locked into Russia following the 2022 war.

Second, the literature on foreign divestment has traditionally portrayed market exit as a defensive response to poor performance, strategic failure, or deteriorating market conditions (Boddewyn, 1983; Mata & Portugal, 2000). However, the unprecedented wave of corporate withdrawals from Russia suggests that exit may serve functions beyond mere loss avoidance. Recent research has called for reconceptualizing foreign divestment as a potentially proactive strategic tool that can create value rather than simply preserve it (Sethuram & Gaur, 2024). When firms exit markets to demonstrate alignment with stakeholder values and societal expectations, such withdrawal may enhance legitimacy (Bhagwat et al., 2020). This gap motivates the third study of this dissertation, which examines whether and under what conditions market exit as stakeholder-valued activity generates positive performance outcomes.

Chapter 3: Operations Locked-in Amid Geopolitical Conflicts: A Study of the 2022 Russo–Ukrainian War

3.1 Introduction

The escalation of geopolitical tensions worldwide has exposed multinational enterprises to growing uncertainties in their operations and supply chain networks. This is especially evident in the fashion and textiles industry, where globally dispersed supply chains and cross-border sourcing arrangements make firms particularly vulnerable to geopolitical disruptions. Scholars in the OSCM field have started exploring how geopolitical events like the Brexit and U.S.-China trade war affect corporate activities and consequences. Research in this area covers multiple dimensions, such as sourcing decisions (Charpin & Cousineau, 2025), supply chain reconfigurations (Moradlou et al., 2021, 2024), profitability (Fan et al., 2022a), and cross-border collaborations (Charpin et al., 2024).

In response to increasing geopolitical uncertainty, firms often scale back or halt their activities in high-risk areas. For instance, the trade friction between U.S. and China led many American businesses to decrease their transactions with Chinese suppliers (Fan et al., 2024). Similarly, after Russia launched its military campaign against Ukraine in 2022, lots of MNEs, especially for whose headquarters in Western countries, reduced or halted their Russian activities (The New York Times, 2022). Major fashion brands including H&M, Adidas, and Nike suspended their Russian sales and operations shortly after the conflict began. These actions reflected both alignment with Western political opposition to the conflict and a practical strategy to avoid instability in a volatile environment.

However, not all companies have managed to completely withdraw from conflict-affected areas. Some remain locked in these regions while facing considerable geopolitical hazards. In this context, “locked-in” describes situations where firms maintain, suppliers, customers, or subsidiaries in Russia, which creates barriers for them to market exit. This concept differs from Fan et al. (2024), who applied the term

to describe how suppliers' unique advantages lock in foreign customers. Our conceptualization of "locked-in operations" focuses on committed resources, including physical infrastructure, established supply chain relationships, and human capital within a particular region. For example, Pepsi and AstraZeneca both retained their Russian activities due to their extensive assets and market positions there (Doherty, 2023).

These locked-in firms have vital resources in unstable regions, which complicates efforts to relocate them elsewhere. Russia has launched policies that prevent Western corporations from transferring assets back to unfriendly nations (Stognei, 2023). Consequently, such locked-in firms must cope with increasing uncertainties and resource constraints while sustaining their activities in volatile markets.

This challenging situation, however, also presents a potential trade-off for firms. Reduced competition following competitor exits could enable remaining firms to capture greater market share and enhance profitability (Grullon et al., 2019). Yet staying in such markets often brings higher costs, reputational concerns, and sanction risks, which may worsen financial outcomes (Jungblut & Johnen, 2022; Alam et al., 2023). This tension motivates the first research question: *Do firms with locked-in operations in high-risk geopolitical environments experience weakened profitability?*

Resource dependence theory (RDT) offers a proper lens for examining this issue. According to this perspective, firms facing environmental uncertainty seek greater control over external resources to stabilize their operations (Pfeffer & Salancik, 1978). Geopolitical conflicts like the Russo–Ukrainian War amplify uncertainty for firms with assets locked in affected areas. RDT posits that organizational performance relies on how firms effectively manage their reliance on essential resources (Hillman et al., 2009). Yet this capability varies across firms. Those heavily dependent on a specific market may prove more vulnerable to regional geopolitical shocks (Lo et al., 2022). Meanwhile, firms possessing organizational slack—excess resource buffers—may better withstand external disruptions (Bourgeois, 1981). These heterogeneity among firms prompt our

second research question: *What conditions enable firms to mitigate profitability losses when locked into geopolitically risky environments*?

We investigate these questions using a sample of U.S.-listed companies with operations locked in Russia after the 2022 Russo–Ukrainian War. Employing propensity score matching combined with difference-in-differences analysis (PSM-DID), we find a decline in profitability among these firms. Our moderating analysis reveals heterogeneous effects of market dependence. Firms maintaining Russian subsidiaries or sourcing from Russian suppliers suffered sharper profit declines, whereas having Russian customers alleviated the negative effect. Additionally, we examine how slack resources buffer the adverse impact, finding that firms with higher levels of operating and unborrowed slack helped firms better sustain their financial performance.

Our study advances OSCM literature in several ways. It contributes to research on geopolitical risks, supply chain risk management, and RDT. By centering on firms with "locked-in operations," we move beyond conventional advice urging withdrawal from conflict zones. We also identify market dependency as a pivotal factor influencing corporate responses to geopolitical turmoil. Finally, we offer practical guidance for managers seeking strategies to navigate future geopolitical disruptions.

3.2 Literature Review and Hypotheses Development

3.2.1 Geopolitical Conflicts in OSCM

Geopolitical events, including armed conflicts, terrorism, pandemics, cross-boarder tensions, and territorial disputes represent various forms of geopolitical risk that increase uncertainty and instability into international business (Adabor & Ayesu, 2024). In an era of de-globalization marked by these more frequent and severe geopolitical risks, MNEs increasingly adjust their operational strategies in line with both the objective risk level and their subjective risk perceptions (Witt, 2019; Moradlou et al., 2024). Compared with other types of disruptions, such as market fluctuations or natural catastrophes, geopolitical conflicts are especially challenging for firms because

of their political character and potential to spill across borders and domains (Handley & Limão, 2022). By reshaping the formal and informal rules, norms, and expectations that influence cross-border transactions, these conflicts disturb the institutional foundations of international business (Charpin & Cousineau, 2025), thereby generating a volatile and unpredictable operating environment.

Growing geopolitical turbulence has arisen scholarly inquiry into how such conflicts shape firm operations, supply chain networks, and financial outcomes. Researchers have examined diverse contexts, including COVID-19 pandemic (Jiang et al., 2023), Brexit (Roscoe et al., 2020; Moradlou et al., 2021), U.S.-China trade war (Fan et al., 2022a, 2024), the Russo–Ukrainian War (El Baz et al., 2025), and broad geopolitical uncertainty (Zhu et al., 2025). Such conflicts can influence cross-border material flows, triggering disruptions, delays, and unpredictability that hamper operational efficiency (Bednarski et al., 2024). Financial performance suffers as a result (Fan et al., 2022a), driven by rising operational expenses, heightened risks in politically volatile settings, and potential reputational harm or stakeholder resistance (Darendeli & Hill, 2016). Collectively, these effects can erode corporate competitiveness and resilience amid geopolitical uncertainty.

Scholars have proposed multiple resilience-building strategies to counteract these adverse effects. Reconfiguring supply chain networks through approaches like friend-shoring (Charpin & Cousineau, 2025) or reshoring (Cheng et al., 2025) can limit geopolitical exposure while enhancing network efficiency. Embedding flexibility into supply chain networks and operations further strengthens firms' adaptive capacity (Lin et al., 2021; Moradlou et al., 2024). Additionally, leveraging digital technologies and improving supply chain transparency equip firms with predictive tools to anticipate and address emerging geopolitical threats in advance (Belhadi et al., 2024).

3.2.2 Locked-in Operations During Geopolitical Conflicts

A common scholarly consensus holds that firms typically respond to geopolitical risk by withdrawing from or scaling back operations in geopolitically unstable regions (Dai et al., 2013, Srai et al., 2023). This "flight" response emerges

because political volatility undermines the ability to capture returns on investment, making continued operations economically unfeasible. Empirical studies provide evidence from this perspective. Oh & Oetzel (2017) observed that MNEs divested subsidiaries following terrorist incidents and natural disasters to minimize operational disruptions. Srai et al. (2023) similarly documented how firms initiated the process of "unhooking" their supply chains from conflict zones in the aftermath of the Russo–Ukrainian War. Fan et al. (2024) revealed that during the 2018 U.S.-China trade war, firms scaled back transactions with suppliers in conflict-affected areas as a risk mitigation strategy.

However, exit is not always feasible. The Russo–Ukrainian War has particularly reflected the dilemma of firms that find themselves "locked in" to geopolitically volatile regions, constrained in their capacity to withdraw or attenuate risk exposure (Evenett & Pisani, 2023). Several factors contribute to this situation. High sunk costs and asset specificity are primary barriers, as firms commit significant capital to specialized infrastructure and equipment that are hard for redeployment or recovery, making the exit economically prohibitive (Dai et al., 2013, 2017). Strategic considerations also play a crucial role, as some firms stay to preserve access to critical resources or established market positions (Lieberman et al., 2017). Additionally, institutional barriers, such as contractual obligations and regulatory restrictions enforced by host governments, can further constrain firm's withdrawal options (Darendeli & Hill, 2016).

This locked-in phenomenon is closely related to, but distinct from the concept of dependency. Dependency is inherently dynamic, arising from a firm's evolving reliance on external actors and conditions. Lock-in, by contrast, reflects the cumulative outcome of such dependencies and past commitments, which create substantial barriers to exit and hinder adaptation or relocation abilities (Jiang et al., 2023). Scholars argue that these dependencies generate organizational inertia and constrain firms' capacity to adjust to changing geopolitical landscapes (Darendeli & Hill, 2016). As a result, firms operating in conflict regions confront particularly tensions between managing risk and sustaining competitiveness and financial performance (Hiatt & Sine, 2014).

Existing literature has examined lock-in effects in buyer-supplier relationships under geopolitical contexts. For example, drawing on the U.S.-China trade war, Fan et al. (2024) found that U.S. firms can become locked in to Chinese suppliers that offer superior capabilities, such as high levels of innovation and strong social responsibility performance. However, we still know relatively little about how firms that are locked in conflict zones are affected and how they respond. In order to fill this gap, this study concentrates specifically on firms that remain locked in amid geopolitical turmoil, with the aim of examining their vulnerabilities, strategic choices, and performance implications.

3.2.3 Impacts of the 2022 Russo–Ukrainian War

The Russo–Ukrainian War represents the most significant geopolitical conflict in Europe since World War II (D'Anieri, 2023). It has sharply increased systemic risk and generated global spillovers (Qureshi et al., 2022). In May 2022, the U.S. Federal Reserve predicted that the ongoing conflict would cut global output by 1.7%, highlighting the substantial economic damage associated with rising geopolitical tensions (Alam et al., 2023; Liadze et al., 2023). Although OSCM research has not extensively focused on this war (Srai et al., 2023; Belhadi et al., 2024), scholars in other fields have already examined its broad consequences—for example, by estimating worldwide economic losses (Qureshi et al., 2022; Liadze et al., 2023) and analyzing how firms engage in war-related sociopolitical activism to strengthen or preserve stakeholder legitimacy (Ganesan & Mallapragada, 2025; Kipnis et al., 2025).

In the aftermath of the conflict, many MNEs announced that they would suspend or wind down their activities in Russia (Srai et al., 2023). For example, Adidas announced the closure of its stores in Russia. However, leaving the market proved extremely difficult for some firms. Exiting from Russia often required relocating complicated supply chain networks and accepting major financial write-downs. Legal and regulatory barriers, such as limitations on asset sales and complications arising from existing contracts, further constrained exit options. Philip Morris, for example, announced its intention to scale back and seek ways to withdraw from Russia, but

reported serious obstacles linked to the regulatory framework and the challenge of finding buyers for its Russian assets (Barnes, 2023). Table 3.1 presents a summary of the key challenges facing firms operating in Russia after the outbreak of the war.

Table 3.1 Pre- and post-war comparison of firms operating in Russia

Aspect	Before Russo-Ukrainian War	After Russo-Ukrainian War
Operating costs	Manageable operating costs, primarily driven by business strategy	Rising operating costs due to inflation, regulatory challenges, and logistics
Operational flexibility	Higher flexibility; less constrained by asset specificity	Reduced flexibility; "locked-in" due to high asset specificity
Supply chain stability	Relatively stable supply chains networks with infrequent disruptions	High instability; disruptions and delays in logistics
Regulatory environment	Standard regulatory requirements; freedom to repatriate assets	Challenging environment; regulatory restrictions on asset repatriation
Reputational risk	Low reputational risk; no political pressures affecting reputation	High reputational risk; political pressures and potential boycotts

RDT offers appropriate theoretical lens for examining firms with locked-in operations in high-risk geopolitical contexts. The theory posits that entities are constrained by their external environments, relying on outside organizations for critical resources (Pfeffer & Salancik, 1978). During uncertainty periods, firms may encounter substantial challenges in securing these vital resources, potentially threatening the continuity of their activities (Darby et al., 2020).

Firms maintaining operations in Russia confront considerable supply chain disruption risks and rising operating costs which undermine firms' profitability (Alam et al., 2023). Furthermore, the growth of political consumerism has empowered consumers and other stakeholders to force firms publicly declare their positions on political matters. Organizations that do not meet these expectations face risks of boycotts (Jungblut & Johnen, 2022). Evidence further suggests that firms maintained their Russian business may experience adverse consumer perceptions and diminished

purchase intentions (Ganesan & Mallapragada, 2025). As a result, the increased uncertainty and vulnerability make firms more difficult to gain incomes to cover rising operating costs. Based on these considerations, we hypothesize:

Hypothesis 1 (H1): Firms maintaining operations in Russia after the Russo–Ukrainian War experience reduced profitability.

3.2.4 The Moderating Effects of Market Dependency

According to RDT, an organization's dependence on external entities for key resources determines how much those entities can shape its behaviour and performance outcomes (Pfeffer & Salancik, 1978). Effectively managing external dependencies and mitigating environmental uncertainty is a critical organizational consideration (Hillman et al., 2009). In international settings, exposure to a foreign country typically occurs through subsidiaries, suppliers, and customers in that county (Gereffi et al., 2005). Subsidiaries represent a firm's direct investment and operational footprint within a foreign market, whereas supplier and customer ties reflect the organization's dependence on that economy for essential inputs and revenue generation, respectively.

When companies rely heavily on Russia for such key resources, they become particularly vulnerable to disruption under the current geopolitical turmoil (Lo et al., 2022). Strong market-specific ties and investments make it costly and time-consuming to withdraw or redirect activities, limiting room to pivot toward alternative locations (Darby et al., 2020; Hillman et al., 2009; Ivanov et al., 2014). In addition, continuing to earn income in a state engaged in military aggression may trigger reputational damage or even boycott (Ganesan & Mallapragada, 2025). Accordingly, we propose the following:

Hypothesis 2 (H2): For firms that remain operations in Russia after the Russo–Ukrainian War, the negative impact on profitability is amplified when they have a high level of dependency on Russian market.

3.2.5 The Moderating Effects of Organizational Slack

Organizational slack refers to surplus capacity that can be mobilized to buffer against environmental shocks and support adaptation (Bourgeois, 1981). Studying slack thus helps explain how firms that remain locked in high-risk geopolitical contexts can still secure needed resources and protect profitability. In this study, we focus on two types: operating slack and unborrowed slack.

Operating slack consists of internally available resources, such as unused production capacity, and surplus labor (Kovach et al., 2015). These slack resources can be swiftly redeployed to deal with emerging operational difficulties (Shi et al., 2025). Organizations with more operating slacks are therefore better positioned to absorb the and disruptions arising from geopolitical turmoil (Azadegan et al., 2013). By drawing on this buffer, firms can mitigate the adverse impacts on profitability. Therefore, we hypothesize:

Hypothesis 3 (H3): For firms that remain operations in Russia after the Russo–Ukrainian War, the negative impact on profitability is mitigated for firms with high levels of operating slacks.

Unborrowed slack reflects an organization's potential capacity or room to obtain external finance, such as additional borrowing or raising new capital (Cheng & Kesner, 1997). According to RDT, greater environmental volatility increases organizations' need to secure funds from outside organizations (Pfeffer & Salancik, 1978), we therefore argue that firms locked in Russia have a particularly strong need to secure extra funding as a buffer against future operation disruptions (Alam et al., 2023).

Amid geopolitical instability and operational constraints, debt financing becomes a key channel for obtaining additional liquidity and enhancing financial flexibility. Access to new debt allows organizations to maintain ongoing activities, pursue new investments, or address unanticipated challenges (Demerjian, 2017). This reasoning is in line with RDT's view that organizations actively seek to reduce the impact of external constraints (Pfeffer & Salancik, 1978). Empirical studies have shown that firms tend to expand their financial resources during periods of escalating uncertainty (Graham & Harvey, 2001; Alfaro et al., 2021). By strategically exploiting

their unborrowed slack, firms can obtain the necessary capital to sustain operational continuity. Drawing on these arguments, we propose the following:

Hypothesis 4 (H4): For firms that remain operations in Russia after the Russo–Ukrainian War, the negative impact on profitability is alleviated for firms with more unborrowed slack.

Figure 3.1 presents an overview of the theoretical framework.

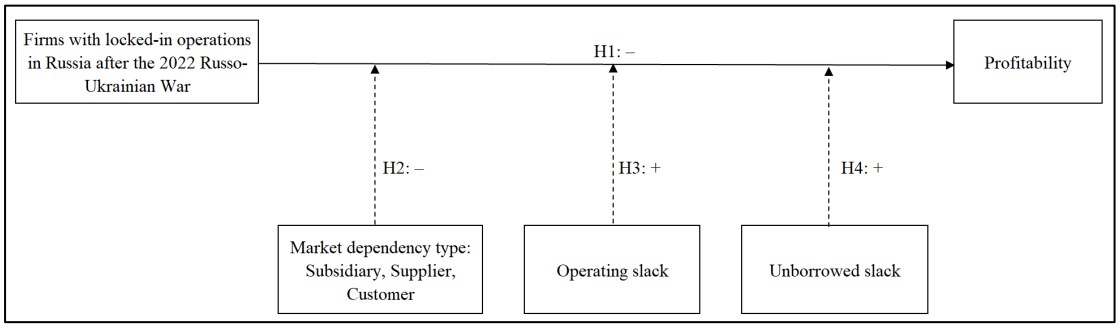


Figure 3.1 Theoretical framework

3.3 Data

3.3.1 Data Sources

To empirically examine our hypotheses, we compiled data from multiple sources, including the KSE Institute, Orbis, FactSet Revere, and Compustat database. The KSE Institute, an independent Ukrainian research organization, served as our key source for identifying firms that continued operating in Russia. Following the outbreak of conflict, KSE institute initiated a project monitoring international companies' business decisions regarding Russia throughout the conflict and released the resulting dataset on its public "Leave Russia" website. To validate and complement the data, we relied on Orbis, a global database that provides detailed financial and ownership information on both private and public firms. Orbis enabled us to cross-check the KSE classifications and ensure data consistency. Information on buyer–supplier relationships was obtained from FactSet Revere. This database collects supply chain information from multiple sources, including company filings, annual reports, press releases, and other public disclosures. As for financial data, we relied on Compustat, a

widely recognized database providing quarterly financial information for publicly traded companies. Our empirical setting focuses on U.S.-listed companies. Given the strong political hostility between the U.S. and Russia, these firms face particularly elevated risks when maintaining operations in the Russian market, making them an appropriate sample for our analysis.

3.3.2 Data Collection

Table 3.2 outlines our data collection and cleaning procedures. We first established clear criteria for identifying "locked-in" firms. A U.S.-listed company is classified as having "operations locked-in Russia" if it (1) conducted business there before the war (through subsidiaries, suppliers, or customers), (2) continued these activities after the war began, and (3) had not publicly announced either a suspension or a withdrawal from the Russian market by the end of 2023. To construct this sample, we began with the KSE Institute dataset, which records firms with confirmed activities in Russia. The KSE Institute compiles this information from multiple sources, including official company announcements, reputable news outlets, international media, press releases, company blogs, and verified social media accounts. In cooperation with the Ukrainian Ministries of Economy, Foreign Affairs, and Digital Transformation, the institute reviews and validates the collected information to enhance accuracy and reliability. We then manually checked each firm's status and removed companies that had publicly declared an intention to suspend or exit Russian operations, even if their actual behavior suggested continued activity. This step helped exclude cases where stated intentions conflicted with on-the-ground practices. To further refine the sample, we cross-checked KSE records with Orbis, identifying U.S. firms' Russian subsidiaries and then tracing their ultimate parent companies. Next, we used Compustat to verify that these parent firms (or the listed entities themselves) were publicly traded in the United States. Applying these procedures yielded 366 U.S.-listed firms whose operations remained locked in Russia after the 2022 Russo–Ukrainian War. All other U.S.-listed firms served as the pool from which we later drew our control group.

After finalizing the firm list, we extracted quarterly financial data from Compustat spanning 2021Q1 through 2023Q3. To isolate the war's effects from other factors, we dropped 2020 to prevent confounding influences from the COVID-19 pandemic. Our panel thus contains 11 quarterly observation periods, with the official commencement of the war (February 24, 2022) serving as the demarcation point between pre- and post-treatment periods. During this process, 132 treated firms were excluded due to insufficient financial data coverage. Subsequently, we removed firms lacking data on key variables (namely total assets, return on assets (ROA), debt-to-asset ratio, quick ratio, and inventory), yielding a final sample of 216 treated firms. Additionally, 3,080 U.S.-listed companies from Compustat were retained as potential industry control units for subsequent propensity score matching estimations.

Table 3.2 Data collection and preparation process

Panel A: Data collection				
	Data Screening	Number of treated firms removed	Number of firms remained	Data source
1	Collected firms with locked-in operations in Russia	/	2,214	KSE Institute
2	Identified that firms are U.S. listed firms	1,848	366 (treated firms)	Compustat
3	Removed firms with unavailable quarterly financial data from 2021 to 2023	132	234 (treated firms) 4,103 (control firms in industries)	Compustat
4	Removed firms without total asset, ROA, quick ratio, inventory and debt to asset ratio data	18	216 (treated firms) 3,080 (control firms in the same industries)	Compustat
Panel B：PSM process				
	Data Screening	Number of treated firms removed	Number of treated firms	Number of control firms

5	Continued with the 216 treated firms	/	216	3,080
6	Remove treated firms that could not be matched with any corresponding control firms	8	208	555
Panel C: Develop data for DID analysis				
	Data Screening	Number of observations removed	Number of observations remained	Number of firms remained
7	Continued with the matched dataset	/	7,516	763
8	Remove observations without necessary variables in DID regression	2,018	5,435	542

3.4 Methods

3.4.1 Empirical Design

Our empirical strategy relied on the comparison between treated and control firms. The treated firms were the 216 U.S.-listed firms identified as maintaining locked-in operations in Russia after the war began. Control firms were chosen based on similarity in key firm-level characteristics and industry classification. To further enhance causal identification, we employed a difference-in-differences (DID) estimation approach (Bertrand et al., 2004). By comparing the change in outcomes for treated firms before and after the onset of the war with the corresponding change for control firms, this approach enables more precise isolation of the causal effect of maintaining Russian operations on firm profitability. Additionally, our specification incorporates two-way fixed effects to address potential confounding factors. Firm fixed effects control for time-invariant unobserved heterogeneity across firms, while time fixed effects absorb common temporal shocks affecting all firms uniformly.

3.4.2 PSM

The rationale for employing matching techniques was to address firm heterogeneity that could potentially bias estimates of the causal effect of maintaining

Russian operations on firm performance. To mitigate this concern, we implemented PSM to control for observable organizational characteristics, including firm size, performance metrics, and industry affiliation. Through matching along these dimensions. Thus, treated and control firms would exhibit similar covariate distributions. Achieving this balance helps reduce selection bias arising from systematic differences across firms.

The PSM procedure estimated the likelihood that a firm would elect to remain in or withdraw from Russia following the war's commencement. We employed nearest neighbor matching with exact matching on Standard Industrial Classification (SIC) codes, ensuring that paired firms operated within the same business sectors. The following probit model was specified to match treated firms with potential control counterparts:

$$Status_{i,t} = P(X_{i,t_{-1}\&\, t_{-2}\&\, t_{-3}\&\, t_{-4}}, Industry_i), \quad (3.1)$$

where P(.) represents a probit function estimating the probability that firm i would maintain or terminate its Russian operations. X denotes a vector of pre-treatment covariates, calculated as averages across four quarters preceding the conflict (i.e., 2021Q1 to 2021Q4). Employing four-quarter lagged averages mitigates potential distortions from short-term fluctuations or outliers (Levine & Toffel, 2010). For firms with incomplete quarterly data, we computed averages using available periods only; 82.69% of sample firms possessed complete four-quarter data, while 93.84% had at least three quarters available, with all firms having a minimum of one quarter. Additionally, $Industry_i$ represents four-digit SIC code dummies, ensuring that matched pairs share identical industry classifications.

3.4.3 Matching Covariates in PSM

We incorporated several covariates to estimate the probability of a firm's operational status in Russia. Firm size is a major source of heterogeneity (Barber & Lyon, 1996), so we included the four-quarter pre-war average of total assets as a size control. We also used the pre-trend average ROA to proxy for profitability. Profitable firms may tolerate greater risk and thus be more willing to bear the costs and uncertainty

of operating in a conflict zone (Dai et al., 2017). Several additional variables capture factors that could shape exit decisions. Average inventory levels were included because inventories provide a buffer against shocks (Shu & Fan, 2024); firms with larger inventories may be less sensitive to geopolitical disruptions and therefore more inclined to continue operations. Several additional variables capture factors that could shape exit decisions. Average inventory levels were included because inventories provide a buffer against shocks (Shu & Fan, 2024); firms with larger inventories may be less sensitive to geopolitical disruptions and therefore more inclined to continue operations.

Industry fixed effects were also added, as the war, although a common macro shock, does not affect all sectors equally. For example, both natural gas and water utilities fall under the two-digit SIC code 49, yet Russia is central to global natural gas supply but largely irrelevant to water utilities. Accordingly, we required exact matching across all four SIC digits to ensure that paired firms operated within identical industry classifications.

Table 3.3 The distribution of treated firms by industry

Two-digit SIC	Percentage	Two-digit SIC	Percentage	Two-digit SIC	Percentage
13	0.65%	29	1.94%	49	0.65%
16	0.65%	30	2.58%	50	1.94%
17	0.65%	32	0.65%	51	1.94%
20	3.87%	33	0.65%	53	0.65%
21	0.65%	34	2.58%	56	1.29%
22	0.65%	35	11.61%	58	0.65%
23	1.94%	36	13.55%	73	1.94%
24	0.65%	37	5.16%	78	0.65%
25	0.65%	38	14.19%	79	0.65%
26	1.94%	39	0.65%		
28	21.94%	48	1.94%		

Following propensity score calculation, each treated firm was matched with three control firms. Sensitivity analysis (detailed in Section 3.5.2) confirmed that the selected matching ratio did not distort the results. We employed nearest neighbor

matching based on minimum distance with exact SIC code requirements and without replacement, ensuring no overlap between treated and control groups. Due to the limited number of suitable counterparts in some industries, not all treated firms could be matched with three control firms, indicating that caliper restriction is unnecessary. The final matched sample comprised 555 control firms paired with 208 treated firms, while 8 treated firms lacking suitable matches were dropped from the analysis. Table 3.3 presents the industry distribution of treated firms within our sample.

3.4.4 DID Regression

We constructed a three-year panel, 11-period panel dataset (2021Q1–2023Q3) for the matched sample of 208 treated firms and 555 control firms. Data before 2021 was excluded to eliminate potential confounding influences from the COVID-19 pandemic. Given that conflict commenced in late February 2022 and first-quarter financial reports extend through March, we designated 2022Q1 as the initial post-treatment period. Since our analysis utilized quarterly data, we performed seasonality tests on the dependent variable to verify estimation validity. ANOVA results indicated that no statistically significant differences in mean financial performance measure across quarters ($p > 0.1$), suggesting that seasonal fluctuations posed no substantial concern for our dataset.

We employed a DID analysis incorporating two-way fixed effects to examine profitability differences (H1) between pre- and post-war periods, comparing treated and control firms. The baseline specification is expressed as follows:

$$Profitability_{i,t} = \alpha + \beta Status_i \times Post_t + \gamma X_{i,t} + \mu_i + \tau_t + \varepsilon_{i,t} \quad (3.2)$$

The dependent variable $Profitability_{i,t}$ denotes ROA for firm i at time t. $Status_i$ is a binary indicator equal to 1 for firms maintaining Russian operations and 0 otherwise. The variable $Post_t$ is an indicator assigned a value of 1 for quarters following 2022Q1—capturing financial reports subsequent to the war's outbreak in February 2022—and 0 for preceding periods. The vector $X_{i,t}$ contains firm-level controls to account for characteristics that might otherwise confound the estimated war effect.

Specifically, we include the logarithms of quarterly total assets, net income, accounts receivable ratio, and inventory turnover ratio. Firm size, measured by total assets, is a primary source of heterogeneity (Corbett et al., 2005). Net income proxies for the scale of profits generated from core operations (Barber & Lyon, 1996). indicates financial health, with low values in wartime potentially reflecting weaker efficiency or liquidity constraints (Deloof, 2003). Inventory turnover reflects how effectively firms manage inventories under adverse conditions (Fan et al., 2022a). The term μ_i and τ_t denote firm and time fixed effects, respectively. $\varepsilon_{i,t}$ denotes the error term. Descriptions of all variables used in the regression analysis are provided in Table 3.4.

Table 3.4 Variable descriptions

Variable	Description	Source	Reference
Profitability	ROA: the ratio of operating income to total assets	Compustat	Corbett et al., 2005
Ru_proportion	The number of firm's subsidiaries in Russia to the total number of subsidiaries	Subsidiary Data by WRDS	/
Supplier	Equals 1 if a firm has suppliers in Russia, and 0 otherwise	FactSet Revere	/
Customer	Equals 1 if a firm has suppliers in Russia, and 0 otherwise	FactSet Revere	/
Operating Slack	The ratio of PPE to sales, standardized by three-digit SIC	Compustat	Hendricks et al., 2009
Unborrowed Slack	1 – total debt/total assets	Compustat	Wiengarten et al., 2017
Total Assets	Logged total assets	Compustat	Fan et al., 2022b
Net Income	Logged net income	Compustat	Dewenter & Malatesta, 2001
Accounts Receivable Turnover	Net Credit Sales / Average Accounts Receivable	Compustat	Deloof, 2003
Inventory Turnover	The ratio of cost of goods sold to average inventories	Compustat	Fan et al., 2022a

3.4.5 Analysis for Moderating Effects

We tested H2–H4 using the in equation (3.3), which allows us to examine how market dependence and organizational slack moderate the baseline treatment effect.

$$Profitability_{i,t} = \alpha + \beta_1 Status_i \times Post_t \times Moderator_{i,t} + \beta_2 Status_i \times Post_t + \beta_3 Moderator_{i,t} + \gamma X_{i,t} + \mu_i + \tau_t + \varepsilon_{i,t} \quad (3.3)$$

In this specification, $Moderator_{i,t}$ captures either market dependency on Russia or level of organizational slack of firm i at time t. Market dependency is measured using three indicators: Ru_proportion, Supplier, and Customer. Organizational slack is captured by Operating Slack and Unborrowed Slack.

Ru_proportion measures the ratio of a firm's Russian subsidiaries relative to its total worldwide subsidiaries. Supplier and Customer are dummy variables equal to 1 if the firm has at least one identified supplier or customer in Russia, respectively, and 0 otherwise. These three variables collectively capture dependency by reflecting distinct dimensions of a firm's dependency on Russia across operations, supply ties, and customer relationships.

Operating Slack is measured as the ratio of property, plant, and equipment (PPE) to sales, standardized within three-digit SIC industries (Hendricks et al., 2009). This metric reflects the degree of excess production capacity. Firms with higher operating slack can adjust output more readily in response to shocks, making it easier to cope with disruptions (Kovach et al., 2015). Unborrowed Slack is computed as one minus the leverage ratio (Tan & Peng, 2003). A higher value indicates more unused borrowing capacity and thus greater scope to raise external finance, enhancing liquidity and financial flexibility (Tan & Peng, 2003). Conceptually, Unborrowed Slack is an externally oriented measure of access to financial resources, whereas Operating Slack is an internally oriented indicator of operational flexibility based on existing assets.

Table 3.5 Correlations and descriptive statistics of variables

	Variable	Mean	SD	1	2	3	4	5	6	7	8	9	10
1	Profitability	0.0786	0.1689										
2	Status×Post	0.1851	0.3884	0.1264***									
3	Ru_Proportion	0.0059	0.0262	-0.0154	0.1292***								
4	Supplier	0.0256	0.1579	0.0678***	0.1239***	0.0061							
5	Customer	0.3529	0.4779	0.2175***	0.4302***	0.1593***	-0.1196***						
6	Operating Slack	-0.0116	0.8597	-0.1519***	-0.0244*	0.0119	-0.0162	-0.0483***					
7	Unborrowed Slack	0.6747	0.2109	0.0114	-0.0525***	-0.0031	-0.0309**	-0.0318**	-0.034**				
8	Net Income	1.9198	3.4492	0.5480***	0.1102***	0.0012	0.0799***	0.2212***	-0.1145***	0.0382***			
9	Total Assets	6.7474	2.6041	0.3200***	0.0195	0.0041	0.0570***	0.2007***	-0.0057	-0.0953***	0.4980***		
10	Accounts Receivable Turnover	11.3592	22.0660	0.0939***	-0.0270**	-0.0445***	-0.0050	-0.0345**	-0.0319**	-0.0354***	0.0517***	-0.0048	
11	Inventory Turnover	7.3852	11.9334	-0.0616***	-0.0362***	-0.0171	-0.0230*	-0.0389***	0.0213	-0.0988***	-0.0625***	0.0389***	0.0609***

Notes: *** p <0.01, **p < 0.05, *p < 0.1; N=5.435

3.5 Results

3.5.1 Main Effects

Table 3.5 presents the correlation matrix and descriptive statistics for all variables. The maximum variance inflation factor (VIF) across our regressions was 1.42, indicating that multicollinearity posed no substantial concern for our analysis.

Regarding the baseline effect presented in Table 3.6, the coefficient for the interaction term Status × Post was significantly negative ($\beta = -0.0189$, $p < 0.01$). This finding indicates that firms maintaining locked-in operations in Russia experienced a statistically significant decline in ROA, approximately 1.89 percentage points lower than their industry-matched control counterparts following the war's outbreak. This result provides empirical support for H1, confirming that continued Russian operations adversely affected firm profitability.

Table 3.6 Results of baseline analysis

Variables	(1)	
	Estimate	SE
Status × Post	-0.0189***	0.0048
Net Income	0.0021***	0.0007
Total Assets	-0.0013	0.0034
Accounts Receivable Turnover	0.0016***	0.0006
Inventory Turnover	0.0014	0.0010
Constant	0.0564**	0.0256
Firm fixed effect	Yes	
Time fixed effect	Yes	
N	5,435	
F	11.4957***	
R-Squared (within)	0.0184	

Notes: *** p<0.01, ** p<0.05; SE=Standard Error.

Tables 3.7 presents the results examining the moderating effects of market dependency. To test H2, we examined whether market dependence—captured by Ru_proportion, Supplier, and Customer—moderates the effect of Status × Post on profitability. The results displayed in Models (2) and (3) of Table 3.7 reveal that

Ru_proportion (β = -0.0953, p < 0.1) and Supplier (β = -0.0119, p < 0.1) significantly amplified the negative baseline effect. Conversely, the interaction term Status × Post × Customer shows a significantly positive coefficient (β = 0.0172, p < 0.01). These findings indicate the heterogeneous moderating role of market dependency across different dimensions.

Table 3.7 Results of the moderating effects of dependency

Variables	(2)		(3)		(4)	
	Estimate	SE	Estimate	SE	Estimate	SE
Status×Post	-0.0098***	0.0036	-0.0083**	0.0034	-0.0226***	0.0050
Net Income	0.0025***	0.0004	0.0026***	0.0004	0.0025***	0.0004
Total Assets	-0.0029	0.0024	-0.0030	0.0022	-0.0029	0.0022
Accounts Receivable Turnover	0.0016***	0.0006	0.0016***	0.0006	0.0016**	0.0006
Inventory Turnover	0.0014	0.0008	0.0015*	0.0008	0.0015	0.0008
Ru_Proportion	0.2124*	0.1166				
Status×Post×Ru_Proportion	-0.0953*	0.0548				
Supplier			/	/		
Status×Post×Supplier			-0.0119*	0.0068		
Customer					/	/
Status×Post×Customer					0.0172***	0.0054
Constant	0.0650***	0.0195	0.0669***	0.0179	0.0665***	0.0179
Firm fixed effect	Yes		Yes		Yes	
Time fixed effect	Yes		Yes		Yes	
N	5,435		5,435		5,435	
F	9.4595***		11.8121***		13.2862***	
R-Squared (within)	0.0318		0.0367		0.0377	

Notes: *** p <0.01, **p < 0.05, *p < 0.1; SE=Standard Error.

A higher proportion of Russian subsidiaries implies greater exposure to the direct consequences of sanctions, asset impairment, and operational disruptions within the Russian market (Srai et al., 2023). Similarly, dependence on Russian suppliers

during the war can precipitate supply chain interruptions, input shortages, and escalating procurement costs (Bode et al., 2011). However, the positive moderating effect of customer relationships suggests a different mechanism. The exodus of competitors from Russia directly reduces the number of market participants, enabling locked-in firms to capture an expanded share of residual demand. This competitive consolidation may partially offset the adverse profitability consequences associated with maintaining Russian operations. Given these mixed findings—with Ru_proportion and Supplier exacerbating negative effects while Customer mitigates them—H2 is partial supported.

To test H3 and H4, we employed Operating Slack and Unborrowed Slack as moderating variables. Model (5) in Table 3.8 reveals that the coefficient for the interaction term Status × Post × Operating Slack is significantly positive ($\beta = 0.0099$, $p < 0.05$). This finding suggests that the availability of unused production capacity serves as a buffer against the adverse profitability consequences of maintaining locked-in Russian operations. Firms with greater operational flexibility can more effectively adjust production levels in response to conflict-induced disruptions, thereby mitigating performance deterioration. Model (6) shows that Unborrowed Slack similarly exerts a significant positive moderating effect on profitability ($\beta = 0.0529$, $p < 0.01$). This result indicates that firms with greater capacity to access external financing can better absorb the financial shocks associated with operating in a conflict zone, maintaining liquidity and operational continuity despite heightened uncertainty. These findings provide empirical support for both H3 and H4, demonstrating that both forms of organizational slack enable firms with locked-in Russian operations to sustain profitability more effectively. Notably, the magnitude of the Unborrowed Slack coefficient substantially larger than that of Operating Slack, suggesting that access to external financial resources plays a more important role in buffering against geopolitical adversity than internally derived operational flexibility.

Table 3.8 Results of the moderating effects of organizational slack

Variables	(5)		(6)	
	Estimate	SE	Estimate	SE
Status×Post	–0.0086***	0.0033	–0.0435***	0.0120
Net Income	0.0026***	0.0004	0.0026***	0.0004
Total Assets	–0.0029	0.0022	0.0001	0.0022
Accounts Receivable Turnover	0.0016***	0.0006	0.0014***	0.0005
Inventory Turnover	0.0014*	0.0008	0.0011	0.0008
Operating Slack	–0.0016	0.0021		
Status×Post×Operating Slack	0.0099**	0.0045		
Unborrowed Slack			0.1695***	0.0200
Status×Post×Unborrowed Slack			0.0529***	0.0165
Constant	0.0670***	0.0178	–0.0631***	0.0235
Firm fixed effect	Yes		Yes	
Time fixed effect	Yes		Yes	
N	5,435		5,435	
F	10.8423***		19.5168***	
R-Squared (within)	0.0384		0.0874	

Notes: *** p <0.01, **p < 0.05, *p < 0.1; SE=Standard Error.

3.5.2 Robustness Checks

Parallel Trend Test on DID Analysis

The validity of our DID estimates relies on the parallel trend assumption. It requires that the outcome variable (ROA) for treated and control firms would have evolved similarly over time in the absence of the treatment (Angrist & Pischke, 2009). If this condition were violated, differences in post-war outcomes could reflect underlying pre-existing trends rather than the causal impact of being locked in Russia. To evaluate this assumption, we conducted a parallel trends analysis using the following event-study specification:

$$Profitability_{i,t} = \sum_{2021q1}^{2023q3} \kappa_t \times Status_i \times D_t + \gamma X_{i,t} + \mu_i + \tau_t + \varepsilon_{i,t}, \quad (3.4)$$

where D_t denotes quarter-specific dummies for all periods from 2021Q1 to 2023Q3. The interaction term for 2021Q4 is omitted to serve as the reference period. Control variables remain the same as those employed in the baseline DID analysis.

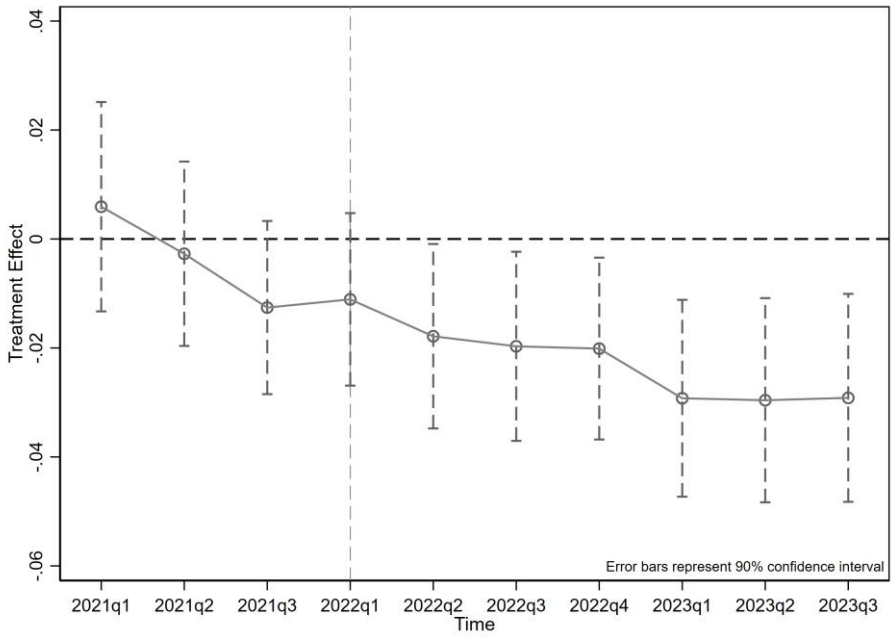


Figure 3.2 Parallel trend test on profitability (2021Q4 as the benchmark)

Results from this test are shown in Appendix Table B.1, displaying estimated coefficients alongside their confidence intervals. The coefficients for pre-treatment periods (2021Q1 through 2021Q3) are statistically insignificant for ROA ($p > 0.1$), indicating no significant outcome differences between treated and control groups prior to the war's onset. Figure 3.2 plots the average differences in ROA trajectories between two groups. The absence of statistically significant pre-treatment differences confirms that the parallel trends assumption is not violated.

Placebo Test on DID Analysis

We implemented a placebo test to further assess the robustness of our DID estimates and to rule out the possibility that the detected treatment effects were driven by random chance. We repeatedly randomized the treatment assignment across firms and re-estimated the DID model 500 times. For each replication, we recorded the coefficient on the interaction term (Status × Post) and its corresponding p-value, and then plotted the distributions of these placebo coefficients and p-values in Figure 3.3. The vertical red dashed line marks the original coefficient from our baseline DID specification using the actual treatment status. For profitability, 90.2% of the placebo DID estimates generated p-values above the 10% significance level, indicating

statistical insignificance. Moreover, the original treatment effect estimate is positioned at the extreme tail of the placebo distribution, implying that our estimation is highly unlikely to be generated through random assignments. Together, these results strengthen the causal interpretation of our findings and confirm the robustness of our DID estimates. These results suggest that our original treatment effect is highly unlikely to be generated through random assignments.

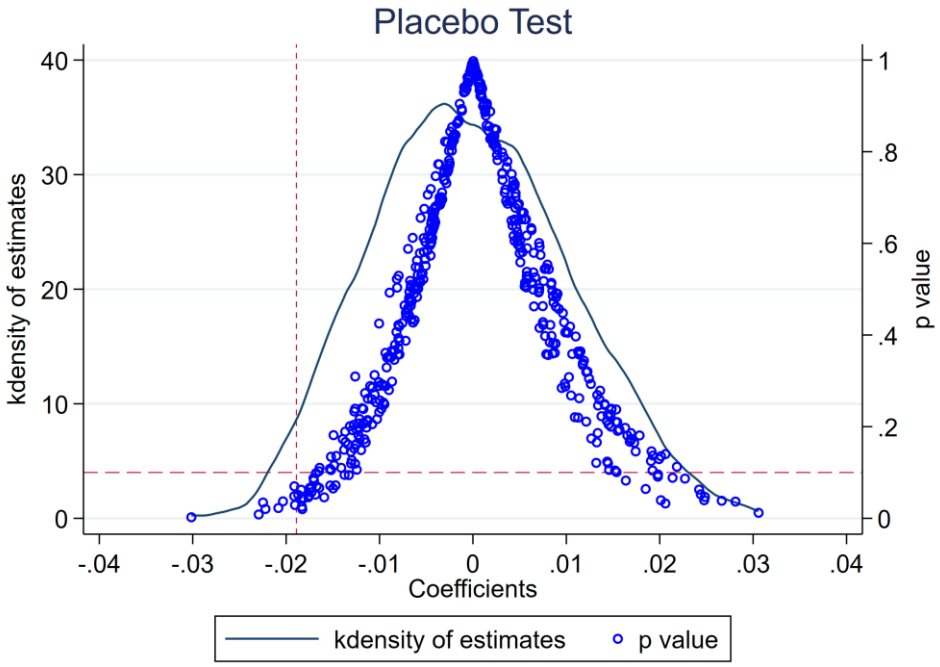


Figure 3.3 Placebo test on profitability

Sensitivity Check on Matching Ratio

During the PSM procedure, we employed a 1:3 matching ratio, allowing each treated firm to be paired with up to three control firms. To assess whether this choice affected our results, we performed a sensitivity analysis by varying the matching ratio from 1:1 to 1:10 and re-estimating the treatment effect under each specification. For each alternative ratio, we applied the same DID model, recorded the coefficient on the treatment interaction term with its corresponding confidence interval. These estimates were subsequently compared with those obtained under the 1:3 benchmark to assess whether their differences are significant. Figure 3.4 presents the results of this sensitivity analysis. The confidence intervals of the DID coefficients under all matching ratios include zero, suggesting that none of the alternative ratios yields an effect

statistically different from that of the 1:3 setup. These findings confirm that our analytical results remain stable across alternative matching specifications.

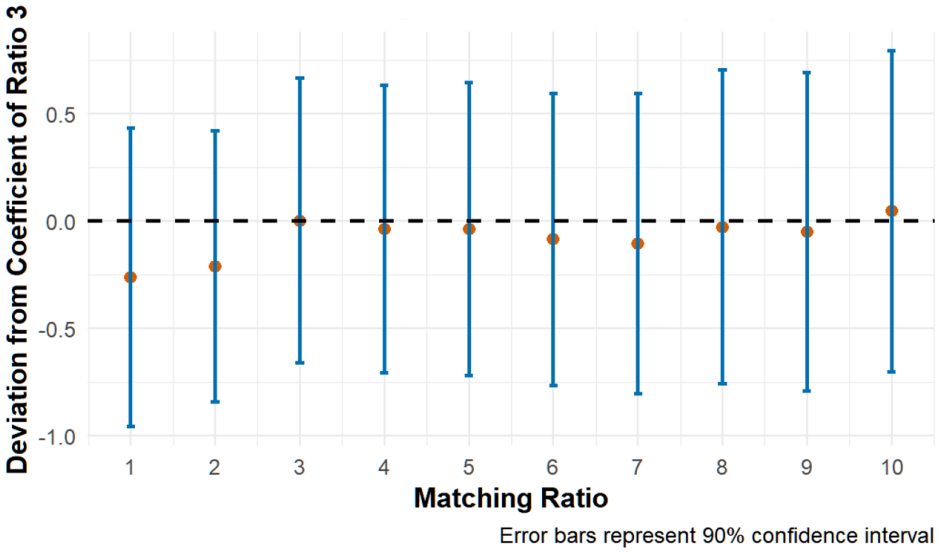


Figure 3.4 Coefficient estimates relative to matching ratio=3 on profitability

Lagged Variable Regression

To address potential reverse causality concerns, we conducted a robustness check using lagged variable regression. Specifically, we lagged all independent variables by one period to ensure that independent variables temporally precede the dependent variable, thereby mitigating the possibility that firm performance influences the independent variables rather than vice versa. The results from this lagged specification remain consistent with our main findings. As shown in Table 3.9, the interaction term Status × Post continues to be significantly negative ($\beta = -0.0134$, $p < 0.01$), confirming that firms with locked-in operations in Russia experienced significant profitability losses following the outbreak of the Russo-Ukrainian War. This robustness check strengthens our confidence in the causal interpretation.

Table 3.9 Results of lagged variable regression

Variables	(7)	
	Estimate	SE
L.Status × Post	-0.0129***	0.0039
L.Net Income	0.0038***	0.0006
L.Total Assets	0.0007	0.0038
L.Accounts Receivable Turnover	0.0016***	0.0006
L.Inventory Turnover	0.0018*	0.0010
Constant	0.0377	0.0295
Firm fixed effect	Yes	
Time fixed effect	Yes	
N	4,931	
F	16.8312***	
R-Squared (within)	0.0383	

Notes: *** p<0.01, ** p<0.05; SE=Standard Error.

3.5.3 Further Analysis

We conducted a supplementary analysis focusing on firms within the fashion and textiles industry. We identified fashion and textiles firms within our main sample by information from their SIC codes. Specifically, we screened SIC codes commonly associated with apparel, textiles, and related products. This screening process generated a subsample of 28 firms from our matched full sample.

We subsequently re-estimated the baseline model and moderation analyses (H1 - H4) using this industry-specific subsample. Results are presented in Table 3.10. The coefficient for Status × Post remained significantly negative ($\beta = -0.0159$, $p < 0.1$), indicating that fashion and textiles firms with locked-in Russian operations similarly experienced decreased profitability following the war's outbreak. This finding confirms that the adverse baseline effect identified in our full sample extends to the fashion and textiles sector, providing support for H1 within this industry context. However, the moderating effects of market dependency and organizational slack did not attain statistical significance within this subsample. The interaction terms for Ru_proportion, Supplier, Customer, Operating Slack, and Unborrowed Slack all yielded insignificant

coefficients ($p > 0.1$), suggesting that these moderating mechanisms maybe not useful within the fashion and textiles industry.

Table 3.10 Results of subsample analysis on fashion and textiles industry

Variables	Dependent variable = ROA					
	(8)	(9)	(10)	(11)	(12)	(13)
Status×Post	-0.0159*	-0.0119	-0.0184*	-0.0136	-0.0182*	0.0434
	(0.0095)	(0.0110)	(0.0100)	(0.0140)	(0.0096)	(0.0412)
Net Income	-0.0004	-0.0005	-0.0004	-0.0004	-0.0008	-0.0004
	(0.0010)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)
Total Assets	-0.04797***	-0.0479***	-0.0480***	-0.0478***	-0.0483***	-0.0423***
	(0.0053)	(0.0053)	(0.0053)	(0.0054)	(0.0053)	(0.0056)
Accounts Receivable Turnover	0.0000***	0.0000***	0.0000***	0.0000***	0.0000***	0.0000***
	(0.0000)	(0.0000)	(0.0000)	(0.0000)	(0.0000)	(0.0000)
Inventory Turnover	0.0056	0.0057	0.0051	0.0055	0.0027	0.0036
	(0.0071)	(0.0071)	(0.0071)	(0.0071)	(0.0072)	(0.007)
Ru_Proportion		-1.7771				
		(5.9037)				
Status×Post× Ru_Proportion		-0.2805				
		0.3980				
Supplier			/			
Status×Post× Supplier			0.0181			
			(0.0228)			
Customer				/		
Status×Post× Customer				-0.0036		
				(0.0161)		
Operating Slack					-0.0062*	
					(0.0037)	
Status×Post× Operating Slack					-0.0054	
					(0.0091)	
Unborrowed Slack						0.2314***
						(0.0734)

Status×Post× Unborrowed Slack						-0.0982
						(0.0717)
Constant	0.4536***	0.4603***	0.4553***	0.4529***	0.4655***	0.2784***
	(0.0423)	(0.0491)	(0.0424)	(0.0426)	(0.0425)	(0.0697)
Firm fixed effect	Yes	Yes	Yes	Yes	Yes	Yes
Time fixed effect	Yes	Yes	Yes	Yes	Yes	Yes
N	294	294	294	294	291	294
F	20.7167***	14.7976***	17.3434***	17.2069***	15.9643***	16.6981***
R-Squared (within)	0.2930	0.2946	0.2947	0.2931	0.3132	0.3203

Notes: *** p <0.01, *p < 0.1. Standards errors in parentheses.

Two potential explanations account for these moderation results. First, the limited subsample size of 28 firms substantially reduces statistical power, constraining our ability to detect moderating effects. Second, the industry composition of our full sample differs from the fashion and textiles sector. Firms within SIC codes 28 (chemicals and allied products), 38 (measuring and analyzing instruments), 36 (electronic equipment), and 35 (industrial machinery) collectively constitute approximately 61% of our total sample. These industries, which represent heavy manufacturing and technology sectors, exhibit fundamentally different operational characteristics, capital structures, and supply chain configurations compared to fashion and textiles industry. The resource deployment mechanisms and market dependency dynamics observed in these industries may not translate directly to the more labor-intensive, consumer-facing fashion and textiles sector.

3.6 Conclusion and discussion

This research investigated the operations of firms locked in geopolitical turmoil, with particular attention to firms unable to withdraw from Russia during the 2022 Russo–Ukrainian conflict. Our empirical results indicate that these firms encountered decreased profitability levels after the war. We further found that firms with high levels of operating and unborrowed slack could attenuate profitability erosion. However, the moderating role of market dependency showed mixed effects. Firms maintaining

subsidiary or supplier relationships within Russia suffered intensified profitability deterioration. Alternatively, firms sustaining customer relationships in Russia partially mitigated the adverse profitability effect.

Our supplementary analysis of the fashion and textiles industry subsample proved the baseline negative profitability effect, with firms in this sector similarly experiencing significant ROA declines following the conflict's commencement. However, the moderating mechanisms, including both organizational slack dimensions and market dependency measures, failed to achieve statistical significance within this industry context. This difference potentially reflects the distinctive operational characteristics of fashion and textiles firms compared to the heavy manufacturing and technology sectors dominating our full sample.

In summary, these findings underscore the complex interplay between resource deployment and market interconnections when navigating geopolitical disruptions. The subsequent sections discuss the theoretical contributions and managerial implications arising from this study.

3.6.1 Theoretical Contributions

In the current era of de-globalization, geopolitical uncertainties have emerged as a critical concern for MNEs, prompting scholars to integrate political dimensions into operations and supply chain management scholarship (Witt, 2019; Fan et al., 2022b). Geopolitical events impede the flow of goods and services across supply chain networks, presenting a significant source of risk (Roscoe et al., 2022). In response, a growing body of work suggests companies to "de-risk" by decoupling their supply chains from conflict-prone regions and politically sensitive zones (Freund et al., 2024).

Such suggestions, however, implicitly assume that firms can readily reconfigure their global footprints. In practice, many firms are bound to conflict regions through sunk investments, asset specificity, or institutional and contractual entanglements that make withdrawal prohibitively costly. These conditions create what we conceptualize as "locked-in operations." Our study shifts attention to this often-overlooked groups by examining how the 2022 Russo–Ukrainian War affected the profitability of firms that

remained in Russia. Rather than focusing solely on ex ante avoidance or rapid relocation of risk, we explore how firms manage direct exposure to geopolitical instability. This perspective expands OSCM research beyond traditional risk-mitigating strategies to include adaptation under severe constraints to geopolitical turmoil.

Prior literature (e.g., Fan et al., 2024) has demonstrated that dependency constrains organizational responses to geopolitical hazards. Our investigation advances these studies by disaggregating the influences of different market dependency forms—upstream, downstream, and operational—within geopolitical disruption contexts. Notably, our findings challenge the conventional view of market dependency as a liability during crises. The heterogeneous outcomes reflect dependency's dual-edged effects, suggesting it functions simultaneously as vulnerability and advantage during geopolitical disturbances. High levels of subsidiary concentration and supplier reliance within affected markets amplify profitability deterioration, as firms are exposed to operational disruptions, asset devaluation, and supply network challenges (Bode et al., 2011). Conversely, as competitors withdraw due to intensified geopolitical hazards, sanctions, or reputational pressures (Alam et al., 2023; Srai et al., 2023), locked-in firms may capture expanded market share as customers seek for alternative providers. This demand consolidation can partially counterbalance geopolitical disruption's adverse profitability consequences. The study offers a more balanced perspective on the role of market dependency on organizational resilience, enriching the OSCM literature by identifying dependency as an important determinant shaping firms' geopolitical conflict response.

Additionally, previous investigations have highlighted the benefits of operating slack benefits for attenuating supply chain hazards (Kovach et al., 2015; Wiengarten et al., 2017). Our results confirm that operating slack retains its value in helping firms mitigate the negative impact of geopolitical shocks, particularly when firms have few options to reconfigure their global activities. This finding aligns with established understanding that lean organizations exhibit heightened vulnerability within uncertain environments (Obermaier & Donhauser, 2012). Additionally, we extend existing work by highlighting the importance of unborrowed slack. Firms with greater unused

borrowing capacity can more effectively attract external financing in turbulent periods, as creditors may have stronger confidence in their ability to generate future cash flows when leverage is relatively low (Bendig et al., 2017). Thus, unborrowed slack not only reflects financial conservatism but also enhances access to external resources precisely when internal cash flows are under pressure, thereby supporting operational continuity during crises.

Finally, our study advances RDT by situating it within the context of acute geopolitical risk. RDT emphasizes that organizations depend on external actors for critical resources and must manage these dependencies to reduce uncertainty and ensure survival (Pfeffer & Salancik, 1978). Much of the classic RDT literature examines how firms proactively shape or diversify their dependencies to gain bargaining power and control. In contrast, we provide a context in which strategic discretion is constrained: "locked-in operations" under geopolitical conflict. Our findings show that even under such constraints, firms can draw on two sets of buffers—internal productive resources and potential external financing capacity—to sustain their operations. In doing so, we extend RDT by illustrating how organizations navigate resource dependence when exit and reconfiguration are not viable options, thereby enriching our understanding of firm behavior under extreme geopolitical turmoil.

3.6.2 Managerial Implications

The study offers several important insights for managers operating in, or considering entry into, politically volatile environments. First, firms should systematically evaluate their exposure to markets that are vulnerable to geopolitical tension. Heavy dependence on operations, subsidiaries, or key suppliers located in conflict zones would severely restrict a firm's flexibility and intensify financial vulnerabilities during crises. Accordingly, managers should develop strategies to reduce over-reliance on any single high-risk market. Such approaches could involve geographic diversification initiatives or building parallel supply chains that can be reconfigured as geopolitical landscapes shift. Nonetheless, the advantages of sustaining market presence following competitor departures remain contingent rather than assured.

Firms must carefully evaluate the potential gains against the risks and challenges of operating in geopolitically volatile environments.

Additionally, this study underscores the role of slack resources as a buffer against geopolitical uncertainties. Firms with greater operating slack are better equipped to absorb disruptions and mitigate the impact of conflict-related shocks on profitability when they cannot exit high-risk locations. For managers, this implies that maintaining some degree of excess capacity or operational redundancy can be an intentional resilience strategy, rather than merely a sign of inefficiency. However, slack is not costless. Excessive idle resources may depress returns in stable periods, suggesting the need for careful risk–return analysis to determine an appropriate resilience premium. Managers should thus adjust slack levels based on the firm's exposure to geopolitical and supply chain risks, ensuring sufficient buffers without undermining overall productivity.

Finally, the study highlights the importance of prudent financial structure for crisis resilience. Maintaining moderate leverage—and thus higher unborrowed slack—can be critical for preserving access to external funding during periods of heightened uncertainty. Firms that enter a geopolitical crisis with already high leverage may face tighter credit conditions, weaker bargaining power with lenders, and limited capacity to secure additional capital (Phan et al., 2019). By actively managing leverage level and preserving borrowing capacity in normal times, managers can enhance their firms' ability to mobilize external financial resources when operations are disrupted, thereby increasing the likelihood of survival and successful adaptation under geopolitical stress.

3.6.3 Limitations and Future Research Directions

This study is subject to several limitations that could be addressed by future research. First, our analysis centers on the 2022 Russo–Ukrainian War, a militarized geopolitical conflict characterized by a sudden onset and relatively discrete escalation. It is therefore uncertain whether the observed results generalize to other forms of geopolitical tension, such as economic disputes, trade wars, or cultural conflicts, which

may evolve more gradually and through different institutional channels. Subsequent work could investigate whether the mechanisms identified here operate similarly in these alternative contexts or whether distinct dynamics emerge. Second, the empirical setting is restricted to firms listed in the United States, a country that has been in pronounced political and economic confrontation with Russia. This focus may shape both firms' strategic options and the external pressures they face (e.g., sanctions, stakeholder expectations, reputational concerns). Future research could incorporate firms from countries with less adversarial relationships to Russia, such as China or India, to assess whether these dynamics differ. Additionally, the study relies exclusively on secondary, quantitative data. While this approach permits broad coverage and rigorous econometric analysis, it does not fully capture the underlying managerial rationales, political considerations, and ethical judgments that explain the decision to remain in a conflict zone. Future studies could employ qualitative methods, such as in-depth interviews, case studies, or text analyses to gain deeper insights into these decision-making processes and motivations. Lastly, this study compared the treated firms (i.e., those with locked-in operations in geopolitical areas) with similar industrial pairs as control firms, without explicitly distinguishing whether control firms had prior operations in Russia before the war. Future studies could refine the empirical design by constructing more granular comparison groups.

Chapter 4: Foreign Exit as Corporate Sociopolitical Activism: Impacts of Firm Exits from Russia on Firm Performance Amid the 2022 Russo-Ukrainian War

4.1 Introduction

Over the past three decades, MNEs have benefited significantly from globalization by expanding into international markets. However, alongside global expansion, foreign exit—the withdrawal or closure of operations in a foreign market—has also become a prevalent phenomenon (Dai et al., 2017). Despite its strategic importance, market exit remains relatively understudied compared to market entry (Dixit & Chintagunta, 2007; Sethuram & Gaur, 2024). This imbalance restricts the ability of international business (IB) research to fully grasp the complexities of contemporary global business dynamics, particularly amid rising geopolitical tensions, deglobalization, and decoupling trends (Witt et al., 2023).

Traditionally, IB literature has portrayed foreign exit negatively, viewing it as evidence of strategic errors or managerial failure (Sethuram & Gaur, 2024; Sousa & Tan, 2015). Literature often framed exit as a reactive response to poor subsidiary performance (Surdu et al., 2019) or increased uncertainty in the host country environment (Dai et al., 2017). Such exits were considered defensive decisions to protect firm assets from volatile conditions or unsatisfactory financial results (Elfenbein & Knott, 2015). However, recent corporate actions indicate a shift from these purely economic and defensive rationales toward sociopolitical motives for exit.

The 2022 Russian invasion of Ukraine represents a prominent case of exit driven by corporate sociopolitical activism (CSA), defined as corporate actions taken to publicly support or oppose sociopolitical issues (Bhagwat et al., 2020). Following Russia's military actions in Ukraine, many NMEs announced the suspension or complete exit of their operations in Russia. The announcement is not primarily due to operational underperformance but to publicly oppose the war under stakeholder's pressure (Gershkovich et al., 2022). These exits were often accompanied by explicit activist statements. For example, Adidas closed all its stores in Russia, stating: "We strongly

condemn any form of violence and stand in solidarity with those calling for peace" (Kantchev, 2022). Likewise, H&M Group suspended sales in Russia with the announcement stating: "H&M Group cares for all colleagues and joins all those around the world who are calling for peace."

Building on recent marketing literature, we conceptualize the corporate exodus from Russia as CSA-oriented exit (Bhagwat et al., 2020). Such actions signal the firm's ethical stance on contested sociopolitical issues and respond to stakeholder pressures (Gershkovich et al., 2022). This framing contrasts sharply with traditional explanations of foreign exit as a reactive measure to underperformance or risk exposure (Karakaya, 2000). Instead, CSA-oriented exit reflects firms' proactive efforts aiming to demonstrate moral responsibility and align with stakeholder expectations to enhance legitimacy (Ganesan & Mallapragada, 2025).

Yet, withdrawing from a foreign market for sociopolitical reasons is not without significant costs. While stakeholders such as like-mind consumers may reward firms for taking a principled stand (Bhagwat et al., 2020; Ganesan & Mallapragada, 2025), exiting profitable markets entail direct financial losses and the complex reallocation of resources. Current literature offers limited insights into the performance implications of such exits. To address this gap, our first research question (RQ1) asks: *How does CSA-oriented exit from foreign markets affect firm performance, specifically brand equity and profitability?* Following the call to measure multiple dimensions of performance (Hult et al., 2008), We examine both financial performance and reputation-based performance to provide a more comprehensive understanding of its performance implications.

To address this question, we integrate instrumental stakeholder theory and expectation-confirmation theory. Instrumental stakeholder theory (IST) argues that proactively addressing stakeholder expectations can enhance firm performance by fostering legitimacy, trust, and long-term stakeholder relationships (Donaldson & Preston, 1995; Jones, 1995). Expectation-confirmation theory (ECT) complements this perspective by suggesting stakeholders evaluate firms based on how well corporate actions align with their expectations during ethical or institutional crises. Integrating IST with ECT, we argue that value-consistent exits confirm stakeholders' moral expectations, thereby strengthening legitimacy and trust that translate into brand equity and, ultimately, profit margin.

The impact of CSA-oriented exit on firm performance is likely not uniform across firms but rather depends on how strongly exit actions align with stakeholder expectations (Hambrick & Wowak, 2021). Therefore, we propose a second research question (RQ2): *Under what conditions do firms gain greater benefits from CSA-oriented exit?* We conceptualize expectation alignment as a multidimensional construct capturing how well the exit resonates with stakeholders' expectation. Specifically, we argue that firms gain more when their exit aligns with their primary market's institutional stance (normative alignment), when they already enjoy strong positive word of mouth (WOM) (reputational alignment), and when they act promptly to demonstrate moral urgency (temporal alignment).

Empirically, we leverage the natural experiment created by the 2022 Russo-Ukrainian war, examining global MNEs with operations in Russia at the war's onset. The treated group includes firms who announced the exit from Russia after the war started (CSA-leavers) while the control group includes firms with no such an announcement (stayers). We use a robust difference-in-differences design combined with entropy balancing to estimate the average treatment effects of the exit announcement on the treated firms. Our findings indicate that CSA-oriented exits significantly enhanced both brand equity and profitability. Furthermore, these benefits were amplified for firms whose actions aligned with their home countries' institutional stances, those with more positive word-of-mouth, and those that announced exit decisions earlier.

Despite our DID model addressing observable heterogeneity through entropy balancing and controlling for time- and firm-invariant characteristics via two-way fixed effects, we implement comprehensive robustness checks to address two primary endogeneity concerns: selection bias and reverse causality. We employ complementary approaches. First, parallel trends tests confirm that treated and control groups followed similar trajectories before the war, ensuring that our results are not driven by pre-existing different trends that might influence firms' self-selection into exit decisions or by performance trajectories determining exit choices. Second, placebo tests using random treatment assignments and alternative time windows verify that our effects are specific to actual exit announcements rather than driven by unobserved confounders. In addition, we apply inverse probability weighting (IPW) to adjust for differences in the propensity of

treatment assignment based on observable characteristics, further ensuring that our estimates are not biased by systematic differences between exiting and staying firms. We also estimate the potential influence of unobservable variables (Oster, 2019), finding that selection on unobservable is unlikely to substantially bias our results. To address reverse causality concerns—the possibility that performance outcomes drive exit decisions—we implement additional strategies. We use lagged independent variables to ensure proper temporal ordering, confirming that exit announcements precede performance improvements. Furthermore, we construct an instrumental variable that affects exit decisions but not performance outcomes directly, thereby isolating exogenous variation in exit announcements to address endogeneity concerns. These robustness checks provide strong evidence that CSA-oriented exits causally enhance both brand equity and profitability.

This study contributes to IB and marketing literature in several important ways. First, we reframe foreign exit as a proactive strategic choice rather than merely a reactive response to failure, responding directly to recent calls in IB literature to elevate market exit or divestment as a critical area of inquiry (Sethuram & Gaur, 2024). Second, we contribute to international marketing literature by empirically demonstrating that CSA-oriented exits can strategically enhance brand value, challenging traditional marketing assumptions that view exits primarily as defensive or damage-limiting strategies. Third, we extend CSA literature by clarifying how geopolitical activism, executed through strategic exits, can yield tangible reputational and financial benefits when well-aligned with stakeholder expectations. These contributions provide both theoretical insight and practical guidance for firms navigating complex sociopolitical challenges in global markets.

4.2 Literature Review

4.2.1 Foreign Exit

Exit from a foreign market, also termed as “foreign divestment” in some IB research (e.g., Boddewyn, 1983; Sousa & Tan, 2015), has historically been framed as an unfortunate outcome—mainly a defensive response to failure, risk, or strategic misfit. Early studies established this “failure narrative,” showing that multinational enterprises (MNEs) typically withdraw when subsidiaries underperform or when growth expectations

are not met (Boddewyn, 1983). Risk-based explanations likewise emphasize how rising political or economic threats push firms to limit exposure, aligning with institutional and real-options theories that view exit as a prudent option under uncertainty (Belderbos & Zou, 2009). The resource-based view complements this logic: firms prune units that do not fit core advantages, reallocating resources to protect overall performance (Chang & Singh, 1999). Together, these dominant lenses—performance failure, risk avoidance, and resource misfit—have advanced understanding of why firms retreat but mostly treat exit as defensive (Sethuram & Gaur, 2024).

However, some IB scholars have begun to push this narrow view. Berry (2010) argues that exit can also be a deliberate strategic reallocation, freeing up capital and management focus for higher-value opportunities. Empirical work by Vidal and Mitchell (2018) further shows that proactive exits can realign firm portfolios and create long-term value, challenging the notion that exit always destroys value.

Today's turbulent global landscape makes this broader lens more urgent. Geopolitical tensions, economic decoupling, and rising skepticism toward globalization are driving firms to rethink foreign operations not only for economic reasons but also to manage legitimacy and stakeholder trust (Sethuram & Gaur, 2024). Recent research highlights how non-economic motives increasingly shape exit decisions: for example, Thein et al. (2024) show that firms withdrawing from Myanmar (or sanctioned regimes) often acted under pressures from stakeholders and civil society. Thus the exit can be viewed as an ethical stance rather than just loss-cutting. These voluntary, values-driven exits illustrate that the reputational impact of exit depends on how well it aligns with societal expectations (Zaheer & Mosakowski, 1997). A "responsible exit" can strengthen legitimacy and brand equity; an irresponsible one risks backlash (Thein et al., 2024).

This shift reveals a clear research gap: while mainstream IB research treats foreign exit mainly as a reactive retreat, it overlooks exit's potential as a proactive stakeholder strategy—a form of CSA that signals a firm's moral alignment with its key audiences. In this study, we respond to recent calls (Sethuram & Gaur, 2024) by reframing foreign exit as not merely a retreat but, under certain conditions, an intentional and positive instrument to build legitimacy and stakeholder trust.

4.2.2 Corporate Sociopolitical Activism

CSA refers to firms publicly taking a stand on contested social or political issues (Bhagwat et al., 2020; Vredenburg et al., 2020). CSA and corporate social responsibility (CSR) are both characterized by high public visibility, as they involve actions that attract substantial media coverage and stakeholder attention (Tsai et al., 2023). However, CSA differs from CSR in its inherently polarizing nature (Bhagwat et al., 2020). While CSR initiatives typically address widely supported social or environmental goals and tend to generate broad consensus, CSA often entails taking explicit stances on polarized sociopolitical issues, which can simultaneously bolster support among aligned stakeholders and provoke opposition from others.

Although CSA can yield substantial opportunities such as reinforcing authenticity, strengthening ties with values-aligned stakeholders, and differentiating the brand, it can also expose firms to reputational and financial risks. However, in today's mediatized environment, corporate actions are rapidly amplified and scrutinized across traditional and social media (Tsai et al., 2023). Consumers and other stakeholders, fueled by the growth of political consumerism, increasingly pressure firms to publicly articulate their positions on salient sociopolitical issues (Billard & Moran, 2020; Jungblut & Johnen, 2021). The global sociopolitical climate has intensified substantially due to ongoing conflicts, and the Russo-Ukrainian war offers a rich context for examining CSA, which is attracting increasing scholarly attention (Gong et al., 2025).

Traditionally, CSA behaviors have encompassed public statements, charitable donations, boycotts, and other symbolic or material gestures (Mukherjee & Althuizen, 2020). These actions serve as strategic signals to stakeholders, aiming to convey organizational values and align with salient societal expectations (Bhagwat et al., 2020; Braga et al., 2024). However, literature emphasizes that the impact of CSA is highly contingent. Positive outcomes, such as enhanced brand equity, customer loyalty, employee morale, and organizational legitimacy, are typically realized when there is strong alignment between the firm's stance and the values of key stakeholders (Mkrtchyan et al., 2024; Jin et al., 2023). Conversely, perceived misalignment or authenticity deficits can trigger backlash, reputation loss, or even anti-brand activism (Vredenburg et al., 2020; Ahmad et al., 2024). This conditionality underlines the importance of considering not just whether a

firm engages in activism, but also how, when, and for whom such activism is enacted (Braga et al., 2024; Homroy & Gangopadhyay, 2025).

Notably, while most studies focus on relatively low-cost or symbolic forms of CSA, such as statements or donations, far fewer have explored exit—that is, the voluntary withdrawal from a market or stakeholder relationship—as a form of CSA (Glambosky & Peterburgsky, 2022; Fong & Kim, 2023). Compared to other modes of activism, exit often entails significant financial and operational sacrifices, signaling a heightened level of commitment to the espoused cause (Glambosky & Peterburgsky, 2022; Shukla et al., 2025). Yet, the efficacy and boundary conditions of exit as CSA remain underexamined, especially regarding when and how such costly acts are most likely to yield stakeholder approval and tangible performance benefits.

In summary, this study seeks to advance CSA literature by expanding the behavioral boundaries of corporate activism to include exit. By conceptualizing exit as both a form of brand activism and a strategic signal to stakeholders, we address a critical gap in the literature and set the stage for exploring the contingent effects of such actions. This foundation motivates our investigation of the moderating role of stakeholder alignment and the interplay between expectations and outcome confirmations.

4.3 Theory and Hypotheses

4.3.1 Theoretical Foundation

To explain why and when foreign exit as CSA may garner stakeholder approval and translate into performance gains, we integrate IST with ECT. IST highlights the instrumental value of meeting stakeholder expectations for competitive advantage and financial outcomes (Donaldson & Preston, 1995; Jones, 1995). ECT explains how stakeholders translate corporate actions into satisfaction and support through expectation–experience matching (Oliver, 1993; Bhattacherjee, 2001). Recent literature has begun to combine these lenses to link stakeholder oriented actions with market consequences (e.g., Fan et al., 2021). In the CSA oriented exit context, we integrate the two theories to jointly predict that actions which confirm salient stakeholder expectations will yield relational and market benefits.

IST starts from the premise that stakeholders control critical resources. For example,

customers shape demand and reputation of firms. The theory's instrumental thesis holds that firms which proactively address stakeholder expectations cultivate trust, cooperation, and legitimacy that are valuable, rare, and hard to imitate, and thus support sustained advantage and firm performance (e.g., profitability, stability, growth) (Donaldson & Preston, 1995; Jones, 1995). In other words, stakeholder management is not merely "nice to have," but a pathway to value creation through stakeholder controlled resources. A growing body of work documents market and nonmarket payoffs to stakeholder engagement. In capital markets and regulation intensive settings, effective engagement with external stakeholders increases firm valuation and lowers risk by reducing conflict and delay—i.e., turning "nonmarket threats into assets" (Henisz et al., 2014). In customer markets, stakeholder directed conduct (often studied via CSR as an IST mechanism) builds trust and identification, which raises loyalty and advocacy (Homburg et al., 2013) and translates stakeholder satisfaction into performance (Berrone et al., 2007). Taken together, IST provides the value creation logic: when stakeholder expectations are met, firms earn support that reduces risk, strengthens market demand, and ultimately improves financial performance.

ECT explains stakeholder approval and continued support as a function of confirmation—the match between prior expectations and realized experience (Oliver, 1993). When corporate actions confirm or exceed expectations, stakeholders report higher satisfaction and willingness to support the firm; expectancy violation triggers disappointment and withdrawal (Bhattacherjee, 2001). The mechanisms generalize beyond consumer repurchase to organizational settings: confirmation shapes attitudes and behavioral intentions across contexts (Hong et al., 2010). ECT also implies that prior's matter (e.g., trust, reputation, or WOM as credibility baselines) for how observers interpret the same act, and that expectation calibration (e.g., timing and clarity) alters perceived confirmation strength.

In morally charged crises such as Russia's invasion of Ukraine, stakeholders develop clear normative expectations about what a "values consistent" firm should do. A CSA oriented exit communicates more than rhetoric: because it typically entails real operational and financial sacrifices, it functions as a high diagnostic, credibility enhancing signal relative to low cost statements. When the action confirms stakeholders'

expectations—on substance and timing—it elevates satisfaction, trust, and identification; when it disconfirms them (e.g., appears reluctant, delayed, or inconsistent with prior positioning), stakeholders are more likely to register disappointment, skepticism, or backlash.

4.3.2 Impacts of CSA-oriented Exit

Drawing on IST and ECT, we argue that announcing exit from Russia during the 2022 Russo Ukrainian War (a highly moralized, media intense crisis) strengthens brand equity because it confirms what salient stakeholders in many primary markets expected firms to do (e.g., cease commercial ties with the aggressor) and does so through a costly action rather than low cost rhetoric. ECT predicts that when a firm's visible behavior meets or exceeds prior stakeholder expectations in such contexts, satisfaction, trust, and identification rise, fueling supportive responses that accumulate in brand equity (Oliver, 1993; Bhattacherjee, 2001). IST explains why those supportive responses translate into brand value: stakeholder approval expands access to stakeholder controlled resources (attention, goodwill, cooperation), which improves reputational assets and market outcomes (Donaldson & Preston, 1995).

In business markets, closely related evidence shows that stakeholder directed conduct (e.g., CSR) builds trust and identification and, in turn, downstream loyalty—canonical pathways into brand equity (Homburg et al., 2013). In the war context specifically, activism aligned with anti-war norms has been shown to elicit consumer rewarding and favorable reactions, consistent with these mechanisms (Fong & Kim, 2023; Glambosky & Peterburgsky, 2022). Accordingly, firms that announced Russia exits as an activist stand should, on average, enjoy higher brand equity than comparable firms that did not announce such exits, because expectation confirming, high diagnostic signals unlock the IST channel from stakeholder approval to brand value.

Hypothesis 1 (H1): Firms announced to exit from Russia have a higher brand equity compared with those firms without such an announcement during the 2022 Russo-Ukrainian War.

In addition, we argue that the brand-equity gains unlocked by expectation-confirming CSA-oriented exit from Russia during the 2022 Russo-Ukrainian

War convert into higher profit margins. On the ECT side, when firms' exits meet stakeholders' anti-war expectations, satisfaction and trust rise, generating supportive behaviors that strengthen brand equity (Oliver, 1993; Bhattacherjee, 2001). IST then explains how this approval becomes economically appropriable: stronger brand equity raises willingness-to-pay and lowers price sensitivity, while also improving loyalty and referral—effects that raise revenue per customer and reduce acquisition/retention costs, thereby expanding margins (Rust et al., 2004; Homburg et al., 2013).

In the specific war context, evidence indicates that anti-war corporate actions elicit consumer rewarding and favorable responses (e.g., preference and advocacy), consistent with price-premium and efficiency mechanisms that support margin gains (Fong & Kim, 2023; Glambosky & Peterburgsky, 2022). Moreover, by aligning with salient norms in key home markets, exit also reduces nonmarket frictions (e.g., boycotts, regulatory scrutiny), lowering cost volatility and protecting profitability (Donaldson & Preston, 1995; Henisz et al., 2014). Accordingly, firms that announced exits as an activist stand should exhibit higher profitability than comparable non-announcers because brand-equity improvements—rooted in expectation confirmation—flow through instrumental stakeholder channels into margin expansion.

Hypothesis 2 (H2): Firms announced to exit from Russia have a higher profit margin compared with those firms without such an announcement during the 2022 Russo-Ukrainian War.

4.3.3 Moderating Effects of Alignments

While H1–H2 posit that expectation-confirming CSA-oriented exit enhances brand equity and, in turn, profitability, the magnitude of these gains may be conditional on how strongly stakeholders perceive the action to confirm what they expect. Under ECT, confirmation strength depends on (i) the expectation baseline shaped by institutional cues and public discourse, (ii) credibility priors that color authenticity inferences, and (iii) temporal cues that calibrate whether an act appears conviction-driven or merely responsive (Oliver, 1993; Bhattacherjee, 2001; Tsai et al., 2023). IST then explains why stronger confirmation yields larger appropriable value: the more salient and convinced stakeholders are, the more readily they mobilize resources that firms can capture in markets and

nonmarkets (Donaldson & Preston, 1995; Henisz et al., 2014).

In the Russo-Ukrainian War context, anti-war norms in many primary markets heightened baseline expectations for corporate exit. Thus exit announcements aligned with those markets' norms elicited consumer rewarding and favorable investor reactions (Fong & Kim, 2023; Glambosky & Peterburgsky, 2022). Pre-existing positive WOM/reputation operates as a credibility prior that increases the likelihood observers assimilate the exit as authentic rather than opportunistic (Kim et al., 2009; Vredenburg et al., 2020), and earlier announcements serve as higher-diagnostic signals of conviction and authenticity (Jin et al., 2023). Accordingly, we examine three alignment amplifiers—normative (institutional stance), reputational (prior WOM), and temporal (announcement timing)—as moderators that strengthen the pathway from CSA-exit to brand equity and profitability (Hypothesis 3–Hypothesis 5).

First, the strength of confirmation depends on the baseline expectations stakeholders hold, which are shaped by the institutional stance (e.g., government's open stance) in a firm's primary markets (Oliver, 1993; Bhattacherjee, 2001; Tsai et al., 2023). When those markets (such as the headquartered market) broadly condemn the invasion and expect responsible firms to sever ties, a Russia exit is more likely to be read as norm congruent, authentic, and high diagnostic—as opposed to opportunistic—thereby producing stronger confirmation (Vredenburg et al., 2020). Convinced, high salience stakeholders mobilizing resources in the firm's favor can amplify brand equity and profitability gains (Donaldson & Preston, 1995; Henisz et al., 2014). Consistent with this mechanism in the Russo Ukrainian War context, anti-war corporate actions elicited consumer rewarding and favorable reactions in markets where anti-war norms were salient (Glambosky & Peterburgsky, 2022; Fong & Kim, 2023). Therefore, we postulate:

Hypothesis 3 (H3): The positive effect of CSA-oriented exit on (a) brand equity and (b) profitability is stronger when the exiting firm's decision aligns with its primary market's institutional stance.

ECT suggests that observers interpret new actions through pre-exiting priors; a strong positive reputation provides a credibility baseline that shapes how stakeholders assimilate subsequent signals (Oliver, 1993; Kim et al., 2009). In this sense, reputation does more than convey past quality—it legitimates the firm's decision by positioning it as

appropriate, desirable, and taken-for-granted within prevailing norms, thereby making a CSA-oriented exit appear authentic rather than opportunistic (Vredenburg et al., 2020).

In digital markets, electronic WOM—"any positive or negative statement about a product, brand, or company made by potential, current, or former customers and made available to a multitude of people and institutions via the Internet" (Hennig-Thurau et al., 2004, p. 39)—both reflects and amplifies that reputation. Extensive evidence shows that WOM valence/volume is tightly linked to market outcomes (sales, demand elasticity) and even capital-market reactions, underscoring its role as a reputation barometer at the brand and firm level (Babić Rosario et al., 2016). Social media further accelerates this dynamic, making reputation cues more salient and widely diffused, which heightens the perceived authenticity and diagnosticity of costly actions such as exiting Russia in 2022 (Kaplan & Haenlein, 2010). Through IST channels, these strengthened confirmation and legitimacy judgments raise willingness-to-pay, reduce perceived risk (brand credibility), and expand supportive behaviors (advocacy, loyalty), thereby amplifying the brand-equity and profitability gains from CSA-oriented exit (Donaldson & Preston, 1995; Homburg et al., 2013).

Hypothesis 4 (H4): The positive effect of CSA-oriented exit on (a) brand equity and (b) profitability is stronger when the firms are with more positive WOM.

Lastly, we contend that timing calibrates the strength of expectation confirmation: in highly moralized, fast-moving crises such as the 2022 Russo-Ukrainian War, stakeholders rapidly form clear expectations about what a "values-consistent" firm should do; earlier, unprompted exit more fully matches that expectation set, whereas delay invites disconfirmation and skepticism (Oliver, 1993). Early announcements also carry greater diagnosticity and perceived authenticity—observers infer that the decision is value-driven rather than pressure-driven—thereby strengthening confirmation and downstream supportive responses (Vredenburg et al., 2020; Jin et al., 2023). Empirically consistent with this logic in the war context, audiences reward proactive anti-war actions (e.g., exits) with favorable attitudinal and behavioral reactions (Fong & Kim, 2023). Consequently, earlier, authenticity-infused confirmation mobilizes stakeholder-controlled resources—greater demand and willingness-to-pay, advocacy, cooperation, and reduced nonmarket frictions—which enhance brand equity and profitability (Donaldson & Preston, 1995;

Henisz et al., 2014).

Hypothesis 5 (H5): The positive effect of CSA-oriented exit on (a) brand equity and (b) profit margin is stronger when the exit is announced earlier.

Figure 4.1 illustrates the theoretical framework.

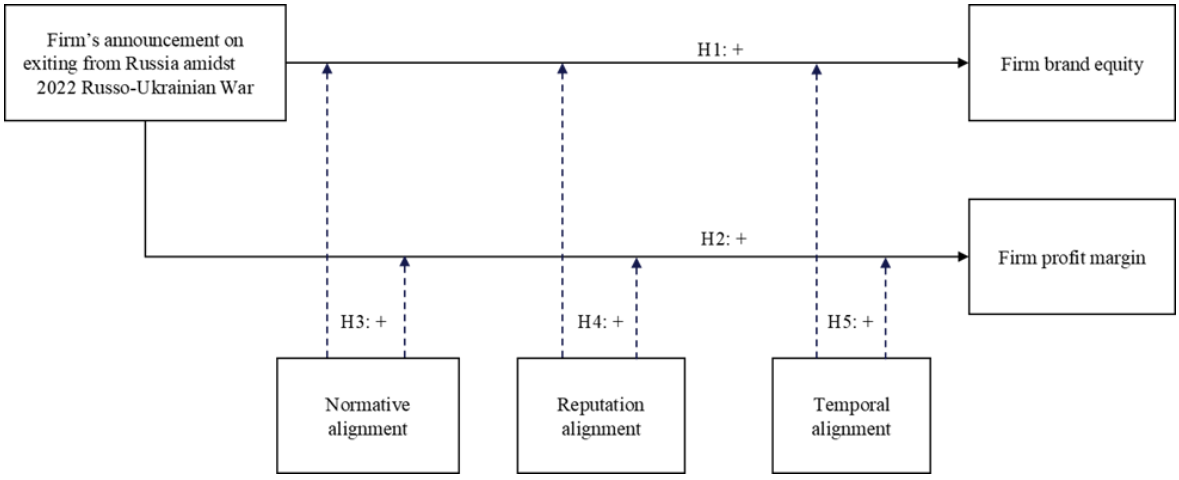


Figure 4.1 Conceptual framework

4.4 Data

4.4.1 Sample

This study focuses on U.S.-listed firms, as these large multinational corporations have a significant presence in the global market. Additionally, U.S.-listed firms often face greater public scrutiny and stakeholder activism, which may influence their strategic decisions regarding international operations, particularly in geopolitically sensitive contexts. The sample collection process began by identifying U.S.-listed firms with business ties in the Russian market at the onsite of the 2022 Russo-Ukrainian War. To determine these firms, we relied on data from the Kyiv School of Economics (KSE) Institute, which collected information from various sources to assess companies with confirmed business activities in Russia. The KSE collaborated with Ukrainian government agencies to validate the information collected. We also performed an independent cross-verification by comparing the KSE data with records from the Orbis database, which provides information on foreign companies with subsidiaries in Russia. This verification process allowed us to confirm the initial pool of companies with operations in Russia.

Subsequently, we used the Compustat North America database to confirm that the firms in our sample are publicly listed in the United States. The initial sample pool consisted of 744 U.S.-listed firms with business ties in the Russian market before the war.

We categorized these firms into two groups based on their response to the war: "stay" or "leave." Firms were classified as "leave" if they already made an announcement explicitly stating the suspension of their existing business activities in Russia (including sales, shipments, and operations) or declaring immediate withdrawal from the market. We relied on the KSE database and cross-validate each case using Factiva to ensure that the statements were directly linked to the outbreak of the Russo–Ukrainian War. Besides the cases of Adidas and McDonald demonstrating the leave with the statement against war, other cases include Coca-Cola's exit announcement declared that "our hearts are with the people who are enduring unconscionable effects from these tragic events in Ukraine,". PepsiCo announced suspension of production and sales in Russia with the message that "war is never an answer." These public statements of solidarity and moral positioning indicate that such exits were intended to signal corporate sociopolitical activism, not merely responses to elevated operational risks.

Conversely, firms without such announcements, or those that only disclosed plans to scale down their operations or suspend future investments without halting ongoing activities, were classified as "stay." To further refine the classification, we manually reviewed the status of each firm, excluding those that previously announced plans to leave but were publicly reported to still operate as usual.

Additionally, we excluded firms in the financial sector (Standard Industrial Classification (SIC) codes from 6000 to 6799), as they typically do not have physical business activities in the country (Fan et al., 2022). We also did not consider companies that announced their withdrawal after 2022 to mitigate potential biased estimates resulting from heterogeneous treatment effects (Baker et al., 2022). These excluded firms represent only a small proportion of our sample. Table C.1 in Appendix C provides some additional examples of the announcements from official websites and media reports. After determining the list of firms, we collected their annual financial data from the Compustat North America database, covering the period from 2017 to 2024. The final sample consists of 599 firms. Figure 4.2 summarizes the sample collection process.

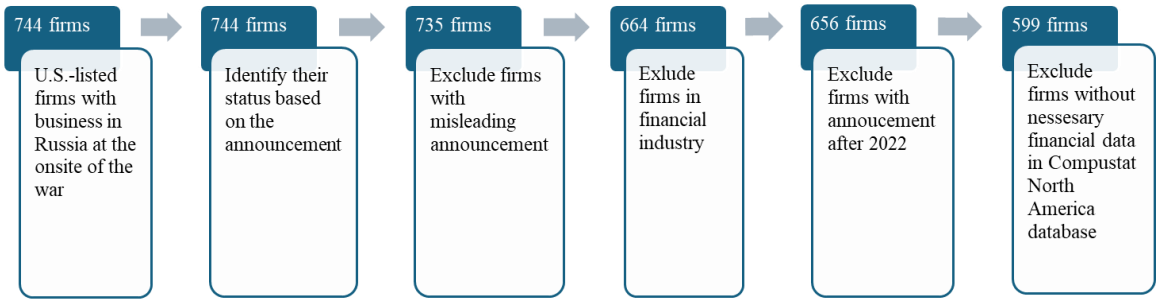


Figure 4.2 Sample collection process

4.4.2 Measurement

In our empirical settings, we measure firm performance through two key dimensions: brand equity and profit margin. To mitigate the influence of extreme outliers on our results, we winsorize all variables at the 1% level. Table 4.1 presents a summary of the variable descriptions used in our study.

Brand Equity

Following Wang et al. (2009), we use financial data to evaluate brand equity (*BE*) created through advertising expenses. First, we estimate firm's intangible assets using Tobin's Q, which is calculated as the market value of a firm divided by the replacement cost of its assets (Rao et al., 2004). Since Tobin's Q represents the value of brand equity as well as other firm-specific and market-specific factors unrelated to BE, our model focuses specifically on the brand equity aspect. To isolate brand equity from other intangible values, we follow Wang et al. (2009) by considering six firm-specific and market-specific variables: market value, sales growth, market share, industry size, industry concentration, and industry growth. The specific equation employed is:

$$\Delta TobinQ_{it} = a + \alpha_1 lnA_{it} + \alpha_2 \Delta lnA_{it} + b_1 lnMS_{it} + b_2 lnSG_{it} + b_3 lnMV_{it} + b_4 lnTI_{it} + b_5 lnIG_{it} + b_6 lnIC_{it} + \varepsilon_{it}\ , \quad (4.1)$$

where $\Delta TobinQ_{it} = TobinQ_{it} - TobinQ_{it-1}$, representing the change in Tobin's Q for firm i at year t. A_{it} refers to advertising expenditure of firm i at year t. MS is market share, calculated as firm's sales divided by total industry sales based on four-digit SIC code. SG is sales growth rate, referring to the ratio of firm's sales to sales from the previous year. MV is the market value of equity. TI represents industry size, measured as the total sales of firms in the same industry identified by the four-digit SIC code. IG is the industry growth

rate, calculated as the industry size divided by industry size from the previous year. IC refers to industry concentration, representing the concentration of the top four companies in an industry.

We take the logarithm of the variables in our model. For firms with missing advertising expenditure data, we employ multivariate imputation by chained equations techniques to impute these values (Royston, 2004). We then group companies based on their primary four-digit SIC codes. Industries with at least three companies are included in the analysis. For each industry group, we conduct cross-sectional time-series regressions to estimate the persistence of advertising effects. Based on the regression results, we define the parameter ρ as follows:

$$\rho = \alpha_1/(\alpha_1 + \alpha_2), \tag{4.2}$$

where α_1 and α_1 are the coefficients obtained from the regression analysis in equation 1. The ρ serves as a quantitative measure of the effectiveness of advertising expense in building intangible assets through consumer-based brand equity. Specifically, ρ reflects the proportion of the initial brand effect generated by advertising that translates into long-term brand equity. Higher values of ρ indicate greater marketing effectiveness in establishing brand equity. Therefore, we use ρ as the primary metric for measuring brand equity in this study. To increase the robustness of our measurement, we also use alternative variable on brand equity, and the results are shown in robustness checks section.

Profit Margin

Profit margin is measured using return on sales (ROS), which is calculated as operating income divided by net sales (Hult et al., 2008). It captures a company's ability to generate operating income from its core business activities relative to its revenue.

Normative Alignment (Stance)

We use the firm's headquarters location as a proxy for its primary target market for H3. This approach is justified for several reasons. First, firms typically maintain their strongest market presence and customer base in their home countries (Rugman & Oh, 2013). In addition, home country institutional environments significantly influence corporate decision-making through both formal regulations and informal norms (Dunning, 2009).

To measure country-level stances, we utilize the United Nations General Assembly Resolution ES-11/1, which condemned Russia's military actions in Ukraine. Of the 193 United Nations member states, 141 voted in favor of the resolution, while the remaining countries either voted against or abstained. For country stance, we assign a value of 1 to countries that voted "approval" and 0 to those that voted against or abstained. For corporate stance, firms that announced withdrawal from Russia receive a value of 1, while those that continued operations receive 0. Our key variable, "Stance," takes a value of 1 when the company's action matches it headquarters country's stance, and 0 when there is a mismatch between corporate and national stances.

Reputation Alignment (Sentiment)

We examine social media sentiment as a real-time indicator of firms' WOM for H4. We employ sentiment polarity scores to quantify the positive and negative valence of social media content (Hewett et al., 2016). For sentiment analysis, we utilize RoBERTa (robustly optimized bert pretraining approach), an advanced natural language processing model (Nguyen et al., 2020). These modifications result in superior contextual understanding and improved performance in capturing nuanced meanings, making RoBERTa particularly suitable for sentiment analysis applications.

Our social media data collection proceeded through several systematic steps. First, we compiled the list of company names and their common variations from our final sample of firms that exited the Russian market. Then, we collected posts from X (formerly Twitter) that mentioned these keywords during our observation period from 2017 to 2024. We restricted our search to English-language posts to maintain consistency in sentiment classification and because English serves as the main language for international discussions of multinational corporate behavior. Next, we applied the RoBERTa (Robustly Optimized BERT Pretraining Approach) model to analyze the sentiment of each collected post (Liu et al., 2019). RoBERTa is an advanced natural language processing model that builds upon the BERT architecture with optimized training procedures, resulting in superior contextual understanding (Nguyen et al., 2020). The model classifies each post into three sentiment categories: negative (coded as 0), neutral (coded as 1), and positive (coded as 2). Finally, we aggregated these individual post-level sentiment scores to the firm-year level by

calculating the mode sentiment score for each firm in each year, yielding our final sentiment measure. The pre-post cut-off is February 24, 2022, the date of Russia's invasion of Ukraine.

Temporal Alignment (Response)

For H5, we measure the temporal dimension of market exit by creating a binary variable indicating whether firms announced their exit within seven days of the Russia-Ukraine war's outbreak on February 24, 2022. The variable equals 1 if a firm announced its exit within the seven-day window, and 0 otherwise. Research on crisis communication demonstrates that the timing of organizational responses plays a critical role in shaping stakeholder perceptions of legitimacy and credibility. Early communication strategies enable firms to preserve and potentially enhance legitimacy (Fowler, 2017). In our sample, 25.5% of exit announcements occurred within this 7-days timeframe. We also employ an alternative continuous measure of response timing in our robustness checks to validate our findings.

Control Variables

We incorporate multiple control variables to account for factors that may potentially confound the impact of CSA-oriented exits on firm performance. These controls capture firms' basic characteristics, financial conditions, operational efficiency and flexibility, market characteristics, governance attributes, and ESG-related reputational risks.

For basic firm characteristics, we control for firm age and firm size, as these fundamental attributes capture organizational heterogeneity and influence strategic flexibility and resource availability (Barber & Lyon, 1996; Strebulaev & Yang, 2013). Regarding financial characteristics, we include quick ratio to measure financial slack, as firms with greater liquidity buffers can better absorb the economic shocks associated with market exit decisions (Wiengarten et al., 2017). We also control for debt ratio to account for leverage-related constraints, since highly leveraged firms may face difficulties in bearing the costs of market withdrawal (Campello et al., 2010). To capture operational efficiency and flexibility indicators, we include fixed asset turnover, which measures production resource efficiency and affects firms' ability to adapt to strategic changes (Modi

& Mishra, 2011). Inventory days is also included as firms with extended inventory cycles may face greater operational challenges when restructuring their market presence (Hendricks & Singhal, 2005). Marketing efficiency, measuring the effectiveness of marketing resource deployment, influences firm performance outcomes (Katsikeas et al., 2016). We also control for inflexibility level, as firms with rigid operational structures require substantial resources to respond to environmental uncertainties, potentially constraining their exit options (Nadkarni & Herrmann, 2010).

For market characteristics, we include the Herfindahl-Hirschman Index (HHI) to control for industry concentration effects and market share to account for competitive positioning (Bhattacharya et al., 2022). Russia revenue is a particularly important control variable as firms with higher revenue exposure to Russia face greater economic trade-offs when exiting, which directly influences its performance consequences (Dai et al., 2017).

Regarding governance characteristics, board size affects decision-making efficiency and the diversity of perspectives in strategic choices (Delis et al. 2017). Board gender diversity enhances boards' ability to understand diverse stakeholder concerns and has been linked to greater CSA orientation and improved reputational outcomes (Bear et al., 2010).

Finally, for ESG-related reputational risks, we include RRI (RepRisk Index) which measures firms' exposure to ESG and business conduct risks through media and stakeholder attention. Firms with high pre-existing ESG scrutiny may face large stakeholder expectations when making CSA-oriented decisions (Zhou & Wang, 2020). Also, we control for violator status, which captures human rights violation risks based on the United Nations Global Compact (UNGC) Principle 1—the expectation that businesses should support and respect the protection of internationally proclaimed human rights (Mateska et al., 2023).

Table 4.1 Variable descriptions

Variable	Description	Source	Reference
Brand Equity	The effectiveness of advertising expense in building intangible assets through consumer-based brand equity, operationalized through Equations 1 and 2.	Compustat	Wang et al. 2009
Profit Margin	ROS: Operating income / Net sales	Compustat	Hult et al. 2008
Stance	A binary variable that equals 1 when a firm's market exit decision is consistent with its headquarters country's stance, and 0 otherwise	United Nations General Assembly Resolution ES-11/1, Compustat	/
Sentiment	Classification of social media posts into three categories: negative (0), neutral (1), and positive (2) based on RoBERTa model	Social media platforms	Nguyen et al. (2020)
Response	A binary variable equals 1 when a firm announced its exit within 7 days after the start of the war, and 0 otherwise	Announcement	/
Firm Age	The natural logarithm of the number of years since a firm's founding	Compustat	Strebulaev & Yang (2013)
Firm size	The natural logarithm of total assets	Compustat	Barber & Lyon (1996)
Quick Ratio	(Current assets − Inventory) / Current liabilities	Compustat	Wiengarten et al. (2017)
Debt Ratio	The ratio of firm's total debt to total shareholder's equity.	Compustat	Wiengarten et al. (2017)
Fixed Asset Turnover	The ratio of firm's sales to property, plant, and equipment.	Compustat	Modi & Mishra (2011)
Inventory Days	365*(Average inventory / Cost of goods sold)	Compustat	Deloof (2003)
Marketing Efficiency	The ratio of a firm's sales to selling, general, and administrative expenses	Compustat	Modi & Mishra (2011)
Inflexibility	A firm's historical range of operating costs over sales, divided by volatility of the logarithm of changes in sales-to-assets ratio	Compustat	Gu et al. (2018)

	$INFLEX_{i,t} = \frac{max_{i,0,t}\left(\frac{OPC}{Sales}\right) - min_{i,0,t}\left(\frac{OPC}{Sales}\right)}{std_{i,0,t}\left[\Delta log\left(\frac{Sales}{Assets}\right)\right]}$		
Market Share	The ratio of firm's sales to total sales within the same industry, defined by four-digit SIC codes	Compustat	Ferrier et al. (1999)
Russia Revenue	The ratio of sales exported to Russia to firm's total sales	Import Genius, Compustat	Sullivan (1994)
HHI	The sum of squared market shares for all firms within the same industry, defined by four-digit SIC codes	Compustat	Kurt & Hulland (2013)
Board size	The natural logarithm of the number of a firm's directors	BoardEx	Delis et al. (2017)
Board gender diversity	The proportion of male directors	BoardEx	Delis et al. (2017)
RRI	A firm's reputational exposure to ESG and business conduct risks, capturing the level of media and stakeholder attention on ESG issues. RRI is a 0–100 index, with higher values indicating greater risk exposure	RepRisk	Zhou & Wang (2020)
Violation	It measures the risk level of violating UNGC Principle 1 (Human Rights) in company operations or supply chains, coded as 2 for high risks, 1 for potential risks, and 0 for no evidence of violations	RepRisk	Mateska et al. (2023)

4.5 Estimation

4.5.1 Empirical Strategy and Identification

Our empirical strategy exploits the 2022 Russo-Ukrainian conflict as a quasi-experimental setting. We designate firms that exited the Russian market as the treated group (N=287) and those maintaining operations as the control group (N=312). Appendix Table C.2 provides the detailed distribution of treated firms across industries. The conflict's onset in 2022 serves as an exogenous shock that prompted differential firm responses, creating natural variation in market exit decisions. This setting enables a difference-in-differences (DID) approach where we compare outcomes between treated and control firms before and after 2022, covering a range from 2017 to 2024.

However, this approach faces some endogeneity concerns. First, self-selection bias arises because firms' exit decisions are not randomly assigned—firms with specific characteristics such as lower Russia revenue exposure, greater financial flexibility, or stronger ESG commitments may be more likely to exit, potentially confounding the relationship between exit decisions and performance outcomes. Second, reverse causality could occur if better-performing firms are more capable of absorbing exit costs, making performance a driver rather than a consequence of exit decisions.To address self-selection bias, we implement entropy balancing (Hainmueller, 2012) to reweight the control group, ensuring that the distribution of covariates exactly matches that of treated firms. By achieving exact balance on these confounding variables, we eliminate the bias that would arise from comparing inherently different groups of firms.Entropy balancing minimizes the information loss between the original and reweighted samples while imposing linear moment-matching constraints; it therefore attains balance without discarding observations and with far fewer iterative balance checks than propensity-score approaches.

The covariates included in the balancing are as followed: For operational and market factors: Russia revenue exposure (exit costs), firm age and size (organizational resources and inertia), quick ratio and debt ratio (financial flexibility), fixed asset turnover and inventory days (asset specificity and supply chain lock-in), market share and HHI (competitive positioning), marketing efficiency (resource deployment effectiveness), and operational inflexibility (adjustment costs). For governance and ESG factors: board size and board gender diversity (strategic decision-making capacity and stakeholder orientation), RRI and human right violation (pre-existing ESG scrutiny).

Together, these covariates represent the key mechanisms—sunk and switching costs, redeployability, flexibility, competitive exposure, board decision-making, and ESG reputation risk exposure—that the international business and strategy literatures identify as central to divestment and exit decisions. As shown in Table 4.2, after weighting the means, variances, and skewness of every covariate are equalized across treated and control firms confirming successful balance. This approach ensures that the treated and control groups are highly similar, mitigating the concern that any ATT captured is due to the heterogeneities between treated and control firms.

While entropy balancing addresses selection on observables, we employ the

method proposed by Oster (2019) to assess potential bias from unobservable confounders. This test evaluates coefficient stability and R^2 changes between regressions with control without control variables to construct an identifiable set of treatment effects. When this set excludes zero, we can reject the possibility that omitted variables are driving our results. δ indicates the relative significance of unobserved factors compared to observed factors in causing selection bias. Results are presented in panel B of Table 4.4.

Beyond these identification strategies, we implement multiple additional robustness tests to comprehensively address endogeneity concerns, such as parallel trends test, placebo test, two-stage least squares (2SLS) with instrumental variable estimation, regression with lagged independent variables, inverse probability weighting, and synthetic control methods. Details of these checks are provided in the Results section.

Table 4.2 Entropy balancing results

Variable	Mean			Variance			Skewness		
	Treated	Control		Treated	Control		Treated	Control	
		Before	After		Before	After		Before	After
Firm Age	3.9173	3.8551	3.9173	0.7206	0.7231	0.7206	-0.5685	-0.4328	-0.5685
Firm Size	9.4084	8.6727	9.4084	2.6581	3.1406	2.6581	-0.2416	-0.3465	-0.2416
Quick Ratio	1.3745	1.4877	1.3745	1.0774	1.3233	1.0774	2.9836	2.9748	2.9836
Debt Ratio	0.6452	0.6048	0.6452	0.0523	0.0627	0.0523	0.6676	1.0556	0.6676
Fixed Asset Turnover	7.6643	8.0057	7.6643	69.7869	109.5579	69.7869	3.3661	3.4985	3.3661
Inventory Days	69.0192	95.6213	69.0192	5050	6578	5050	1.5962	1.1433	1.5962
Marketing Efficiency	6.8273	6.8528	6.8273	67.9929	63.5529	67.9929	3.0959	2.9262	3.0959
Inflexibility	24.9624	28.3564	24.9624	5659	10225	5659	7.4379	6.2783	7.4379
Market Share	0.2292	0.1741	0.2292	0.0747	0.0560	0.0747	1.3777	1.8927	1.3777
Russia Revenue	0.0064	0.0132	0.0064	0.0010	0.0032	0.0010	10.4751	6.0169	10.4751
HHI	0.2914	0.2634	0.2914	0.0523	0.0445	0.0523	1.3365	1.5440	1.3365
Board size	2.3272	2.2367	2.3272	0.0687	0.0677	0.0687	0.2936	-0.6748	0.2936
Board gender diversity	0.7261	0.7488	0.7261	0.0153	0.0158	0.0153	-0.3000	0.0873	-0.3000
RRI	18.0369	13.9759	18.0369	208.1826	160.9619	208.1826	0.8383	1.0370	0.8383
Violation	0.0567	0.0481	0.0567	0.0756	0.0680	0.0756	5.2915	5.9119	5.2915

4.5.2 Estimation Models

We employ the following DID model to examine changes in brand equity (H1) and profit margin (H2) between treated and control firms around market exit announcements. Our estimation proceeds in several steps to ensure robust causal inference. First, our baseline model incorporates matching weights generated by entropy balancing to ensure covariates balance between two groups. While we include a set of control variables, causal inference may still be threatened by unobserved confounders. To address this concern, we implement a two-way fixed effects estimator that absorbs time-invariant unobservable variables at both the firm and time levels. The specific model is as follows:

$$FP_{it} = \alpha + \beta Leave_i \times Post_t + \gamma Z_{it} + \mu_i + \tau_t + \varepsilon_{it}\ , \tag{4.3}$$

here, FP_{it} is the firm performance (i.e., brand equity or profit margin) of firm *i* in year *t*. $Leave_i$ equals to 1 if a firm *i* has announced to leave Russia, and 0 otherwise. $Post_t$ equals 1 for years 2022 and later, and 0 for years prior to 2022. $Z_{i,t}$ refers to a set of control variables, including firm age, firm size, quick ratio, debt ratio, fixed assets turnover, inventory days, inflexibility, marketing efficiency, Russia revenue, market share, HHI, board size, board gender diversity, RRI, and human right violation. The coefficient, β, captures the effect of leaving the Russia market on firm performance. α represents the intercept term. μ_i and τ_t refers to the firm fixed effect and year fixed effect, respectively. ε_{it} is the error term.

For the moderating effects, we perform the following model to test our hypotheses (H3 and H4):

$$FP_{it} = \alpha + \beta Leave_i * Post_t * Moderator_{it} + \beta' Moderator_{it} + \gamma Z_{it} + \mu_i + \tau_t + \varepsilon_{it}\ , \tag{4.4}$$

where $Moderator_{it}$ refers to stance, sentiment, and response of firm *i* in year *t*. Other terms in equation 4.4 are defined the same as those in equation 4.3.

4.6 Results

4.6.1 The Baseline Effects

Panel A of Table 4.3 reports the results of baseline effects. For brand equity, the coefficient on Leave×Post is statistically positive ($\beta = 0.1045$, $p < 0.01$). This indicates that firms exiting the Russia market experienced a significant increase in brand equity relative to firms that remained, when comparing the post-conflict period to the pre-conflict years. This finding provides support for H1. Similarly, the profit margin model yields a positive and significant coefficient for the term Leave×Post ($\beta = 0.0151$, $p < 0.01$), suggesting that exiting firms achieve increased profitability and thus supporting H2.

The Oster (2019) test results in panel B provide evidence against omitted variable bias. For brand equity, the identified set [0.0333, 0.1045] excludes zero, with a delta statistic of 1.1801. For profit margin, the bound [0.0151, 0.0202] remains entirely positive with a delta statistic of 4.9942, indicating that unobservables would need to be nearly five times as important as observables to nullify our treatment effect. Given that we have already included comprehensive control variables, it is highly unlikely that unobservable factors could drive our main results.

Table 4.3 The results of baseline effects

Variable	(1) Brand Equity	(2) Profit Margin
Panel A: Two-way fixed effect estimates		
Leave×Post	0.1045***	0.0151***
	(0.0237)	(0.0025)
Firm Age	-0.3915**	0.1101***
	(0.1538)	(0.0319)
Firm Size	-0.0693*	-0.0074
	(0.0372)	(0.0065)
Quick Ratio	0.0397***	0.0027
	(0.0085)	(0.0019)
Debt Ratio	-0.0690	0.0249**
	(0.0835)	(0.0091)
Fixed Asset Turnover	-0.0043*	0.0029***
	(0.0023)	(0.0003)
Inventory Days	0.0003	-0.0004**
	(0.0002)	(0.0002)

Marketing Efficiency	-0.0286**	0.0155***
	(0.0114)	(0.0014)
Inflexibility	-0.0011***	-0.0005***
	(0.0003)	(0.0000)
Market Share	0.4739***	0.0492***
	(0.1216)	(0.0121)
Russia Revenue	-0.6791***	-0.0302
	(0.1562)	(0.0223)
HHI	-0.3864***	-0.0202
	(0.1287)	(0.0189)
Board size	-0.0827	-0.0283***
	(0.0730)	(0.0055)
Board gender diversity	0.1121	-0.0499***
	(0.1235)	(0.0144)
RRI	-0.0002	-0.0003***
	(0.0010)	(0.0001)
Violation	0.0059	-0.0022**
	(0.0289)	(0.0010)
Constant	2.6352***	-0.2618***
	(0.6089)	(0.0773)
Firm fixed effect	Yes	Yes
Year fixed effect	Yes	Yes
Adj. R-Squared	0.1000	0.7759
R-Squared (within)	0.0119	0.1580
F	43.4053***	527.1802***
N	4,137	4,244
Panel B: Selection on unobservable		
Oster bounds (δ=1, $R_{max} = \min(1.3 * R, 1)$)	[0.0333, 0.1045]	[0.0151, 0.0202]
Delta (δ) statistics	1.1801	4.9942

Notes: *** p <0.01, **p < 0.05, *p < 0.1. Robust standards errors in parentheses.

Parallel Trends Test

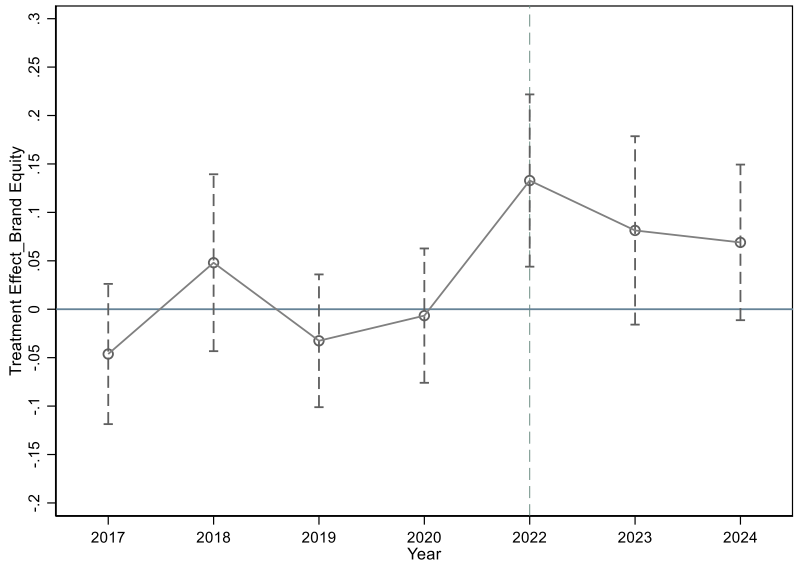
The parallel trends assumption is a critical premise for valid DID inference. This assumption requires that, in the absence of treatment, the outcome variables would have followed similar trends over time for both treated and control groups. Violations of this

assumption can lead to biased estimates of treatment effects. To assess the validity of the parallel trends assumption, we conduct the following model (Angrist & Pischke, 2009):

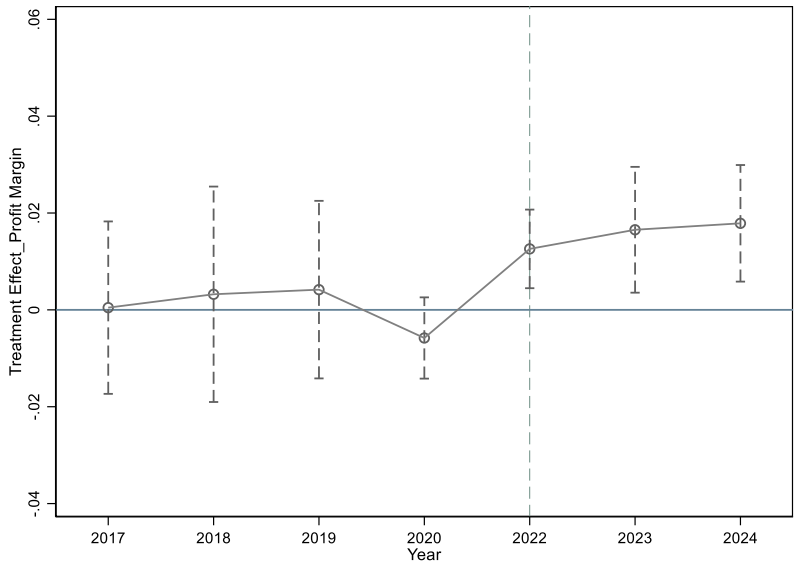
$$FP_{it} = \sum_{2017}^{2024} \kappa \times Leave_i \times Y_t + \gamma Z_{it} + \mu_i + \tau_t + \varepsilon_{it}, \quad (4.5)$$

where Y_t represents year dummy variables spanning 2017 to 2024. We include the same set of control variables as in our baseline DID specification.

We plot the estimated coefficients and confidence intervals in Figure 4.3. The coefficients for the pre-treatment period are statistically insignificant ($p > 0.1$), indicating there are no significant differences in outcomes between treated and control groups prior to the intervention. This provides additional evidence that our results are not capturing the reverse effect of firm performance on exit decisions or the effect of omitted variables placing exiting firms on differential growth trajectories. The performance differences emerge only since the 2022 shock and align with exit timing, supporting our interpretation that performance improvements are consequences, not causes, of CSA-oriented exit decisions.



(a)



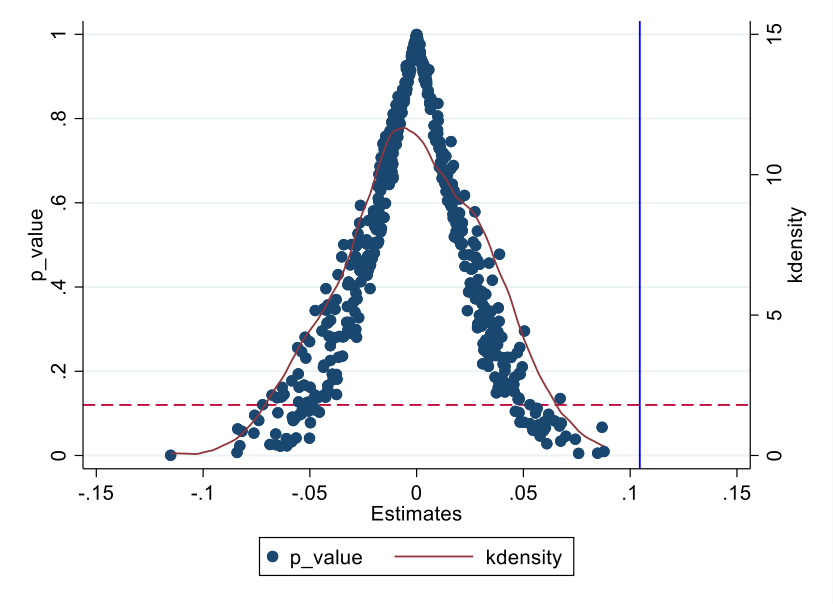
(b)

Figure 4.3 Parallel trends test

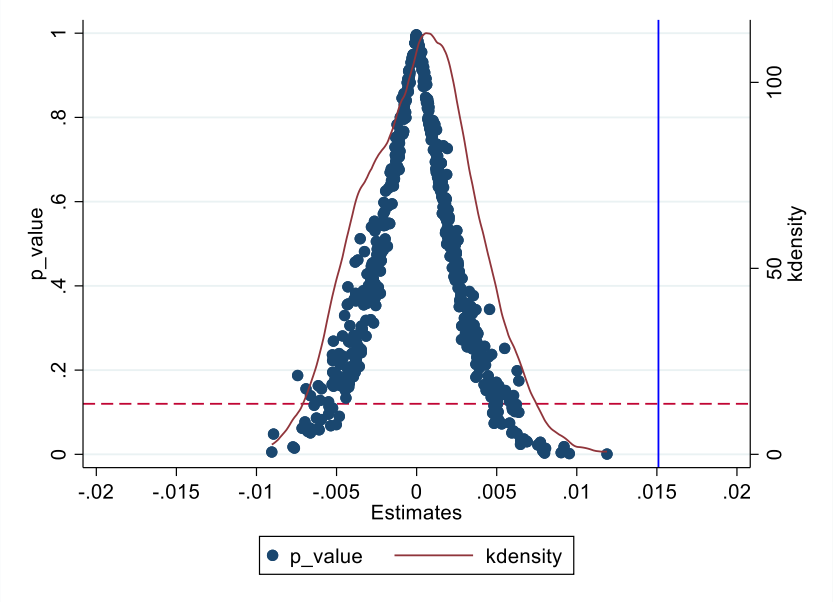
Notes: (a) presents results for brand equity and (b) for profit margin. The pre-treatment year 2021 serves as the baseline period. All confidence intervals are constructed at the 90% level.

Placebo Test

To rule out the possibility that our results are driven by random factors rather than the actual treatment, we conduct the placebo test. We simultaneously randomize both the treatment units and time, then re-estimate the DID model 500 times. Figure 4.4 plots the coefficient Kernel density and corresponding p-values for the interaction term Leave×Post from these placebo regressions. For brand equity and profit margin outcomes, 90.4% and 91.2% of the placebo DID estimates, respectively, are statistically insignificant at the 10% level. Moreover, the original treatment effect estimates lie far from the placebo effect distributions, indicating substantial differences between the actual treatment effects and placebo effects. These results suggest that the probability of our original treatment effects being driven by random chance is extremely low, thereby enhancing the robustness of our results.



(a)



(b)

Figure 4.4 Placebo test results

Notes: (a) presents results for brand equity and (b) for profit margin. The vertical blue line indicates the original coefficient estimated from the actual treatment effect.

4.6.2 The Moderating Effects

Table 4.4 presents the moderating analyses examining how normative (stance), reputational (sentiment), and temporal (response) alignment influence the relationship between CSA oriented market exit and firm performance.

For corporate brand equity, the interaction term Leave×Post×Stance in Column

(1) is positive and statistically significant (β = 0.1047, p < 0.01), supporting H3a. This indicates that firms whose values align with their home country achieve greater brand equity improvements following market exit compared to those staying firms. Similarly, normative alignment significantly improves the positive baseline effect on profit margin (β = 0.0150, p < 0.01), providing support for H3b. Since our model specification includes two-way fixed effects, the time-invariant variable Stance is absorbed and thus drops out of the results.

The results for sentiment show positive moderating effects, as predicted. The coefficient on Leave×Post×Sentiment in the brand equity model reaches 0.0946 (p < 0.05), indicating firms with positive social media sentiment benefit more from the CSA oriented market exit. Therefore, H4a is supported. The profit margin model in Column (4) also shows consistent results, with a significant positive moderating effect (β = 0.0130, p < 0.01). Exiting firms operating in environments with positive social media sentiment achieve profitability gains that exceed those of firms facing negative sentiment by 2.6 %. This finding provides support for H4b.

In Column (5), the interaction term Leave×Post×Response shows a coefficient of 0.1831 (p < 0.05) for brand equity, suggesting that early responders to the crisis capture greater brand equity from their exit decisions. This evidence supports H5a. Similarly, Column (6) demonstrates that response timing influences financial performance, with the profit margin model yielding a coefficient of 0.0211 (p < 0.01). Firms that announced their Russian market withdrawal promptly following the invasion experienced more profitability than those delaying their exit decisions. H5b is thus supported. As with sentiment, the main effect of response is absorbed by the two-way fixed effects structure.

Table 4.4 The results of moderating effects

Variable	(1) Brand Equity	(2) Profit Margin	(3) Brand Equity	(4) Profit Margin	(5) Brand Equity	(6) Profit Margin
Leave×Post×Stance	0.1047***	0.0150***				
	(0.0239)	(0.0025)				

Stance	/	/				
Leave×Post×Sentiment			0.0946**	0.0130***		
			(0.0366)	(0.0023)		
Sentiment			-0.1178***	-0.0024*		
			(0.0153)	(0.0013)		
Leave×Post×Response					0.1831**	0.0211***
					(0.0743)	(0.0052)
Response					/	/
Firm Age	-0.3920**	0.1100***	-0.3855**	0.1091***	-0.4322***	0.1062***
	(0.1539)	(0.0320)	(0.1546)	(0.0320)	(0.1546)	(0.0320)
Firm Size	-0.0692*	-0.0074	-0.0620	-0.0081	-0.0644*	-0.0070
	(0.0371)	(0.0065)	(0.0386)	(0.0066)	(0.0356)	(0.0064)
Quick Ratio	0.0399***	0.0027	0.0394***	0.0027	0.0399***	0.0027
	(0.0086)	(0.0019)	(0.0090)	(0.0019)	(0.0087)	(0.0019)
Debt Ratio	-0.0685	0.0250***	-0.0525	0.0246**	-0.0699	0.0247**
	(0.0831)	(0.0091)	(0.0889)	(0.0092)	(0.0856)	(0.0094)
Fixed Asset Turnover	-0.0043*	0.0029***	-0.0045*	0.0029***	-0.0039	0.0030***
	(0.0023)	(0.0003)	(0.0025)	(0.0003)	(0.0025)	(0.0003)
Inventory Days	0.0003	-0.0004**	0.0004	-0.0004**	0.0003	-0.0004**
	(0.0002)	(0.0002)	(0.0002)	(0.0002)	(0.0002)	(0.0002)
Marketing Efficiency	-0.0286**	0.0155***	-0.0290**	0.0155***	-0.0292**	0.0154***
	(0.0114)	(0.0014)	(0.0113)	(0.0014)	(0.0116)	(0.0014)
Inflexibility	-0.0011***	-0.0005***	-0.0010***	-0.0005***	-0.0011***	-0.0005***
	(0.0003)	(0.0000)	(0.0003)	(0.0000)	(0.0003)	(0.0000)
Market Share	0.4736***	0.0491***	0.4632***	0.0523***	0.4484***	0.0461***
	(0.1217)	(0.0121)	(0.1254)	(0.0123)	(0.1246)	(0.0121)
Russia Revenue	-0.6790***	-0.0302	-0.7318***	-0.0349	-0.6533***	-0.0291
	(0.1562)	(0.0223)	(0.1833)	(0.0224)	(0.1586)	(0.0248)
HHI	-0.3862***	-0.0201	-0.3987***	-0.0192	-0.3904***	-0.0200
	(0.1287)	(0.0189)	(0.1256)	(0.0191)	(0.1334)	(0.0190)
Board size	-0.0828	-0.0284***	-0.0838	-0.0287***	-0.0784	-0.0274***
	(0.0730)	(0.0055)	(0.0731)	(0.0057)	(0.0708)	(0.0055)

Board gender diversity	0.1117	-0.0499***	0.1184	-0.0498***	0.0972	-0.0507***
	(0.1233)	(0.0144)	(0.1213)	(0.0141)	(0.1295)	(0.0149)
RRI	-0.0002	-0.0003***	-0.0002	-0.0003**	-0.0003	-0.0003***
	(0.0010)	(0.0001)	(0.0010)	(0.0001)	(0.0010)	(0.0001)
Violation	0.0059	-0.0023**	0.0113	-0.0020*	0.0031	-0.0027**
	(0.0289)	(0.0010)	(0.0282)	(0.0010)	(0.0284)	(0.0010)
Constant	2.6359***	-0.2617***	2.6363***	-0.2501***	2.7672***	-0.2496***
	(0.6091)	(0.0773)	(0.6169)	(0.0770)	(0.6605)	(0.0781)
Firm fixed effect	Yes	Yes	Yes	Yes	Yes	Yes
Year fixed effect	Yes	Yes	Yes	Yes	Yes	Yes
Adj. R-Squared	0.1000	0.7759	0.1017	0.7758	0.1006	0.7758
R-Squared (within)	0.0120	0.1579	0.0142	0.1578	0.0126	0.1577
F	42.9629***	527.5622***	369.8821***	601.6378***	161.3956***	503.2762***
N	4,137	4,244	4,137	4,244	4,137	4,244

Notes: *** p <0.01, **p < 0.05, *p < 0.1. Robust standards errors in parentheses.

4.6.3 Robustness Checks

Our primary analysis employs entropy balancing to address selection bias by equalizing covariate distributions between treated and control groups, while using the Oster (2019) test to estimate potential omitted variable bias.. To validate our DID framework, we conduct parallel trends tests confirming similar performance trajectories between groups prior to the war which mitigates reverse causality concern, and perform placebo tests to verify that our estimated effects were not driven by spurious correlations or pre-existing trends.

To further strengthen the validity of our findings, we conduct additional robustness tests. First, we apply an instrumental variable method to mitigate selection bias stemming from unobservable factors. Second, the generalized synthetic control method (GSCM) allows us to construct more precise unit-specific counterfactuals that best approximate each treated unit's pre-treatment characteristics. Third, we lag the independent variables by one year to establish temporal precedence and further address reverse causality issue. Moreover, to address concerns about model specification, we

use double/debiased machine learning (DDML) techniques which relax parametric assumptions. In addition, we investigate potential violations of the stable unit treatment value assumption (SUTVA) by analyzing whether a firm's exit decision influenced non-exiting competitors' performance through spillover effects. Furthermore, we test our results against alternative measurements for all key variables. Finally, we complement our entropy balancing approach with inverse probability weighting (IPW) to evaluate whether our results remain stable under different methods. Table 4.5 summarizes these tests and their corresponding results.

Table 4.5 Summary of robustness checks

Potential issue	Method	Result	Table
The validity of stable unit treatment value assumption (SUTVA)	Test whether exit decisions by industry peers generate spillover effects on non-exiting firms	Not violating SUTVA	Table 4.6
Selection bias from unobservables and reverse causality	Instrumental variable analysis	Not falsifying H1−H2	Table 4.7
Counterfactual control group	Generalized synthetic control method (GSCM)	Not falsifying H1−H2	Figure 4.5
Reverse causality issue	Lagged variable regression	Not falsifying H1−H2	Table 4.8
The validity of the linear regression model	Double/debiased machine learning (DDML)	Not falsifying H1−H2	Table 4.9
Measurement errors	Alternative measurements	Not falsifying H1−H5	Table 4.10
The validity of the weighting method	Alternative weighting method: Inverse probability weighting (IPW)	Not falsifying H1−H5	Table 4.11

Stable Unit Treatment Value Assumption (SUTVA) Test

A critical assumption underlying our causal identification strategy is the SUTVA, which requires that one firm's treatment status does not affect other firms' outcomes. Violation of SUTVA would undermine our ability to interpret the estimated effects, as the control firms' outcomes could be contaminated by spillovers from treated

units (Imbens & Rubin, 2015). In our settings, this assumption could be violated if firms remaining in Russia experience performance changes due to competitors' exits—for instance, through market share redistribution or reputational contagion effects.

To test this assumption, we examine whether exit decisions by industry peers generate spillover effects on non-exiting firms' performance. We construct a spillover analysis focusing on firms that did not announce exits from Russia (Leave = 0). For each non-exiting firm, we create an indicator variable, Peer, equal to 1 if at least one firm within the same industry (defined by four-digit SIC code) announced an exit, and 0 otherwise. Using this industry exit exposure variable, we conduct a DID specification comparing non-exiting firms with industry peer exits (Y_{01}) to non-exiting firms without industry peer exits (Y_{00}). This approach estimates potential spillover effects, as all firms in this analysis remained in Russia. The results in Table 4.6 show no significant spillover effects on either brand equity or profitability for firms that remained in Russia when industry peers exited. These findings support the validity of SUTVA in our context.

Table 4.6 SUTVA test results

Variable	(1) Brand Equity	(2) Profit Margin
Peer×Post	0.0495	0.0055
	(0.0383)	(0.0077)
Control Variables	Yes	Yes
Firm fixed effect	Yes	Yes
Year fixed effect	Yes	Yes
Adj. R-Squared	0.0949	0.8051
R-Squared (within)	0.0115	0.2234
N	2,108	2,163

Notes: Robust standards errors in parentheses. Control variables remain consistent with those employed in main DID models.

Instrumental Variable Analysis

Given that the treatment might not be randomly assigned, firms with specific characteristics may self-select into the treated group, creating selection bias that threatens the validity of our causal estimates. While our entropy balancing approach

partially addresses this concern by matching on observable covariates, it cannot account for unobservable time-variant factors that may influence both the exit decision and subsequent performance outcomes. Moreover, reverse causality brings an additional challenge, as performance considerations might drive exit decisions. To address these endogeneity concerns more comprehensively, we employ an instrumental variable (IV) approach. The IV strategy helps isolate exogenous variation in exit decisions by identifying factors that affect the likelihood of exit but do not directly influence firm performance except through the exit channel (Baiocchi et al., 2014). By leveraging variation in exit decisions that is orthogonal to both firm performance and unobservable characteristics, the IV approach addresses both selection bias and reverse causality simultaneously.

We construct our instrument based on the observation that a firm's home country stance on the Russo-Ukrainian conflict influences both the legitimacy of maintaining Russian operations and stakeholder expectations regarding exit decisions. Specifically, we use whether a firm's headquarters country voted to condemn Russia in the UN General Assembly Resolution ES-11/1 as the basis for our instrument. To introduce time variation and capture industry-specific exit pressures, we interact this country stance variable with the logarithm transformed total number of peer firms in the same industry (defined by four-digit SIC code) that have already left Russia by a specific year to create the IV (Fenske et al., 2023).

Table 4.7 presents the IV estimation results. Columns (1) and (3) report the first-stage results, where the coefficients on our instrumental variable are significantly positive. The Kleibergen-Paap LM statistic strongly rejects the null hypothesis of underidentification ($p < 0.01$), while the first stage F-statistics exceed conventional thresholds, confirming that our instrument satisfies weak identification test.

Columns (2) and (4) present the second stage results for brand equity and profit margin, respectively. The treatment effect remains significant for both outcome variables. These results demonstrate that our baseline findings are robust to addressing the nonrandom selection issue. After accounting for potential endogeneity in exit decisions, hypotheses H1 and H2 continue to receive empirical support.

Table 4.7 The results of instrumental variable analysis

Variable	(1) First stage Leave×Post	(2) Second stage Brand Equity	(3) First stage Leave×Post	(4) Second stage Profit Margin
IV	0.1241***		0.1260***	
	(0.0122)		(0.0120)	
Leave×Post		0.4828***		0.0620**
		(0.1826)		(0.0278)
Control Variables	Yes	Yes	Yes	Yes
Firm fixed effect	Yes	Yes	Yes	Yes
Year fixed effect	Yes	Yes	Yes	Yes
N	4,137	4,137	4,244	4,244
Kleibergen-Paap rk LM statistic	129.584***		136.852***	
Kleibergen-Paap Wald rk F statistic	104.069*** [16.38]		110.044*** [16.38]	

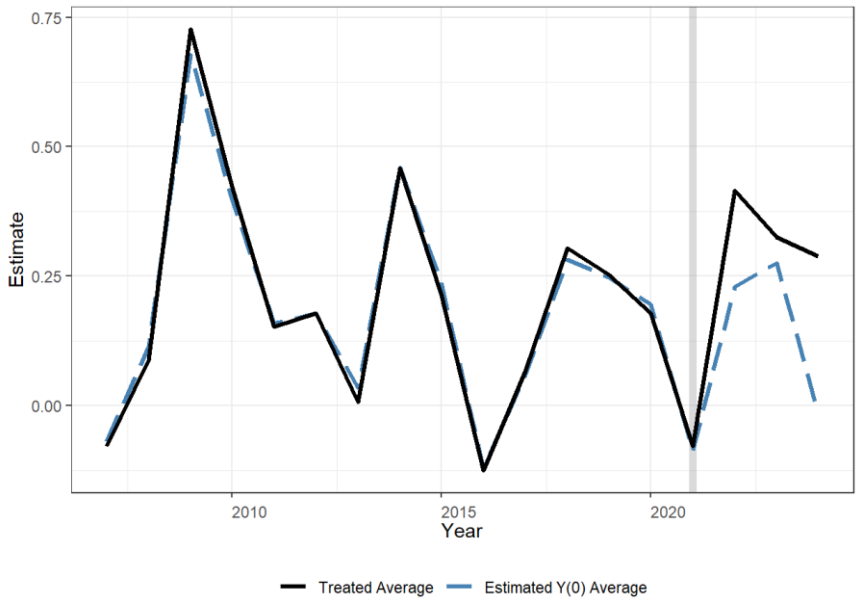
Notes: *** p <0.01, **p < 0.05. Robust standards errors in parentheses. [ ] includes 10% maximal IV size. Control variables remain consistent with those employed in main DID models.

Generalized Synthetic Control Method

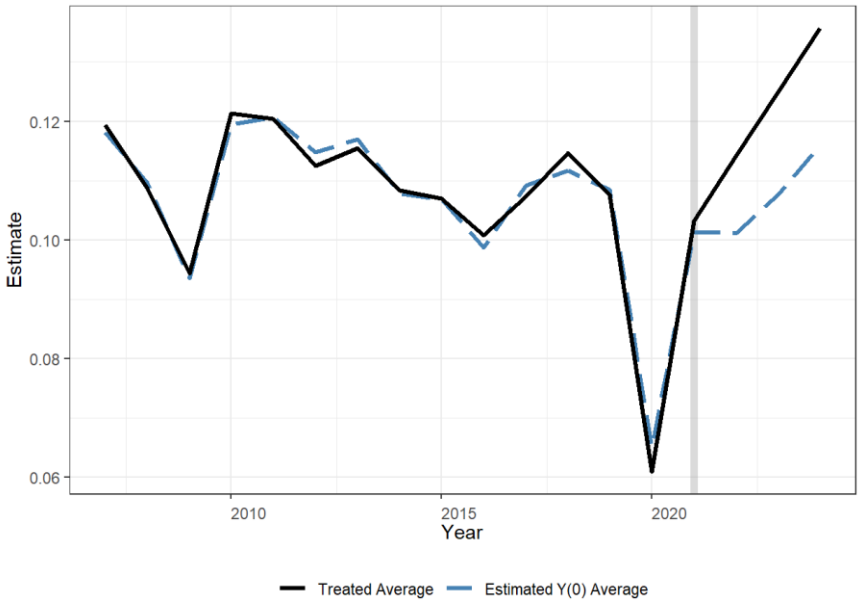
Our DID setting faces the challenge that exiting and non-exiting firms may differ in unobservable time-varying factors that influence both exit decisions and performance outcomes. Simple matching on observable characteristics may not capture these dynamic differences, potentially biasing our estimates. To address this concern, we employ the generalized synthetic control method (GSCM), which creates weighted combinations of control units that best match each treated unit's pre-treatment outcome trends (Xu, 2017).

This approach strengthens our identification in two ways. First, it reduces selection bias by matching firms based on their entire pre-treatment performance evolution rather than static characteristics alone, thereby accounting for unobservable factors reflected in these trends. Second, it helps rule out reverse causality—if firms with stronger pre-2022 performance were more likely to exit, GSCM would match them with control firms showing similar pre-treatment patterns. By comparing each exiting firm against a synthetic control that closely tracked its pre-exit performance but

remained in Russia, we can better isolate the causal effect of exit decisions from other factors driving performance differences.



(a)



(b)

Figure 4.5 GSCM results

Notes: (a) presents results for brand equity and (b) for profit margin. The vertical grey line represents year 2021.

We implement GSCM using 15 years of pre-treatment data (2007−2021) to construct synthetic controls for each treated firm. The results in Figure 4.5 show strong pre-treatment fit, with synthetic controls closely tracking treated firms' performance

trends before exit announcements. During post-treatment, we observe clear differences between treated and synthetic control units, with exiting firms significantly outperforming their synthetic counterparts. The average treatment effect on the treated (ATT) remains significantly positive for both brand equity (ATT = 0.1712, $p < 0.1$) and profit margin (ATT = 0.0165, $p < 0.05$), confirming that our main findings are robust.

One-year Lagged Variable Regression

To further address reverse causality concerns, we re-estimate our main models using one-year lagged values for all independent variables. This approach ensures that all predictors precede the outcome by one year, mitigating the possibility that current performance influences any of the explanatory variables. Table 4.8 presents the results of this analysis. The coefficients on L.Treat×Post remains significantly positive for both brand equity (0.0644, $p < 0.05$) and profit margin (0.0118, $p < 0.01$). The treatment effects with lagged specifications strengthen our causal interpretation.

Table 4.8 Lagged variable regression results

Variable	(1) Brand Equity	(2) Profit Margin
L. Treat×Post	0.0644**	0.0118***
	(0.0310)	(0.0025)
L. Control Variables	Yes	Yes
Firm fixed effect	Yes	Yes
Year fixed effect	Yes	Yes
Adj. R-Squared	0.0833	0.7406
R-Squared (within)	0.0106	0.0613
N	3,540	3,626

Notes: *** $p < 0.01$, ** $p < 0.05$. Robust standards errors in parentheses. Control variables are the same as those in main DID models. The parallel trends test is valid for dependent variables in columns (1) and (2).

Double/debiased Machine Learning (DDML)

We employ DDML as an additional robustness check to address potential model misspecification concerns in our main analysis. Traditional DID estimation assumes linear relationships between covariates and outcomes, which may be restrictive on firm

performance determinants. DDML relaxes these parametric assumptions by using machine learning algorithms to flexibly model the relationships between high-dimensional covariates and outcomes (Chernozhukov et al., 2018). We employ 3-fold cross-fitting, where the sample is randomly split into three folds, and then implement DDML using gradient boosting as our machine learning algorithm. Table 4.9 presents the DDML results. The coefficients remain positive and significant for both brand equity ($\beta = 0.1234$, $p < 0.01$) and profit margin ($\beta = 0.0106$, $p < 0.1$).

Table 4.9 DDML results

Variable	(1) Brand Equity	(2) Profit Margin
Leave×Post	0.1234***	0.0106***
	(0.0246)	(0.0038)
Control Variables	Yes	Yes
Firm fixed effect	Yes	Yes
Year fixed effect	Yes	Yes
N	4,138	4,244

Notes: *** p <0.01. Robust standards errors in parentheses. Control variables remain consistent with those employed in main DID models.

Alternative Measurements

To ensure our results are not driven by specific measurement choices, we re−estimate our models using alternative measures for all key variables. Table 4.10 presents the results using these alternative measurements. All results remained similar to our main settings.

For brand equity, we adopt the approach developed by Simon & Sullivan (1993), a classic method in marketing literature. The detailed calculation of this variable is presented in Appendix C.3. We replace our profitability measure with sales growth (i.e., $Sales_t/Sales_{t-1}$), which offers a more direct indicator of market performance and customer demand response following exit decisions (Morgan et al., 2009).

For the normative alignment variable, we move beyond the binary UN Resolution ES-11/1 vote to incorporate a more detailed measure of country-level

political distance from Russia. Following Bailey et al. (2017), we obtain voting similarity indices based on the UN General Assembly voting results. This index ranges from 0 to 1, with higher values indicating greater foreign policy alignment with Russia. We calculate the average index for each country in our sample over the 2017-2024 period, then code countries with below-average similarity scores as 1 (indicating political distance from Russia) and above-average scores as 0. Stance2 is then coded as 1 when a firm's exit decision aligns with its home country's political position, and 0 otherwise.

Table 4.10 The results of alternative measurements

Variable	(1) BE2	(2) Sales Growth	(3) Brand Equity	(4) Brand Equity	(5) Brand Equity	(6) Profit Margin	(7) Profit Margin	(8) Profit Margin
Leave×Post	0.1871**	0.0470***						
	(0.0744)	(0.0097)						
Leave×Post ×Stance2			0.1046***			0.0156***		
			(0.0242)			(0.0025)		
Leave×Post ×Sentiment2				0.5110*			0.0569***	
				(0.2909)			(0.0163)	
Leave×Post ×LnDays					-0.0003*** (0.0551)			-0.0000** (0.0029)
Control Variables	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Firm fixed effect	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year fixed effect	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Adj. R-Squared	0.8346	0.2916	0.1000	0.1007	0.0987	0.7759	0.7758	0.7752
R-Squared (within)	0.0119	0.1077	0.0120	0.0130	0.0105	0.1581	0.1581	0.1556
N	4,242	4,237	4,137	4,137	4,137	4,244	4,244	4,244

Notes: *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$. Robust standards errors in parentheses. Control variables are the same as those in DID models. The parallel trends test is valid for the alternative dependent variables in columns (1) and (2).

We also employ an alternative sentiment analysis approach using TextBlob (Hasan et al., 2018). This lexicon-based method parses individual tweets into sentences

using punctuation markers, computes sentiment scores for each sentence, and aggregates them to generate average Sentiment2 measures.

Finally, to address the concern that our specific time window cutoff may impose arbitrary boundaries on the definition of quick response, we conducted robustness checks using an alternative continuous measure of response timing. The binary seven-day window approach, while theoretically grounded, may not capture variation in response timing beyond this threshold. Therefore, we constructed a continuous variable, LnDays, defined as the natural logarithm of the number of days between a firm's exit announcement and the outbreak of war plus one, i.e., ln(announcement date - February 24, 2022 + 1). For firms without an exit announcement during our observation period, we assigned a value of 999 to reflect their non-response status.

Inverse Probability Weighting (IPW)

We implement IPW as an alternative to entropy balancing to assess the sensitivity of our results to different weighting approaches. While entropy balancing directly adjusts covariate distributions to achieve exact balance, IPW addresses selection bias by reweighting observations based on their propensity to receive treatment (Austin & Stuart, 2015). Both IPW and propensity score matching (PSM) use estimated treatment probabilities to address selection bias, but IPW offers advantages for our setting by utilizing the full sample rather than discarding unmatched observations. In IPW, we first estimate each firm's propensity to exit Russia based on observable covariates through a probit regression model. We then assign weights inversely proportional to the probability of receiving the treatment: treated units receive weights of $1/p(X)$, while control units receive weights of $1/(1-p(X))$, where $p(X)$ represents the estimated propensity score obtained from the probit model. After IPW, the differences of all covariates are insignificant between two groups ($p > 0.1$).

Table 4.11 presents results using IPW adjusted regression models. The treatment effects on both brand equity and profit margin remain significantly positive. Moreover, the moderating effects remain consistent with our main findings.

Table 4.11 The results of IPW adjusted regression

Variable	(1) Brand Equity	(2) Brand Equity	(3) Brand Equity	(4) Brand Equity	(5) Profit Margin	(6) Profit Margin	(7) Profit Margin	(8) Profit Margin
Leave×Post	0.0805***				0.0163***			
	(0.0228)				(0.0025)			
Leave×Post ×Stance		0.0805***				0.0163***		
		(0.0228)				(0.0025)		
Leave×Post ×Sentiment			0.0938***				0.0096***	
			(0.0215)				(0.0023)	
Leave×Post ×Responce				0.1339**				0.0151***
				(0.0573)				(0.0040)
Control Variables	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Firm fixed effect	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year fixed effect	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Adj. R-Squared	0.1008	0.1008	0.1020	0.1009	0.7769	0.7769	0.7767	0.7765
R-Squared (within)	0.0094	0.0094	0.0111	0.0095	0.1425	0.1725	0.1717	0.1707
N	3,962	3,962	3,962	3,962	4,061	4,061	4,061	4,061

Notes: *** $p < 0.01$, ** $p < 0.5$. Robust standards errors in parentheses. Control variables remain consistent with those employed in main DID models. The parallel trends test is valid for the IPW adjusted regression model.

4.6.4 Further Analysis

Fashion and textiles firms are consumer-facing enterprises with heightened brand sensitivity and substantial exposure to public sentiment. The sector witnessed widespread and highly publicized withdrawal announcements, with brands such as H&M, Nike, and LVMH rapidly suspending Russian operations amid intense media scrutiny and consumer pressure. Moreover, fashion companies typically maintain extensive global supply networks and retail footprints, rendering their exit decisions particularly visible to stakeholders worldwide. Therefore, we conduct supplementary analyses focusing specifically on the fashion and textiles sector.

Following the methods established in Section 3.5.3, we identified firms

belonging to the fashion and textiles industry through examination of SIC codes. Then we get a subsample of 28 firms from our dataset. We subsequently re-estimated the models examining the relationship between Russian market exit and firm performance outcomes, as well as the moderating effects. Results are presented in Table 4.12.

Table 4.12 The results of subsample analysis

Variable	(1) Brand Equity	(2) Brand Equity	(3) Brand Equity	(4) Brand Equity	(5) Profit Margin	(6) Profit Margin	(7) Profit Margin	(8) Profit Margin
Leave×Post	0.1521*				0.0102**			
	(0.0735)				(0.0033)			
Leave×Post ×Stance		0.1521*				0.0102**		
		(0.0735)				(0.0034)		
Leave×Post ×Sentiment			0.1059				0.0040	
			(0.0793)				(0.0048)	
Leave×Post ×Responce				0.0438				-0.0010
				(0.1097)				(0.0070)
Control Variables	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Firm fixed effect	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year fixed effect	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Adj. R-Squared	0.2436	0.2436	0.2571	0.2357	0.9111	0.9111	0.9103	0.9103
R-Squared (within)	0.1796	0.1796	0.2001	0.1710	0.3347	0.3347	0.3333	0.3288
N	186	186	186	186	195	195	195	195

Notes: ** $p < 0.05$, **$p < 0.1$. Robust standards errors in parentheses. Control variables remain consistent with those employed in main DID models.

Consistent with our full sample findings, the coefficients for Leave×Post remain significantly positive for both brand equity ($\beta = 0.1521$, $p < 0.1$) and profit margin ($\beta = 0.0102$, $p < 0.05$) within this industry subsample. These results indicate that fashion and textiles firms withdrawing from Russia similarly experienced enhanced brand equity and improved profitability relative to counterparts maintaining Russian presence. The magnitude of these effects appears comparable to those observed in the full sample,

suggesting that the reputational and financial benefits of exit extend robustly to this consumer-facing sector.

Regarding the hypothesized moderating mechanisms, the interaction term capturing stance alignment between firms and target markets achieved statistical significance for both brand equity and profit margin. However, neither social media sentiment nor response speed attained statistical significance as moderating variables within this subsample. One possible reason is that 28 firms with less than 200 observations substantially reduce our statistical power. Additionally, fashion consumers may prioritize substantive alignment with their values over the speed or manner of corporate communication, making these process-oriented factors less determinative of performance outcomes within this industry context.

4.7 Conclusion and Discussion

This study examines the impacts of firm conducting CSA-oriented foreign exit and firm performance. Using the 2022 Russo-Ukrainian war as the backdrop and sampling the U.S. listed firms, we conduct a natural experiment combining entropy-balance matching and DID analysis. The results find that the firms who announced to exit from the Russian market after the start of the war has positive impacts on their corporate brand equity and profit margin. The results are robust when using the instrumental variables and different matching methods. In addition, the moderating analyses find that the positive impacts are more pronounced when exit aligned with the institutional stance of their primary market (normative alignment), when firms already enjoyed strong positive word of mouth (reputational alignment), and when they acted swiftly to signal moral urgency (temporal alignment). This section provides the implications for the literature of foreign market exit and divestment, CSA and MNE operations amid de-globalization. We also discuss the implications for practices.

4.7.1 Implications for Market Exit Literature

Our study contributes to research on market exit, legitimation strategies, and corporate sociopolitical activism (CSA) by recasting exit from a reactive “failure

correction" to a proactive, stakeholder oriented strategy under identifiable conditions. Classical IB work has emphasized exit as a response to underperformance, strategic misfit, or rising uncertainty—foundationally in early divestment theory and later in resource and real options perspectives (e.g., Boddewyn, 1983; Chang & Singh, 1999; Belderbos & Zou, 2009), with contemporary reviews continuing to highlight the dominance of antecedent centric, defensive framings (e.g., political risk oriented accounts; Witt et al., 2023). We respond to recent calls to elevate market exit as an important IB phenomenon and to theorize its consequences, not only its triggers (Sethuram & Gaur, 2024), by showing that CSA motivated exits from Russia are associated with higher brand equity and wider profit margins relative to comparable non announcers. In short, when exit is framed—and perceived—as activism, it can create value through stakeholder approval and market differentiation, rather than merely preserve value by cutting losses. (Boddewyn, 1983; Chang & Singh, 1999; Belderbos & Zou, 2009; Witt et al., 2023; Sethuram & Gaur, 2024).

We further connect IB exit research with nonmarket strategy by theorizing when the upside from CSA oriented exit is strongest: when the act aligns with the institutional stance of the primary market (normative alignment), when firms possess reputational endowments such as positive WOM (reputational alignment), and when firms move early in moralized crises (temporal alignment). This logic dovetails with diffusion and legitimacy based accounts of value driven exits (e.g., Myanmar divestment) yet extends them by linking alignment conditions to measurable brand and financial outcomes and by clarifying exit's role as a costly, high diagnostic signal of values that stakeholders reward (Bhagwat et al., 2020; Ganesan & Mallapragada, 2025). In doing so, we shift the center of gravity in market exit research from "why firms leave" to "what exit does". We open a research agenda on post exit value creation via legitimacy and reputation, (ii) the time sensitivity of activist signals in turbulent environments, and (iii) integration with portfolio reconfiguration and redeployment considerations in global strategy.

4.7.2 Implications for CSA in International Marketing

Marketing research has conceptualized corporate activism primarily as expressive voice—public statements, advocacy campaigns, and donations designed to signal values to stakeholders (Bhagwat et al., 2020; Mukherjee & Althuizen, 2020; Vredenburg et al., 2020). Our results extend this conversation by demonstrating that foreign exit—a costly action—can also enhance brand equity and profitability when the action aligns with salient stakeholder expectations across borders. In doing so, we complement the prevailing "voice" paradigm with evidence that high cost, action based signals travel through international markets as credible commitments, not merely as rhetoric, thereby situating exit squarely within Hirschman's exit–voice logic (Hirschman, 1970) and the marketing literature on corporate sociopolitical activism. Moreover, whereas prior work emphasizes the risks of perceived inauthenticity and polarized reactions to activism (Mukherjee & Althuizen, 2020; Vredenburg et al., 2020), our findings show that when foreign exit is normatively, reputationally, and temporally aligned, stakeholders interpret exit as a substantive, value consistent act that converts legitimacy gains into measurable brand and financial returns (Bhagwat et al., 2020). Taken together, these results invite a rebalancing of the international marketing agenda—from asking what firms say about sociopolitical issues to theorizing what firms do (and sacrifice) in contested host markets, and under which alignment conditions action based signals outperform voice in generating cross border marketing value.

Literature has substantial debate on why the same activist move pays in some markets but not others (e.g., Mukherjee & Althuizen, 2020). Our results introduce a portable alignment framework—normative (institutional stance), reputational (pre existing word of mouth base), and temporal (speed)—that organizes this cross-market heterogeneity and grounds it in established theory. We show that when a firm's exit coheres with dominant home/primary market norms (normative alignment), where it starts from a positive reputation stock (reputational alignment), and how quickly it acts to convey moral urgency (temporal alignment), the activist signal is interpreted as value consistent rather than performative—converting legitimacy into brand and financial returns. This extends CSA findings in marketing that emphasize both the payoffs and

risks of taking stands (Bhagwat et al., 2020), and it complements emerging evidence that audience polarization conditions responses to corporate activism across countries (Braga et al., 2024). Conceptually, the framework shifts the question for marketing literature from whether to engage in activism to how to design alignment along these three levers so that costly actions (e.g., exit with divestment) are credibly rewarded across borders.

4.7.3 Practical Implications

Our study also provides practical implications. Managers should reassess the prevailing assumption in international business that foreign exit is primarily evidence of strategic error or underperformance. Our results indicate that CSA oriented exits can enhance both brand equity and profitability, particularly when decisions match stakeholder expectations and are communicated early. This reframing calls for updating investment committee heuristics and board policies so that the stakeholder value of exit—including legitimacy, trust, and demand side effects—is analyzed alongside conventional cost–benefit calculations. In practice, firms should treat contested market positions as real options whose exercise may unlock reputational returns when moral expectations become salient.

To maximize the benefits of CSA, firms should pursue a strategy that embeds three execution principles revealed by our findings. First, assess normative alignment before announcing: map home and lead market stances (policy signals, investor stewardship codes, public sentiment) and move when alignment is strong (Hambrick & Wowak, 2021). Second, cultivate reputational alignment by activating credible advocates (employees, long standing NGO partners, anchor customers) and harmonizing message content across owned and earned media to amplify positive WOM (Bhagwat et al., 2020). Third, exploit the timing premium—announce early with verifiable commitments; in crisis communication, proactive, timely disclosures increase perceived authenticity and reduce attributions of opportunism (Coombs, 2007). Message architecture should clearly specify why (values), what (scope/form of exit),

how (irreversible steps and milestones), and who is protected (employees/suppliers), thereby facilitating expectation confirmation and strengthening downstream financial outcomes.

4.7.4 Limitations and Future Research Direction

As with all empirical work, this study has limitations that open avenues for further inquiry. First, our sample mostly comprises firms from the Western world where stakeholder sentiment during the study period was generally critical of continued operations in Russia. This context may accentuate both the salience of sociopolitical expectations and the returns to CSA-oriented exits. Future research should extend the sampling frame to non-Western firms, and compare jurisdictions with different sanction regimes, media freedoms, and public opinion to assess external validity and boundary conditions. Second, we extend the alignment logic (Hambrick & Wowak, 2021) from stakeholder-issue congruence to include firm characteristics (e.g., reputational capital) and decision attributes (e.g., announcement timing). Subsequent work could examine additional alignment dimensions—such as issue ownership and moral competence, supply-chain exposure, stakeholder centrality and power, regulatory embeddedness, and cross-market message consistency—to explain when and why CSA-exit translates into superior brand and financial outcomes across industries and institutional contexts. Third, our brand equity construct relies on secondary proxies, which, while advantageous for coverage and comparability, are imperfect measures of stakeholder-level mechanisms. Future studies could integrate primary evidence—multi-stakeholder interviews, surveys, and experiments (e.g., conjoint designs manipulating timing, message architecture, and market alignment)—and link them to transaction-level sales or pricing data to more directly capture expectation confirmation and to pinpoint micro-foundations of performance effects.

Chapter 5: Conclusions

5.1 Summary of the Studies

This dissertation has examined how MNEs navigate operations and develop strategies amid geopolitical conflicts, using the 2022 Russo-Ukrainian War as the empirical context. Through three interconnected studies, this research has investigated firms' strategic choices, performance consequences, and the underlying mechanisms shaping these outcomes during geopolitical turbulence. The three studies form a coherent framework that progresses from synthesizing existing knowledge to addressing gaps regarding constrained adaptation to proactive disengagement as value creation. This chapter concludes the key findings from each study and discusses their contributions to theory and practice, along with limitations.

The first study conducted a systematic literature review on geopolitical risk management in global business. Employing CNA, this study identified and analyzed 111 articles published in leading academic journals, including those listed in the UTD24, FT50, and ABS4-rated journals in the operations and supply chain management field. Through bibliometric clustering analysis, three distinct research streams emerged. Cluster 1, MNEs' strategic response to political violence and volatility, includes research on how firms respond to political instability through entry mode decisions, subsidiary management, and divestment strategies. Cluster 2, supply chain management under geopolitical risks, addresses supply chain resilience, supplier diversification, reshoring decisions and their consequences. Cluster 3, nationalism and deglobalization, examines how techno-nationalism and economic nationalism reshape the global business environment. This systematic review identified two significant gaps that directly motivated the subsequent empirical investigations. First, existing research adopts a risk-aversion perspective emphasizing exposure reduction, while overlooking adaptation mechanisms for firms constrained from exiting high-risk regions. Second, the literature on foreign divestment has traditionally portrayed market exit as a defensive response to failure rather than a proactive strategic tool capable of creating value.

The second study addressed the first gap by examining firms that remained locked into Russia following the 2022 invasion. These firms represent an underexplored population that could not follow the traditional guidance of reducing geopolitical exposure and instead had to adapt to adverse conditions. Using a sample of U.S. listed firms comprising 5,435 firm-quarter observations from 2021 to 2023, this study employed PSM-DID analysis to investigate the performance consequences of firms locked-in Russia. Grounded in RDT, the analysis revealed that locked-in firms experienced significant profitability decline compared to matched control firms without Russian exposure. The study reveals important heterogeneity in outcomes based on dependency types. Firms with higher subsidiary and supplier dependency on Russia experienced more severe performance decline. However, customer dependency could mitigate this negative relationship. The study also examined the moderating role of organizational slack. Operating slack demonstrated a buffering effect on performance deterioration, as firms with greater production capacity could absorb short-term disruptions and fund strategic adjustments. Unborrowed slack similarly mitigated performance decline by providing financial flexibility to pursue alternative strategies.

The third study addressed the second gap by investigating market exit as an alternative strategic response. While the second study examined firms that could not leave, this study focused on firms that proactively chose to leave and whether such strategic disengagement could generate value. Together, these two studies represent the full spectrum of strategic responses to geopolitical crises: constrained adaptation for locked-in firms and proactive disengagement for firms exercising strategic choice. Using a sample of U.S. listed firms comprising 4,244 firm-year observations from 2017 to 2024, this study reconceptualized Russian market exit as a form of CSA. Grounded in IST and ECT, the DID analysis revealed that activism-oriented exits generated significant improvements in both brand equity and profitability. The study examined conditions under which exit decisions produced stronger performance benefits. Normative alignment emerged as a significant moderator, with firms whose decisions aligned with their primary market's institutional stance experiencing amplified benefits. Reputational alignment also moderated the relationship, as firms with stronger prior

reputations gained more from exit decisions. Temporal alignment proved important as well, with firms that exited quickly experiencing stronger performance benefits than those that delayed withdrawal. The findings remained robust after addressing potential endogeneity concerns.

5.2 Research Implications

5.2.1 Theoretical Implications

This dissertation makes several important contributions to scholarly understanding of firm behavior and performance under geopolitical risk.

First, the dissertation advances resource dependence theory by situating it within the context of acute geopolitical risk where strategic discretion is constrained. Conventional RDT examines how firms proactively shape or diversify dependencies to gain bargaining power and reduce uncertainty (Pfeffer & Salancik, 1978). In contrast, we provide a context of locked-in operations under geopolitical conflict where exit and reconfiguration are not viable options. While existing literature suggests companies de-risk by decoupling supply chains from conflict-prone regions (Freund et al., 2024), such suggestions implicitly assume firms can readily reconfigure their global footprints. Our study shifts attention to firms bound to conflict regions through sunk investments, asset specificity, or institutional entanglements. The findings show that even under such constraints, firms can draw on two sets of buffers—operating slack representing internal productive resources and unborrowed slack representing potential external financing capacity—to sustain operations and mitigate performance deterioration (Kovach et al., 2015; Wiengarten et al., 2017; Bendig et al., 2017).

Furthermore, the dissertation examines the influences of different market dependency forms within geopolitical disruption contexts (Fan et al., 2024), challenging the conventional view of market dependency as purely a liability during crises. High levels of subsidiary concentration and supplier reliance amplify profitability deterioration through operational disruptions and supply network challenges (Bode et al., 2011). However, as competitors withdraw (Alam et al., 2023;

Srai et al., 2023), locked-in firms may capture expanded market share through demand consolidation. This offers a more balanced perspective on dependency's dual-edged role as simultaneously vulnerability and advantage during geopolitical disturbances.

The dissertation also contributes to market exit research by recasting exit from a reactive failure correction to a proactive, stakeholder-oriented strategy. Traditional international business work has emphasized exit as a response to underperformance or rising uncertainty (Boddewyn, 1983; Chang & Singh, 1999; Belderbos & Zou, 2009), with contemporary reviews highlighting the dominance of antecedent-centric, defensive framings (Witt et al., 2023). We respond to recent calls to theorize exit's consequences rather than only its triggers (Sethuram & Gaur, 2024). By demonstrating that activism-motivated exits generate higher brand equity and profitability, we show that when exit is framed as activism, it creates value through stakeholder approval rather than merely preserving value by cutting losses. This shifts market exit research from "why firms leave" to "what exit does."

Additionally, the dissertation extends CSA literature by demonstrating that costly action functions as credible stakeholder signaling. Marketing research has conceptualized corporate activism primarily as expressive voice through public statements and advocacy campaigns (Bhagwat et al., 2020; Mukherjee & Althuizen, 2020; Vredenburg et al., 2020). Our results show that foreign exit—a costly action—can enhance brand equity when aligned with stakeholder expectations, complementing the prevailing voice paradigm with evidence that action-based signals travel as credible commitments rather than mere rhetoric, thereby situating exit squarely within Hirschman's exit-voice logic (Hirschman, 1970).

Lastly, the dissertation introduces a portable alignment framework organizing cross-market heterogeneity in activist outcomes. We theorize when activism-oriented exit is strongest through three conditions: normative alignment with institutional stance, reputational alignment through pre-existing positive word-of-mouth, and temporal alignment through early action (Bhagwat et al., 2020; Mukherjee & Althuizen, 2020; Braga et al., 2024). This framework shifts the question from whether to engage in

activism to how to design alignment so that costly actions are credibly rewarded across borders.

5.2.2 Managerial Implications

This dissertation offers several practical insights for managers navigating geopolitical uncertainty in global business.

First, managers should recognize that market exit can serve as a strategic tool for value creation rather than merely a defensive response to losses (Boddewyn, 1983; Chang & Singh, 1999). When firms face moralized geopolitical crises, timely withdrawal from conflict-affected markets can generate significant brand equity and profitability gains (Bhagwat et al., 2020; Ganesan & Mallapragada, 2025). However, the effectiveness of exit as activism depends critically on alignment conditions. Managers should assess whether their exit decisions align with the normative expectations of their primary markets, leverage pre-existing positive reputations to amplify stakeholder approval, and act swiftly during the early stages of crises when moral urgency is highest (Mukherjee & Althuizen, 2020; Vredenburg et al., 2020). Delayed or ambiguous responses risk being perceived as performative rather than value-consistent, potentially undermining legitimacy gains.

Second, for firms that cannot readily exit conflict regions due to sunk investments, asset specificity, or contractual entanglements (Freund et al., 2024), our findings highlight the importance of building organizational buffers before geopolitical disruptions occur. Operating slack provides internal resources to absorb short-term shocks and fund strategic adjustments (Kovach et al., 2015; Wiengarten et al., 2017), while unborrowed slack ensures access to external financing when internal cash flows are constrained (Bendig et al., 2017). Managers should view financial conservatism not as inefficiency but as strategic preparation for geopolitical turbulence. Maintaining adequate slack resources enables firms to sustain operations and preserve competitive positioning when rapid reconfiguration is not feasible (Hendricks & Singhal, 2003; Obermaier & Donhauser, 2012).

Additionally, managers should integrate geopolitical risk assessment into strategic planning processes more systematically (Witt, 2019; Fan et al., 2022b; Roscoe et al., 2022). Our findings demonstrate that geopolitical events generate heterogeneous performance consequences depending on firm-specific characteristics including dependency structures, resource endowments, and reputational assets. Scenario planning exercises should incorporate these contingencies to develop tailored response strategies rather than one-size-fits-all approaches. Additionally, firms should invest in developing political capabilities and monitoring systems that enable early detection of geopolitical shifts and rapid strategic response.

Finally, managers should recognize that stakeholder expectations regarding corporate responses to geopolitical events have intensified considerably (Bhagwat et al., 2020; Braga et al., 2024). In an era of heightened sociopolitical awareness, silence or inaction during moralized crises may carry reputational costs (Mukherjee & Althuizen, 2020). Firms must carefully balance commercial considerations against stakeholder expectations, understanding that their geopolitical positioning communicates values to customers, employees, investors, and other stakeholders across global markets (Hirschman, 1970; Vredenburg et al., 2020).

5.3 Limitations and Future Research Directions

Despite the contributions of this dissertation, there are still several limitations for future research.

First, the systematic literature review in Chapter 2 only focused on top-tier journals, including those listed in the UTD24, FT50, and ABS4-rated journals in the operations and supply chain management field. While this approach ensured the inclusion of high-quality research, it may not capture the full scholarly knowledge on geopolitical risk in global business. Future reviews could adopt more inclusive selection criteria to ensure comprehensive coverage of the research domain.

Second, our empirical analyses in Chapters 3 and 4 rely on samples of U.S. listed firms, which may limit the generalizability of findings to other institutional

contexts. Firms from emerging economies or other developed markets may perceive and respond to geopolitical disruptions differently due to varying institutional pressures, stakeholder expectations, and political relationships. Future research should examine how firms from diverse home countries navigate geopolitical risks and whether the alignment conditions identified in this dissertation operate similarly across different institutional environments.

Also, our reliance on secondary data may not fully capture the micro-processes through which managers perceive, interpret, and strategically respond to geopolitical pressures. Qualitative approaches such as in-depth interviews, case studies, or textual analysis could provide richer insights into managerial cognition and decision-making processes during geopolitical crises.

Finally, this dissertation examined market exit as CSA within a specific geopolitical context. Future research could extend this framework by examining what kinds of sociopolitical issues firms should engage with and how they communicate their positions. Building on research that emphasizes brand–issue congruence (Vredenburg et al., 2020), scholars might also examine stakeholder responses to globally salient concerns, such as climate change elicit multiple stakeholder reactions than more localized and political topics. Additionally, activism fatigue remains underexplored: does addressing too many causes diminish stakeholder trust, and are there advantages to focusing on fewer, more deeply aligned issues? Future research might also examine rhetorical strategies that effectively convey authenticity and compare multi-platform engagement across different social media channels.

Appendix A for Chapter 2

Appendix Table A.1 Publications in Clusters

Cluster	Author(s)	Journal	Year
1	Adarkwah et al.	*Strategic Management Journal*	2024
1	Albino-Pimentel et al.	*Strategic Management Journal*	2018
1	Albino-Pimentel et al.	*Journal of International Business Studies*	2021
1	Arikan et al.	*Strategic Management Journal*	2020
1	Bertrand & Betschinger	*Journal of International Business Studies*	2024
1	Bertrand et al.	*Strategic Management Journal*	2016
1	Blake et al.	*Journal of Management Studies*	2024
1	Branzei & Abdelnour	*Journal of International Business Studies*	2010
1	Buckley et al.	*Journal of International Business Studies*	2018
1	Bullough et al.	*Entrepreneurship Theory and Practice*	2014
1	Choudhury et al.	*Strategic Management Journal*	2025
1	Czinkota et al.	*Journal of International Business Studies*	2010
1	Dai et al.	*Strategic Management Journal*	2017
1	Darendeli & Hill	*Journal of International Business Studies*	2016
1	Dimitriadis	*Strategic Management Journal*	2024
1	Duanmu	*Journal of International Business Studies*	2014
1	Fieberg et al.	*Strategic Management Journal*	2021
1	Greve & Zhang	*Academy of Management Journal*	2017
1	Hartwell	*Journal of Management*	2025
1	Hasija et al.	*Journal of Management Studies*	2020
1	Hiatt & Sine	*Strategic Management Journal*	2014
1	Holburn & Zelner	*Strategic Management Journal*	2010
1	Jeong & Weiner	*Strategic Management Journal*	2012
1	Jia & Mayer	*Strategic Management Journal*	2017
1	Johan et al.	*Journal of International Business Studies*	2013
1	Kim & Siegel	*Administrative Science Quarterly*	2024
1	Kim et al.	*Strategic Management Journal*	2025
1	Krammer	*Journal of Management*	2019
1	Li et al.	*Journal of International Business Studies*	2018
1	Li et al.	*Journal of International Business Studies*	2020
1	Li et al.	*Journal of International Business Studies*	2022
1	Liu & Li	*Journal of International Business Studies*	2020
1	Liu et al.	*Strategic Management Journal*	2022
1	Lu & Zhou	*Journal of Management*	2025
1	Ma & Clougherty	*Journal of International Business Studies*	2025
1	Nguyen et al.	*Management Science*	2023
1	Oh & Oetzel	*Strategic Management Journal*	2011
1	Oh & Oetzel	*Strategic Management Journal*	2017
1	Sethuram & Gaur	*Journal of International Business Studies*	2024
1	Stevens et al.	*Strategic Management Journal*	2016

1	Tan et al.	*Production and Operations Management*	2024
1	Williams & Fathallah	*Journal of Business Venturing*	2024
1	Witte et al.	*Journal of International Business Studies*	2017
1	Wu & Salomon	*Journal of International Business Studies*	2017
1	Zhong et al.	*Journal of International Business Studies*	2019
2	Belhadi et al.	*International Journal of Operations & Production Management*	2024
2	Chakkol et al.	*International Journal of Operations & Production Management*	2024
2	Charpin & Cousineau	*International Journal of Operations & Production Management*	2025
2	Charpin et al.	*Journal of Operations Management*	2021
2	Chen et al.	*Production and Operations Management*	2022
2	Choi et al.	*Journal of Operations Management*	2012
2	Cohen & Lee	*Manufacturing & Service Operations Management*	2020
2	Davarzani et al.	*International Journal of Operations & Production Management*	2015
2	Day et al.	*International Journal of Operations & Production Management*	2025
2	Dong & Kouvelis	*Manufacturing & Service Operations Management*	2020
2	Fan et al.	*Journal of Operations Management*	2022
2	Fan et al.	*Journal of Operations Management*	2024
2	Free et al.	*International Journal of Operations & Production Management*	2025
2	Golgeci et al.	*International Journal of Operations & Production Management*	2025
2	Handfield et al.	*International Journal of Operations & Production Management*	2020
2	Hsu & Zhu	*Manufacturing & Service Operations Management*	2011
2	Jacobs et al.	*Journal of Operations Management*	2022
2	Kim et al.	*International Journal of Operations & Production Management*	2025
2	Kouvelis et al.	*Manufacturing & Service Operations Management*	2025
2	Lam et al.	*Journal of Operations Management*	2022
2	Miller et al.	*Journal of Supply Chain Management*	2025
2	Moradlou et al.	*International Journal of Operations & Production Management*	2021
2	Moradlou et al.	*International Journal of Operations & Production Management*	2025
2	Namdar et al.	*Journal of Supply Chain Management*	2025
2	Paraskevas et al.	*Journal of Supply Chain Management*	2025
2	Paulraj et al.	*International Journal of Operations & Production Management*	2025
2	Roscoe et al.	*International Journal of Operations & Production Management*	2020

2	Roscoe et al.	*International Journal of Operations & Production Management*	2022
2	Sodhi & Tang	*Journal of Supply Chain Management*	2021
2	Srai et al.	*International Journal of Operations & Production Management*	2023
2	Wang et al.	*Production and Operations Management*	2011
2	Wu et al.	*Production and Operations Management*	2024
2	Zhang et al.	*Production and Operations Management*	2020
2	Zheng et al.	*International Journal of Operations & Production Management*	2025
2	Zhu et al.	*International Journal of Operations & Production Management*	2025
3	Amdam et al.	*Journal of Management Studies*	2025
3	Bucheli et al.	*Strategic Management Journal*	2023
3	Bucheli et al.	*Journal of International Business Studies*	2024
3	Cai et al.	*Administrative Science Quarterly*	2025
3	Cannizzaro	*Journal of International Business Studies*	2020
3	Ciravegna & Michailova	*Journal of International Business Studies*	2022
3	Click & Weiner	*Journal of International Business Studies*	2010
3	Contractor	*Journal of International Business Studies*	2022
3	Edman et al.	*Journal of International Business Studies*	2024
3	Ertug et al.	*Journal of Management*	2024
3	Fischer et al.	*Journal of International Business Studies*	2022
3	Giacomin & Romagnoli	*Journal of Management Studies*	2025
3	Godsell et al.	*Journal of International Business Studies*	2023
3	Huang et al.	*Journal of International Business Studies*	2015
3	Jamison et al.	*Journal of International Business Studies*	2025
3	Li et al.	*Journal of International Business Studies*	2024
3	Liu et al.	*Journal of International Business Studies*	2024
3	Liu et al.	*Journal of Management Studies*	2025
3	Lubinski & Wadhwani	*Strategic Management Journal*	2020
3	Luo	*Journal of International Business Studies*	2022
3	Luo & Van Assche	*Journal of International Business Studies*	2023
3	Matala & Stutz	*Journal of Management Studies*	2025
3	Minefee & Bucheli	*Journal of International Business Studies*	2021
3	Morck et al.	*Journal of International Business Studies*	2008
3	Nambisan & Luo	*Journal of International Business Studies*	2021
3	Perchard et al.	*Journal of Management Studies*	2025
3	Petricevic & Teece	*Journal of International Business Studies*	2019
3	Teece	*Journal of International Business Studies*	2025
3	Van der Eng et al.	*Journal of Management Studies*	2025
3	Yang et al.	*Journal of International Business Studies*	2025
3	Yue et al.	*Journal of Management*	2024

Appendix B for Chapter 3

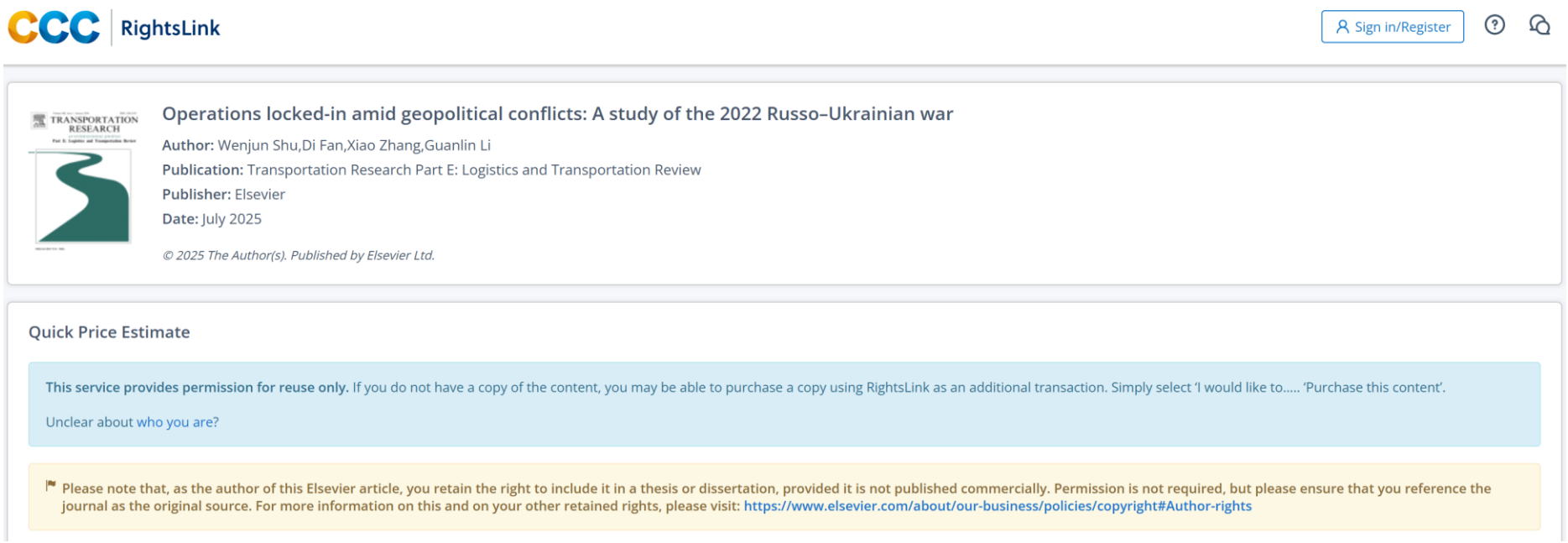
Appendix Table B.1 DID Regression on Quarters

Variables	(B1)	
	Estimate	SE
Status×2021Q1	0.0059	0.0117
Status×2021Q2	-0.0027	0.0103
Status×2021Q3	-0.0126	0.0097
Status×2022Q1	-0.0111	0.0096
Status×2022Q2	-0.0178*	0.0103
Status×2022Q3	-0.0197*	0.0106
Status×2022Q4	-0.0201**	0.0101
Status×2023Q1	-0.0292***	0.0110
Status×2023Q2	-0.0296***	0.0114
Status×2023Q3	-0.0292**	0.0116
Net Income	0.0021***	0.0007
Total Assets	-0.0025	0.0035
Accounts Receivable Turnover	0.0016***	0.0006
Inventory Turnover	0.0014	0.0010
Constant	0.0651**	0.0259
Firm fixed effect	Yes	
Time fixed effect	Yes	
N	5,435	
F	4.9917***	
R-Squared (within)	0.0200	

Notes: *** p <0.01, ** p < 0.05, * p < 0.1; SE=Standard Error.

Appendix B.2 Reuse of Publication

The Chapter 3 draws on Shu et al. (2025).



Appendix C for Chapter 4

Appendix C.1 Examples of Announcements

This appendix provides examples of corporate responses to the 2022 Russo-Ukrainian War from official company statements and media reports.

Table C.1 Examples of announcements

Title	Related firm	Link
"Apple suspends all product sales in Russia"	Apple Inc.	https://edition.cnn.com/2022/03/01/tech/apple-russia/index.html
"H&M Group takes steps to exit Russia"	H&M Group	https://hmgroup.com/news/hm-group-takes-steps-to-exit-russia/
"Nike latest brand to leave Russia permanently"	Nike Inc.	https://www.bbc.com/news/business-61914165
"Adidas Closes Its Stores in Russia"	Adidas Group	https://www.wsj.com/livecoverage/russia-ukraine-latest-news-2022-03-08/card/adidas-closes-its-stores-in-russia-RdpeOsI4W0n7Q72skdQf

Appendix C.2 The Distribution of Treated Firms

Table C.2 presents the industry composition of firms that announced exits from Russia based on two-digit Standard Industrial Classification (SIC) codes. The exiting firms span diverse sectors, with notable representation in business services (25.44%), electronic and other electrical equipment and components (excluding computer equipment) (11.15%), and industrial and commercial machinery and computer equipment (10.45%).

Table C.2 The distribution of treated firms by industry

2-digit SIC code	Percentage	2-digit SIC code	Percentage
01	0.35%	39	1.39%
10	0.35%	41	0.35%
13	1.05%	44	1.05%
20	3.83%	45	1.39%
21	0.35%	47	0.35%
23	2.44%	48	2.79%
25	0.35%	50	0.35%
26	1.74%	53	0.70%
27	0.70%	54	0.70%
28	5.92%	56	0.70%
29	2.09%	58	0.70%
30	0.70%	59	1.05%
31	1.05%	70	0.70%
32	0.70%	73	25.44%
33	1.05%	75	0.35%
34	0.70%	78	0.35%
35	10.45%	79	1.05%
36	11.15%	82	0.35%
37	8.36%	87	1.05%
38	4.53%	99	1.39%

Appendix C.3 The Alternative Measurement of Brand Equity

Following Simon & Sullivan (1993), this method decomposes a firm's total market value (V^*) into tangible (V_T) and intangible components (V_I), with brand equity representing a specific portion of intangible value. Simon and Sullivan decompose intangible value into three components: brand equity (V_b), non-brand factors that provide cost advantages such as R&D (V_{nb}), and industry-wide factors that permit monopoly profits (V_{ind}). Brand equity itself comprises two elements: the demand-enhancing component (V_{b1}) that enables price premiums through perceived quality, and the cost-reducing component (V_{b2}) that generates marketing efficiencies. Therefore:

$$V_I = (V_{b1} + V_{b2}) + V_{nb} + V_{ind} \quad (C.1)$$

To isolate brand equity from other intangible assets, we employ a two-stage approach. First, we separate market share attributable to brand factors from that attributable to non-brand factors by regressing total market share on various determinants. Brand-related market share is explained by order (ord) of market entry and relative advertising expenditures to industry peers (adshr, defined by four-digit SIC code), while non-brand market share derives from relative R&D investments to industry peers (rndshr).

$$S = S_{b2} + S_{nb} \quad (C.2)$$

$$S = b_0 + b_1 \times ord + b_2 \times adshr + b_3 \times rndshr + \varepsilon \quad (C.3)$$

$$E(S_{b2}) = \widehat{b_1} \times ord + \widehat{b_2} \times adshr \quad (C.4)$$

$$E(S_{nb}) = \widehat{b_0} + \widehat{b_3} \times adshr + \hat{\varepsilon} \quad (C.5)$$

Then, we use the following equation to estimate intangible capital values:

$$V_I = \beta_0 + \beta_1 \times CR4 + \beta_2 \times adv + \beta_3 \times age + \beta 4 \times E(S_{b2}) + \beta 5 \times E(S_{nb}) + \upsilon, \quad (C.6)$$

where CR4 represents industry concentration, adv captures advertising expenditures, age measures brand maturity, and $E(S_{b2})$ and $E(S_{nb})$ represent expected market shares from brand and non-brand factors respectively.

Finally, brand equity is then computed as equation A7. For our empirical analysis, we take the natural logarithm of this brand equity measure (BE2) in the DID model.

$$\widehat{V_b} = \widehat{\beta_2} \times adv + \widehat{\beta_3} \times age + \widehat{\beta_4} \times E(S_{b2}) \quad (C.7)$$

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