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Geopolitical Risks and International Business Decision-Making: Strategies for Mitigation

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Master in International Management

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BUSINESS
SCHOOL

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Dedication

I dedicate this dissertation to my beloved family, cherished friends, and esteemed colleagues who have been unwavering pillars of support throughout my academic and professional journey. Your encouragement, understanding, and patience have been invaluable, fueling my aspirations and sustaining my determination.

In particular, I extend my deepest gratitude to my wife, Dr. Andreia Araújo Marques, whose boundless love, unwavering faith, and tireless support have been the cornerstone of my academic and professional accomplishments. Your strength and belief in me have illuminated even the darkest of paths, and I am profoundly grateful for your presence in my life.

To my family, for their unwavering belief in my potential and the sacrifices they made to nurture my dreams; to my friends, for their encouragement and camaraderie that have enriched my life; and to my colleagues, for their collaboration and shared experiences that have shaped my professional journey – I offer my heartfelt appreciation.

Finally, to Dr. Maria do Rosário da Veiga, for her insightful guidance, mentorship, and faith in my work, I am deeply grateful. Your expertise and encouragement have been instrumental in bringing this research to fruition.

This dissertation stands as a tribute to the remarkable individuals who have shaped my path and stood by me, and it is with profound gratitude and love that I dedicate this work to you all.

With heartfelt thanks,

Diogo Moreira Fernandes

Resumo

Este estudo inicia-se com uma análise de fatores de risco geopolítico, incluindo instabilidade política, tensões comerciais, alterações regulatórias e conflitos regionais, examinando o impacto nas operações internacionais, cadeias de suprimento e estratégias de entrada no mercado. Com base em estudos de caso e pesquisa empírica, a dissertação destaca as consequências financeiras e reputacionais significativas que os riscos geopolíticos podem impor às empresas globais.

O foco central é o desenvolvimento de estratégias eficazes para mitigar esses riscos, aprofundando-se em modelos de avaliação de risco, planeamento de cenários e o papel da tecnologia e da análise de dados na identificação e avaliação de riscos geopolíticos. O estudo explora ainda a importância da gestão intercultural, das relações governamentais e da liderança ética frente à instabilidade política e incerteza global.

A dissertação também evidencia a adaptabilidade na tomada de decisões no contexto de negócios internacionais, enfatizando a incorporação da mitigação de riscos no planeamento estratégico. Ao integrar insights da literatura, entrevistas com especialistas e estudos de caso práticos, oferece-se um quadro para que as empresas gerenciem e mitiguem proactivamente os riscos, aumentando a resiliência e garantindo sucesso global sustentado.

Nesta era de crescente turbulência geopolítica, esta pesquisa é um recurso valioso para líderes empresariais, formuladores de políticas e académicos que buscam navegar as complexidades do panorama global e tomar decisões informadas para promover crescimento e prosperidade sustentável.

Classificação JEL: F23, M16

Palavras-chave: Riscos Geopolíticos, Negócios Internacionais, Tomada de Decisões, Mitigação de Riscos, Estratégia Global, Instabilidade Política

Abstract

This study begins with an in-depth analysis of geopolitical risk factors—political instability, trade tensions, regulatory shifts, and regional conflicts—and examines their impact on international business operations, supply chains, and market entry strategies. Through case studies and empirical research, it highlights the financial and reputational consequences that geopolitical risks pose for global enterprises.

Central to the research is the development of effective risk mitigation strategies, delving into risk assessment models, scenario planning, and the role of technology and data analytics in identifying and evaluating geopolitical risks. Additionally, it explores the importance of cross-cultural management, government relations, and ethical leadership in managing political instability and global uncertainty.

The dissertation underscores the need for adaptability in international business decision-making, advocating for the integration of risk mitigation in strategic planning. By combining academic literature insights, expert interviews, and practical case studies, it provides a framework for proactive risk management, enhancing resilience and supporting sustained global success.

In a time marked by geopolitical turbulence, this study serves as a valuable resource for international business leaders, policymakers, and scholars navigating the complexities of the global landscape to make informed decisions that foster sustainable growth and prosperity.

JEL Classification System: F23, M16

Keywords: Geopolitical Risks, International Business, Decision-Making, Risk Mitigation, Global Strategy, Political Instability

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CHAPTER 1

Introduction

1.1. Contextualization of Geopolitical Risks in International Business

In an era marked by rapid globalization, international corporations face increasingly complex and volatile geopolitical landscapes. Geopolitical risks—spanning political instability, regulatory shifts, trade disputes, and regional conflicts—have become central challenges for globally operating businesses. These risks manifest through sudden policy shifts, sanctions, and long-standing regional tensions that disrupt trade, supply chains, and entire markets. The current business environment requires companies to be agile, strategically assessing and adapting to these evolving geopolitical factors.

Research highlights the significant impact of geopolitical risks on global supply chains, market access, and corporate profitability (Knight & Pretty, 1996). The February 2022 Russian invasion of Ukraine, building on the initial 2014 annexation of Crimea, demonstrated how such events can disrupt global industries, particularly impacting European energy supplies and driving broader economic shifts (Dabrowski & Myachenkova, 2022). This conflict precipitated the withdrawal of over 1000 multinational corporations from the Russian market, underscoring the complexity and urgency with which global businesses must now respond to political volatility and regulatory pressures (Kobrin, 2022; Kuznetsov & Kuznetsova, 2023).

Similarly, the COVID-19 pandemic exposed vulnerabilities in global supply chains, underscoring the need for resilience in crisis management and revealing the potential for rapid destabilization in established logistics and production networks (Ivanov & Dolgui, 2020).

More recently, the 2023 Hamas attack on Israel and the escalating conflicts involving Gaza, Hezbollah, and potential Iranian involvement illustrate another significant risk, especially for the energy sector. The crisis not only threatens regional stability but also poses risks to global energy markets, as Middle Eastern nations are among the largest oil producers worldwide (British Petroleum, 2023). If prolonged instability impacts critical transit routes, such as the Strait of Hormuz, energy prices could experience increased volatility, further disrupting global supply chains (Blas, 2023).

Looking forward, the upcoming 2024 U.S. presidential election introduces another layer of uncertainty. Political shifts in the United States have historically influenced global markets, with potential changes in trade policies and international alliances likely to impact regulatory frameworks and geopolitical stability (Friedman, 2023). Together, these examples underscore the pressing need for multinational corporations to enhance their understanding of geopolitical risks, underscoring the importance of proactive risk assessment and robust mitigation strategies in navigating today's unpredictable global landscape.

1.2. Definition of the Research Problem

The fundamental problem addressed by this dissertation is how multinational corporations (MNCs) can effectively manage and mitigate geopolitical risks in an increasingly uncertain and dynamic global landscape. As businesses expand across borders, their exposure to diverse and potentially disruptive geopolitical forces increases. Understanding how these risks affect organizational strategies and decision-making processes is vital to ensuring long-term success. Despite the increasing prevalence of geopolitical risks in today's business environment, there remains a lack of comprehensive frameworks for assessing and integrating these risks into corporate strategies (Bailey & Hellin, 2017).

While previous research has explored individual dimensions of geopolitical risks, such as political instability or trade tensions, there has been limited focus on how international businesses can holistically approach risk management from a geopolitical perspective (Girling, 2013). The complexity and unpredictability of geopolitical events require more than linear forecasting models; instead, scenario-based planning and robust risk assessment tools are essential (Kitsing, 2022).

This dissertation aims to fill this gap by exploring the ways in which geopolitical risks impact corporate strategies and providing actionable insights for businesses navigating these uncertainties.

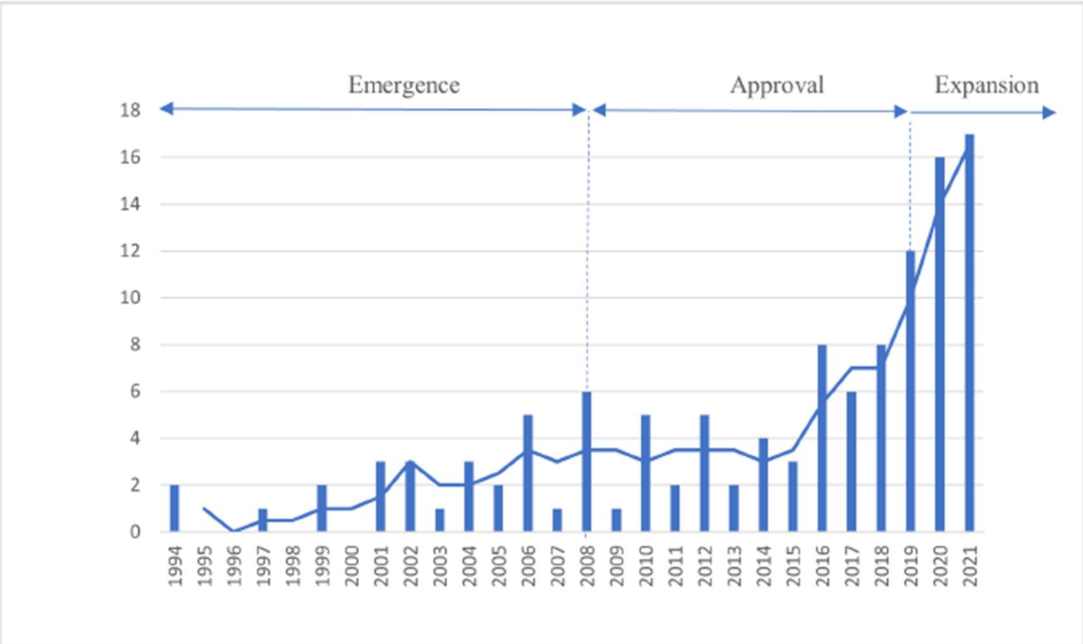
1.3. Importance and Relevance of the Research

The significance of this research stems from the increasing acknowledgment that geopolitical risks profoundly affect corporate performance, operational sustainability, and long-term resilience. As markets and supply chains have become progressively interconnected, disruptions originating from geopolitical volatility can lead to widespread, cascading impacts across various industries and regions.

Figure 1.1 - The evolution of geopolitics in IB publications

Source: Bozonelos & Tsagdis (2023), "From Fragmented Geopolitics to Geopolitical Resilience in International Business," AIB Insights, 23(2).

Reprinted from.



As illustrated in Figure 1.1 above, this topic has gained increasing attention within international business research, motivated by the escalating complexity and frequency of geopolitical challenges. However, it is essential to note that the data represented here was gathered prior to the ongoing conflicts in Ukraine and the Middle East, which further highlight the urgency of addressing geopolitical risks in strategic planning frameworks.

For instance, the COVID-19 pandemic exposed critical vulnerabilities in global supply chains, underscoring the importance of preparing for both health and geopolitical disruptions. This realization has prompted many corporations to reassess their risk management approaches (Gereffi, 2020; Shih, 2020).

Moreover, the rising prevalence of high-impact geopolitical events, such as Brexit and the proliferation of protectionist policies, underscores an urgent need for businesses to embed geopolitical risk management within their strategic frameworks proactively (Bown, 2020; Rugman & Verbeke, 2007). These events are predicted to become increasingly relevant as globalization, economic integration, and the unimpeded flow of information across borders have not diminished the power of political dynamics to disrupt markets (Bremmer & Keat, 2009).

Developing a nuanced understanding of these geopolitical risks allows organizations to anticipate potential threats and capitalize on emerging opportunities within uncertain environments (Ansoff, 1957).

As such, this research holds vital implications for business leaders, policymakers, and scholars seeking to navigate today's volatile geopolitical landscape and build corporate resilience to address a spectrum of global challenges (Bailey & Hellin, 2017). Building on this foundation, Chapter 4, which will provide a focused analysis on industries and regions most susceptible to geopolitical volatility, such as energy and technology, and will present a case study on Shell's scenario planning methodology as a practical example of strategic foresight and risk mitigation.

1.4. Research Questions and Objectives

The primary aim of this dissertation is to explore how multinational corporations can effectively manage and mitigate the rising complexities of geopolitical risks in an increasingly interconnected and volatile global business environment. Addressing this challenge is essential as these corporations navigate uncertainties posed by political shifts, regulatory changes, trade barriers, and regional conflicts, which can fundamentally impact their operations and long-term viability.

This research seeks to deepen the understanding of geopolitical risk management by addressing the following key questions:

1. **What strategies can multinational corporations employ to effectively mitigate geopolitical risks?**

   This question seeks to identify proactive and reactive strategies that international businesses can adopt to safeguard their operations and minimize disruptions caused by unpredictable geopolitical events. Emphasis is placed on both traditional risk management techniques and innovative, adaptive approaches suited to the modern geopolitical landscape.

2. **How can geopolitical risk assessment and mitigation be integrated into the strategic decision-making process of international businesses?**

   This question addresses the need for embedding geopolitical risk awareness into the core of corporate strategic planning. The aim is to determine how multinational corporations can use structured frameworks to assess risks and make strategic decisions that align with both immediate risk mitigation and sustainable, long-term business goals.

These research questions frame an investigation into the nature of geopolitical risks, guiding the dissertation toward developing actionable insights for international businesses. To address these questions, the study sets out the following objectives:

- **To analyze the origins and manifestations of geopolitical risks** that are particularly relevant to global businesses. This includes an examination of recent geopolitical disruptions and how they challenge multinational corporations' operations and stability.
- **To identify a range of strategies used by multinational corporations to mitigate geopolitical risks,** focusing on best practices, case studies, and sector-specific insights that offer practical guidance for managing these risks.
- **To provide a framework for integrating geopolitical risk assessment into strategic decision-making within multinational corporations**, enabling them to embed risk awareness into corporate strategies, foster resilience, and enhance agility in response to geopolitical shifts.

1.5. Dissertation Structure

This dissertation is organized into seven key chapters, each structured to build upon the previous sections, providing a comprehensive exploration of geopolitical risk management in international business.

- **Chapter 1: Introduction** – This chapter lays the groundwork for the research, discussing the background and contextualization of geopolitical risks in today's global environment. It articulates the main research problem, defines key terms, presents the research questions and objectives, and provides an overview of the dissertation's structure.
- **Chapter 2: Literature Review** – This chapter provides a comprehensive literature review on the foundational theories and contemporary frameworks related to geopolitical risks, emphasizing their impact on corporate strategy and decision-making under uncertainty. It begins by defining key concepts such as geopolitics and risk, followed by an exploration of the indicators used for geopolitical risk detection. The chapter then delves into strategic decision-making models that organizations employ to navigate uncertain geopolitical landscapes, from corporate to operational levels. This review establishes the theoretical basis for understanding how businesses assess and respond to geopolitical challenges, setting the stage for practical applications discussed in later chapters.

- **Chapter 3: Conceptual Model and Research Hypotheses** – This chapter develops a conceptual framework illustrating the relationship between geopolitical risks and business decision-making. It also formulates research hypotheses based on the established framework, providing a clear direction for subsequent analysis.
- **Chapter 4: Contextualization** – This chapter examines the industry and regional contexts that are most significantly influenced by geopolitical uncertainties, with a particular emphasis on sectors such as semiconductors, minerals, and technology. It presents case studies that illustrate the strategies employed by multinational corporations to mitigate the adverse effects of geopolitical risks. By analyzing these strategies, the chapter seeks to highlight best practices and provide actionable insights for organizations navigating an increasingly complex global landscape.
- **Chapter 5: Methodology** – The methodology chapter outlines the research design, data collection methods, and analytical approaches, whilst addressing ethical considerations regarding data handling and corporate disclosures.
- **Chapter 6: Results and Discussion** - This chapter presents the findings from the research, interpreting the data in relation to the theoretical frameworks discussed earlier. It examines the implications of the findings for both theory and practice, providing practical implication for multinational corporations.
- **Chapter 7: Conclusions and Recommendations** - The final chapter summarizes the key findings of the dissertation, presents strategic recommendations for multinational corporations facing geopolitical risks, and discusses research limitations and future research directions.

CHAPTER 2

Literature Review

2.1. Defining Geopolitical Risks

This sub-chapter delves into the intricate concept of geopolitical risks, offering a robust definition that captures the multifaceted nature of these risks and highlights their dynamic character within the international business landscape. Geopolitical risks can be defined as the potential for political, economic, or social instability in a given country or region, which may adversely affect business operations and decision-making processes (Bremmer & Keat, 2009; Scherer & Palazzo, 2011).

Within this framework, we explore the manifold manifestations of geopolitical risks, encompassing a spectrum that ranges from political instability and trade disputes to regulatory shifts and regional conflicts. This analysis serves as a backdrop for an in-depth examination of the repercussions these risks have on international business.

It is crucial to differentiate between risk and uncertainty in the context of geopolitical analysis. Risk pertains to situations where the probabilities of potential outcomes can be discerned—akin to tossing a coin or rolling a die—while uncertainty arises when the randomness of outcomes defies quantification (Knight, 1921; Gollier, 2012). This distinction is essential for effective corporate strategy in the face of geopolitical developments.

Furthermore, delineating uncertainty from complexity is vital for a comprehensive understanding of geopolitical risks. As Schoemaker (2004) notes, the distinction lies in the extent of available knowledge about a target variable and the number of interrelated variables affecting it. In a world increasingly characterized by "unknown unknowns," this complexity often manifests as uncertainty, highlighting the importance of untangling these intertwined aspects in addressing geopolitical risks effectively (Bremmer & Keat, 2009).

As Bremmer and Keat (2009) assert, although politics may be challenging to quantify and may include numerous "black swans" or unknowable risks, much can still be learned about the political environment through rigorous analysis. Understanding local political dynamics, power structures, and the interests of key stakeholders is essential for navigating these complexities *Meyer & Boxenbaum, 2010).

In summary, this sub-chapter establishes a foundational understanding of geopolitical risks, emphasizing the interplay between geopolitics, risk, and uncertainty.

2.1.1. Geopolitics

"Who rules East Europe commands the Heartland;
Who rules the Heartland commands the World-Island;
Who rules the World-Island commands the world."
Sir Halford John Mackinder

Mackinder's assertion underscores the profound implications of geopolitical power dynamics throughout history. However, what precisely constitutes geopolitics? A cursory search of the term may yield approximately six to seven million results, reflecting a spectrum of interpretations that often complicate its definition. Attempting to encapsulate geopolitics within a singular framework may prove not only challenging but ultimately futile.

The concept of geopolitics originated in the late 19th century, first articulated by Swedish political scientist Rudolf Kjellén. It was subsequently elaborated upon by notable figures such as Sir Halford Mackinder, who introduced the influential "heartland" theory, and Karl Haushofer, who associated geopolitics with German nationalist ideologies. Kjellén initially defined geopolitics as "the theory of the state as a geographical organism or phenomenon in space" (Kjellén, 1899). This definition reflects the era's intellectual currents and illustrates how interpretations of geopolitics have evolved over time.

Richard Hartshorne offered a more pragmatic definition, describing geopolitics as "geography utilized for particular purposes that lie beyond the pursuit of knowledge" (Hartshorne, 1939). This notion implies that the application of geographical insights extends into the realms of power and strategy. Geoffrey Parker characterized geopolitics as "the study of international relations from a spatial or geographical perspective" (Parker, 1998). In contrast, Gearoid O Tuathail argued that "geopolitics does not have a singular, all-encompassing meaning or identity. Its discourse is a culturally and politically laden way of describing, representing, and writing about geography and international politics" (O Tuathail, 2003).

At its core, geopolitics examines the intricate interplay between geography, politics, and power, scrutinizing how physical and spatial dimensions shape international affairs and influence global power distribution. Central themes include territorial control, resource competition, spheres of influence, and the strategic significance of geographic features, such as coastlines, choke points, and natural borders (Dodds, 2007).

The advent of globalization, alongside the rising prominence of non-state actors, has challenged conventional state-centric geopolitical frameworks. Contemporary geopolitical analyses must confront emerging issues such as climate change, transnational migration, and the expanding role of cyberspace and outer space within international relations (Dodds, 2007).

2.1.2. Risks

Risk is commonly defined as the potential for realizing negative or unforeseen outcomes, particularly in decision-making contexts. The International Organization for Standardization (ISO) provides an internationally recognized definition within ISO 31000, a global standard for risk management, stating that risk is the "effect of uncertainty on objectives." This definition underscores the intrinsic connection between risk and uncertainty, emphasizing their impact on goal achievement across various sectors, including business and economics (ISO, 2018).

In economic discourse, risk is traditionally differentiated from uncertainty, following the framework established by Knight (1921). Knight argued that risk pertains to scenarios where the probabilities of potential outcomes can be known or estimated, while uncertainty applies to situations in which these probabilities cannot be assigned due to insufficient information. This foundational distinction remains relevant in contemporary discussions, especially in fields such as international business and geopolitical risk management.

Moreover, it is essential to further distinguish uncertainty from complexity in modern analyses. Schoemaker (2004) highlights that uncertainty relates to the degree of available knowledge about a specific variable, while complexity pertains to the multitude of variables at play and their interrelationships. In complex systems - such as the global geopolitical landscape - the presence of "unknown unknowns" (Rumsfeld, 2002) adds layers of difficulty to effective risk management. When complexity becomes overwhelming or opaque, it may manifest as uncertainty, complicating the assessment and management of risks, particularly in the context of international business.

For example, while market, credit, and operational risks can often be quantified using models or historical data, geopolitical risks tend to exhibit greater uncertainty due to their intricate and interdependent nature. The interconnectedness of global supply chains, trade policies, and political dynamics indicates that minor disruptions in one area can yield extensive repercussions, amplifying uncertainty (Parker, 2008).

Schoemaker's (2004) distinction clarifies that risk management involves not only understanding the likelihood of negative outcomes but also navigating the complexities inherent in the systems that produce those outcomes. To effectively manage risk in this context, decision-makers must disentangle known variables from unknowns and consider both measurable risks and the uncertainties stemming from system complexity.

In the realm of international business, geopolitical risks are particularly susceptible to the challenges posed by uncertainty and complexity. Traditional risk management tools may falter when addressing non-ergodic systems, wherein historical data does not reliably predict future outcomes due to continuously shifting variables. The international environment is characterized by risks associated with economic policies, political instability, and unforeseen global events—such as pandemics or conflicts—that introduce layers of uncertainty, often eluding standard risk models.

To effectively tackle these geopolitical risks, businesses must adopt strategies that transcend mere probability calculations and risk quantification. This includes developing flexible decision frameworks that account for inherent uncertainties, as well as engaging in scenario planning that considers the complex interactions between global actors and policies. By distinguishing between uncertainty arising from knowledge gaps and that stemming from intricate interconnections, decision-makers can navigate the risks associated with operating in a complex global environment more precisely.

Ultimately, understanding the distinctions among risk, uncertainty, and complexity is crucial for effective decision-making in economics and international business. Risk involves measurable probabilities, while uncertainty arises when those probabilities are unknowable, often due to the complexity of the system involved. As Schoemaker (2004) notes, disentangling these two dimensions is vital for addressing the geopolitical risks that define modern international business environments. A nuanced understanding of the interplay between risk, uncertainty, and complexity is key to developing informed strategies in an increasingly interconnected world.

2.1.3. Geopolitical risks and awareness

Geopolitical risks can be conceptualized as a subset of the broader category of political risks. As outlined by Rice and Zegart (2018), political risks arise from significant geopolitical events, such as major wars, shifts in great power dynamics, and the imposition of multilateral interventions. These events not only redistribute power among nations but also generate far-reaching effects across various markets. For instance, the collapse of the Soviet Union had immediate repercussions for companies like Chevron, illustrating the direct impact geopolitical events can have on business operations (Rice & Zegart, 2018). However, as we have emphasized, the indirect effects of geopolitical events are often obscured yet equally significant for businesses navigating the global landscape.

That said, geopolitical awareness entails a comprehensive understanding of the forces and maneuvers within the geopolitical sphere. This awareness encompasses an acknowledgment of unresolved geopolitical issues and factors that may escalate tensions between nations or trigger crises within the global socio-political and economic order (Dijink, 2002). The ability to anticipate and interpret these dynamics is crucial for firms operating in an increasingly interconnected world.

The implications of geopolitical awareness extend beyond immediate threat identification; they play a vital role in strategic decision-making. As highlighted by Khanna (2016), businesses that maintain robust geopolitical awareness can adapt their strategies to mitigate risks associated with political instability and regional conflicts.

Furthermore, the sources of information that shape geopolitical awareness are critical. In the digital age, organizations have access to a plethora of information from traditional news media, social media, and analytical reports. However, the reliability and bias of these sources can significantly influence perceptions of geopolitical risks. As noted by Drezner (2014), media framing can either amplify or downplay the perceived severity of geopolitical issues, affecting corporate responses. Thus, businesses must critically evaluate their information sources and consider the potential biases inherent in different narratives.

Cultural and historical contexts also profoundly influence how geopolitical risks are interpreted. According to O Tuathail (2006), the understanding of geopolitics is often shaped by national narratives and historical experiences, which can lead to divergent interpretations of similar geopolitical events. For instance, how a country perceives its security threats may be heavily influenced by its historical interactions with neighboring states. This underscores the importance of culturally informed geopolitical analysis in corporate strategy.

The assessment of geopolitical risks involves several critical factors, including military expenditures, historical conflict patterns, and shifts in international alliances (Morgan, 2020; Caldara & Iacoviello, 2022).

A comprehensive understanding of these elements is essential for organizations to anticipate potential disruptions and formulate effective responses in an increasingly complex global landscape. As geopolitical awareness deepens, it becomes imperative to translate this knowledge into actionable insights. Thus, we will now explore **Indicators for Geopolitical Risk Detection** in the next sub-chapter, which will provide practical tools and methodologies to effectively monitor and analyze these risks.

2.2. Indicators for Geopolitical Risk Detection

The field of geopolitical risk analysis requires a sophisticated set of indicators to detect, analyze, and respond to emerging threats. In this context, indicators of geopolitical risk serve as essential tools to quantify and track risks, particularly those arising from instability, international conflict, and systemic shifts in power relations. These indicators encompass a range of data-driven metrics, such as the Geopolitical Risk (GPR) Index (Caldara & Iacoviello, 2022), which leverages news-based content to assess the frequency and severity of adverse geopolitical events, thus providing a quantified perspective on global geopolitical tensions. Complementing the GPR Index, Military and Defense Spending metrics offer insights into national defense priorities and regional arms races, both of which are predictive of rising political tensions or potential conflicts (SIPRI, 2024; Tian et al., 2023).

Beyond these measures, other significant indicators enhance the robustness of geopolitical risk detection. Political Stability and Governance Scores provide assessments of government stability, rule of law, and regulatory quality, which are critical in gauging the risk environment of specific regions (World Bank, 2023). Additionally, Trade and Economic Sanctions Data track restrictive measures that influence global supply chains and market access, signaling economic pressures that may lead to heightened geopolitical risks (World Trade Organization, 2023; OFAC, 2023). Together, these indicators create a comprehensive framework for analyzing geopolitical risk, which will be detailed in the subsequent sections.

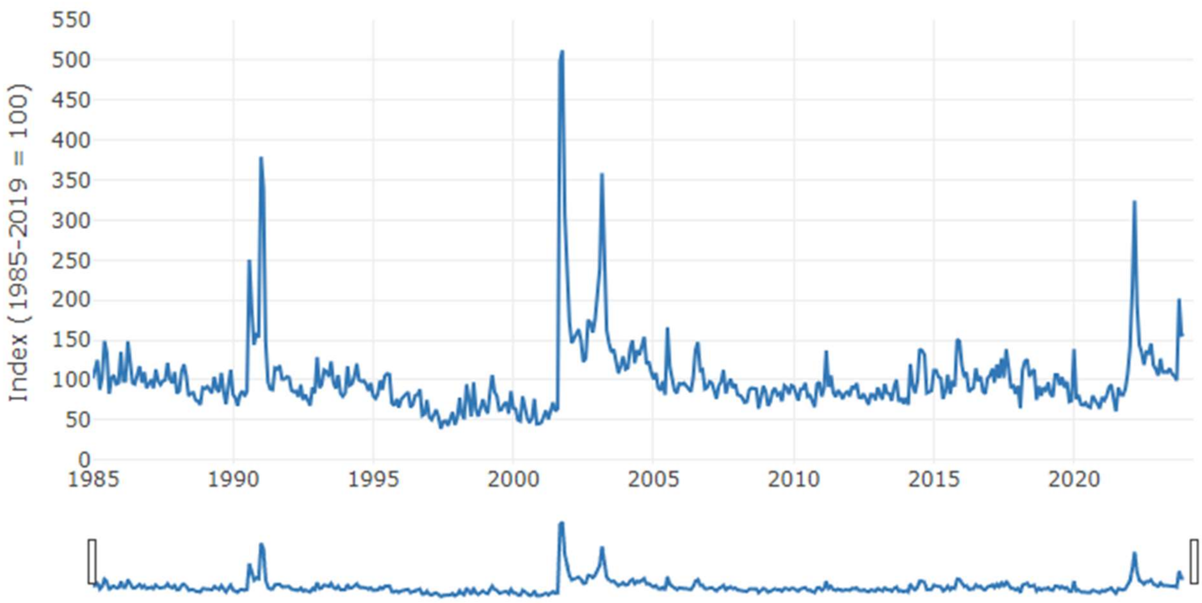
The following subsections will discuss the GPR Index and Military and Defense Spending in depth, with subsequent topics addressing Political Stability and Governance Scores (2.2.3) and Trade and Economic Sanctions Data (2.2.4). These indicators collectively serve as the foundation for strategic geopolitical risk detection and inform decision-making in complex, dynamic environments.

2.2.1. Geopolitical risk (GPR) Index

The Geopolitical Risk (GPR) Index, introduced by Caldara and Iacoviello (2022), offers a quantitative, news-based measure of geopolitical risk through its unique focus on adverse geopolitical events and their implications for economic stability (see Figure 2.1 below). Constructed by analyzing the frequency of references to specific geopolitical events in major Western newspapers, the GPR index serves as a crucial tool for assessing the economic impacts of geopolitical instability. By focusing on the United States, the United Kingdom, and Canada, Caldara and Iacoviello's methodology systematically reviews leading publications, such as The New York Times, The Guardian, and The Wall Street Journal, to generate a monthly index based on the share of articles discussing adverse geopolitical developments (Caldara & Iacoviello, 2022).

Figure 2.1 - Geopolitical risk (GPR) Index

Source: https://www.matteoiacoviello.com/gpr.htm on October 2024



The index categorizes geopolitical events into eight core groups, ranging from broad "War Threats" to specific "Terror Acts," capturing both the latent threats and the active manifestations of geopolitical conflict. This structure enabled Caldara and Iacoviello to construct two essential sub-indices: the Geopolitical Threat (GPRT) index, which focuses on imminent threats (e.g., military buildups or nuclear threats), and the Geopolitical Acts (GPRA) index, which tracks the actualization of such threats (e.g., initiation or escalation of warfare).

Historical analysis shows that the GPR index notably spikes during significant geopolitical crises, such as the two World Wars, the Korean War, and the post-9/11 period.

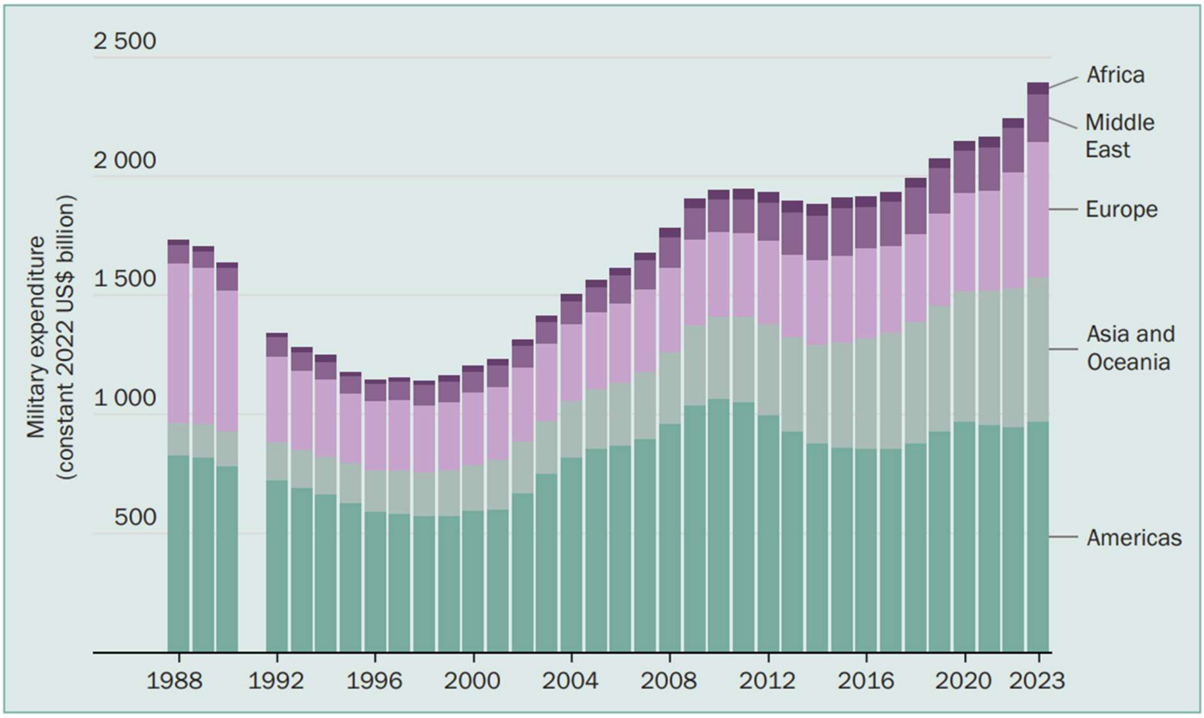
These spikes correlate with economic indicators, revealing that increased geopolitical risk is generally followed by reductions in investment and employment, heightened disaster probabilities, and larger downside economic risks. The GPR Index thus captures both the anticipatory effects and the realized impacts of geopolitical risks, making it a valuable tool for policymakers and businesses seeking to understand and mitigate the economic consequences of geopolitical instability (Caldara & Iacoviello, 2022).

2.2.2. Military and Defense Spending

2.2.2.1. SIPRI Military Expenditure Database

Stockholm International Peace Research Institute (SIPRI) is an independent international institute dedicated to research into conflict, armaments, arms control and disarmament. As shown in Figure 2.2., established in 1966, the SIPRI provides data, analysis and recommendations, based on open sources, to policymakers, researchers, media and the interested public.

Figure 2.2. - World military expenditure, by region, 1988–2023
Source: SIPRI Military Expenditure Database, Apr. 2024
Reprinted from.

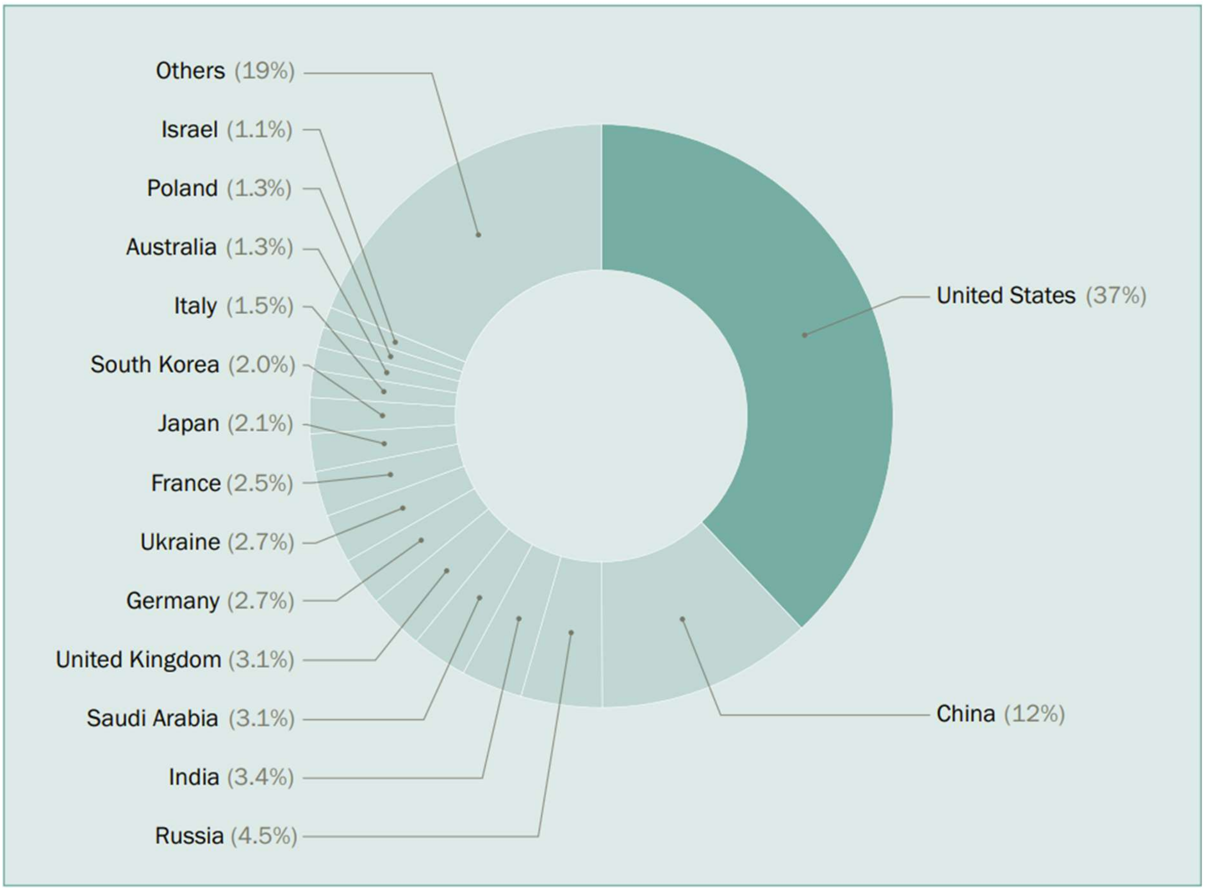


The SIPRI Military Expenditure Database offers comprehensive, annually updated time series data on global military spending, covering the period from 1949 to 2023.

It includes national military expenditures in local currency and US dollars, both in current and constant (2022) terms, and presents these figures as a share of GDP, per capita, and in relation to government expenditure. The database standardizes entries across calendar and financial years, distributing spending for non-calendar fiscal years evenly throughout the year.

All data originates from open sources, ensuring transparency and accessibility for researchers and policymakers tracking military expenditure trends globally.

Figure 2.3. The share of world military expenditure of the 15 countries with the highest spending in 2023
Source: SIPRI Military Expenditure Database, Apr. 2024.
Reprinted from.



As shown in Figure 2.2., global military expenditure reached an unprecedented $2,443 billion in 2023 - the highest in history - marking the ninth consecutive year of growth and a significant 6.8% year-on-year increase - the steepest rise since 2009.

This elevated global military burden (military spending as a percentage of GDP) to 2.3% and raised average military expenditure as a proportion of government spending by 0.4 percentage points to 6.9%. Per capita military spending also reached a new peak at $306, the highest since 1990. These increases primarily reflect the ongoing war in Ukraine and rising geopolitical tensions in Asia, Oceania, and the Middle East, with all regions recording spending increases, notably in Europe, Asia, and the Middle East (Stockholm International Peace Research Institute, 2024).

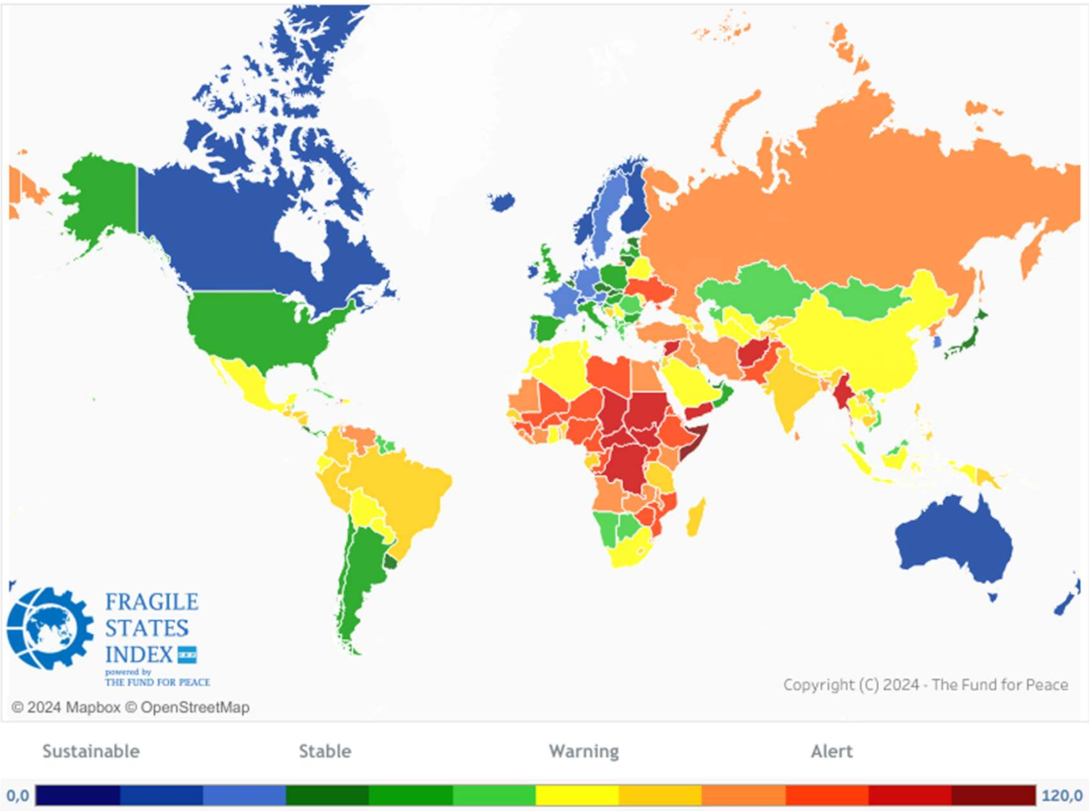
2.2.3. Political Stability and Governance Scores

The Political Stability and Governance Scores, often measured through the World Bank's Worldwide Governance Indicators (WGI), are critical tools for assessing the degree of stability within a state. These scores provide insights into the likelihood of politically driven violence and disruptions, gauging factors such as social tensions, regime durability, and risks of violence or terrorism. The Political Stability and Absence of Violence/Terrorism (PV) indicator, a key component of WGI, reflects perceptions of the probability of political instability or violence within a country, including the impact of terrorism (World Bank, 2024).

Figure 2.4. - Fragile States Index Heat Map as of 9th October 2024

Source: https://fragilestatesindex.org/analytics/fsi-heat-map/

Reprinted from.



This score, together with other governance indicators like government effectiveness and regulatory quality, is derived from a wide array of data sources, including expert assessments and survey data. By combining various metrics across more than 30 sources, the WGI aims to create a comprehensive profile of governance and stability. These indicators are especially valuable in risk assessment as they provide quantifiable metrics that reflect the state's capacity to manage conflict, uphold law and order, and minimize the risks of sudden policy shifts, which can significantly impact investment climates and operational stability (Kaufmann et al., 2010; World Bank, 2023).

For assessing geopolitical risks, the Political Stability score is especially useful as it highlights emerging vulnerabilities and strengthens the capacity for preemptive response in both corporate and governmental risk assessments.

2.2.4. Trade and Economic Sanctions

Trade and economic sanctions data provide essential insights into geopolitical risk analysis by revealing the global and national-level restrictions that shape trade flows, corporate activities, and economic stability. As shown in Figure 2.5., the total sanctions against Russia exemplify the scale of restrictive measures that can be imposed, underscoring the extensive impact such sanctions can have on both targeted economies and international businesses engaging in these regions.

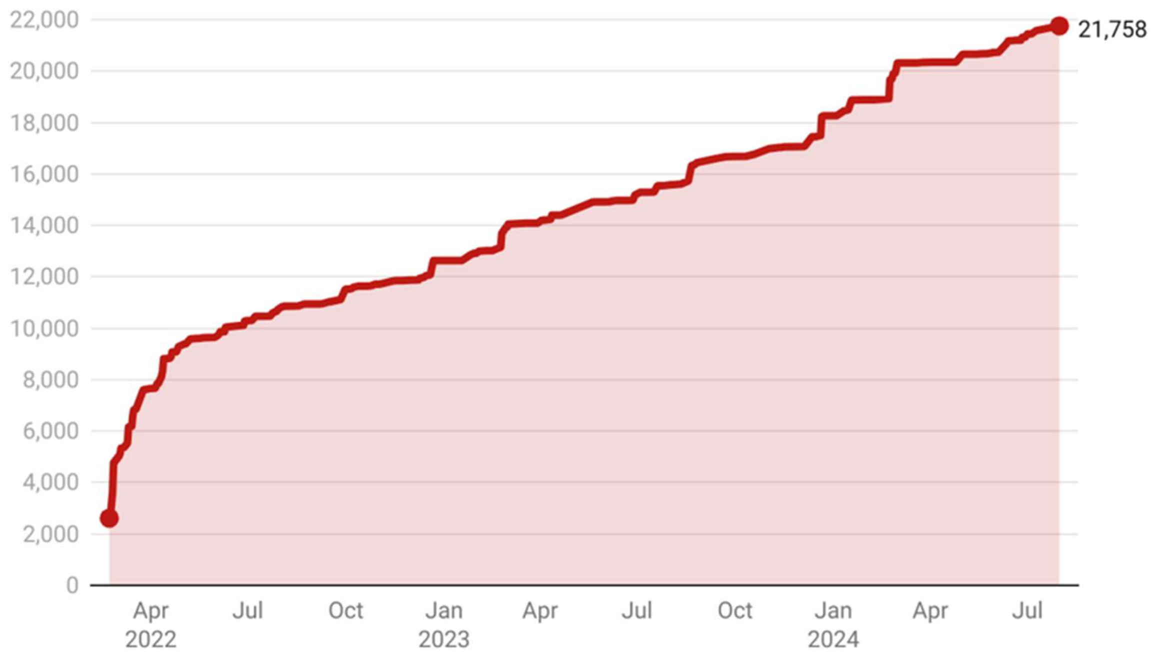


Figure 2.5.– Total Sanctions against Russia

Source: Castellum.AI

Reprinted from.

Economic sanctions, which can include trade barriers, tariffs, asset freezes, or other restrictive measures, are frequently applied by governments or international bodies like the United Nations or European Union to limit the economic capabilities of target states or entities due to political, military, or human rights considerations (Hufbauer et al., 2009). Sanctions data helps assess the economic and operational risks businesses face when engaging in affected regions, as these restrictions can lead to significant disruptions in supply chains, market access limitations, and investment risks (Biersteker, Eckert, & Tourinho, 2016).

Reliable sources for monitoring sanctions data include the U.S. Department of the Treasury’s Office of Foreign Assets Control (OFAC), which maintains updated lists on restricted entities, and the European Union's Consolidated Financial Sanctions List.

Additionally, specialized databases like Refinitiv World-Check and Castellum.AI offer real-time data and risk analysis on global sanctions, aiding in comprehensive and up-to-date assessment. Tracking these sources enables organizations to develop proactive strategies to mitigate risks associated with sanctions and to navigate complex international regulatory landscapes effectively.

2.3. Geopolitical Risks in Corporate Strategy and Decision-Making under Uncertainty

In this section, we explore the dynamic intersection between geopolitical risks and corporate strategy, grounded in seminal strategic management theories, contextualized within contemporary business practices and its respective decision-making processes. Ansoff, often celebrated as the "father of strategic management," underscores the need for a holistic approach in strategic decision-making, one that begins with environmental sensing and culminates in market and product positioning in response to changing conditions (Ansoff, 1992). His perspective on the interaction between strategy and environmental factors, especially within high-stakes geopolitical climates, is fundamental to understanding how firms might preemptively navigate risks through well-informed strategic choices. This approach remains foundational for effective decision-making under uncertainty - a hallmark of geopolitical risk contexts - where firms must integrate diverse internal and external factors into their strategic planning.

Geopolitical risk analysis increasingly incorporates environmental scanning techniques, pioneered by scholars like Francis Aguilar (1967), who introduced the PEST framework as a tool for evaluating political, economic, social, and technological dimensions of the external environment. This analysis has since evolved into the PESTEL framework, encompassing environmental and legal factors, which provides a structured way to examine how contextual elements affect corporate stability and growth potential. By systematizing this information, firms can better understand the implications of geopolitical risk factors on their operations and preemptively address potential disruptions (Aguilar, 1967; World Bank, 2024).

The SOFT (Satisfactory, Opportunity, Fault, and Threat) approach further enhances strategic responsiveness by engaging managers from all levels to identify and address planning issues, both current and future. This participative method represents the original framework that later developed into SWOT (Strengths, Weaknesses, Opportunities and Threats) analysis and was a core component of the System of Plans, one of the earliest comprehensive planning systems (Puyt et al., 2023).

While John Argenti refined the second generation of SWOT analysis, Ansoff advanced it further, introducing the Eurequip matrix in the 1980s to enhance impact analysis within his Strategic Issue Management System (Ansoff, 1980, 1984). This evolution of SWOT highlights the need for time-efficient, high-impact analysis tools, which are particularly critical when evaluating geopolitical risks (Ansoff, 1987).

Illustrative examples from corporate history further emphasize the practical relevance of these strategic frameworks in decision-making under geopolitical risk. For instance, the East India Company’s engagement with local Indian politics in the 18th century demonstrates early examples of strategic risk management within high-risk environments (Bremmer & Keat, 2009). Modern corporations continue to face similar challenges. During the Iraq War in 2003, Dow Corning strategically responded to anticipated logistical disruptions by stockpiling inventory, which safeguarded its supply chain and mitigated potential losses (Rice & Zegart, 2018).

Furthermore, as supply chain management has evolved, firms are increasingly attuned to geopolitical risks inherent in global sourcing and logistics. This globalization of supply chains, while creating efficiencies, exposes companies to vulnerabilities linked to political volatility in supplier countries. Companies today thus face a unique paradox: expanded global opportunities paired with heightened exposure to geopolitical disruptions (Rice & Zegart, 2018).

In navigating these risks, the integration of rational choice theory further enhances decision-makers' ability to weigh the benefits and costs of strategic actions within volatile geopolitical contexts, fostering a balanced decision-making process that minimizes risk exposure (Johnson et al., 2014). Combined with insights into strategic responsiveness, rational choice theory provides a structured foundation for decision-making, which is critical for companies not only striving to remain competitive but also seizing opportunities amidst geopolitical turbulence.

To achieve sustained operational effectiveness and adapt to both current and anticipated risks, organizations benefit from ambidextrous capabilities, as described by Birkinshaw and Gibson. This involves excelling in existing operations while fostering innovation to remain agile in a fluctuating geopolitical landscape (Birkinshaw & Gibson, 2004).

Ultimately, understanding geopolitical risk through the lens of strategy and decision-making offers a robust framework that guides firms in navigating complex environments, aligning resources, and shaping informed strategic responses.

2.3.1. Decision-Making under Uncertainty

Decision-making under uncertainty requires an integration of classical administrative principles, adaptive data-driven methodologies, and an acute awareness of the evolving global context. This process must reconcile the complex interactions between internal organizational objectives and the unpredictable external factors that characterize geopolitical risk (Hanegan, 2023). As Simon (1977) and Drucker (1954) have historically emphasized, decision-making lies at the heart of administrative functions, demanding a balance between structured management principles and the flexibility necessary to respond to external shifts.

Decision-making under uncertainty is subject to cognitive biases, which can distort judgment. March (1994) and Johnson et al. (2017) underscore that biases such as overconfidence, champion's bias, and risk aversion can skew decision-making, especially when data is incomplete or unreliable.

To counter these biases, Eisenhardt (1999) recommends several practices: tracking real-time information, consulting trusted advisors, and building diverse teams to encourage critical debate. By fostering productive conflict and avoiding premature consensus, decision-making teams can rigorously evaluate strategic choices, even in ambiguous situations.

Leaders are encouraged to develop an “ambidextrous” approach, as Birkinshaw and Gibson (2004) describe, balancing short-term operational needs with long-term innovation and adaptability. This ambidexterity is essential for responding swiftly to unforeseen geopolitical risks while remaining aligned with the organization’s broader strategy. Building consensus is valuable, but leaders must also be willing to make decisive choices when required, accepting that some conflict is inherent and even beneficial for balanced decision-making (March, 1994; Eisenhardt, 1999).

2.3.1.1. The Foundations of Decision-Making in Organizational Contexts

Decision-making in uncertain environments must begin with the foundational principles articulated by Fayol (1916), whose administrative theory underscores the necessity of clear planning, effective coordination, and control mechanisms within an organization. Fayol's framework, often seen as the first systematic approach to management, introduces principles such as unity of command and centralization, which promote cohesion and streamlined communication, both of which are crucial when navigating external uncertainty (Fayol, 1949). Fayol’s emphasis on flexibility and adaptation is particularly relevant in managing geopolitical risks, where rigid application of principles without room for adjustment may lead to detrimental outcomes (Drucker, 1994).

For instance, geopolitical uncertainties necessitate that organizations not only plan for immediate outcomes but also evaluate long-term impacts, integrating structured protocols with strategic adaptability. This balanced approach aligns with Fayol’s advocacy for administrative flexibility, especially where complex and multi-layered decisions affect corporate sustainability (Fayol, 1949; Hanegan, 2023). Furthermore, Drucker’s (1954) notion of decision-making as the core of management underscores the ongoing need for managers to adopt a proactive stance, systematically assessing both internal and external risk landscapes.

2.3.1.2. Types of Decision-Making Models for Uncertainty Management

Various decision-making models provide frameworks to address uncertainty in international business. Simon’s (1977) bounded rationality model is particularly pertinent, as it recognizes that decision-makers often operate with limited information, constrained by time, resource availability, and cognitive limits.

In the context of geopolitical risks, Simon's model emphasizes satisficing - making decisions that are satisfactory and sufficient, rather than optimally rational - due to the unpredictability of external political factors (Simon, 1977). This approach is instrumental when navigating uncertain international landscapes, allowing for pragmatic decision-making despite incomplete information.

Alternatively, Lindblom's (1959) incremental model suggests that decision-making is more feasible through small, manageable adjustments rather than comprehensive strategic overhauls, especially in volatile geopolitical climates. Known as "muddling through," this model is grounded in making partial, continuous changes that incrementally steer organizational strategy in response to external risks. Incremental decision-making provides a valuable buffer against potential upheavals, reducing the risks of drastic miscalculations while allowing for strategic adjustments as new data and geopolitical trends emerge (Lindblom, 1959; Hanegan, 2023).

Etzioni's (1967) mixed-scanning model synthesizes elements of both the bounded rationality and incremental models. It posits a two-tier approach in which organizations conduct broad, strategic assessments of geopolitical landscapes, followed by more focused evaluations of high-risk areas. This methodology is highly relevant to corporations that must simultaneously consider overarching geopolitical influences and specific country-level risks (Etzioni, 1967). By scanning the macro and micro-environment, organizations can make informed decisions that reflect both the broader geopolitical climate and localized uncertainties.

Dror's (1968) optimal model expands further, advocating for an integration of rational and extra-rational decision-making to tackle complex geopolitical challenges. Dror's model stresses feedback loops and adaptability, which allow organizations to reassess and refine decisions in real-time as the external environment evolves (Dror, 1968). This model is especially advantageous in regions experiencing frequent political shifts, where static decision-making could prove inadequate.

2.3.2. Corporate, Business, and Operational Decision-Making

Navigating uncertain geopolitical environments requires a multi-tiered decision-making structure that integrates corporate, business, and operational levels. Each of these levels addresses distinct strategic concerns while remaining interdependent to enable cohesive action and adaptability amid external uncertainties. In alignment with classical administrative theories and modern data-informed decision-making frameworks, these levels facilitate the transformation of strategic vision into adaptive actions that bolster resilience and sustainability (Johnson et al., 2017).

2.3.2.1. Corporate-Level (Strategic-Level) Decision-Making

Corporate-level or Strategic-level decision-making operates at the highest level of organizational planning and concerns decisions with long-term consequences. It defines the overarching scope and objectives of an organization, setting the strategic foundation that guides all other decision-making levels. This level addresses expansive considerations such as geographical expansion, product diversification, and alignment with shareholder expectations, which are essential for managing uncertainty and shaping the organization's direction.

As Johnson et al. (2017) note, uncertainty is inherent in strategy due to the necessity of forecasting an unpredictable future. This requires comprehensive environmental scanning and a flexible framework to adapt to emergent opportunities and threats. Strategic decision-making often entails evaluating multiple, competing alternatives, a process aimed at reducing biases like the "sunflower syndrome," where senior leaders' preferences may overshadow objective decision-making. By employing practices such as "issue selling," leaders can promote critical perspectives, mitigating groupthink and ensuring a robust vetting process in high-stakes decisions (March, 1994; Ocasio & Joseph, 2005).

Corporate-level decisions are heavily influenced by complex and variable factors like geopolitical tensions, economic shifts, and technological advancements. Leaders must integrate both qualitative insights and real-time information (Eisenhardt, 1999), recognizing that their choices will have significant implications across the organization's entire operational spectrum. According to Simon's (1977) model of bounded rationality, corporate leaders often operate within constraints due to incomplete information, especially in volatile geopolitical climates. Consequently, balancing structured management principles with adaptive flexibility becomes necessary to mitigate risks while leveraging emerging opportunities.

Corporate strategy also sets the organization's mission and values, providing a directional framework that shapes responses to geopolitical risks. For example, decisions to divest from or expand into specific markets reflect both current opportunities and resilience planning to preserve stability amid external fluctuations (Johnson et al., 2017). Using tools like SWOT analysis and scenario planning, corporate leaders systematically assess the external environment, anticipating shifts and strategically allocating resources. This approach aligns with Fayol's (1916) administrative theory, which underscores the importance of planning and coordination when navigating complex external influences.

2.3.2.2. Business-Level (Strategic Business Unit) or Tactical Decision-Making

Business-level decision-making, also referred to as tactical decision-making, is a mid-level approach that translates corporate strategic goals into actionable policies and programs for each of the organization's strategic business units (SBUs). It focuses on how these SBUs compete within their specific markets through strategies concerning pricing, differentiation, and innovation. While SBUs function within the corporate framework, this level of strategy allows for agility in responding to local market dynamics and competition.

In uncertain environments, business-level decisions often require incremental adjustments rather than drastic changes, a pragmatic approach recommended by Lindblom's (1959) incremental model. These decisions are frequently time-sensitive and require balancing adaptability with adherence to the overarching strategic framework. Leaders at this level assess real-time data to address immediate risks or seize emerging opportunities without compromising corporate objectives. For example, ongoing geopolitical analysis may prompt regional strategy pivots to safeguard interests while preserving long-term goals. This tactical approach also aligns with March's (1994) bounded rationality, where decision-makers apply rational judgment within the constraints of available information and time.

Effective business-level decision-making integrates these adaptive responses with the corporate strategy, ensuring that each SBU contributes to the organization's objectives without detracting from overall brand integrity or corporate values (Johnson et al., 2017). Such alignment is essential in reducing conflicts among SBUs and fostering mutual support within the organization, particularly when different units face shared geopolitical risks. For instance, during the Iraq War in 2003, Dow Corning's decision to stockpile inventory exemplified tactical adjustments to preempt potential disruptions, protecting operational continuity while upholding strategic objectives (Rice & Zegart, 2018).

2.3.2.3. Operational-Level Decision-Making

At the operational level, decision-making centers on the practical implementation of corporate and business strategies within functional units, impacting daily activities that directly influence organizational performance and stability. Operational strategies translate higher-level strategies into tangible actions focused on resource allocation, process efficiency, and workforce management. Operational decisions must closely align with both tactical initiatives and strategic objectives, as operational precision often dictates the real-time effectiveness of strategic plans (Johnson et al., 2017).

The operational level is where an organization can realize strategic advantages through enhanced efficiency, innovation, and adaptability. Given the immediate nature of operational decisions, managers at this level frequently rely on real-time indicators to respond swiftly to external shifts, embodying what March (1994) describes as “adaptive intelligence.” Intuition and “gut feel” also play a significant role in operational decision-making, especially in fast-paced environments that demand immediate actions. Operational strategies ensure that the organization’s ground-level activities reinforce both business-level and corporate strategies, allowing for agility while adhering to long-term objectives.

CHAPTER 3

Conceptual Model and Research Hypotheses

3.1 Development of the Conceptual Framework

In exploring the impact of geopolitical risks on multinational corporations (MNCs) and the effectiveness of strategic mitigation approaches, this study develops a conceptual framework based on theoretical insights from strategic management, risk assessment, and scenario planning. Geopolitical risk, a multifaceted construct encompassing political instability, regulatory shifts, and international conflicts, has been shown to introduce substantial uncertainties into MNCs' operational and strategic landscapes (Hillson, 2017; Hanegan, 2023). As such, the integration of robust risk assessment methodologies within corporate strategy has become a critical avenue for maintaining organizational resilience (Rice & Zegart, 2018).

This framework posits that geopolitical risks exert direct pressures on MNCs' strategic decision-making processes by disrupting resource allocation, market positioning, and supply chain resilience. In response, companies have increasingly incorporated risk mitigation strategies—such as scenario planning—to navigate the volatility of external environments (Schwartz, 1991; Wack, 1985). Scenario planning, a foresight methodology, enables organizations to project multiple future states, allowing for adaptive decision-making under conditions of uncertainty (Bradfield et al., 2005). This approach aligns with Simon's (1977) concept of bounded rationality, which suggests that strategic decisions are shaped within the constraints imposed by the availability of information and predictability of future states.

The framework, therefore, is structured to examine two primary hypotheses. The first explores the negative impact of geopolitical risks on strategic decision-making, while the second investigates the efficacy of mitigation strategies, such as scenario planning, in reducing these adverse effects. By positioning these constructs within the broader framework of corporate strategy, this model serves as a foundation for empirically testing how MNCs can effectively manage geopolitical uncertainties.

3.2 Hypotheses Formulation

Hypothesis 1 (H1): Geopolitical Risks Impact Strategic Decision-Making in MNCs

This hypothesis is derived from the assumption that geopolitical risks disrupt MNC operations, imposing constraints on strategic choices. This disruption can lead to reduced operational flexibility and hinder long-term planning, impacting MNCs' competitiveness in global markets (Porter, 1996).

Hypothesis 2 (H2): Mitigation strategies, such as scenario planning, reduce the adverse effects of geopolitical risks.

This hypothesis suggests that incorporating scenario planning into strategic frameworks allows MNCs to anticipate potential disruptions and develop contingency plans. By considering multiple future scenarios, organizations can create adaptive strategies, thereby diminishing the negative impact of geopolitical uncertainties on decision-making processes (Shoemaker, 1995).

CHAPTER 4

Contextualization

4.1. Industry and Regional Focus

Geopolitical tensions increasingly impact industries reliant on global supply chains and strategic resources, particularly in semiconductor, mineral, and technology sectors. These sectors are exposed due to their dependence on specialized resources, technological advancements, and regulatory shifts that emerge from international political competition. Regional variations further influence the extent and nature of these impacts.

4.1.1. Semiconductors

The semiconductor industry is central to global technological, economic, and defense sectors, placing it at the heart of the intensifying U.S.-China geopolitical rivalry. Semiconductors are essential for applications ranging from consumer electronics to advanced military systems, and their strategic value has turned the industry into a focal point for national security and economic policies (Sweidan, 2024). To preserve its technological advantage, the U.S. has imposed extensive export controls aimed at limiting China's access to advanced semiconductor technologies, particularly those that could bolster China's AI capabilities and military strength (Bergsten et al., 2024). These restrictions underscore the U.S. objective of maintaining critical competencies within its borders to prevent adversaries from gaining strategic advantages (Malkin & He, 2024).

In response, the European Union has launched initiatives like the European Chips Act to bolster domestic semiconductor production and reduce dependency on Asia-based suppliers, thereby enhancing supply chain resilience (Sutter, 2024). This push toward strategic autonomy reflects a global movement among nations seeking to mitigate risks associated with concentrated production hubs and geopolitical uncertainties.

Taiwan and South Korea, two of the world's largest semiconductor producers, face considerable geopolitical pressures as they navigate these international tensions. Taiwan, home to the leading chip manufacturer TSMC, holds a unique position of economic leverage due to global reliance on its semiconductor output. However, this dependence also elevates security concerns amid rising cross-strait tensions (Riyanto & Marlina, 2024). Similarly, South Korea and Japan, key suppliers within the semiconductor ecosystem, are compelled to balance their economic ties to China with political alignment expectations from the U.S., a complex diplomatic terrain that complicates regional stability and trade dynamics (Hamdani & Belfencha, 2024).

The semiconductor sector's geopolitical significance thus lies not only in its economic and technological value but also in its critical role within national and regional security frameworks. As technology advances and dual-use applications proliferate, countries worldwide are increasingly recognizing the need for resilient, autonomous supply chains to secure their strategic interests.

4.1.2. Minerals and Rare Earth Elements

Minerals, especially rare earth elements (REEs), are fundamental to modern technology sectors, powering applications in semiconductors, renewable energy, and defense. China controls over 60% of global rare earth production, which places Western nations in a precarious position, as these resources are integral to high-tech manufacturing and military applications (Sutter, 2024). With China's dominance in the rare earth supply chain, the U.S. and European Union have ramped up efforts to diversify supply chains, reduce dependency, and invest in alternative sources. Australia has emerged as a key partner for the West, leveraging its mineral reserves to offset reliance on Chinese supplies (Kalantzakos, 2017; Sutter, 2024).

In response to the need for more secure supplies, the U.S. Department of Defense has funded domestic rare earth production, while the European Union's Critical Raw Materials Act aims to establish a resilient, sustainable mineral supply network (Chapman, 2018). Additionally, Africa, which holds substantial untapped mineral reserves, has become a focal point in this geopolitical struggle. Western nations, as well as China and Russia, are increasingly pursuing strategic alliances in the region. Russia's involvement, particularly through private military companies linked to the state, adds a complex security layer to the mineral competition in Africa, as the region's resources are strategically significant for both economic and geopolitical reasons (Bergsten et al., 2024).

China's dominance not only impacts economic security but also extends to what has been called "resource diplomacy," where it uses mineral access to forge strong alliances in mineral-rich regions, including parts of Africa and Latin America. Such resource-centric diplomacy allows China to consolidate its influence over global supply chains, shaping both economic and political landscapes (Fan et al., 2023; Kalantzakos, 2020).

4.1.3. Technology Sector

The technology sector, covering fields such as artificial intelligence (AI), biotechnology, and quantum computing, remains at the center of U.S.-China geopolitical rivalry. These technologies increasingly serve dual economic and military purposes, elevating their strategic importance and intensifying competition. The Asia-Pacific region, especially Japan and South Korea, faces rising tensions over technology exports and trade alliances, pressured to balance national interests with global trade dynamics (Bergsten et al., 2024). U.S. policies restricting China's access to advanced technologies reflect the strategic view that certain technological competencies should be under national control to prevent adversaries from gaining undue advantages (Bergsten et al., 2024).

Meanwhile, Middle Eastern countries are emerging as significant players in digital and renewable technology investment as part of their economic diversification efforts. Saudi Arabia and the United Arab Emirates (UAE) lead this shift, positioning themselves as technology hubs in the region. Saudi Arabia's Vision 2030 plan emphasizes reducing oil dependency through renewable energy and digital transformation initiatives, including high-profile projects like NEOM, a smart city envisioned as a model for future urban sustainability (Saudi Vision 2030, 2021). Similarly, the UAE's Energy Strategy 2050 focuses on renewable energy, AI, cybersecurity, and digital infrastructure, aiming to diversify its economy and assert itself as a leader in regional tech innovation (UAE Government, 2017). Both countries have been investing in solar energy, digital innovation hubs, and partnerships with global tech firms to drive sustainable growth (Khan et al., 2021; Kamrava, 2020).

However, escalating tensions—particularly the ongoing conflicts involving Israel and neighboring entities, along with potential Iranian involvement - raise significant concerns about the stability required for these ambitious projects and for regional security overall. A broader regional escalation would severely impact these initiatives, ultimately shaping the trajectory of technological advancement in the Middle East.

CHAPTER 5

Methodology

5.1. Research Design

This study employs a *deductive, exploratory, and qualitative research design*, relying primarily on secondary data to examine the impacts of geopolitical risks on multinational corporations' (MNCs) strategic decision-making. By focusing on pre-existing data sources, including peer-reviewed articles, reports, books, and relevant interviews, this approach provides a structured and theory-based analysis of geopolitical risk management and strategic adaptation.

5.1.1. Deductive Research Approach

Using a deductive approach, this study starts with established theories on geopolitical risk, strategy, and mitigation within international business. By applying and testing these theories through the analysis of secondary data, the study seeks to validate their relevance in today's evolving geopolitical landscape, while also identifying potential gaps in existing frameworks that may require further adaptation.

5.1.2. Exploratory and Predictive Elements

This research combines exploratory and predictive elements to address the complex and often underexplored impacts of geopolitical risks on multinational companies. The exploratory aspect focuses on identifying recurring themes, patterns, and trends in the data, contributing to a comprehensive understanding of current risks. Meanwhile, the predictive component leverages these insights to speculate on potential future geopolitical challenges, equipping MNCs with foresight tools for strategic decision-making.

5.1.3. Qualitative Research Design Using Secondary Data

A **qualitative design** was found appropriate given the study's focus on complex, context-specific factors, such as political stability and cultural nuances, which are critical to understanding the influence of geopolitical risks but are difficult to quantify. Secondary data sources form the core of this analysis, drawing from in-depth literature.

This approach provided a nuanced, interpretive perspective on how MNCs can embed resilience into their strategic frameworks and effectively manage geopolitical uncertainty.

5.2. Data Collection

This study is based entirely on **secondary data**, utilizing a wide array of sources to analyze how geopolitical risks influence multinational corporations' strategic decision-making. The data sources consist of peer-reviewed articles, books, reports, databases, and supplementary interviews, each providing insights into different aspects of geopolitical risks and corporate strategy. This approach ensures a rigorous, theory-backed analysis without the need for primary data collection.

5.2.1. Peer-Reviewed Scientific Articles

Peer-reviewed articles were central to this research, exceeding the baseline standard for a robust secondary data study. These articles contributed to the foundational understanding of geopolitical risk, corporate strategy under uncertainty, and risk mitigation frameworks, providing empirically supported insights. The use of numerous articles allowed for a comprehensive view of academic discourse on how MNCs navigate the complexities of geopolitical risk.

5.2.2. Books

To support the theoretical and historical foundations, a range of seminal and contemporary books were analyzed. These texts cover critical aspects of risk management, decision-making theories, and the evolving role of geopolitics and corporate strategy. Classic works, such as Ansoff's strategic planning theories, provided foundational insights, while modern texts on geopolitical analysis, risk mitigation, and resilience in business settings added relevant contextual depth.

The integration of these sources allowed the research to ground its analysis in both historical and contemporary frameworks, highlighting the evolution of strategic management thinking in response to global challenges.

5.2.3. Reports and Databases

A diverse set of specialized reports and databases complemented the academic literature, offering empirical data on current geopolitical risks, military spending, and international trade trends.

Key resources included:

- *World Bank Indicators* and *World Development Indicators* for governance and economic data,
- *SIPRI Military Expenditure Database* for global defense spending trends,
- *Eurasia Group* and *World Economic Forum* reports for geopolitical and economic risk forecasts, and
- *BMI – Fitch Solutions* reports that provide insights into regional risk analyses, including specific focus on sectors like technology and energy.

These sources were instrumental in providing real-world data points that align with the theoretical frameworks reviewed, enabling a nuanced understanding of how geopolitical factors impact strategic corporate responses. This combination of data sources ensures that the analysis remains grounded in both rigorous empirical evidence and theoretical insights, facilitating a balanced view on risk assessment and decision-making.

5.2.4. Supplementary Interviews

In addition to the core secondary data, this research incorporates supplementary interview data from the *AXA Future Risks Report 2024*. The brief expert interviews included in this report offer relevant perspectives on emerging risks and strategic considerations for multinational companies in a volatile geopolitical environment. While supplementary in nature, these interviews provide valuable context and align with the broader themes addressed in this study, such as resilience-building and proactive risk management. However, given their brevity, these interviews are used to support rather than drive the primary analysis, adding qualitative depth to the findings where applicable.

5.3. Data Analysis - Thematic Analysis Process

The data analysis employs a qualitative thematic approach to extract insights into how geopolitical risks affect MNCs' strategic decision-making and to identify effective mitigation strategies. Given the complexity of geopolitical risks, thematic analysis allows for an in-depth exploration of relevant patterns and concepts across the literature and reports reviewed. This approach supports the study's exploratory focus, providing a nuanced understanding of how MNCs enhance resilience and strategic adaptability in uncertain geopolitical environments. The analysis aligns with the research questions and hypotheses, offering detailed interpretations of how MNCs adjust their strategies to manage these risks.

5.3.1. Data Familiarization and Coding

The analysis began with an in-depth review of peer-reviewed articles, books, and reports, identifying key concepts related to geopolitical risk, strategic decision-making, and mitigation. Data was manually coded into categories such as risk awareness, strategic adaptation, and resilience strategies. This process allowed for the systematic organization of data into meaningful themes.

5.3.2. Theme Identification and Synthesis

Coded data were further grouped into broader themes, including the impacts of geopolitical volatility on strategy, the role of scenario planning, and industry-specific responses to geopolitical challenges. This synthesis enabled the study to connect theoretical insights with practical examples, providing a comprehensive understanding of the strategies MNCs use to navigate uncertainty.

5.3.3. Integration of Contextual Data

Although secondary indicators, such as the Geopolitical Risk Index and SIPRI Military Expenditure Database, were used descriptively in Chapter 2, they supported the thematic analysis by illustrating key trends. This integration provided empirical context for the qualitative themes, helping to validate the study’s findings.

5.4. Limitations and Ethical Considerations

5.4.1. Research Limitations

This study’s reliance on secondary data imposes certain limitations, primarily in the depth of contextual detail. While secondary sources offer extensive insights, they may lack the granularity that direct primary data—such as interviews with industry experts—might provide. Consequently, findings focus on generalizable themes rather than specific, company-level strategies. Additionally, while the study draws on globally representative data, there may be geographic or sectoral biases, with emphasis on high-risk regions and industries like energy and technology. Finally, indicators such as the Geopolitical Risk (GPR) Index may not capture rapid geopolitical shifts, which could impact the relevance of findings in volatile environments.

5.4.2. Ethical Considerations

Ethical integrity is maintained through accurate data usage and citation. All secondary data sources, including articles, reports, and books, are cited properly to ensure transparency. Supplementary interviews from the *AXA Future Risks Report* are included only for contextual insights, not primary analysis, and are attributed fully to uphold ethical standards. To reduce researcher bias, thematic analysis was conducted with a structured coding approach, ensuring that interpretations remained objective and aligned with established theories.

CHAPTER 6

Results and Discussion

6. Results and Discussion

This chapter presents an integrated analysis of findings derived from the research, focusing on the effectiveness of scenario planning, risk management, and data-informed techniques as strategic responses to geopolitical risks in multinational corporations (MNCs). Structured to bridge theory with empirical insights, Chapter 6 systematically addresses how MNCs can develop resilient frameworks that incorporate proactive risk assessment, scenario development, and adaptive decision-making mechanisms.

Through a detailed examination of scenario planning (Section 6.1), the chapter first highlights its pivotal role in navigating uncertainty by enabling organizations to conceptualize and prepare for diverse geopolitical futures. It elaborates on the methodology of scenario construction, from identifying key uncertainties to crafting internally consistent scenarios, positioning scenario planning as a foundation for strategic foresight. Subsequently, Section 6.2 employs a case study of Royal Dutch Shell's innovative approach, underscoring practical insights and lessons that exemplify scenario planning's transformative impact in volatile industries.

In Section 6.3, the discussion progresses to risk management processes, outlining how aligning risk management with corporate strategy fortifies MNCs against geopolitical disruptions. This section defines each phase in the risk management process, emphasizing the importance of context establishment, risk identification, and continuous monitoring. The integration of data-informed techniques in Section 6.4 further enhances this adaptive framework, demonstrating how data analytics, geopolitical risk indices, and continuous feedback loops support dynamic decision-making in high-risk environments.

Finally, Section 6.5 synthesizes these insights by discussing results in the context of the study's hypotheses. By validating the strategic relevance of scenario planning, adaptive risk management, and data-informed frameworks, this chapter establishes a comprehensive foundation for both theoretical and practical advancements in MNC geopolitical risk management. The findings underscore the criticality of integrated, proactive strategies in enabling firms to thrive in a world of heightened uncertainty and complex geopolitical dynamics.

6.1. Scenario Planning as a Core Strategy

In this section, we explore the essential domain of risk mitigation strategies utilized by multinational corporations, focusing on the enduring impact of scenario planning. Drawing on the foundational insights of Schwartz (1991) and the pioneering approach of Royal Dutch Shell in the 1970s, scenario planning emerges as a robust framework designed to fortify businesses against the volatile tides of geopolitical uncertainties. This technique enables organizations to envision alternative futures and incorporate diverse geopolitical, economic, and societal factors into their strategic decision-making.

Scenario planning gained prominence as a strategic management tool largely due to Shell's groundbreaking application during the 1970s, an era marked by intense geopolitical shifts and volatile energy markets. Rather than relying on linear projections, Shell developed a methodology that integrated multiple, plausible future scenarios, encouraging leadership to consider a broader spectrum of possible outcomes beyond traditional forecasts (Schwartz, 1991; Wack, 1985). By constructing these diverse scenarios, Shell was able to anticipate potential high-impact risks, exemplified in its preparedness during the oil crisis of the early 1970s, which positioned the company more favorably than its industry peers (Bradfield et al., 2005).

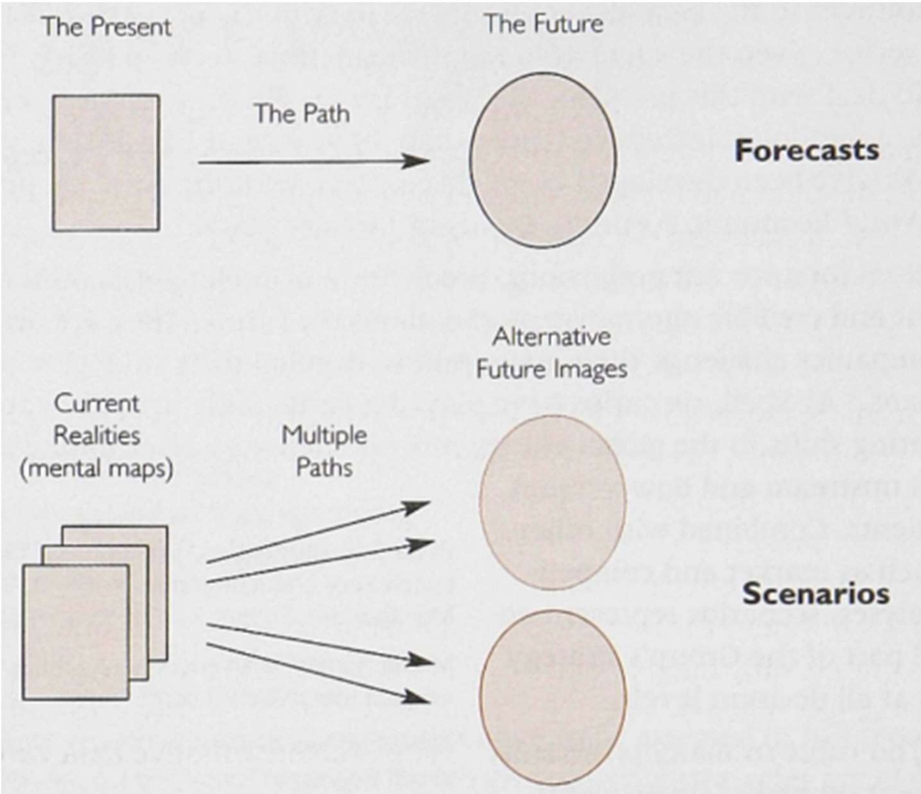
The relevance of scenario planning lies in its ability to mitigate the limitations of conventional forecasting by distinguishing between predetermined factors—those likely to occur regardless of shifts—and critical uncertainties, such as geopolitical tensions or economic downturns, which could drastically reshape market landscapes (Shoemaker, 1995). Scenario planning thus equips leaders with a structured yet flexible approach to navigate uncertainty, allowing them to question prevailing assumptions and engage in "what-if" analyses that broaden strategic thinking and identify previously unconsidered risks (Amer et al., 2013).

Shell's methodology, focusing on both predictable and uncertain elements, underscores the strategic value of scenario planning for modern businesses operating in high-risk geopolitical contexts. Through this process, organizations can actively prepare for multiple potential futures, balancing their internal capacities with external contingencies to create resilience and enhance adaptability. By weaving alternative futures into decision-making, scenario planning helps leaders formulate proactive strategies in response to complex, evolving risks—a topic further explored through Shell's applied strategies in the forthcoming case study.

6.1.1. Building Scenarios

When operating in an environment characterized by significant uncertainty, such as global geopolitical shifts, companies can no longer rely on a singular predictive outlook to guide their strategies. In such volatile contexts, scenario planning emerges as an invaluable tool for developing multiple, plausible narratives about the future, enabling firms to anticipate and prepare for a range of potential outcomes (Schoemaker, 1995). Rather than attempting to forecast exact futures, scenario planning fosters resilience by constructing distinct possibilities that capture the breadth of uncertainties a company may face (see Figure 6.1.).

Figure 6.1. - Original Shell's 'Scenarios vs. Forecasts"
Source: Wack, P. (1985). Scenarios, Harvard Business Review, Reprinted from.



6.1.1.1. Identifying Key Drivers and Catalysts for Change

The first step in effective scenario planning involves isolating the primary drivers of change that could critically impact the organization. These are the factors with the highest levels of uncertainty and potential impact, which could include political stability, technological advancement, regulatory shifts, or macroeconomic changes (Bradfield et al., 2005). For example, within the oil industry, technological evolution, energy demand, and geopolitical stability are recurring focal points. While some drivers, like technology, may follow more predictable trajectories, others, such as political alliances or economic growth rates, can vary dramatically, creating a range of outcomes (Schoemaker, 1995; Schwartz, 1991).

By categorizing these drivers based on their predictability and influence, organizations can identify which factors require close monitoring and which can be considered relatively stable. The interplay between these drivers then serves as the foundation for constructing scenarios that explore how different variables may interact to produce distinct business environments.

6.1.1.2. Constructing Internally Consistent Scenarios

With key drivers identified, organizations can craft internally consistent scenarios that capture contrasting futures. For instance, in the context of a multinational corporation dependent on global supply chains, two scenarios might include one of “stable growth and low geopolitical tension” and another of “restricted trade with high geopolitical friction.” Constructing internally coherent narratives around these themes helps avoid fragmented or contradictory assumptions, ensuring that each scenario remains realistic and actionable (Shoemaker, 1995).

Scenario building thus allows firms to create a range of potential environments by interweaving different drivers and considering their outcomes. This practice not only supports comprehensive strategic planning but also encourages decision-makers to acknowledge and analyze possibilities that lie outside the traditional linear models of growth and stability (Bradfield et al., 2005).

6.1.1.3. Avoiding Predictive Bias and Encouraging Exploration

A well-rounded scenario planning approach emphasizes the importance of multiple scenarios rather than a single “most likely” prediction. Many experts advocate creating two to four alternative scenarios to discourage middle-ground bias, where organizations gravitate toward a single, moderate forecast (Schwartz, 1991). By focusing on fewer but more divergent scenarios, managers are encouraged to remain open to distinct possibilities, avoiding the inclination to rely solely on the perceived “safe” or “moderate” option. This broader perspective enhances the organization’s capacity for strategic foresight and adaptability (Bohl et al., 2017).

6.1.1.4. Scenario Building as an Ongoing Learning Process

Ultimately, the value of scenario planning lies as much in the process as in the scenarios themselves. Regularly debating and re-evaluating these hypothetical futures encourages organizational learning, prompting managers to remain alert to signals of change in the external environment. Effective scenario planning integrates mechanisms for monitoring external indicators, enabling organizations to recalibrate strategies as scenarios unfold or conditions shift. This iterative process supports a more dynamic, responsive strategic posture, equipping firms to adjust their plans to accommodate emerging risks and opportunities (Schoemaker, 1995; Kitsing, 2022).

By thoughtfully constructing and revisiting scenarios, businesses gain a deeper understanding of the forces shaping their environment. Scenario planning, therefore, stands as an essential element within the strategic toolkit of any organization facing complex, uncertain futures.

6.1.2. Integrating Geopolitical Risk Assessment

Integrating geopolitical risk assessment into scenario planning allows organizations to address external risks more effectively, creating scenario frameworks that account for specific geopolitical variables and the potential impacts of volatile international relations. By incorporating geopolitical assessments, firms can design scenarios that reflect the actual complexity of global dynamics, thereby enabling more precise strategic responses and reducing the likelihood of unanticipated disruptions (Rice & Zegart, 2018).

6.1.2.1. Geopolitical Risk as a Scenario Foundation

At the core of integrating geopolitical risk is the identification of specific geopolitical variables that could directly affect the organization's operations and strategic positioning. The Geopolitical Risk (GPR) Index and similar indices, such as the Worldwide Governance Indicators, provide quantifiable insights into global stability and risk factors (Caldara & Iacoviello, 2022).

By anchoring scenarios in these quantitative measures, companies gain a baseline understanding of geopolitical turbulence, allowing for tailored scenarios that incorporate shifts in risk levels. For instance, scenarios for a technology firm may vary significantly depending on potential export control restrictions, shifts in trade alliances, or sanctions imposed by key economic powers, each with unique impacts on supply chains and market access.

6.1.2.2. Contextualizing Risk with Regional and Sector-Specific Assessments

A targeted geopolitical assessment also contextualizes risk based on regional and sector-specific factors. For example, in industries heavily reliant on rare earth minerals or semiconductors, the risk of supply chain disruption due to geopolitical tensions with major suppliers, such as China or Russia, becomes a critical element within scenario design (Kobrin, 2022). Furthermore, regional assessments can help firms distinguish between market-specific risks, such as regulatory changes in the European Union or trade policy shifts in the Asia-Pacific region, thereby tailoring scenarios to reflect these regional distinctions (Bremmer & Keat, 2009).

6.1.2.3. Integrating Geopolitical Risk Indicators and Triggers

Incorporating geopolitical risk indicators and triggers enhances scenario adaptability, as these tools enable firms to monitor key geopolitical shifts in real-time. By establishing indicators—such as changes in defense spending, trade tariffs, or diplomatic sanctions—organizations can detect emerging risks that might alter the trajectory of a given scenario (Ivanov & Dolgui, 2020).

For example, an increase in military expenditure in a strategically important region may signal impending instability, prompting a reassessment of operational plans in that area. Similarly, indicators like currency volatility or energy supply disruptions could serve as triggers for enacting scenario-specific contingency plans, thus embedding a responsive mechanism into the scenario planning process (World Economic Forum, 2023).

6.1.2.4. Enhancing Strategic Agility through Scenario-Based Risk Management

The integration of geopolitical risk assessment into scenario planning supports the development of strategic agility, allowing firms to navigate unpredictable geopolitical environments with greater flexibility. By regularly revisiting and updating scenarios based on evolving risk assessments, companies can ensure their strategic responses remain relevant to current realities.

This approach not only helps to mitigate the immediate impacts of geopolitical disruptions but also strengthens long-term resilience by preparing firms for a spectrum of possible futures (Gholz & Sapolsky, 2021). As a result, geopolitical risk assessment becomes a dynamic component of scenario planning, enhancing both the rigor of the scenarios and the organization's capacity to respond proactively to shifting global landscapes.

6.1.3. Advantages of Scenario Planning

Scenario planning offers numerous advantages for organizations navigating uncertain environments, enhancing their adaptability, preparedness, and resilience to rapidly shifting geopolitical and economic landscapes. By anticipating diverse outcomes and strategically rehearsing responses, scenario planning equips businesses with a robust toolkit to navigate potential disruptions and seize emerging opportunities (Deloitte LLP, 2022).

6.1.3.1. Enhanced Adaptability and Strategic Flexibility

A core advantage of scenario planning lies in its ability to cultivate adaptability, enabling organizations to visualize multiple, plausible futures rather than relying on a single linear forecast. In contrast to traditional forecasting methods, scenario planning encourages a broader examination of external drivers, such as political shifts, technological advancements, and economic instability, thereby allowing organizations to remain flexible and agile (Scoblic, 2020). This approach facilitates proactive adjustments, ensuring that firms can swiftly pivot their strategies in response to unforeseen events and maintain competitiveness amidst volatility (Deloitte LLP, 2022).

6.1.3.2. Improved Risk Awareness and Situational Preparedness

Scenario planning systematically heightens risk awareness within organizations by encouraging leaders to identify and analyze a range of risk indicators and warning signals. By conducting scenario analyses, firms gain a structured framework for understanding how interconnected risks, such as global supply chain disruptions or regulatory changes, may unfold and influence business operations. As Deloitte LLP (2022) highlights, this enhanced risk awareness is critical in complex, interdependent systems where one event can trigger cascading effects across various sectors, such as a conflict escalating oil prices, which in turn impacts global transportation costs.

In essence, scenario planning fosters a culture of vigilance and preparedness, helping organizations avoid the pitfalls of tunnel vision and remain attentive to diverse risk factors that could impact their strategic objectives (Lagarrigue & Ramirez, 2020).

6.1.3.3. Strengthened Organizational Cohesion and Learning

Beyond its operational benefits, scenario planning also facilitates organizational cohesion and collective learning by aligning leadership teams and stakeholders around a shared vision. This collaborative process encourages cross-functional dialogue, leading to deeper insights and a more comprehensive understanding of potential threats and opportunities. For instance, involving diverse perspectives - from executive leadership to emerging talent - ensures a broader range of viewpoints, which enriches the scenario-building process and enhances the organization’s capacity for creative problem-solving (Deloitte LLP, 2017). Scenario planning thus promotes a learning-oriented approach, enabling organizations to systematically evaluate potential futures, refine strategies, and ensure alignment in the face of complexity.

6.1.3.4. Sustainable and Resilient Strategic Outcomes

Finally, scenario planning supports the creation of sustainable, long-term strategies by integrating foresight into decision-making. Instead of making reactive choices, organizations can design resilient strategies that remain relevant across different futures, thereby reducing the risk of “legacy” decisions that may become obsolete over time (Scoblic, 2020). This foresight-driven approach also allows companies to course-correct more efficiently when necessary, as they have already rehearsed potential responses to a range of scenarios (Deloitte LLP, 2019). As a result, scenario planning enhances not only an organization’s immediate responsiveness but also its strategic durability in the long term.

In conclusion, the advantages of scenario planning—from adaptability and improved risk awareness to enhanced cohesion and resilience—underscore its significance as a foundational tool in the strategic management of geopolitical and economic risks. By embedding scenario planning into their core strategies, organizations position themselves to navigate an uncertain future with greater agility and insight, reinforcing their resilience against the unpredictability of global forces.

6.2. Case Study Overview: Shell’s Scenario Planning Approach

Royal Dutch Shell’s pioneering use of scenario planning has become a benchmark in corporate strategy, illustrating the advantages of proactive risk management in the face of complex geopolitical and economic uncertainties. Initiated in the 1970s, Shell’s methodology has enabled the company to remain resilient in fluctuating markets by envisioning a range of possible futures, assessing key uncertainties, and creating adaptive strategies (Schwartz, 1991; Wack, 1985). This section delves into Shell’s scenario planning journey, highlighting its unique methodology, applications, and the key lessons learned from its approach.

6.2.1. Background on Shell’s Methodology

Shell’s adoption of scenario planning emerged from the realization that traditional forecasting models, which rely on linear projections from historical data, could not adequately capture the complex and rapidly changing global landscape. Pierre Wack, a strategist at Shell, introduced scenario planning as a means to extend beyond linear thinking, aiming instead to explore plausible alternative futures that integrated both facts and the subjective perceptions of decision-makers (Wack, 1985). This approach proved essential in preparing for structural disruptions such as the 1973 oil crisis, which was marked by an unprecedented price shock that reshaped global energy markets.

Shell’s methodology centers around identifying predetermined elements - trends that are relatively certain - and critical uncertainties that could disrupt business operations. Scenarios are then built to reflect divergent yet plausible futures, with each scenario providing a framework to explore key drivers, such as political stability, technological advancements, and economic growth (Schwartz, 1991). Shell’s success with this approach is largely due to its emphasis on management perceptions; scenarios are designed to challenge managers’ existing assumptions, enabling them to reconsider strategic choices with an open and critical mindset (Bradfield et al., 2005).

The distinguishing feature of Shell’s approach lies in its focus on “re-perceiving” reality by encouraging decision-makers to go beyond conventional thinking and confront uncertainties proactively. The result is a dynamic decision-making framework that promotes organizational resilience and strategic agility, enabling Shell to anticipate and adapt to disruptive changes (Wack, 1985).

6.2.2. Application of Scenario Planning at Shell

Shell’s scenario planning approach has proven instrumental in navigating various geopolitical and economic challenges. One notable application was Shell’s anticipation of the Soviet Union’s collapse in the late 1980s. Unlike many corporations, Shell’s strategic foresight process had previously incorporated scenarios contemplating a rapid shift in the global political landscape, thereby positioning it to respond proactively as events unfolded. By creating scenarios that went beyond typical market forecasts, Shell demonstrated the potential of scenario planning to foresee “impossible” outcomes that, while unpredictable, held significant strategic relevance (Schwartz, 1991; Bradfield et al., 2005).

Another application of scenario planning within Shell has been in managing energy price volatility. Recognizing the uncertainties surrounding oil supply and demand, Shell used scenarios to examine how factors like regulatory changes, technological disruptions, and shifting consumer preferences could impact energy prices over the long term. By assessing various scenarios—ranging from high-price energy scarcity to low-price stability—Shell developed strategies that balanced investment risk across both upstream and downstream activities, optimizing its portfolio in a volatile market (Wack, 1985; Shoemaker, 1995).

In recent years, Shell has also applied scenario planning to address climate change and the transition toward renewable energy sources. By analyzing the impact of different regulatory frameworks and consumer behaviors on energy demand, Shell has been able to anticipate shifts in the global energy mix. This has informed their investments in renewable energy technologies and their goal of transitioning to a net-zero emissions portfolio, demonstrating scenario planning's capacity to guide long-term strategy in response to global environmental challenges (Deloitte LLP, 2022).

6.2.3. Lessons Learned from Shell's Approach

Shell's approach to scenario planning offers several valuable insights for other multinational corporations (MNCs) aiming to enhance resilience and strategic foresight. First, Shell's experience highlights the importance of viewing scenarios as distinct "worlds" rather than mere extensions of current trends. This perspective enables decision-makers to think beyond linear projections, considering diverse future environments and preparing for transformative disruptions (Wack, 1985; Schwartz, 1991).

Second, Shell's methodology underscores the value of challenging internal assumptions and promoting "re-perception." By encouraging managers to confront their own biases and re-evaluate deeply held beliefs, scenario planning cultivates a mindset of adaptability and critical thinking within the organization. For other MNCs, adopting such an approach can foster a culture that values proactive, rather than reactive, risk management (Scoblic, 2020).

Finally, Shell's integration of scenario planning with strategic options analysis—where potential actions are evaluated for feasibility under multiple scenarios—provides a robust framework for making investment decisions amidst uncertainty. For instance, in assessing projects in volatile regions, Shell combines scenario analysis with real options to gauge long-term viability and flexibility. However, this was not always the case, and Shell itself, went trough several steps until achieving that integration, as shown in Figure 6.2. below, allowing us to conclude that a similar evolution is required for companies initiating their steps in using scenarios.

This combination of techniques equips firms to make informed decisions even when historical data lacks predictive reliability (Bradfield et al., 2005).

Figure 6.2 - Shell's Scenarios Evolution
Source: Source: Wack, P. (1985). Scenarios, Harvard Business Review, Reprinted from.

In sum, Shell's scenario planning framework exemplifies how MNCs can benefit from systematically anticipating uncertainties, challenging organizational assumptions, and creating flexible strategies. By institutionalizing scenario planning, companies can navigate complexity and change with greater resilience, ultimately fostering a sustainable competitive advantage in today's unpredictable global market (Deloitte LLP, 2022).

6.3. Overview of the Risk Management Process

6.3.1. Definition and Phases

Risk management is integral to decision-making in multinational corporations, especially in today's complex geopolitical environment. Recognizing risks early and effectively assessing their potential impact allows organizations to proactively manage uncertainties that could disrupt operations or impact strategic objectives. The risk management process is typically divided into several essential phases: risk identification, assessment, treatment, monitoring, and review (University of Adelaide, 2023). For a more visual please consult Annex D.

1. *Establishing Context:* This initial phase involves defining the strategic context of the risk assessment, focusing on both internal and external factors relevant to the

organization's goals. Here, organizations identify the main objectives and specific areas susceptible to geopolitical risks, such as international supply chains, regulatory compliance, and market access. Establishing a clear context ensures that risk management efforts are strategically aligned with the broader corporate objectives and tailored to the unique operational environment of each company (Hillson, 2017).

2. *Risk Identification:* This phase focuses on pinpointing potential threats, from trade sanctions to shifts in political alliances. Identifying risks involves exploring both direct threats—such as trade restrictions—and indirect influences, including fluctuating currency rates or public policy shifts, that could impact organizational goals. In this stage, input from various stakeholders is essential to capture diverse perspectives on potential risks.
3. *Risk Analysis and Evaluation*: Once identified, each risk is analyzed to determine its likelihood and potential impact on the organization. By assessing risks based on severity and probability, companies can prioritize the most pressing threats. Evaluation tools, such as risk matrices, are often used to categorize risks as low, medium, high, or extreme, guiding the allocation of resources to address each risk category effectively.
4. *Risk Treatment:* Risk treatment involves implementing strategies to mitigate identified risks. Strategies can range from avoiding or reducing the risk to sharing or accepting it, depending on the company's risk tolerance. For example, in response to trade sanctions, a company might diversify its supply chain to mitigate dependency on any one region or implement contingency plans to minimize disruptions.
5. *Monitoring and Review:* Given the dynamic nature of geopolitical risks, ongoing monitoring is essential. Continuous review of the risk management process ensures that mitigation measures remain effective and relevant to changing external conditions. Monitoring also enables organizations to adjust strategies proactively as new risks emerge or existing risks evolve, aligning with the company's overall resilience strategy.
6. *Communication and Consultation*: Effective communication throughout the risk management process fosters collaboration across departments and helps build a cohesive organizational response to risk. Clear communication ensures that stakeholders understand the rationale behind specific risk management decisions, enhancing collective engagement and adaptability

6.3.2 Alignment with Corporate Strategy

Risk management must be closely integrated with a corporation's overall strategy to ensure that risk mitigation efforts align with long-term goals and operational priorities. As Hillson (2017) argues, embedding risk management into corporate strategy enables organizations to make strategic choices that promote resilience while navigating complex geopolitical landscapes. When aligned with corporate objectives, risk management not only protects the organization but also enables it to capitalize on emerging opportunities.

For instance, integrating risk management into the broader strategic framework allows companies to adopt a proactive approach to risk, treating risk mitigation as a core function that directly supports corporate sustainability and competitive positioning. By doing so, companies can more effectively respond to geopolitical shifts, such as changes in trade policies or currency fluctuations, ensuring that strategic goals are met even amid uncertainty.

This alignment fosters a culture of informed decision-making, where risk considerations are embedded into daily operations and strategic planning, thus enabling a more adaptable and responsive organizational framework (University of Adelaide, 2023).

In sum, the risk management process serves as an essential tool for multinational corporations in safeguarding operations and maintaining strategic agility. By integrating risk management within corporate strategy, companies strengthen their ability to manage geopolitical risks in a structured, proactive, and resilient manner.

6.4 Integrating Data-Informed Techniques in Decision-Making under Geopolitical Risk

The integration of data-informed decision-making into strategic management equips multinational corporations with the agility to navigate complex geopolitical risks. By leveraging data-driven techniques, organizations can not only enhance scenario planning but also refine real-time responses to fluctuating geopolitical landscapes. This section explores the phases of data-informed decision-making, focusing on the collection and analysis of relevant data, the tools and indices that support strategic decisions, and the implementation of data-driven insights into corporate frameworks.

6.4.1 Data Collection and Analysis

Data-informed techniques serve as a critical foundation for geopolitical risk analysis, enhancing the accuracy of scenario planning and enabling timely decision-making. According to Hanegan (2023), data-driven decision-making employs a structured approach that begins with defining specific problems and moves toward a continuous cycle of monitoring and adaptation. This eight-stage framework facilitates a detailed understanding of geopolitical risks, encouraging decision-makers to systematically "Ask & Define" the scope of their analysis, identify pertinent data, and interpret findings to clarify potential threats and opportunities (Hanegan, 2023).

In geopolitical risk management, data collection spans a range of sources, including economic reports, intelligence from global databases, and data from specialized institutions like SIPRI and the World Bank. Analyzing these sources through decision matrices, SWOT analyses, and scenario planning allows organizations to develop nuanced views of geopolitical risks. These methods support adaptability by providing organizations with structured yet flexible analyses, accommodating unpredictable developments in political stability, market access, and trade relations (Simon, 1977).

The emphasis on continuous feedback within data-driven methodologies encourages a dynamic and resilient decision-making culture. Through regular monitoring and adjustment based on fresh data insights, organizations build an evolving framework for interpreting geopolitical risks and their implications for strategic choices.

6.4.2 Tools and Techniques

In the face of escalating global uncertainties, organizations leverage specialized tools and indices to monitor and evaluate geopolitical risks. Instruments such as the Geopolitical Risk Index (GPR), military expenditure data from SIPRI, and political stability indices are invaluable for tracking trends and understanding the implications of geopolitical shifts on corporate operations. Each of these tools contributes unique insights:

- *Geopolitical Risk Index (GPR):* Developed to measure the frequency of geopolitical events and assess their impact on economic performance, the GPR offers a quantitative perspective on geopolitical volatility. It enables firms to gauge the risk levels associated with various regions, facilitating more precise scenario planning and guiding decisions on market entry, supply chain adjustments, and investment strategies (Caldara & Iacoviello, 2022).
- *SIPRI Military Expenditure Data*: This data source provides insights into global and regional defense spending, highlighting shifts in political alliances and potential security threats. By tracking military expenditure patterns, companies can anticipate regions

where political instability might escalate, aiding in the proactive adaptation of supply chains and regional operations (Tian et al., 2024).

- *Political Stability Indices:* Political stability indices, such as those provided by the World Bank, offer valuable data on governance, regulatory consistency, and potential social unrest. These indices help companies assess risks related to political disruption, enabling them to structure their operations in regions with varying levels of regulatory and political risk (World Bank, 2024).

When strategically combined, these tools significantly enhance an organization's ability to track intricate geopolitical trends. Similar to the likelihood versus consequence matrix commonly used in risk management assessments (see Annex E), the quantitative insights derived from these tools provide a structured basis for risk evaluation. By integrating these indices within the various scenarios identified during the scenario planning phase, organizations can bolster their capacity to make well-informed, real-time decisions that align seamlessly with evolving global conditions. Furthermore, the quantitative nature of this approach enables a more efficient assessment and categorization of potential risks and scenarios, offering a structured pathway to navigate the inherent uncertainties of the geopolitical landscape.

6.4.3 Implementing Data-Driven Insights

Implementing data-driven insights into organizational strategy requires the establishment of robust monitoring frameworks and response protocols. Data-informed techniques allow companies to create predictive models that provide foresight into possible risk scenarios, enabling proactive risk mitigation and swift responses to emerging challenges. Hanegan's (2023) framework emphasizes a systematic approach where the findings from data analysis are translated into actionable strategies across all organizational levels.

By implementing a risk monitoring system, organizations can continuously track geopolitical developments and adjust their strategies accordingly. Such systems incorporate real-time alerts for key indicators, enabling companies to react promptly to shifts in political stability, economic sanctions, or regional conflicts. Additionally, this proactive monitoring fosters an adaptive organizational culture, where data-driven insights are regularly reviewed and integrated into operational and strategic plans (Hanegan, 2023).

In the context of corporate strategy, data-informed decision-making supports a structured yet flexible approach to uncertainty management. By establishing clear response protocols, companies can align high-level risk assessments with operational actions, ensuring that both corporate and regional managers have a coherent understanding of strategic priorities in volatile geopolitical contexts. This integration of data-driven insights strengthens the organization's resilience, positioning it to navigate geopolitical risks effectively while remaining aligned with its strategic goals (March, 1994).

6.5 Results and Discussion of Hypotheses

This chapter presents the findings of the study, examining how geopolitical risks impact multinational corporations (MNCs) and the effectiveness of mitigation strategies, particularly scenario planning, as hypothesized. The results are presented by each hypothesis, supported by interpretations that link back to the literature reviewed in Chapter 2, enhancing the understanding of decision-making under geopolitical uncertainty. By drawing on data-informed techniques and established decision models, this analysis delves into the multifaceted nature of risk management strategies in high-stakes, volatile environments.

6.5.1 Results by Hypothesis

6.5.1.1 Hypothesis 1: Geopolitical Risks Impact Strategic Decision-Making in MNCs

This study's first hypothesis postulates that geopolitical risks significantly influence strategic decision-making within MNCs. An analysis of the geopolitical landscape reveals direct and indirect effects on corporate strategy, confirming that geopolitical risks lead to adjustments in operational plans, market positioning, and investment decisions across various sectors. Geopolitical factors - such as regulatory constraints, trade disputes, and regional conflicts - demonstrably affect decisions related to supply chains, market entry, and corporate social responsibility initiatives (Kobrin, 2022).

Data Analysis and Interpretation

The influence of geopolitical risks on multinational corporations (MNCs) can be categorized by specific risk factors, observed impacts on decision-making processes, and illustrative examples from recent case studies would be:

Regulatory Shifts: Frequent changes in regulatory policies, especially regarding foreign investment, have a significant impact on strategic planning within MNCs. For instance, recent U.S. trade restrictions on high-tech exports to China have forced technology firms to adjust their supply chain strategies and redirect investments into regions with more stable trade relations. This demonstrates how regulatory shifts lead to strategic adaptations, especially around investment and operational planning.

Trade Disputes and Tariffs: High-stakes trade disputes, such as the U.S.-China tariff exchanges, have compelled MNCs to rethink market access strategies. Companies reliant on global supply chains have had to either absorb increased costs or explore alternative markets and suppliers. This factor particularly influences decision-making around supplier diversification and pricing strategies, as seen with several U.S.-based manufacturing firms affected by retaliatory tariffs on key imports.

Political Instability and Regional Conflicts: Political unrest in regions like the Middle East has impacted energy companies by increasing operational costs and heightening supply chain vulnerabilities. For example, firms with substantial operations in high-risk areas often adopt a "dual-sourcing" strategy to maintain resilience. Political instability thus directly impacts location-based decision-making, often prompting companies to either relocate or diversify their operations.

Resource Nationalism: Policies prioritizing domestic control over strategic resources, such as rare earth minerals, create supply constraints for industries like electronics and automotive manufacturing. To mitigate risks from resource nationalism, companies increasingly seek long-term contracts with resource-rich countries or invest in alternative materials. This factor shapes procurement and investment decisions, often steering MNCs toward less resource-dependent technologies.

Economic Sanctions: Sanctions imposed on countries like Russia have necessitated swift operational changes among firms operating within or trading with those regions. In response, MNCs have sometimes divested from affected markets or scaled back regional operations to align with regulatory mandates. Sanctions thus heavily influence compliance-based decision-making, pushing companies to adjust their international presence accordingly.

This simple, yet powerful exercise summarizes key findings on how MNCs respond to these geopolitical pressures, using evidence from documented case studies and empirical data. And from which, one may conclude, for instance, that firms heavily reliant on international supply chains, particularly in technology and resource-based industries, often reconfigure or diversify their sources in response to sanctions or potential conflicts. Such adjustments validate March’s (1994) concept of “adaptive intelligence,” where firms adopt a dynamic approach to navigate unpredictable environments.

This analysis underscores the strategic value of integrating real-time data and predictive tools in identifying emergent risks. Tools like scenario planning, coupled with decision matrices, enable MNCs to assess the probability and impact of specific geopolitical threats, facilitating informed decisions (Hanegan, 2023). By corroborating existing literature, this study reveals that data-informed decision-making offers an essential support system for companies facing geopolitical volatility, allowing them to make agile adjustments that preserve long-term viability (Dror, 1968).

6.5.1.2 Hypothesis 2: Mitigation Strategies, Such as Scenario Planning, Reduce Adverse Effects of Geopolitical Risks

Hypothesis 2 evaluates the efficacy of scenario planning and related mitigation strategies in reducing the adverse effects of geopolitical risks. This research indicates that scenario planning, coupled with risk assessment tools, provides firms with robust mechanisms to foresee, evaluate, and respond to risk scenarios. By simulating multiple future pathways, scenario planning allows companies to develop contingencies that mitigate the operational disruptions and financial impacts of volatile geopolitical factors (Shoemaker, 1995).

Data Analysis and Interpretation

The model for mitigating geopolitical risks emphasizes the structured implementation of scenario planning, risk monitoring, and response frameworks. This approach highlights three primary layers of defense for multinational corporations:

1. *Scenario Planning*: At the core, scenario planning enables firms to anticipate multiple potential futures by analyzing key risk indicators. By visualizing varied geopolitical scenarios, companies can proactively develop contingency strategies that align with their strategic objectives.
2. *Continuous Monitoring and Real-Time Alerts:* Effective geopolitical risk mitigation relies on a system of continuous monitoring, utilizing tools such as Geopolitical Risk Indices (GPR), political stability indices, and real-time data feeds. This component supports scenario planning by offering updated insights, allowing companies to pivot as risks evolve.
3. *Predefined Response Strategies:* With scenario-informed insights and active monitoring in place, firms implement predefined response strategies, such as supply chain diversification and operational relocation, which are activated based on the scenarios projected by the planning phase. This layer transforms foresight into tangible actions, making the organization more resilient to geopolitical shifts.

Together, these components create a responsive, adaptive framework that strengthens decision-making under uncertainty, helping firms mitigate the adverse effects of geopolitical risks.

Figure 6.1. - Conceptual model of geopolitical mitigation Strategies

Source: Author's Own Work

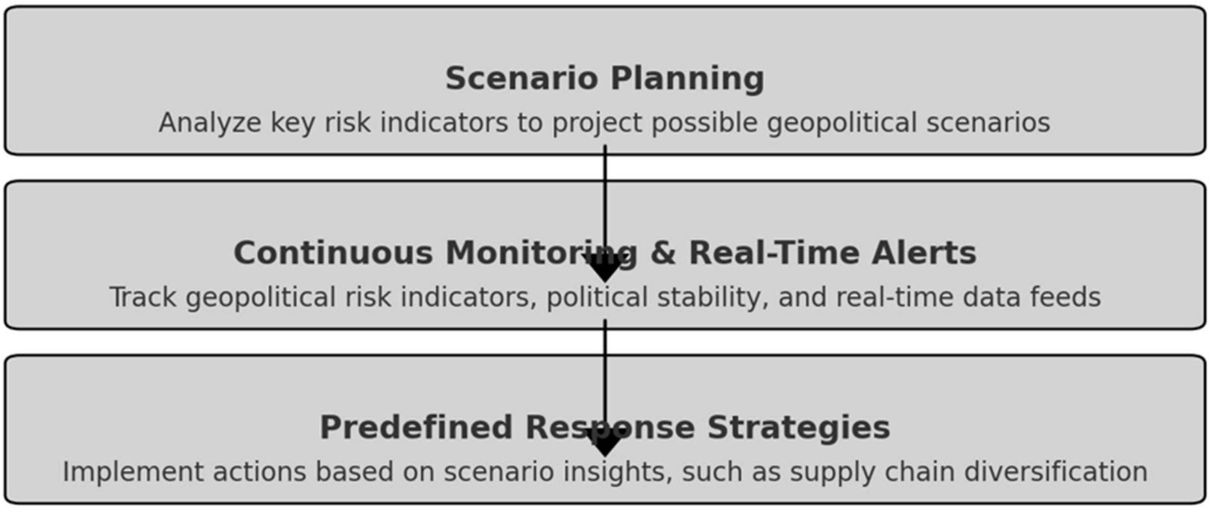


Figure 6.1. illustrates conceptual models used by MNCs, incorporating scenario planning, to counteract geopolitical risks, with case evidence from the energy sector. For example, companies with a global footprint, such as Shell, rely on scenario planning to anticipate shifts in energy regulations and oil market dynamics, demonstrating that such methodologies facilitate resilience against economic shocks (Wack, 1985). Firms implementing scenario-based strategies can not only prepare for potential setbacks but also explore new opportunities that arise from changes in political landscapes, thus aligning with Schwartz's (1991) findings on proactive risk management.

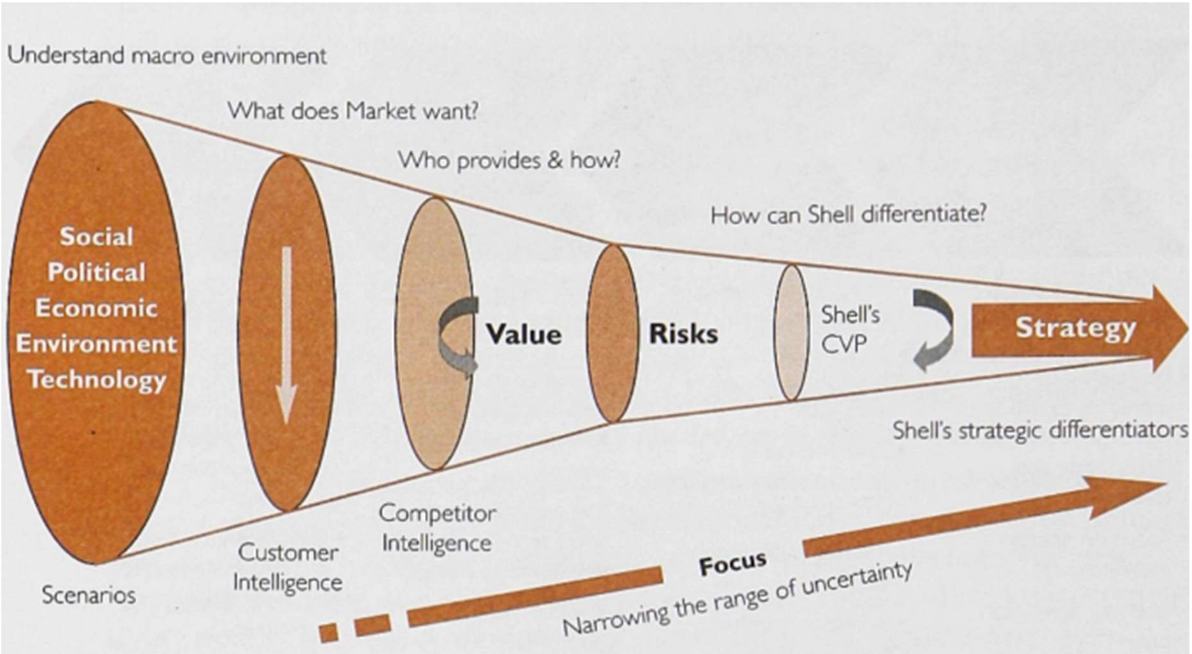
This finding is further supported by data on MNCs employing scenario planning to assess emerging risks, with real-time dashboards and geopolitical indices like the Geopolitical Risk (GPR) Index. These tools aid in constructing adaptable strategies that can be adjusted as circumstances evolve, which supports Hanegan's (2023) view on the significance of continuous monitoring for long-term resilience.

6.5.2 Discussion: Synthesis of Findings from Literature

The findings of this study align closely with established literature on geopolitical risk management, strategic planning and decision-making under uncertainty, reaffirming the importance of scenario planning as an adaptive tool for MNCs in volatile geopolitical climates. This study builds on the work of Schwartz (1991) and Wack (1985), demonstrating that scenario planning provides firms with a proactive stance against geopolitical challenges. By anticipating multiple possible futures, companies cultivate flexibility, improving their resilience against unanticipated shocks and policy changes.

Moreover, the results underscore the critical role of data-informed decision-making frameworks in strategic risk management. Techniques such as scenario planning, decision matrices, close monitoring of geopolitical indicators - particularly integrated in environmental scanning - such as the PESTEL or SWOT analyses, as advocated by Hanegan (2023), equip organizations with systematic approaches to interpreting and acting on geopolitical risk data, and therefore increasing its resilience to these kind of events (see Figure 6.3.). This approach is further supported by Simon's (1977) principles of bounded rationality, which advocate for adaptable strategies when faced with information constraints.

Figure 6.3 - Original Shell's Scenarios in Strategic Planning
Source: Wack, P. (1985). Scenarios, Harvard Business Review, Reprinted from.



The study's findings suggest that while geopolitical risks remain an inherent challenge, MNCs can leverage advanced scenario-based and data-informed techniques to mitigate adverse impacts and uncover strategic opportunities. This adaptability, or "*adaptive intelligence*," as coined by March (1994), positions MNCs not only to weather geopolitical storms but also to thrive amidst uncertainties.

6.5.3 Implications for Practice

The integration of scenario planning and data-informed decision-making has practical implications for MNCs operating in diverse geopolitical environments. This research highlights the need for organizations to adopt a multi-tiered approach, incorporating data insights at strategic, operational, and tactical/business-unit levels. By fostering a proactive risk-aware culture, MNCs can develop robust strategies that allow for timely adjustments, thereby enhancing organizational resilience in the face of geopolitical volatility (Hanegan, 2023; Dror, 1968).

CHAPTER 7

Conclusions and Recommendations

7.1 Key Findings

This dissertation examined strategies for multinational corporations (MNCs) to mitigate geopolitical risks and integrate risk awareness into strategic decision-making. Chapter 6 findings support the hypotheses by demonstrating how geopolitical risks influence MNCs' strategic flexibility and preparedness, highlighting the central role of scenario planning and dynamic data-informed decision-making. Specifically:

- **Hypothesis 1**—that geopolitical risks impact strategic decision-making—was affirmed through evidence linking regional instability, trade restrictions, and economic sanctions to shifts in corporate priorities, resource allocation, and strategic alignment.
- **Hypothesis 2**—that mitigation strategies such as scenario planning reduce adverse effects—was substantiated by the effectiveness of scenario-based planning and risk management frameworks in reducing organizational vulnerabilities.

These findings not only reinforce the literature but also contribute new insights into how MNCs can enhance adaptability through scenario-based planning and proactive risk assessment. They provide an integrated model of risk management, aligning with existing theoretical frameworks but expanding upon them with a modernized, data-informed approach. This study demonstrates that integrating geopolitical risk assessments at the strategic level bolsters MNCs' resilience against disruptions, strengthens market positioning, and enhances long-term growth trajectories in uncertain global environments.

7.2 Strategic Recommendations

Given the findings, this section presents practical strategies for MNCs to incorporate geopolitical risk awareness into their operations and strategic planning. Strategic adaptation in the face of geopolitical risk requires a multifaceted approach that combines awareness, capability-building, and strategic control mechanisms to foster resilience and ensure sustained competitive advantage for multinational corporations (MNCs). Dr. Maria Garcia from the United Nations Economic Commission for Europe emphasizes that "mitigation strategies should encompass proactive risk assessment, diversification of supply chains, and political intelligence gathering." This broader approach not only mitigates immediate risks but also strategically positions MNCs to withstand future geopolitical disruptions.

As Michael Porter (1996) articulates, the essence of strategy lies in performing activities differently from competitors by creating unique combinations of capabilities, resources, and functional policies that enhance fit across the organization. In this context, integrating geopolitical risk analysis into strategic planning becomes essential. This integration enables organizations to develop capabilities tailored to specific geopolitical risks, fortifying strategic control measures and ensuring that the broader organizational culture remains attuned to geopolitical developments. According to Dr. Michael Chang, an expert in Geopolitical Economics, “integration enables businesses to make informed and adaptive decisions in the face of geopolitical challenges.”

Strategic recommendations focus on building an awareness-oriented mindset, expanding business intelligence capabilities, and establishing robust monitoring frameworks. Dr. Sarah Brown, a professor of Global Business Strategy, further highlights that "businesses need to adopt a proactive approach by diversifying suppliers, implementing contingency plans, and continuously monitoring geopolitical developments.” Through such strategies, MNCs cultivate resilience, enabling them to adapt dynamically to geopolitical shifts.

By viewing strategy as a composite of interconnected activities rather than isolated functions, MNCs gain competitive advantage. This integrated approach aligns with Porter’s assertion that “the competitive value of individual activities… cannot be decoupled from the system or the strategy” (Porter, 1996), underscoring the importance of fit in strategy.

7.2.1 Cultivating a Geopolitical Risk Awareness Mindset

For effective risk management, fostering an awareness-oriented mindset across all organizational levels is crucial. Embedding geopolitical risk awareness within the organizational culture encourages proactive thinking and preparedness for sudden shifts. Leaders can drive this culture by prioritizing awareness as a shared responsibility, ensuring that risk-related information flows seamlessly across departments and is integrated into day-to-day operations (Rice & Zegart, 2018).

Continuous learning and commitment to geopolitical awareness at the leadership level are fundamental. MNCs should invest in regular training sessions, workshops, and briefings to educate leaders and employees on the latest geopolitical trends and emerging risks. By establishing clear communication channels for risk updates and scenario discussions, companies can promote a deeper understanding of global dynamics and foster organizational resilience.

7.2.2 Developing Strategic Capabilities

Establishing Business Intelligence Units within organizations is essential for gathering, analyzing, and synthesizing geopolitical data. These units can play a pivotal role in tracking developments, assessing risks, and providing strategic insights to guide decision-making. BIUs can monitor key geopolitical indicators, such as the Geopolitical Risk Index (GPR) and SIPRI military expenditure data, which provide contextual data on global stability, thereby enhancing the company's ability to anticipate and respond to emerging threats (Hanegan, 2023).

Forming cross-functional teams with expertise in risk, strategy, compliance, and regional analysis strengthens MNCs' geopolitical risk management. Such teams ensure a holistic view, blending diverse insights to create comprehensive risk profiles and mitigation strategies. These teams should work collaboratively to integrate risk management frameworks into business operations, enabling a unified approach to managing external uncertainties.

7.2.3 Enhancing Strategic Controls

A structured risk monitoring framework enhances an organization's ability to track geopolitical risks and respond effectively. This framework should include real-time data dashboards, automated alerts, and clear reporting protocols. Monitoring systems enable MNCs to maintain a constant view of geopolitical risks, quickly recognize escalating issues, and adjust strategies accordingly (University of Adelaide, 2022).

Developing robust contingency plans for specific scenarios, such as supply chain disruptions, policy shifts, or sanctions, is vital. Response strategies should involve detailed action plans that address various risk levels, from minor disruptions to major crises. MNCs can benefit from predefined response protocols, allowing rapid adaptation and effective communication across the organization during crises. These response strategies support strategic flexibility and ensure that companies are prepared to manage complex geopolitical landscapes.

7.3 Research Limitations and Future Research

This research provides valuable insights but like any other, has its own limitations. The focus on qualitative analysis restricted the study from quantitatively assessing the financial impacts of geopolitical risks on MNCs, such as changes in revenue, EBITDA or market share.

Future studies could address this gap by employing quantitative methods, such as econometric modeling or longitudinal analyses, to explore the direct financial implications of geopolitical risks on organizational performance. Additionally, this research concentrated on select high-risk sectors; future research could expand to industry-specific or region-specific studies to examine how geopolitical risks differentially impact sectors such as healthcare, finance, or telecommunications.

Another promising avenue for future research lies in the integration of real-time data and predictive analytics into risk management frameworks. With advances in AI, machine learning, and big data analytics, future studies could develop and test innovative tools for more precise geopolitical risk forecasting. Additionally, exploring the role of ethical AI in risk management, particularly in addressing disinformation and fake news, could offer new insights into safeguarding corporate strategy against manipulative tactics. This would broaden the scope of geopolitical risk management to include emerging digital threats and their implications for strategic resilience.

By expanding on these areas, future research could deepen our understanding of geopolitical risk management and contribute to more sophisticated, data-driven frameworks that support MNCs in navigating an increasingly complex global landscape.

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Annex A

Title: ***A Fragmented World Entails a Lot of Agility for Global Companies***

Interview Transcript: Gilles Moëc, Chief Economist at AXA Group on Geopolitical and Economic Instability

Source: AXA Group. (2024). *AXA Future Risks Report 2024. Retrieved from* [*https://www.axa.com/news/2024-future-risks-report*](https://www.axa.com/news/2024-future-risks-report)

Interviewer: *What are the economic impacts of geopolitical instability for consumers, businesses, and states?*

Gilles Moëc: "In contrast to the Cold War era, when the separation of the blocs meant geopolitical instability had very little economic impact, the ramifications of tensions between the US and China can be huge. Geopolitical instability is hampering cooperation on global regulatory progress, for example, in financial affairs, and leading to a return of trade barriers around the world. Exports are vital for China, as domestic demand remains weak. However, wariness of China now transcends political boundaries in the US, as the Biden administration did not unwind the tariffs imposed by the Trump administration. As a result, Chinese producers are shifting their focus to other markets, which are also imposing tariffs. For example, the EU Commission recently introduced compensatory tariffs on Chinese electric vehicles. Indonesia's decision in June 2024 to raise tariffs on Chinese products has been largely ignored in the West, but we see it as a significant signal that the return of trade barriers cannot be solely understood as a 'North/South' issue.

All of this means that global companies need to think about the location of their production centers not only in terms of cost and proximity to markets but also political alignment. Companies must consider diversifying suppliers across geographies to minimize the risk of sudden stops in trade flows. This will raise their overall cost base, ultimately impacting consumers, who will bear the cost of increased tariffs."

Interviewer: *In this pivotal election year, what effects are political movements having on the global economy?*

Gilles Moëc: "Election results in the UK and Europe have been encouraging. The UK now has a more EU-friendly government, and while we do not expect spectacular institutional change in the EU-UK relationship, more political convergence appears highly likely. In Europe, elections have not dramatically altered the capacity of mainstream political forces to shape the agenda in Brussels. However, the big uncertainty remains the US election. Donald Trump has proposed raising tariffs on imports into the US to 10%, with a special 60% rate for China."

Interviewer: *Does the period of geopolitical instability we are going through mark the start of a new world order?*
Gilles Moëc: "It is difficult to think in terms of a clearly organized 'world order,' as we see cracks across all blocs. The EU-US relationship, for example, is strained by disputes on trade and the financial burden of defense. The idea of a Global South under Chinese leadership is, in our view, largely an empty concept given the internal disagreements within this group—such as the rivalry between India and China—and the deep economic difficulties of member countries, such as South Africa. Navigating this fragmented world will entail a lot of agility for global companies."

Annex B

Annex B: Interview Transcript with Rafael Docavo-Malvezzi, Global Chief Underwriting Officer for Political Risk, Credit & Bond, AXA XL

Title: *Defining and Managing Political Risk in a Rapidly Changing World*

Source: AXA Future Risks Report 2024. Retrieved from https://www.axa.com/news/2024-future-risks-report

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Interviewer: *How would you define political risk? What is your role within AXA as a political risk expert?*

Rafael Docavo-Malvezzi: "Political risk refers to potential losses or disruptions due to regulatory changes, nationalization, civil unrest, armed conflict, or sanctions. My role is to assess these risks and help our clients mitigate their exposure."

Interviewer: *How have political risks evolved in recent years, particularly with new technologies?*

Rafael Docavo-Malvezzi: "Political risk was traditionally linked to developing countries with weak institutions. However, civil conflict and policy unpredictability are rising even in established democracies. Social media, generative AI, and deepfake technologies have made it easier to spread misinformation, manipulating public opinion and amplifying the speed, scale, and complexity of threats."

Interviewer: *What are the tools for a company like AXA to anticipate and protect against political risks?*

Rafael Docavo-Malvezzi: "We use risk assessment tools, advanced analytics, and global intelligence networks. We collaborate with colleagues in crisis management, marine, aerospace, and cyber to better understand political risks. Internally, we provide insights to inform AXA's risk governance, while our insurance solutions help safeguard businesses against unpredictable political events."

Annex C

Annex C: Interview Transcript with David Colon, Professor and Researcher at Sciences Po Paris

Title: *Disinformation and Its Impact on Democracy and Freedom of Expression*

Source: AXA Future Risks Report 2024. Retrieved from https://www.axa.com/news/2024-future-risks-report

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Interviewer: *In your book "The Information War," you talk about how fake news is used as a weapon of war. Why?*

David Colon: "Since the end of the Cold War, the information space has become a major battlefield between democracies and authoritarian regimes. Democracies see the free global circulation of information as a vector of progress, while authoritarian regimes view it as an existential threat. The strategic use of fake news aims to destabilize democratic regimes from within by amplifying divisions, fostering mistrust, and eroding the ability of citizens and organizations to discern truth from falsehood."

Interviewer: *How would you say misinformation has evolved with the emergence of new digital tools?*

David Colon: "The advent of smartphones, social media, and artificial intelligence has escalated disinformation to unprecedented levels in scope and reach. Major online platforms, driven by advertising revenue, have inadvertently encouraged the proliferation of fake news and conspiracy theories. Programmatic advertising has further exacerbated this issue by unwittingly directing funds to unreliable websites. With influencers, algorithms, and digital crowds converging, our information space is more volatile than ever."

Interviewer: *Is there an effective way of countering fake news? Can society be resilient in the face of this risk?*

David Colon: "Progress has been made in raising awareness and adopting measures to address disinformation. France, for example, launched the Information and Democracy Partnership in 2019, established the Viginum agency to detect digital interference, and passed legislation to counter foreign interference. The EU Digital Services Act is a significant advance, as is the OECD report, 'Facts Not Fakes,' which offers practical recommendations to safeguard the integrity of our information space. I believe society can indeed be resilient, particularly as businesses recognize their democratic responsibility in this effort."

Interviewer: *The Brazilian Supreme Court recently deplatformed X in Brazil to combat fake news. Can democracy coexist with freedom of expression?*

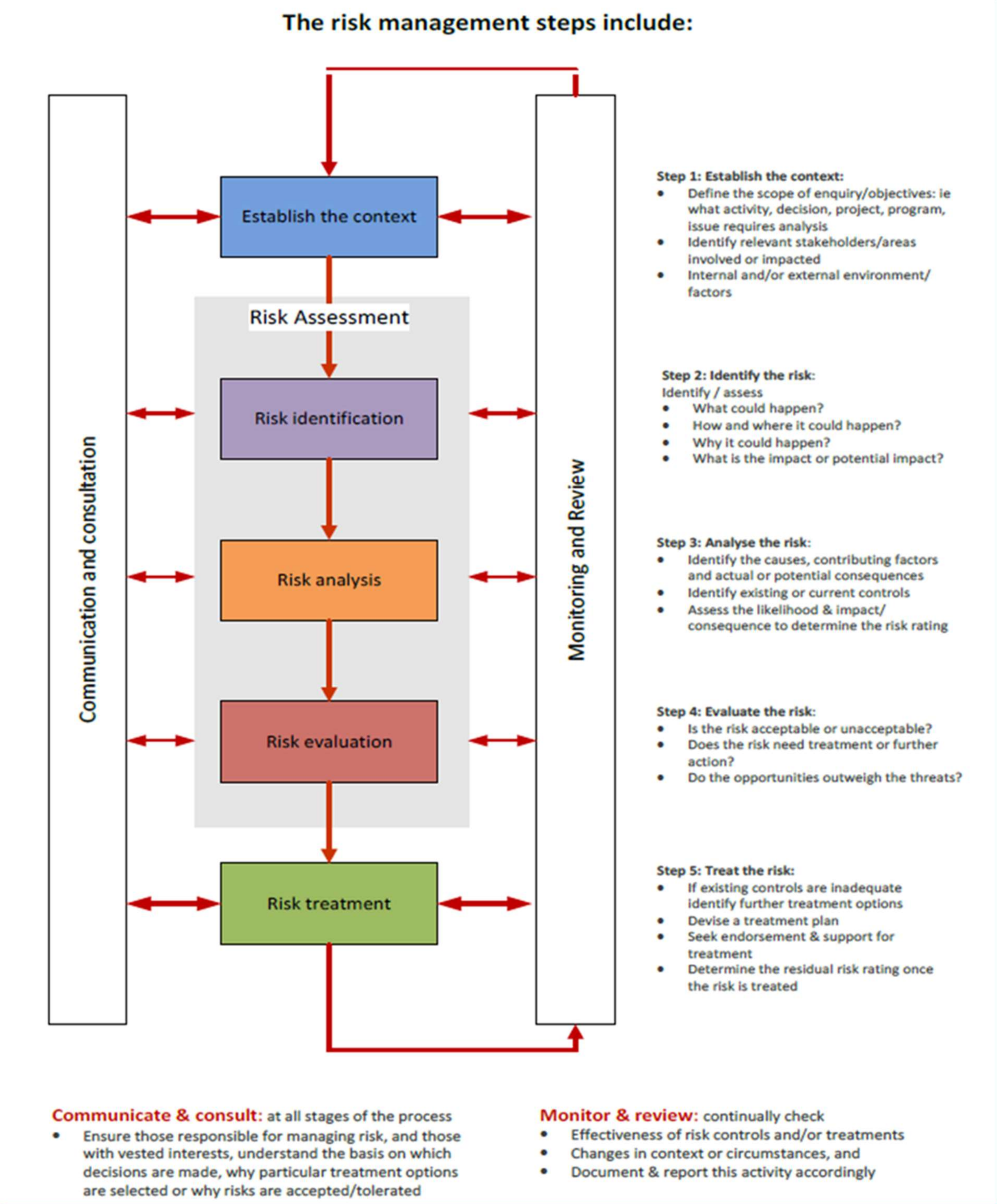
David Colon: "Firstly, I believe such measures are ineffective, as evidenced by X circumventing its suspension in Brazil and RT bypassing the European Commission's suspension in 2022. Secondly, they are counterproductive, as they may appear, albeit falsely, to infringe on freedom of expression. Our democracies often attempt to counter fake news by restricting freedom of expression, opinion, or information. Along with other researchers, I advocate for regulating content dissemination rather than the content itself. As Renée DiResta noted, 'Freedom of speech is not freedom of reach."

Annex D

Annex D: Risk Management Process

Title: *Risk Management Process*

Source: University of Adelaide. (2020). *Risk management process*. Retrieved from https://www.adelaide.edu.au/risk



Annex E

Annex D: Risk Matrix - Likelihood & Consequence

Title: Risk Matrix - Likelihood & Consequence

Source: University of Adelaide. (2020). *Risk management process*. Retrieved from https://www.adelaide.edu.au/risk

Score	Description of likelihood
A Almost Certain	Highly likely to happen, possibly frequently
B Likely	Will probably happen, but not a persistent issue
C Possible	May happen occasionally
D Unlikely	Not expected to happen, but is a possibility
E Rare	Very unlikely this will ever happen

RISK RATING - MANAGEMENT ACTION REQUIRED
• **Extreme risk** = immediate attention & response needed; requires a risk assessment & management plan prepared by relevant senior managers for Vice-Chancellor; risk oversight by Council or nominated Standing Committee or Management Committee
• **High risk** = risk to be given appropriate attention & demonstrably managed; reported to Vice-Chancellor or other senior Executives / Management Committees as necessary
• **Medium risk** = assess the risk; determine whether current controls are adequate or if further action or treatment is needed; monitor & review locally, e.g. through regular business practices or local area meetings
• **Low risk** = manage by routine procedures; report to local managers; monitor & review locally as necessary

RISK MATRIX

CONSEQUENCE / LIKELIHOOD	1 Insignificant	2 Minor	3 Moderate	4 Major	5 Extreme
A - Almost certain (frequent)	M	M	H	E	E
B - Likely (probable)	L	M	H	H	E
C - Possible (occasional)	L	M	M	H	H
D - Unlikely (uncommon)	L	L	M	M	H
E - Rare (remote)	L	L	L	L	M