The Principle of Geodemocracy and its impact on FDI, global supply chain and global sourcing

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Name, Ph.D. (Chair)

DEDICATION

I dedicate this dissertation to my family. I love all of you deeply with all my heart, and thank you for the assistance during this COVID-19 pandemic, and thank you for always supporting my dreams. I'm so grateful to have all of you in my life.

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Great thanks to my wonderful family.

Great thanks to my supervisor Dr. Sasa Petar, Ph.D.

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ABSTRACT

This dissertation investigates the intricate dynamics of Geodemocracy in the contemporary world, focusing on the interplay between geopolitics, power, and policy in shaping global political landscapes. By employing a multidisciplinary approach, the study integrates perspectives from political science, geography, international relations, and economics to offer a comprehensive analysis.

The research begins with a theoretical framework that revisits classical Geodemocracy Theory and contextualizes them within modern realities, then study the impact of Geodemocracy Theory on foreign direct investment (FDI), global supply chain (GSC) and global sourcing (GS) around the world, and focuses on how to mitigate potential uncertainties and risks.

The Geodemocracy Index (GMI) is a combined tool to dynamically estimate risks from three major pillars: democracy, economy and geopolitics, which might be utilized by business practitioners as an indicator for international business activities. The dissertation also explains how GMI functions:

- What is geodemocracy?
- How does the GMI impact FDI, global supply chain, and global sourcing?
- How do business practitioners mitigate risks when executing FDI, GSC, and global sourcing by using GMI analysis?

Keywords

Foreign Direct Investment, Global Supply Chain, Global Sourcing, Geodemocracy, Geopolitics, Risk Control, Risk Management.

Directed by: Professor Sasa Petar, Ph.D.

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Main Abbreviation List	
Name	**Full description**
4M	4M rating system: Max, Major, Medium, and Minor
FDI	Foreign Direct Investment
GCI	Geopolitical Confidence Index
GDP	Gross domestic product
GMI	Geodemocracy Index
GSC	Global Supply Chain
GS	Global Sourcing
IBS	International Business Society
LIO	Liberal International Order
MNC	Multinational corporation
MNE	Multinational enterprise
SC	Supply Chain
SCRM	Supply Chain Risk Management
TPDR+G	TPDR+G model: : T, P, D, R, G stands for Think, Plan, Do, Review and Geodemocracy Index analysis respectively

1.0 INTRODUCTION

1.1 Background

Despite the positive efforts and possible strategies to optimize business models, supply chains, and supply sourcing, the global businesses continue to experience significant disruption all over the world (Kenny, 2009). The potential uncertainties and risks, like a ghost, wanders around the Business Life Cycle from project kick-off (project initial launch) to growth, to shake-out, to maturity, and finally to project decline (Gordon, 1990).

Risk and uncertainty analysis is a fundamental aspect of decision-making processes in various fields (Terje Aven, 2012). Jean-Paul Chavas (2004) affirmed there was scarcely any situation where economic decisions were made with flawless certainty. Risk Control (or Risk Management) is an obligatory course for any enterprises (or organizations) to neutralize / mitigate risks, before who finally tailor investment strategies to their specific goals and risk tolerance. But the business practitioners and policy makers may ask:

- Where do these uncertainties and risks emanate from?
- What are the best measures to identify and eliminate them?
- How do we make decisions when some of the events remain dubious?
- Where is the best place to invest in the world?

These questions remain an unresolved topic of sometimes angry debate among researchers, scholars, academic scholars, and policy-makers, etc. These conundrums repeatedly perplex the investors (mostly are international investors instead of domestic ones) when performing both macroeconomic and microeconomic fundamental evaluation.

This dissertation investigates the impact of geodemocracy on Foreign Direct Investment (FDI), Global Supply Chain (GSC) and Global Sourcing (GS) around the world, and

focuses on how to mitigate potential uncertainties and risks during the strategic operation of FDI, GSC, and GS, and provided one step-by-step analysis method.

Geodemocracy Theory, which was created herein for the first time, is a combined tool to dynamically estimate each country / region using Geodemocracy Index (GMI), from three major pillars of Democracy, Economy, and Geopolitics. GMI can be utilized by business practitioners, policymakers, and scholars, etc. as an indicator to assess the international business activities. To be more specific, businesses must stay informed about geodemocratic developments and be prepared to adapt to changes in the geodemocratic landscape. Mihir Shukla (CEO of Automation Anywhere) (Yoon and Mormont, 2023) held the view that "The pandemic and other geopolitical issues have forced business leaders to adapt to new ways of working while meeting customer demands".

The purpose of this dissertation is to develop and establish a comprehensive theoretical framework of Geodemocracy Theory that explains the complex dynamics of geodemocracy and their impacts on foreign investment, global supply chain, and global sourcing. The study aims to uncover how geographical, economic, political, social, and technological factors intertwine to shape the geodemocratic landscape, influence national and regional stability, and drive international policies and strategies. Typical considerations and questions listed as below:

T1 - Geodemocracy Theories and Frameworks

- What are the key Geodemocracy Theories that apply to the current international context?
- What frameworks can be used to analyze the power dynamics between major global players, and in FDI, global supply chain and global sourcing?

T2 - Economic and Resource Considerations

- What is the significance of energy resources (oil, gas) in global geodemocracy?
- What are the implications of economic interdependence and globalization for national sovereignty and security?

T3 - Political and Strategic Interests

- How do domestic politics and leadership changes affect a country's foreign policy, such as Foreign Investment Law?
- How do international organizations (UN, NATO, OPEC, etc.) impact the domestic policies of countries?

T4 - Cultural and Social Dimensions

- How do cultural and religious factors influence geodemocratic relationships and conflicts?
- What is the impact of migration and demographic changes on geodemocratic stability and policies?

T5 - Environmental and Resource Security

- How do environmental degradation and natural disasters influence political stability and international relations?
- What strategies are countries employing to secure access to critical resources (minerals, arable land)?

T6 - Technological and Cyber Dimensions

- How does control over information technology and cyber capabilities influence geodemocratic power?
- What are the implications of cyber warfare and technological supremacy (AI, 5G) for national security?

T7 - Future Trends and Scenarios

- What are the potential future trends in global geodemocracy (e.g., the Fall of China, the Rise of India, and the potential collapse of Russia)?
- What are the plausible geopolitical scenarios for the next decade, and how should policymakers prepare?

1.1.1 Globalization Trend

Globalization refers to the process of increasing interconnectedness and interdependence among countries (Surugiu and Surugiu, 2015), particularly in terms of economic, cultural, technological, and political interactions. Globalization, being a complex variety of economic, cultural, social, and political changes, has shaped the entire world in recent decades (Council of Europe, 2012). Globalization greatly improved the majority of people's well-being all over the world mainly from five developments: innovation and knowledge transfer, faster and cheaper transportation, Information Technology (IT) and Communication Technology (CT) advancement, economic growth, and Trade Liberalization (Reduction of trade barriers, tariffs, e.g.). To put it briefly, Douglas Irwin (2022) pinpointed that "Globalization has helped raise incomes almost everywhere since the 1980s", and "Globalization enabled nearly all countries to grow richer in recent decades".

However, globalization also has negative aspects (Council of Europe, 2012). While globalisation brings numerous benefits, it also poses significant challenges that require careful management and international cooperation. With the rapid development of globalization and internationalization since the late 1940s, multinational corporations who are in favor of globalization always encounter risks from market, politics, and environment (Goldin, 2010; Abuzjarova, 2020). No business organizations are out of

purview of potential uncertainties and risks during operation (Mishra and B, 2011) and hence Foreign Investment, Global Supply Chain and Global Sourcing are no deviation: in recent years, Foreign Investment, Global Supply Chain and Global Sourcing have been greatly impacted by multiple risk factors.

Ranking		Top 10 risks
2023	2022	
1	1	Cyber risks
2	2	Business interruption: supply chain disruption
3	10	Macroeconomic instability: inflation, deflation, monetary policy, austerity plans
4	-	Energy crisis: supply deficit or interruption, price fluctuation
5	5	Changes in legislation and regulation
6	3	Natural catastrophes
7	6	Climate change
8	9	Shortage of skilled labour
9	7	Fire/explosion
10	13	Political risks and violence

Table 1 – Top 10 Business Risks 2023 (Allianz Risk Barometer, 2023)

Martin Wolf, the Anglosphere's most influential finance journalist nominated by Prospect Magazine (Archive.org, 2010) and the author of "Why globalization works", persuasively stated "the biggest obstacle to global economic progress has been the failure not of the market but of politics and government, in rich countries as well as poor (Wolf, 2005)". That is to say, defective politics and flawed government policies brought out unpredictable challenges, uncertainties and risks, which have to be identified, managed, or eradicated if possible.

In 2023 Allianz Risk Barometer (Allianz Commercial, n.d.) conducted a survey from 94 countries and territories with the views of 2,712 respondents during October 2022 and November 2022. The study unveiled that the most significant global business risks mainly come from economy, democracy, and politics (or geopolitics).

Caldara and Iacoviello (2018) concluded “Entrepreneurs, market participants, and central bank officials view geopolitical risks as key determinants of investment decisions and stock market dynamics.” Former Governor of Bank of England and Bank of Canada, Mark Carney (BIS central bankers’ speeches, n.d.) clearly pointed out that uncertainties and risks mainly “come in threes: geopolitical, economic, and policy uncertainty”.

In conclusion, risk and uncertainty are crucial concepts in decision-making, which arise from various sources that impact decision-making in different contexts.

1.1.1.1 Risk

Risk is the probability that an event will occur (Burt, 2001). These potential sources of risks are briefly summarized below:

- Market Risk. Fluctuations in market prices, such as stock prices, interest rates, and commodity prices, can create financial risks. For example, a sudden drop in stock prices can lead to significant losses for investors.
- Credit Risk. The risk that a borrower will default on a loan or other credit obligation. This can lead to financial losses for lenders and investors who hold debt instruments.
- Operational risk. Risks arising from internal processes, systems, people, or external events. This includes risks such as fraud, system failures, and human errors.
- Liquidity risk. The risk that an entity will not be able to meet its short-term financial obligations due to an inability to convert assets into cash quickly without significant loss of value (This risk is normally analyzed in financial management and corporate finance contexts).

- Legal and regulatory risk. Changes in laws and regulations or non-compliance with existing regulations can create risks for businesses. This includes new taxes, environmental regulations, and changes in trade policies.
- Strategic risk. Risks associated with high-level decisions that affect the overall direction of an organization. This can include risks from entering new markets, launching new products, or mergers and acquisitions.
- Reputational risk. Damage to an organization's reputation can result from various factors, including poor customer service, product failures, or negative publicity.
- Environmental risk. Risks arising from environmental factors such as natural disasters, climate change, and pollution. These can impact supply chains, production, and overall business operations.

1.1.1.2 Uncertainty

Uncertainty, which is different from risk, is the sum of all unforeseeable events that are not anticipated despite professional planning (Garrison Esst et al., 1992; Anon, 2020). These potential sources of uncertainty are briefly outlined as follows:

- Incomplete information. Lack of complete information about the current state or future developments can lead to uncertainty. This can be due to limitations in data collection or analysis capabilities.
- Complexity of systems. Complex systems, such as financial markets or large organizations, have many interdependent components that make it difficult to predict outcomes accurately.

- Behavioral uncertainty. Human behavior can be unpredictable and irrational, adding uncertainty to decisions involving stakeholders such as consumers, employees, and investors.
- Technological change. Rapid advancements in technology can create uncertainty regarding the future landscape of industries and markets. Innovations can disrupt existing business models and create new opportunities and risks.
- Economic fluctuations. Uncertainty in economic conditions, such as inflation rates, employment levels, and GDP growth, can impact decision-making and risk assessments.
- Political and geopolitical uncertainty. Changes in political leadership, government policies, and international relations can create uncertainties that affect global markets and business operations.
- Natural events, unpredictable natural events, such as earthquakes, hurricanes, and pandemics, introduce significant uncertainty and can have widespread impacts on societies and economies.
- Regulatory and policy changes. Uncertainty about future regulatory and policy changes can impact business strategies and investments. Companies may be unsure how future regulations will affect their operations and profitability.

1.1.1.3 Mitigation Methods for Risk and Uncertainty

While both risk and uncertainty involve potential deviations from expected outcomes, risk is quantifiable (Al-Suwailem, Doria and Kamel, 2018) and can be managed with specific strategies, whereas uncertainty is less predictable (Dmitriĭ Bilenkin, 1979) and requires more adaptive and flexible approaches.

To effectively manage risk and uncertainty, enterprises and organizations use a combination of quantitative and qualitative methods:

- Quantitative Methods. These include statistical analysis, probabilistic modeling, and financial metrics like Value at Risk (VAR) to quantify risks and predict potential impacts.
- Qualitative Methods. These involve expert judgment, scenario planning, and risk assessments to evaluate and prepare for various uncertain outcomes.
- Mixed-Methods Research, which offers a range of advantages that can enhance the richness, validity, and applicability of the findings. By combining the strengths of both quantitative and qualitative approaches, researchers can gain a more comprehensive understanding of their research questions.

By understanding their sources, individuals and organizations can develop strategies to mitigate potential negative impacts and capitalize on opportunities. Effective risk management requires a balanced approach that combines rigorous analysis with adaptive planning and resilience. According to Geodemocracy Theory in this dissertation, all these kinds of uncertainties and risks are classified as part of geodemocratic risks.

1.1.2 Constraints on Foreign Investment Assessment

There are numerous but quite comparable definitions realised by International Monetary Fund (IMF), Economic Co-operation and Development (OECD), and other financial institutions. Financial Times (web.archive.org, 2019) defines FDI “investment from one country into another (normally by companies rather than governments) that involves establishing operations or acquiring tangible assets, including stakes in other businesses”, with a direct or indirect 10% threshold of voting power / voting shares (while International Accounting Standards (IAS) used by the United States utilize a 20%

threshold for financial statements, in terms of the significant influence that the investor can impose).

The two terms “Home country” and “Host country” are often used: “Home" is where the FDI arises from, while the "Host" is the country where the FDI goes to. For example, Elon Musk (Ferris, 2018) opened a new factory in China in 2018 to produce Tesla electric vehicles (EVs): US is the home country and China is the host country.

FDI can include mergers, acquisitions, and partnerships in retail, services, logistics, and manufacturing, etc. (Olivier Coispeau and Luo, 2015).

FDI plays a crucial role in international economic integration and can accelerate economic growth between economies. The study by the World Bank (World Bank, n.d.) indicated “FDI brings investment, jobs, increased exports, supply chain spillovers, new technologies and business practices to countries”. During the 1970s and 1980s, there were only a few billion US dollars FDI flowing into other countries around the world. But from the late 1990s to the 2010s, FDI surged up to US $3.13 trillion (The World Bank, 2022). In quantity (Statistics Times, 2021), this is even bigger than the 2022 GDP of the Unite Kingdom (UK) (ranking the sixth biggest GDP in 2022 worldwide).

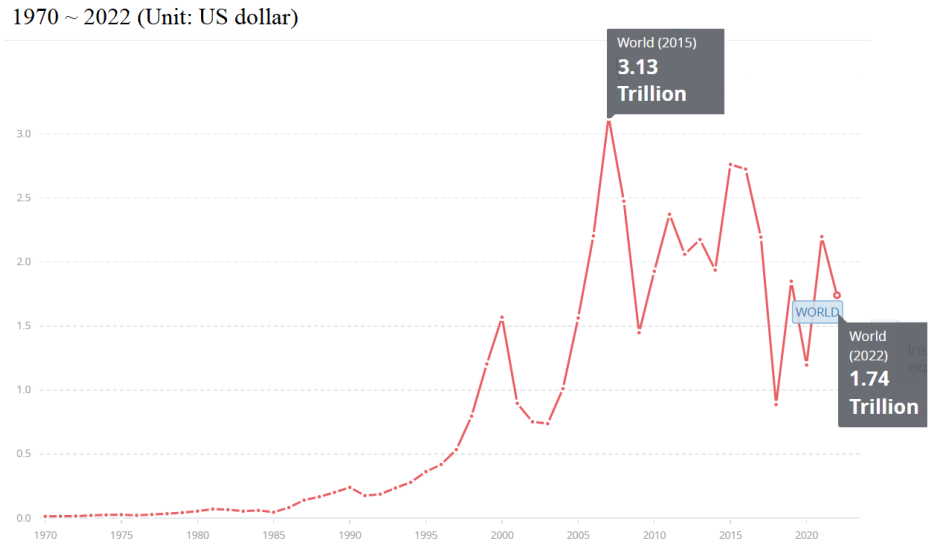

Figure 1 – FDI Trend (1970 to 2022) (The World Bank, 2022)

Highest GDP (nominal) Ranking (Unit: trillion USD)			
Country	**Ranking**	**2022**	**Share (%)**
United States	1	25.462	25.4%
China	2	17.886	17.9%
Japan	3	4.238	4.2%
Germany	4	4.086	4.1%
India	5	3.389	3.4%
United Kingdom	6	3.082	3.1%
France	7	2.780	2.8%
Russia	8	2.244	2.2%
Canada	9	2.138	2.1%
Italy	10	2.012	2.0%
Entire World		100.149	100.0%

Table 2 – Top 10 Countries by GDP 2022 (Statistics Times, 2021)

The World Economic Forum (WEF) (World Economic Forum, n.d.), mostly known for its annual meeting at the end of January in Davos, also promoted FDI around the world to fight Climate Change.

IMF professional Lim (2001) summarized the recent debates / arguments on the relationship between FDI and its determinants. In a nutshell, Lim (2001) concluded that "market size, infrastructure quality, political / economic stability, and free trade zones" are the major parameters which impact FDI. Unfortunately, there was no rigorous and intelligible explanation on how to analysis these social factors, such as political stability, economic stability, and free trade barriers / openness, etc. After further reviewing these various empirical studies, Calimanu (2021) claimed that a considerable amount of investors might underestimate the risks / uncertainties arose from the host countries, such

as political movements, economic non-viability, etc., although who already conducted extensive Financial Evaluation (FE).

Every investment needs assessment / evaluation, which is the process of assessing whether a proposed investment is worth undertaking (FasterCapital, n.d.). Assessing foreign investments presents several unique challenges and constraints compared to domestic investments. These limitations can impact the accuracy and reliability of investment evaluations and decision-making processes. Here are some key limitations and constraints on foreign investment assessment:

- Political instability risk. Changes in government, political unrest, or civil disturbances can affect the stability of the investment environment.
- Government policy change Risk. Sudden changes in government policies, such as expropriation, nationalization, changes in foreign investment laws, and taxation policies, can pose significant risks to investors. Mostly importantly, navigating different legal and regulatory frameworks across countries can be complex and costly. Compliance with local laws, safety standards, and environmental regulations adds to the complexity of foreign investment.
- Economic risks. Firstly, risk rom economic volatility. Economic conditions in foreign countries can be highly volatile and unpredictable, affecting investment returns. Additionally, high inflation rates and fluctuating exchange rates can erode the value of returns on foreign investments, adding an extra layer of risk.
- Legal and regulatory constraints. Differences in legal systems, enforcement mechanisms, and property rights can pose challenges. Investors need to understand local laws and regulations, which may be significantly different from those in their home country. Moreover, variability in intellectual property

protection can affect investments, particularly in high-tech and innovative sectors.

- Cultural differences. Differences in business practices, negotiation styles, and corporate governance can affect the success of foreign investments. Mostly importantly, adjustment to local consumer preference. Understanding local consumer behavior and preferences is crucial for market success, which can be challenging for foreign companies.
- Operational challenges. Inadequate infrastructure, such as transportation, communication, and utilities, can hinder operations and increase costs. In addition, Managing supply chains across borders introduces risks related to logistics, quality control, and supplier reliability.
- Information asymmetry. Foreign investors may lack critical information about local markets, competitors, and economic conditions. This information asymmetry can lead to suboptimal investment decisions. Besides that, Reliable and comprehensive data may be difficult to obtain, making it challenging to conduct thorough market analysis and due diligence.
- Taxation issues. Tax regimes, including double taxation, withholding taxes, and transfer pricing rules, can affect corporate profitability. In addition, changes in tax incentives or holidays offered to foreign investors can impact the financial viability of investments.
- Currency risk. Volatility in currency exchange rates can lead to unpredictable returns when profits are repatriated. Some countries impose controls on currency exchange, restricting the ability to move funds in and out of the country.

- Repatriation restrictions. Regulations that limit the ability to repatriate profits, dividends, or capital can pose significant risks to investors. Delays in remitting funds due to bureaucratic procedures can affect cash flow and profitability.
- Geopolitical risk. Tensions between the investor's home country and the host country can lead to trade restrictions, sanctions, or other barriers. Another kind risk is from regional Conflicts: Proximity to regions with ongoing conflicts can pose risks to investments and operations.
- Ethical and social issues. Foreign investors may face pressure to adhere to local Corporate Social Responsibility (CSR) norms and practices, which can vary significantly from their home country. Furthermore, Differences in labor laws and standards, including wages, working conditions, and unionization, can pose challenges.
- Technological risks. For example, the Technological Transfer Restrictions. Regulations on the transfer of technology and intellectual property protection can impact investments, especially in high-tech industries.
- Technology cybersecurity risks. Cyber threats and the level of cybersecurity infrastructure in the host country can pose risks to operations.

1.1.3 Constraints on Global Supply Chain Assessment

Global Supply Chain (GSC), defined by International labour organization (ILO), “have become a common way of organizing investment, production and trade in the global economy.” Global supply chain risks, therefore, are inevitable which are entangled with international business activities (Skipper and Hanna, 2009).

Assessing global supply chains involves evaluating various factors that affect the efficiency, cost-effectiveness, and reliability of the supply chain network. However, several limitations and constraints can complicate this assessment. Here are some of the key challenges:

- Data availability and quality. Data from different regions or suppliers may be inconsistent, incomplete, or inaccurate, leading to flawed assessments. Furthermore, Timely and accurate data is essential for effective supply chain management, but it can be challenging to obtain real-time data across global networks.
- Complexity and scale issue. Global supply chains involve multiple layers of suppliers, manufacturers, and logistics providers, making them inherently complex and difficult to assess comprehensively. Secondly, The vast geographical scale of global supply chains can complicate logistics, coordination, and data collection.
- Political and regulatory environment risk. Different countries have different regulations, and frequent changes can complicate compliance and assessment. In addition, tariffs, trade barriers, and sanctions can impact the movement of goods and materials, making it difficult to assess supply chain stability and costs.
- Economic and financial risk. Currency exchange rate volatility can affect the cost of goods and financial assessments of the supply chain. Economic instability, such as Economic downturns, inflation, and other macroeconomic factors in supplier countries can impact supply chain costs and reliability.
- Technological challenge. Different technological systems and platforms used by various supply chain partners may not be compatible, hindering effective

data integration and communication. Also, assessing the cybersecurity resilience of supply chain partners is critical but challenging, especially when dealing with multiple international entities.

- Operational and logistical constraints. Variability in infrastructure quality across regions can impact logistics efficiency and cost. Another constraint is transportation Issues: Disruptions in transportation networks, such as port congestion, shipping delays, and strikes, can significantly affect supply chain performance.
- Environmental and natural risks. Events like earthquakes, floods, and hurricanes can cause major disruptions. Assessing the resilience of supply chains to such events is difficult. The risk from climate change also cannot be neglectable. Long-term environmental changes can affect the availability of resources and transportation routes
- Supplier reliability and quality control. Variability in supplier performance and reliability can affect the overall quality and consistency of products, and Ensuring consistent quality standards across different suppliers and regions can be challenging.
- Cultural and language differences. Differences in language and cultural practices can lead to misunderstandings and miscommunications, affecting coordination and assessment accuracy. In addition, variations in business practices and standards can complicate the evaluation of supplier reliability and performance.
- Environmental regulations and ethical concerns. Different environmental regulations and standards across countries can impact assessments of

sustainability. Secondly, ensuring ethical labor practices and social responsibility in various regions can be difficult to assess and monitor.

- Geopolitical risks. Tensions between countries can lead to trade restrictions, sanctions, and other barriers that affect supply chain operations. Regional Conflict is another knotty problem. Proximity to regions with ongoing conflicts can pose risks to supply chain stability.

1.1.4 Constraints on Global Sourcing Assessment

Cambridge business English dictionary (2011) defined sourcing as "the act of getting something, especially products or materials, from a particular place". Sourcing includes many types, for instance, insourcing, outsourcing, near-sourcing, global sourcing, low-cost country sourcing (LCCS), manufacturing, professional service, etc.

Global sourcing assessments involve evaluating the potential of sourcing goods and services from international markets. This process, while offering significant benefits such as cost savings and access to a broader range of suppliers, also comes with various limitations and constraints. Here are the primary limitations and constraints that companies must consider:

- Data availability and accuracy. Obtaining comprehensive and reliable data on international suppliers can be challenging, and the accuracy and timeliness of data can vary, affecting the reliability of the assessment
- Complexity of analysis. Assessing global sourcing involves numerous variables such as cost, quality, delivery times, and risks, which can be complex to analyze. Most importantly, Market conditions can change rapidly, making it difficult to conduct accurate long-term assessments.

- Cost of assessment. Conducting thorough global sourcing assessments can be resource-intensive, requiring significant time, money, and expertise. Besides that, Investment in advanced tools and technology for data analysis and supply chain management can be costly.
- Regulatory risk and legal constraints. Different countries have varying legal and regulatory requirements that must be understood and complied with, which made Compliance with International Laws more difficult. Tariffs, quotas, and trade embargoes can limit sourcing options and affect cost-effectiveness.
- Cultural and communication barriers. Language barriers can hinder effective communication and lead to misunderstandings. Additionally, different business practices and cultural norms can impact negotiations and relationships with suppliers.
- Economic instability and political risk. Economic fluctuations in supplier countries can affect their reliability and cost structure. What's more, changes in government policies, political unrest, and instability can pose significant risks.
- Logistical challenges. Variability in transportation and infrastructure capabilities can impact delivery times and reliability. Again, Managing a global supply chain is inherently complex, involving coordination across multiple time zones and regions.
- Technological constraints. Integrating technology systems across different countries and suppliers can be challenging and expensive. In addition, Disparities in technological infrastructure can affect communication, data sharing, and supply chain visibility.

- Sustainability requirements and ethical consideration. Increasing demand for sustainable sourcing practices can limit supplier options. Furthermore, Ensuring suppliers adhere to ethical labor practices can be difficult and may constrain sourcing choices.

1.2 Importance of Geodemocracy Study

Geodemocracy studies are essential for understanding the complex interactions among democracy, economy, and geopolitics, and cultural factors that shape global and regional power dynamics. Based on the edifice of Geodemocracy Theory, by examining historical theories, contemporary issues, and emerging trends, scholars and practitioners can better navigate the complexities of international relations and contribute to more informed decision-making:

- Policy making. Geodemocracy analysis provides valuable insights for policymakers, helping them to craft strategies that account for geographic and political realities.
- Economic planning. Businesses and investors use geodemocratic analysis to assess risks and opportunities in different regions, influencing decisions on trade, investment, and resource allocation.
- Enhancing economic development. Geodemocratic factors significantly influence economic conditions, which in turn affect democratic governance. Geodemocracy study aids in understanding the distribution and management of natural resources, ensuring that democratic systems can equitably and sustainably manage these resources. Moreover, Geodemocracy analysis

supports the creation of economic policies that promote regional integration and development, fostering conditions conducive to stable democracies.

- International relations. It enhances the understanding of global power dynamics and the interactions between states, international organizations, and non-state actors.
- Security and defense. Geodemocratic knowledge is crucial for national security, guiding military planning, and defense strategies.

Before the introduction of Geodemocracy Theory, there is no standardized procedures, or there is no clear quantitative way to analyze these uncertainties and risks combined with politics, economy, and geopolitics.

Kasaeva (2019) developed a methodology to assess the potential of countries attracting foreign direct investment (mainly focused on social evaluation), by using a multiplicative model of Cobb-Douglas function (Goldberger, 1968), while Yankovy and Matskevich (2020) utilized the same Cobb-Douglas function for economic assessment of investment. These two research solutions are kind of contradictory and put the evaluation in a dilemma.

Broadly speaking, researchers and business practitioners have not reached a common consensus on the relations among these variables. In recent years there is an increasing demand for assistance in creating effective appraisal process to help business organizations mitigate these risks. The research works in this dissertation filled this analytical gap.

While FDI, GSC, and GS offers numerous advantages, it also presents significant limitations that companies must carefully consider and manage. Addressing these challenges requires a strategic approach that includes thorough due diligence, robust operation management, strong communication and relationship-building practices, and a

commitment to ethical and sustainable sourcing. Based on that, the international companies / international investors can better leverage its benefits while minimizing risks.

Fashion industry, or garment industry, was often condemned for use of unethical sourcing method (Human Rights Watch, 2014; Białowolska, Białowolski and McNeely, 2020). For example, there have been numerous reports which exposed the exploitation of workers in Southeast Asia countries like Cambodia, Inia, Laos, and Bangladesh, etc. where workers, often including children and / or teenagers, are subjected to unsafe working conditions, low wages, and extra long working hours. International investors shall manage to avert suspicion of unethical sourcing method, and balance prioritizing profit margin and corporate social responsibility (CSR).

In conclusion, geodemocracy studies are crucial for navigating the complexities of the modern world, which provide essential insights for governments, businesses, and international organizations, helping to shape policies, manage risks, and promote global stability and cooperation.

1.3 Research Aims

A clear research aim is vital and sets the tone for further literature research (Doody and Bailey, 2016), by relying on which, researchers can erect a predefined search strategy to screen all the studies that were peer-reviewed and published, and finally draw an explicit conclusion (or expression).

Researchers, scholars, and policy-makers, etc. have been searching for a suitable business assessment tool that can be utilized for quantitative analysis for a quite long time, unfortunately the consequences are not positive.

In this dissertation, the research aim is to conceptualize the idea of Geodemocracy Theory and operationalize it into analysis that can be utilized (as an auxiliary tool) to assist

business practitioners, policymakers, etc. to mitigate potential uncertainties and risks when managing their International Investment, Global Supply Chain, and Global Sourcing, etc.

1.4 Research Objectives

The objective of current study is to:

- Investigate geodemocratic risks that affect international investment, from typical countries like China, Russia, and previous Warsaw Pact countries.
- Analyze potential uncertainties and risks that international investors may experience when executing global supply chain and global sourcing.
- Investigate the risk management process or model that help mitigate risks related to international investment, global supply chain, and global sourcing.

1.5 Dissertation Structure

Finally, following this introduction, the structure of the dissertation is listed as below:

- Part 1 (Introduction) introduces the background information and the idea of Geodemocracy theory.
- Part 2 (Literature review) outlines the literature works that have been studied, argued and established about the uncertainties and risks that impact FDI, global SC and global sourcing. Then identified the correlated risk management processes or tools that were utilized to mitigate risks.
- Part 3 (Methodology) aims to reply to the question of "how does GMI impact FDI, global supply chain, and global sourcing?", and the quantitative analytical methods will be utilized. In order to estimate the GMI, a series of terminologies and a set of structured formulas are created to calculate the possibility.

- Part 4 (Results and Discussion) will be used to present what was found out when conducting the quantitative analysis. The discussion section will explain the meaning of those results, and go further developments.
- Part 5 (Conclusions and Recommendations) will summarize overall findings and conclusions, and clearly state the responses to the research questions. A series of recommendations will be introduced to help potential customers or clients.

2.0 LITERATURE REVIEW

2.1 Geodemocracy Theory Background

From World War II, the bule planet is not always filled with peace and love (Elhance, 1999). Tremendous uncertainties and risks emerged from time to time which caused crisis, conflict, or war, either regionally or globally:

- US-China conflict over Taiwan for long time
- Anti-globalization campaigns for long time
- The Israeli-Palestinian conflict for long time
- China-Indian conflict for long time
- North Korea nuclear weapons and ballistic missiles threats to International Society (IS)
- US-China de-coupling trend in recent years
- Kosovo War between 1998 and 1999
- Russia Crimea invasion 2014
- United States of America (US)-China trade war from January 2018
- The sudden COVID-19 pandemic in 2019
- Iran and US Persian Gulf crisis (heightened military tensions) between 2019 and 2021
- Syrian civil war for 11 years (from 2011 to now)
- US War in Afghanistan with Taliban for 20 years (ended in 2021)
- Ukraine war in 2022 (starting from 24 February 2022)

These hostile events have made the world into a new era of conflict and violence (United Nations, 2020). To those MNEs / MNCs and business practitioners, finding a suitable place for international business activities (Ellram, Tate and Petersen, 2013) are more challenging than ever before. Geodemocracy theory introduced herein is used to reflect

the real-world conditions and provide auxiliary guidance to the International Business Society (IBS) on international investment, supply chain operation, global sourcing, etc.

Furthermore, the failure to mitigate Climate Change and the increasing cybersecurity threats (for example, state-sponsored attacks targeting Critical Infrastructure (IC), government department / government agency, etc. are becoming more often) have heightened tensions within the international society.

2.2 Historical Perspectives on Geopolitical study

The geodemocracy theory is closely integrated with geopolitical study (Based on the theoretical edifice of geodemocracy, geopolitics is an essential part of geodemocratic system). Numerous scholars, academic scholars, and thinkers have contributed to the evolution of geopolitical theory.

- Friedrich Ratzel, a German geographer (Ratzel is often considered the father of political geography), originated (Sharghi and Dotu, 2021) the concept of "Lebensraum" (living space) and proposed that states are organic and grow according to their needs for space and resources.
- Karl Haushofer , a German geopolitician, expanded on Friedrich Ratzel's ideas and was a key proponent of geopolitics in Germany(Heske, 1987), who created the concept of "geopolitik" then founded the journal "Zeitschrift für Geopolitik".
- Alfred Thayer Mahan, an American naval officer, emphasized the importance of naval power in global dominance. In his book "The Influence of Sea Power upon History" (1890), Mahan argued that control of the seas was crucial for national power, influencing both American and British naval strategies.
- Halford John Mackinder, a British geographer and politician, was a pivotal figure in the field of geopolitics and geography, Mackinder (1999) developed

the “Heartland Theory”, it was believed that who laid the foundation for modern geopolitical analysis,

- Nicholas J. Spykman, a Dutch-American geostrategist, who was known for his critiques and adaptations of Mackinder’s theories, formulated (Gray, 2015) the "Rimland Theory".
- Rudolf Kjellén, a Swedish political scientist, finalized the term "geopolitics" (Tunander, 2008) and emphasized the importance of geography in shaping political power.
- Saul Cohen, an American political geographer, focused on the geopolitics of the post-Cold War era and developed the concept of "shatter belts” in his book "Geopolitics of the World System" (Saul Bernard Cohen, 2003).
- Yves Lacoste, a French geopolitician, emphasized the strategic and practical uses of geography in geopolitics with book "La Géographie, ça sert, d'abord, à faire la guerre" (Lacoste, 1976), and also argued that geographical knowledge is essential for political and military strategy.

Each of these professionals brought unique perspectives and insights that have shaped the understanding of the relationship between geography and global political power, and influenced contemporary geopolitical analysis and strategy. But there is still lacking a way to assess the tension magnitude of geopolitics directly, and often moves the audiences into an illusion of understanding.

Dario Caldara and Matteo Iacoviello (2018) firstly developed the well-known geopolitical risk (GPR), using quantitative method, which aimed to create a systematic and quantifiable measure of geopolitical risk by analyzing the frequency of articles in leading newspapers that discuss geopolitical tensions and conflicts. But when GPR is

examined from a broad sense, that is a considerably arbitrary interpretation. Because there are more similar means discussing political tensions / conflict, form example, TV shows, magazines, and social medias like TikTok, YouTube, etc.). Furthermore, because of "political correctness", languages and actions must be inclusive and respectful of all groups, not all the wars, regional tensions, etc. were reported publicly and captivated the public attention equally.

2.3 Geoeconomics Impacts Geodemocracy

Economic conditions and capabilities often shape geodemocratic strategies. For example, access to resources can influence territorial disputes (Radhuber and Radcliffe, 2023). Geodemocratic stability or geodemocratic instability can significantly impact economic policies and decisions. For example, a country might seek to diversify its energy sources to avoid over-reliance on geopolitically unstable regions.

In brief, geoeconomics and geodemocracy study are intertwined fields that together provide a comprehensive understanding of how geographical factors influence national and international power dynamics through both economic and political lenses, which help to readily analyze how economic and political strategies are crafted and implemented, providing a holistic view of international relations and global power structures.

- When viewed through an economic lens, the focus is on how economic factors and policies influence and shape global power dynamics.
- From a political lens, the focus shifts to how geodemocratic strategies and alliances are influenced by geographical considerations and how these, in turn, affect economic relationships.

2.3.1 Definition of Geoeconomics

According to 2024 Merrian Wester dictionary (www.merriam-webster.com, n.d.), Geoeconomics, or Geo-Economics, is “the combination of economic and geographic factors relating to international trade”. The concept of Geoeconomics was coined by Edward Luttwak in 1990 in his publish “From Geopolitics to Geo-economics: Logic of Conflict, Grammar of Commerce” (1990). Geoeconomics involves the use of economic instruments to influence global affairs and enhance national security.

Geoeconomics emphasizes the strategic use of economic tools to achieve geodemocratic objectives and the impact of economic policies on global power dynamics. Huntington (1993) agreed that “economic activity is a source of power” and “It is indeed probably the most importance source of power”.

2.3.2 Mechanisms of Geoeconomic Influence

This field examines how economic policies, trade, investments, and financial instruments are employed to influence global power dynamics.

2.3.2.1 Economic Sanctions

One or more countries apply restrictions or penalties to exert pressure on a target country to change its policies or behaviors. Sanctions have been a critical tool in international diplomacy and economic statecraft, particularly in conflict zones and politically volatile regions (Hufbauer and Jung, 2021). The US Department of the Treasury often used economic sanctions to coerce, deter, or punish designated countries or entities that threaten international security (U.S. Department of the Treasury, n.d.):

- Sanctions on Iran. The United States imposed sanctions on Iran to limit its nuclear program and regional influence (Esfandiary and Fitzpatrick, 2011).

- Sanctions on Russia, In response to Ukraine War, the EU countries and U.S. imposed sanctions targeting key sectors of the Russian economy (Hosoe, 2023; Schott, 2023).
- Afghanistan-related Sanctions. The United Nations Security Council (UNSC) imposed sanctions against the Taliban for harboring terrorists, and also against the Taliban and al-Qaeda affiliates in Afghanistan (Falkenheim, 2017).
- Cuba sanctions. The U.S. began imposing sanctions on Cuba after the Cuban Revolution of 1959, led by Fidel Castro, which overthrew US-backed Batista regime (Cerezo and Fernández, 2023; Rodríguez, 2024), which is regarded as one of the most enduring and comprehensive sanctions regimes in modern history.

2.3.2.2 Trade Policies and Trade Wars

This is the use of tariffs, trade barriers, and trade agreements to protect domestic industries and promote national interests, in order to create favorable trade conditions, protect strategic industries, and retaliate against unfair trade practices. For instance, the US-China Trade War began in 2018 which represents a significant shift in global trade dynamics (Steinbock, 2018) and geodemocratic strategy - US imposed tariffs on Chinese goods to address trade imbalances and intellectual property theft, prompting retaliatory tariffs from China. Up to 2022, US exports to China fell by 26.3% while China exports to US declined by 8.5% (Gorman, 2022). After six years, this Trade War benefited other countries, and notably, Vietnam, Thailand, Korea, and Mexico emerged as the winners of the US-China Trade War (kmenke, 2023).

2.3.2.3 Investment Strategies

Strategic investments in foreign countries to expand economic influence and foster dependency, and intentionally to gain political leverage, secure access to resources, and

build alliances. China's Belt and Road Initiative (BRI), launched by China in 2013, is an ambitious global development strategy aimed at enhancing regional connectivity and economic integration (Tekdal, 2018; Garlick, 2021) - China invests in infrastructure projects across Asia, Africa, and Europe to enhance connectivity and expand its influence.

2.3.2.4 Foreign Aid and Development Assistance

Financial and technical assistance provided to developing countries, that is often utilized to build alliances, promote stability, and counter the influence of rival powers. U.S. Foreign Aid is a critical component of the nation's foreign policy, aimed at promoting economic development, humanitarian relief, and geopolitical stability.

- Marshall Plan (1948-1952), acting as a Post-World War II recovery program providing over $12 billion (equivalent to over $130 billion today) to Western European countries (Tarnoff, 2018), which significantly contributed to economic recovery and growth in Western Europe, establishing strong political and economic ties with US (Eichengreen and Uzan, 1992; Stern, 1997).
- PEPFAR (President's Emergency Plan for AIDS Relief)(2003-Present), its initiative is to combat HIV/AIDS, primarily in Sub-Saharan Africa. Analysed by Bendavid and Bhattacharya (2009), the PEPFAR program saved millions of lives through funding for prevention, treatment, and care, significantly reducing HIV/AIDS prevalence.
- Millennium Challenge Corporation (MCC), being an US government agency, provided large-scale grants to countries (Millennium Challenge Corporation (U.S, 2008)) meeting specific governance and economic criteria, and focuses on reducing poverty through sustainable economic growth (Gootnick and Franzel, 2005).

2.3.2.5 Currency Manipulation and Financial Instruments

Interventions in currency markets and the use of financial tools to influence economic conditions, in order to gain competitive advantages, control inflation, and influence global financial systems.

- Japan's Yen policy. From 1989 to 2003, the Bank of Japan managed currency policies to boost exports and economic growth (Nanto, 2005), when suffering from a long deflationary period.
- Swiss franc. In Financial crisis of 2007 – 2008, the Swiss National Bank announced that it intended to buy foreign exchange (US dollars, Euros, etc.) to prevent the Swiss Franc from further appreciation (Gagnon, 2014). The reason behind that Swiss Franc further appreciation, as studied by the world's No. 1 CFD and Forex provider IG Group Holdings plc (IG, n.d.), is that the Swiss Franc is commonly considered a "risk-off" currency which means it tends to appreciate during times of geopolitical uncertainty or market volatility (IG, 2024).
- Chinese Yuan. From 2005 to 2020, China Central Bank allegedly devaluated Chinese Yuan in relation to US dollars (Belon, 2022) by purchasing large amounts of US dollars in the foreign exchange market.

2.3.2.6 Economic Alliances and Trade Blocs

Formation of economic alliances and trade agreements to promote regional integration and economic cooperation, by focusing on strengthening economic ties, creating large markets, and enhancing collective bargaining power.

- European Union (EU), An economic and political union that facilitates free trade and coordinated policies among member states. As demonstrated by European Union (European Union, 2023), “ The EU has delivered over half a century of

peace, stability and prosperity. It also plays an important role in democracy, fundamental freedoms and the rule of law – across the globe".

- NAFTA (now USMCA), A trade agreement between the U.S., Canada, and Mexico to eliminate trade barriers and increase economic cooperation. In general, NAFTA has had an overwhelmingly positive effect on the Canadian economy (Global Affairs Canada - Affaires mondiales Canada, 2016), and to the United Stages (Burfisher, Robinson and Thierfelder, 2001), and to Mexico (Salvatore, 2007).

2.4 Introduction to Geodemocracy Theory

2.4.1 Definition of Geodemocracy

Democracy, one simple word but shines the modern society, was originated from Greek dēmokratia in late Latin, according to Oxford dictionary (Hornby and J Crowther, 1998). After thousands of years, democracy has played a vital role in the development of civilization, transforming the world from power dominated structure of monarchy, dictatorship, and authoritarian into modern community filled with full democracy, popular sovereignty, and universal value (Brown and Hunter, 2004; Brown and Mobarak, 2009). One of the most commonly accepted definitions is from Joseph Schumpeter, professor at Harvard University (who was recognized by Essential Scholars in 2020) as one of the economic theory giants of the twentieth century). Schumpeter (1942) defined democracy as "that institutional arrangement for arriving at political decisions in which individuals acquire the power to decide by means of a competitive struggle for the people's vote."

Geopolitics has become one of the most vibrant thoughts of political geography since Gearoid Ó Tuathail first introduced the concept in the late 1980s (Tuathail, 1986; Tuathail and Agnew, 1992; Sharp, 2013). The definition of geopolitics has been revised, re-worked and broadened (Anderson, 2003; Kelly, 2006; Sharp, 2013; Myers, 2013; Haverluk, Beauchemin and Mueller, 2014).

Flint (2017) described geopolitics as "how the world works: what drives historical changes, what causes countries to fight, what determines whether a country will become a great power or not." Similarly, Kelly (2020) believes that "Geopolitics is the study of how the projection of power (ideological, cultural, economic, or military) is effected and affected by the geographic and political landscape in which it operates".

Figure 2 - Google Scholar Searching Results

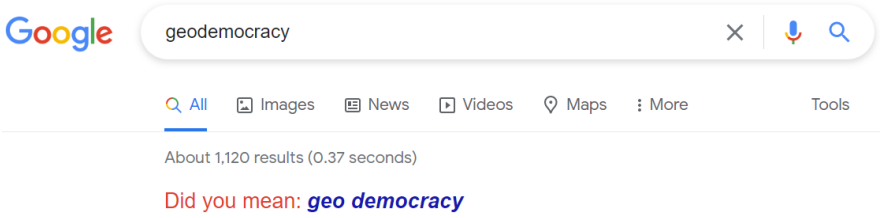

Figure 3 - Google Searching Results

Unfortunately, the terminology "geodemocracy" was rarely studied in the past decades, and has not achieved any common definition in the field of academia. When geodemocracy was searched as key word on Google Scholar or Google (at the time of writing of this dissertation), searching results are very limited and are negligible.

Most importantly, all of these searching results are not significantly corelated with the idea of Geodemocracy introduced in this dissertation. Robert Ilson (1999), professor at Oxford University, linked geodemocracy with Land value taxation and declared that geodemocracy " is a system in which public finance is based on the collection of unearned increment rather on the taxation of value added." Another example is Fulya Vatansever (2021), newly graduated from Southern Cross University of Australia, who used the terminology "critical geodemocratics" to express democracy related ideas. Vatansever (2021) regarded critical geodemocratics as "a relocating of the idea and practice of democracy, which is viewed as forever and inevitably spatialised and emplaced."

Although all of these studies cannot be ignored or washed away, we define geodemocracy herein as a furtherance of democracy and link it with geopolitics to reflect global political structure.

Geopolitics, explained by Cambridge English Dictionary (2021), is "the study of the way a country's size, position, etc. influence its power and its relationships with other countries." Geopolitical risk (GPR) index, adopted by the International Finance Discussion Paper (IFDP) of US Federal Reserve System, was defined (Caldara and Iacoviello, 2018) as "spikes around the two world wars, at the beginning of the Korean War, during the Cuban Missile Crisis, and after 9/11. Higher geopolitical risk foreshadows lower investment and employment and is associated with higher disaster probability and larger downside risks."

Geodemocracy theory introduced in this dissertation resolutely adheres to the opinion of Caldara and Iacoviello (2018), and broadens it in a more extensive viewpoint.

The new full definition of geodemocracy can be established in the similar way of geopolitics, that is: Geodemocracy is the study of the projection of power that is effected and affected by the combined environment (combined from politics, economy, and geopolitics) in which it operates.

In other words, for these three risks: political risks, economic risks, and geopolitical risks, we also define that geodemocratic risks come from either any one of them, or any two of them, or all these three risks. (along with geodemocracy, geodemocratic is the adjective, while geodemocratically is the adverb).

Simchi-Levi (2015) realized that these kinds of risks are very difficult to quantify by using traditional models because of lacking historical data. Geodemocracy Theory invented a series of mathematic formulas, utilizing Geodemocracy Index (GMI) as an

indicator to describe how good or how bad that the geodemocracy environment of a designated county (or region) is, using 4M rating system.

However, COVID-19, earthquake, piracy (robbery by ship, etc.), flood, hurricane, etc. these kinds of occurrences that beyond the reasonable control, are not regarded as geodemocratic risks in this dissertation, but natural disasters and / or generic force majeure events, as originated from Roman Law (Katsivela, 2007).

2.4.2 Explanation of Geodemocracy Theory

Geodemocracy Theory, which was created herein for the first time, is a combined tool to dynamically estimate each country or region using Geodemocracy Index (GMI), from three major pillars of democracy, economy, and geopolitics. Geodemocracy Theory can be used by business organizations as an indicator for investment, global outsourcing / global purchasing and business operation, etc.

2.4.2.1 Geodemocracy Index (GMI) Design

Geodemocracy Index (GMI) was used as an indicator to describe how good or how bad that the geodemocratic environment of a designated county (or region) is, using 4M rating system. We also define that geodemocratic risks come from either any one, or any two, or all three of political risks, economic risks and geopolitical risks.

Geodemocracy Index (GMI) is classified into four categories, Max class, Major class, Medium class, and Minor class (which is named as the “4M” rating system). The higher the GMI a country achieved, the more confidence for the international business stakeholders execute business activities in that country at a given time.

Based on Geodemocracy theory, not all countries (or regions) are suitable for international investment, global supply chain, or global sourcing.

GMI was calculated as a weighted average, considering the degree of importance of each variable in a series of data set (political data, economic data and geopolitical data), then multiplying them with preferred weight factors. At the last calculation step, Geopolitical Confidence Index (GCI) was multiplied to achieve the final GMI of that selected country. Canada, China and Russia are selected as the standard samples to guide the full estimation process of all countries / regions around the world.

2.4.2.2 Geopolitical Confidence Index (GCI) Design

It is a general consensus that the global structure after Cold War firstly became unipolar (Huntington, 1999) - US was the only superpower who dominated the planet, then became "1+" structure later on: one superpower (US) dominated, maybe along with a few major powers (Russia, China, France, and the United Kingdom (UK), etc.) and a few minor powers (Germany, India, Japan, etc.). US could effectively resolve important international issues alone (Huntington, 1999; Christie, Wagner and Du, 2001), without or with little assistance from allies, which is so-called the rule-based international order.

In this dissertation Geopolitical Confidence Index (GCI) is based on the existing rule-based international order since the late 1940s (Finnemore and Ikenberry, 2006; Kundnani, 2017), which was led by US and reflects the real global politics.

Geopolitical Confidence Index (GCI) is also a dynamic indicator, and can be based on any international order:

- Russia-based international order (Russia dominated the world). The GCI of any country will be estimated based on its geopolitical relationship with Russia. During Ukraine War, GCI of Ukraine will be scored as 0% (its GMI is 0 too). So, Ukraine will fall into Minor class. Therefore, from Russia side or Russia's allies side, any international business activities in Ukraine are like suicide.

- China-based international order (China dominated the world). Similarly, The GCI of any country will be estimated based on its geopolitical relationship with China. If China fights with US because of Taiwan (Taiwan War), GCI of US will be scored as 0% (its GMI is 0 too). So, US will fall into Minor class. Therefore, from China side or China's allies side, any international business activities in US during Taiwan War become hopeless, and the majority of the US based business organizations will flee Chinese market.
- Any country "ABC" based international order (that country "ABC" or that country "ABC" with its allies dominated the world), then this is similar story as that of US, Russia, or China. This way makes GCI reflect the world geopolitics map more accurately, and clients / customers can perfect their business plans and strategies from the contradictory sides (math.andrej.com, n.d.; Gardiner, 1996) (one is based on the US-led international order, the other one is based on the host country (the selected country for GMI calculation) dominated international order).

In addition, over a long period of time there was a voice among scholars and theorists that the US-led international order was similar as the liberal international order (LIO) (Curtis, 1939; Angell, 2014), but was fiercely challenged. Some of them are Kundnani (2017), the director of Chatham House, and Blackwill and Wright (2020) from the Council on Foreign Relations (CFR). The GCI design in this dissertation will adhere to the opinions of Blackwill and Wright (2020).

2.5 Risks Arise along Geodemocracy Theory

The end of the World War II marked a new beginning of the global economy. Since that time, globalization has become dominant in recent decades (Homer, 1997; Amadi, 2020).

Globalization heightened competitions (International Monetary Fund (IMF), 2008; Natal and Stoffels, 2019) and brought out risks impacting global corporations (Shiyi, 2020), as a process of "increasing integration of economies around the world (International Monetary Fund (IMF), 2008)".

With the rapid development of globalization and internationalization, MNEs and MNCs always encounter risks from market, politics, and environment (Goldin, 2010; Abuzjarova, 2020). Especially in recent years, FDI, global supply chain, and global sourcing have been greatly impacted by multiple risk factors. The 2023 Allianz Risk Barometer (Allianz Commercial, n.d.) survey concluded that the most important global business risks mainly come from economy, democracy, and politics (geopolitics).

Caldara and Iacoviello (2018) concluded "Entrepreneurs, market participants, and central bank officials view geopolitical risks as key determinants of investment decisions and stock market dynamics." Carney (BIS central bankers' speeches, n.d.) clearly pointed out that uncertainty and risk mainly "come in threes: geopolitical, economic, and policy uncertainty". These risks and challenges can be summarized as follows:

2.5.1 Economic Risks

Economic risks refer to the potential for financial loss or adverse economic conditions (Naranjo and Ling, 1997), which are inherent in the dynamic global economy, and affects individuals, businesses, and governments.

- Economic Inequality. Globalization can exacerbate income inequality both within and between countries. While some regions and individuals benefit significantly (like China, Vietnam, etc.), others may be left behind (like most of African countries) (National Geographic Society, 2023), leading to social and economic disparities. Another significant risk associated with globalization is job

displacement, which was primarily driven by the shift of production and services to countries with lower labor cost (Görg, 2011). Workers in developed countries, like the United States (US) and West Europe countries, lose their jobs due to competition from cheaper labor markets or automation, leading to economic instability and social unrest. According to 2022 statistics of Economic Policy Institute (Economic Policy Institute, n.d.), From 1998 to 2021 the United States lost more than 5 million manufacturing jobs due to the trade deficit in manufacturing goods and services with cheaper labour countries.

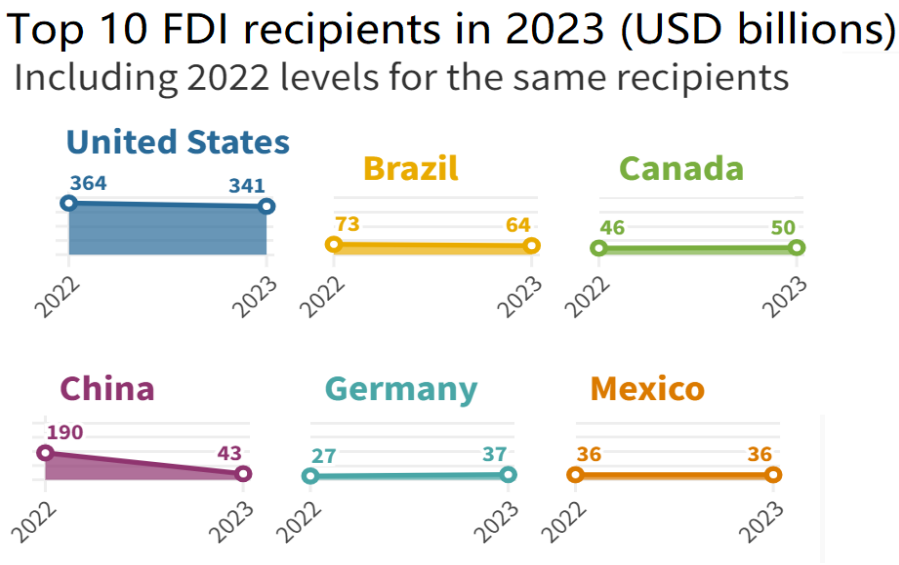

Figure 4 - Top 10 FDI recipients in 2023(OECD, 2023),

- Financial Crisis. The interconnected global financial markets means that one financial crisis boosted in one country can quickly spread to others, as seen in the 2008 global financial crisis - The US housing market collapse (Subprime mortgage crisis in US in 2008) was s catalyst for a global financial crisis that spread from US to the rest of the world through the linked global financial system (Reserve Bank of Australia, n.d.). Secondly, when international investors highly prioritize

corporate profit, the rapid movement of speculative capital from countries to countries can be readily seen, which can lead to volatility in financial markets, creating risks for emerging economies. After Covid-19, the Federal Reserve (FED) started increasing interest rate to curb the hyperinflation (Actually another hidden purpose is to strengthen US dollars). As of May 2024, the FED's benchmark interest rate is 5.33% (Federal Reserve, 2019), which is the highest rate from 2001. According to OECD analysis (OECD, 2023), the FDI level dropped 46% in 2023 mostly in developing countries, but US remained the Number 1 FDI recipient country ($341 billions), which is close to 6 times the second FDI recipient Brazil ($64 billions).

2.5.2 Political and Social Risks

Political and social risks are uncertainties (Visvizi and Lytras, 2019) that arise from changes in the political landscape, social environment, or public sentiment. These risks can significantly impact individuals, businesses, and governments.

- National Sovereignty. Globalization can lead to a loss of national sovereignty (Sassen, 1996; Michele, 2017) as international organizations and multinational corporations exert influence over domestic policies. There can be a rise in nationalism and protectionism as a reaction to the perceived threats to national sovereignty and cultural identity (Bekhuis, Meuleman and Lubbers, 2012). In other words, sometimes globalization is regarded as foreign invader to the local national / national culture (Robertson, 1995; Norris, 2005).
- Cultural Homogenization. The spread of global culture can undermine local cultures and traditions, leading to cultural homogenization and loss of diversity (Robertson, 1995). When Javier Milei won the presidency election on 10 December

2023, one of his shock therapy policies was to move from the Peso to the US dollar (Ziady, 2023; Wilkis and Luzzi, 2023).

Moreover, the gradually increased migration and cultural exchange can sometimes lead to social tensions and conflicts in host countries (Robertson, 1995; Norris, 2005), or downturn into the worst-case scenario - exacerbate religious and ethnic tensions by promoting a standardized cultural narrative that may not be inclusive of diverse religious or ethnic identities (Crawford, 2007).

2.5.3 Environmental Risks

Environmental risks refer to the potential negative impacts on the environment (Allan, Adam and Carter, 2000) caused by human activities, natural events, or a combination of both, which can have significant consequences (Kasperson and Kasperson 2013) for ecosystems, human health, and economic stability, etc.

- Environmental Degradation. Globalization brings out massive production requirements, the demand for natural resources can lead to over-exploitation and environmental degradation (Lampert, 2019), including deforestation / forest loss, environmental pollution, and biodiversity loss (Goswami, 2024). Global industrial activities contribute significantly to climate change (Ojeaga and Posu, 2017) and greenhouse gas emission, along with the industrial waste and garbage disposal (these waste can pollute the surface soil, surface water, and ground water (Taylor and Allen, 2006)), posing long-term risks to ecosystems and human societies (Qasim et al., 2020).
- Pandemics / COVID-19 Pandemic. The increased global travel and trade can facilitate the rapid spread of infectious diseases, as seen with the COVID-19 pandemic starting from 11 March 2020 (WHO, 2020), posing catastrophic effect

(which resulted in more than 6 million deaths worldwide (Cascella et al., 2023), and triggered the largest economic crisis across countries in more than a century (The World Bank, 2022).

2.5.4 Security Risks

Security risks are potential threats that can compromise the safety, integrity, and availability of assets, information, and systems (Landoll, 2021), which can affect individuals, organizations, and governments, etc.

- Transnational Crime and Terrorism. Illicit Trade, Globalization can facilitate transnational crime (International and Transnational Crime and Justice., 2019), including but not limited to, drug trafficking, human trafficking, illegal arms trade, international fraud, money laundering, and child pornography, etc. Globalization, acting as a key factor, impacts terrorism and criminal activities around the world (Ahmed, 2016). Terrorist and criminal groups often employ various disguises, such as under the guise of legitimate international businesses, to conceal their identities and carry out their illegal activities stealthily (Awoyemi, Omotayo and Mpapalika, 2021), and take advantage from globalization and broaden their activities all over the world.
- Cybersecurity Threats. Globalization has led to unprecedented levels of interconnectivity, with organizations relying on digital networks to conduct business across the globe (Zekos and Zekos, 2021). While this connectivity facilitates communication and collaboration, it also creates a larger attack surface for cybercriminals to exploit. The digital interconnectedness of globalization increases vulnerability to cyberattacks, data breaches, and other cyber crimes. Fleck (2022) concluded cybercrimes were expected to skyrocket in the coming years, and

Statista's Market Insights (Statista, 2024) claimed the global cost caused by cybercrime was estimated to surge in the next four years, from $9.2 trillion (2024) to $13.8 trillion (2028). In recent years state sponsored cyberattacks, mostly targeting Critical Infrastructure, have become more common and more visible, and have doubled from 20% to 40% in the past two years (SentinelOne, 2023).

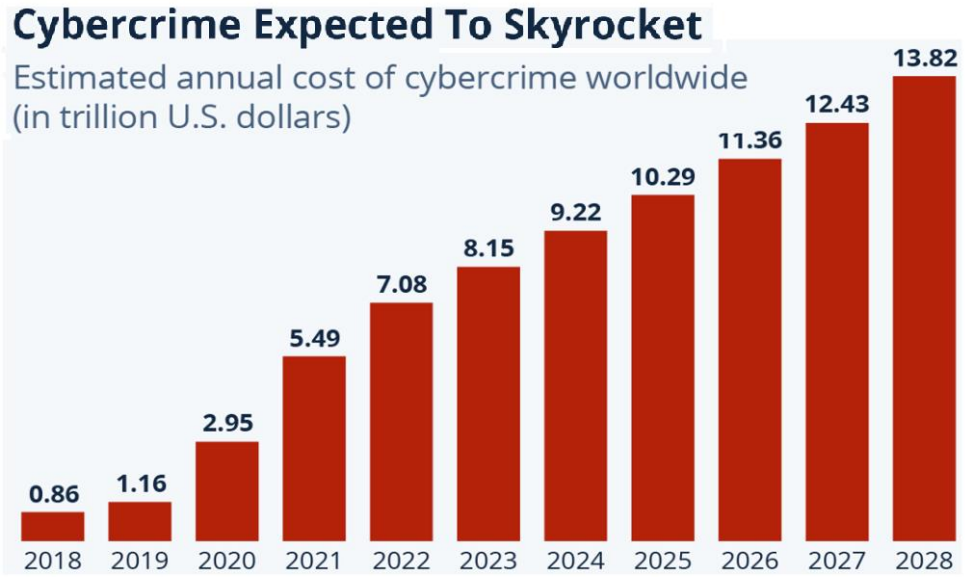

Figure 5 - Global Cost by Cybercrime (Statista, 2024)

2.5.5 Economic Dependency and Vulnerability

Economic dependency and vulnerability refer to the susceptibility of an economy to external shocks and the extent to which it relies on other countries or sectors for its economic stability and growth. Jacobs (1974) thought that high levels of dependency could increase vulnerability to disruptions.

- Supply Chain Disruptions. Global supply chains can be highly vulnerable to disruptions caused by political conflicts, natural disasters (Stecke and Kumar, 2009) or pandemics, as seen during the COVID-19 crisis. Political conflicts such as wars or sanctions can disrupt supply chain by introducing barriers to trade, imposing tariffs or sanctions on certain goods. For instance, heightened tensions between US

and China have lead to increased restrictions on imports and exports (Uyghur Human Rights Project, n.d.), including but not limited to, 117 punitive sanctions, 5 laws, and 11 investment bans, etc. (Tellez, n.d.), which caused huge loss to Chinese companies. In the recent decades China dominated the Rare Earth market, with 70% of global production and nearly 90% of processing of global output, as well as 90% of rare earth element permanent magnet production (Anon, 2024). When China announced a Rare Earth ban on US on 21 December 2023, this significantly impacted US national, economic, and essential resource security (with strategic vulnerabilities) (Baskaran, 2024).

- Trade Disputes / Economic Sanctions. The rise of protectionist policies and trade disputes, such as the US-China trade war, can disrupt global trade and economic stability. Huawei's smartphone sales fell dramatically, for instance, after US president Trump imposed sanctions on Huawei (who was cut off from global chip suppliers) in 2019 and 2020.

Based on the pre-defined assessment function, all of these aforementioned risks are classified into three major categories: Economic Risk, Politics Risk, and Geopolitical Risk (which are measured as Economic Risk Index, Politics Risk Index, and Geopolitical Confidence Index, respectively).

In outline, while globalization has brought significant advancements and opportunities, it also presents substantial risks / challenges that require careful management and international cooperation. Plus other risks from national economy, and other risks from reginal tension / conflict, all of them formed the global power dynamics. Addressing these risks involves creating policies that promote inclusive growth, protect the environment, ensure security, and respect cultural diversity. Balancing the benefits of geodemocracy with its challenges is crucial for sustainable and equitable global development.

2.6 Geodemocratic Risks Impact FDI

Geodemocratic risks can directly impact FDI inflow. Caldara and Iacoviello (2018) declared "Higher geopolitical risk foreshadows lower investment and employment and is associated with higher disaster probability and larger downside risks." In addition, Le and Tran (2021) firmly indicated that higher geopolitical risk was always associated with lower corporate investment.

In September 2022 German automobile manufacturer OPEL announced to cancel a planned investment into China because of geopolitical conflict coming from China and US, and from China and EU (Reuters, 2022).

Due to the abnormal relations between Japan and China "Hot Economics, Cold Politics" (Akbar Rusdy, 2016), Japanese government determined to pay at least US$536 million to mull 87 companies to exit China and to bring the investment back to Japan (Report, 2020; The Business Standard, 2020). In May 2022 Tokyo Steel Manufacturing Co. announced to leave China and move its offshore operation back to Japanese market because of tense geopolitical risks (www.bloomberg.com, n.d.; South China Morning Post, 2022).

2.6.1 FDI Net Inflow Change of China

Before January 1979, China and US faced heightened geopolitical risks because of Cold War, hence FDI net inflow of China is zero. After China and US shook hands from both sides of Pacific Ocean, by establishing diplomatic relations in January 1979, geopolitics (or Geodemocracy it brings out) changed fundamentally. FDI net inflow of China changed drastically, revealed by data from World Bank (data.worldbank.org, n.d.) and OECD (www.oecd.org, n.d.). In 2021 China received 334 billion US dollars which makes China as the second largest FDI recipient around the world.

Country name	Before 1978	1979	1980	1981	1990	2013	2020	2021
China	0	0.08 million	57 million	265 million	3.49 billion	290.9 billion	253 billion	334 billion

Table 3 - FDI Net Inflow Change (World Bank, 2021)

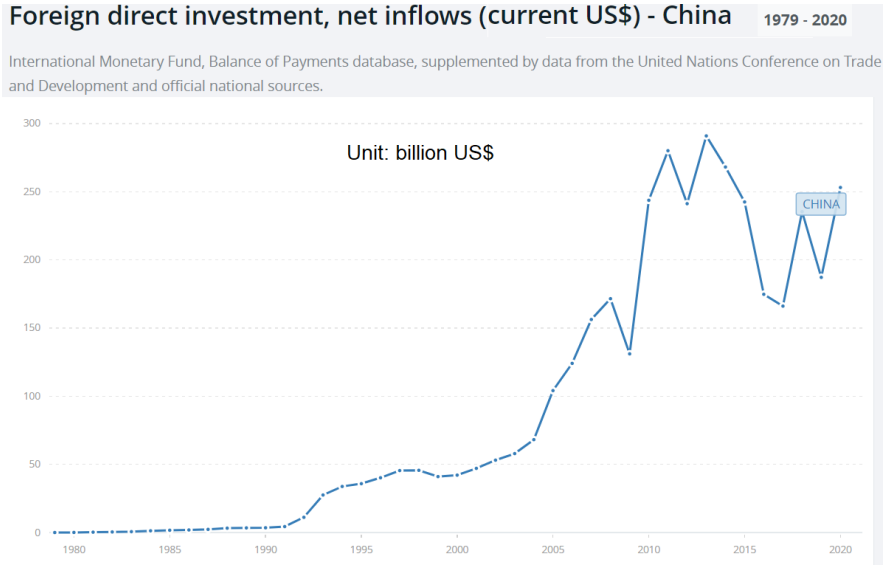

Figure 6 - FDI Net Inflow China 1979 to 2020 (World Bank, 2021)

2.6.2 FDI Net Inflow Change of Russia

Russia is another vivid example. Before December 1991, Soviet Union and US, as the leader of Warsaw Pact and North Atlantic Treaty Organization (NATO) respectively, faced heightened Geopolitical risks because of Cold War, hence FDI of Russia is zero. After the Dissolution of Soviet Union in December 1991, Geopolitics (or Geodemocracy it brings out) change fundamentally, shock therapy (Sachs, 1995) was introduced into Russia. FDI of Russia changed drastically based on the World Bank (data.worldbank.org, n.d.) and OECD (www.oecd.org, n.d.). Russia received 38 billion US dollars in 2021, which makes Russia as the 7th largest FDI recipient around the world.

Country name	Before 1991	1992	1993	2000	2008	2020	2021
Russia	0	1.16 billion	1.21 billion	2.68 billion	74.78 billion	9.48 billion	38 billion

Table 4 - FDI Net Inflow Change (World Bank, 2021)

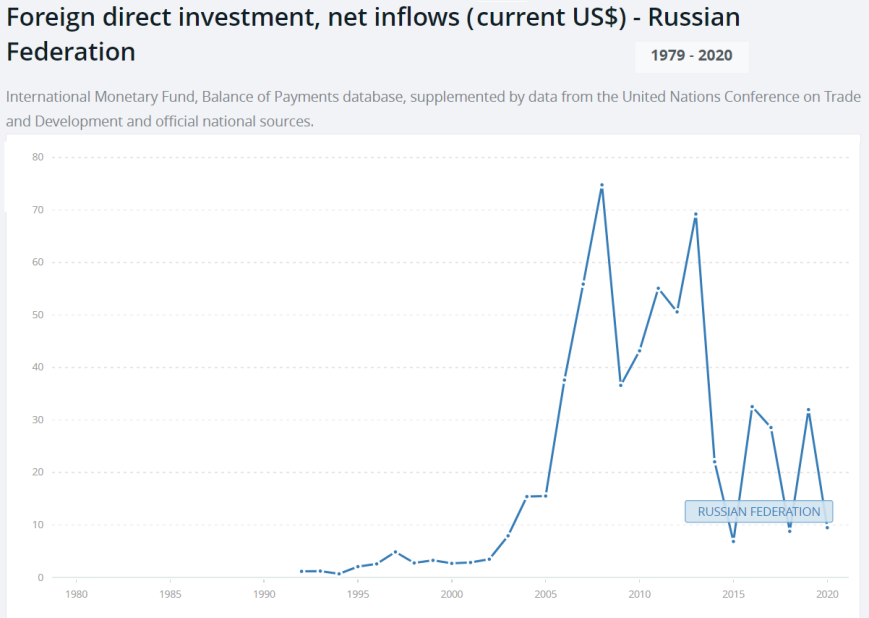

Figure 7 - FDI Net Inflow Russia 1979 to 2020 (World Bank, 2021)

2.6.3 FDI Net Inflow Change of Previous Warsaw Pact Countries

Previous Warsaw Pact countries are another example. Up to today all previous Warsaw Pact countries have joined NATO, except Russia. Before July 1991, Warsaw Pact and NATO faced heightened Geopolitical risks because of Cold War, FDI of each Previous Warsaw Pact Country is zero (or very litter). After the Dissolution of Warsaw Pact in July 1991, Geopolitics (or Geodemocracy it brings out) change fundamentally. FDI of each Previous Warsaw Pact Country changed drastically based on the World Bank (data.worldbank.org, n.d.).

Country name	Before 1989	1990	1991	1992	1993	2008	2020
Albania	0	0	0	20 million	58 million	1.25 billion	1.07 billion
Bulgaria	0	4 million	55.9 million	41.5 million	40 million	10.3 billion	3.6 billion
Czechoslovakia	0	0	0	0	654 million	8.8 billion	8.5 billion
Hungary	0	553 million	1.46 billion	1.48 billion	2.35 billion	75.1 billion	171 billion
Poland	11 million	89 million	291 million	678 million	1.72 billion	14.57 billion	17.4 billion
Romania	0	10K	263 million	77 million	94 million	13.67 billion	3.6 billion
East Germany	No effective data was found						

Table 5 - FDI Net Inflow Change (World Bank, 2021)

2.7 Geodemocratic Risks Impact Global Supply Chain

2.7.1 Global Supply Chain

When global supply chain is plagued with bullwhip effect that distorts its operation, any unpredictable risks and uncertainties have to be processed with pre-established global risk management strategy (Manuj and Mentzer, 2008; Goldin, 2010; Niemann, Kotzé and Mannya, 2018).

In addition, Ukraine War plunged Russian economy back to 2018 with 4% Gross domestic product (GDP) drop in 2022 (Putin's War Hurls His Economy Back Four Years in One Quarter, 2022).

2.7.2 Geodemocratic Risks Impact Global Supply Chain

Manuj and Mentzer (2008) stated "Global supply chains are more risky than domestic supply chains due to numerous links interconnecting a wide network of firms."

Geopolitical uncertainties and risks can significantly disrupt global supply chains (Simangunsong, Hendry and Stevenson, 2012; Roscoe et al., 2020) and increase frictional costs in international business and overseas trade, thus negatively impact business organizations' performance (Ho et al., 2015) (competence, cost control, high quality product delivery, and financial conditions, etc.). One of the major requirements from global supply chain risk management (SCRM) is to mitigate those risks and disruptions (Manuj and Mentzer, 2008).

Series	Sectors	Risks	Ranking
1	Environmental	Natural disasters	59%
2		Extreme weather	30%
3		Pandemic	11%
4	Geopolitical	Conflict and political unrest	46%
5		Export/import restrictions	33%
6		Terrorism	32%
7		Corruption	17%
8		Illicit trade and organized crime	15%
9		Maritime piracy	9%
10		Nuclear/biological/chemical weapons	6%
11	Economic	Sudden demand shocks	44%
12		Extreme volatility in commodity prices	30%
13		Border delays	26%
14		Currency fluctuations	26%
15		Global energy shortages	19%
16		Ownership/investment restrictions	17%
17		Shortage of labour	17%
18	Technological	Information and communications disruptions	30%
19		Transport infrastructure failures	6%

Table 6 - Top supply chain risk (World Economic Forum risk survey, 2011)

Supply chain (SC) disruptions are defined as events that disturb the flow of products or services across SCs and negatively impact one business organization's operation performance (Ho et al., 2015, p. 5035). SC disruptions can either be natural, such as hurricanes, floods and famines, or man-made, such as war, terrorism and political disputes (Hendricks and Singhal, 2009).

Managers are often obliged to re-evaluate the manufacturing location decision in order to mitigate SC disruption risks that can occur around the world (Ellram, Tate and Petersen, 2013). Goldin (2010) believed today when planning outsourcing and offshoring strategies, more and more international corporations concentrate more on reputation and political risks associated with widely dispersed supply chain.

Manuj and Mentzer (2008) found out the exogenous and endogenous risk factors that cause global supply chain disruptions mostly coming from four risk categories: environment, geopolitics, economy, and technology. Nikookar and Yanadori (2021) believed that global supply chain could be permanently changed by adverse geopolitical risks. When facing severe geopolitical uncertainties, most of the international investors would re-design their global supply chain in a particular manner to minimize losses (Roscoe et al., 2022).

2.7.3 Global Supply Chain Risk Management

Supply Chain risk management (SCRM) is the systematic approach to identify and mitigate the potential uncertainties and risks caused by supply chain network (Javaid and Siddiqui, 2018; Gurtu and Johny, 2021).

Gurtu and Johny (2021) defined one SCRM model to provide guidelines to the International Business Society (IBS).

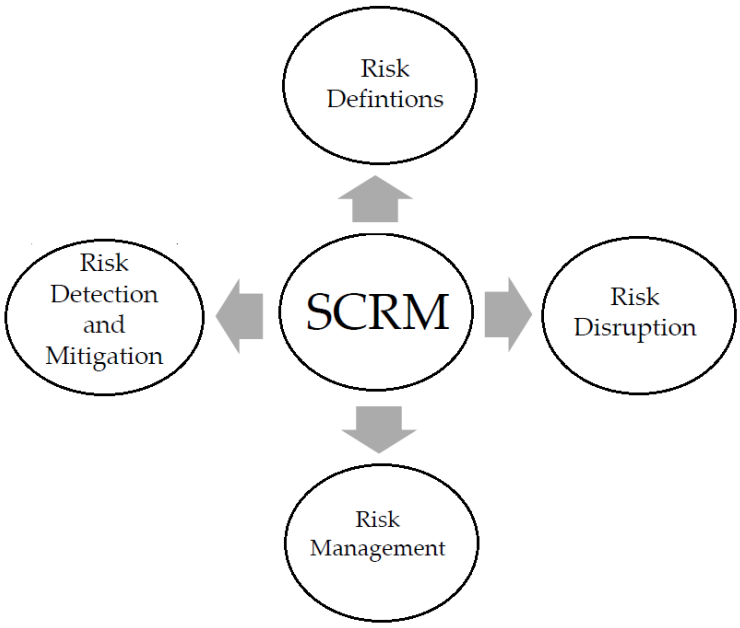

Figure 8- Supply Chain risk management model (Gurtu and Johny, 2021)

Global supply chain is a risky business, and global supply chain risk management (or Global SCRM) faced more challenges, uncertainties and risks than domestic SCRM (Manuj and Mentzer, 2008; Manners-Bell, 2018). These unpredictable challenges, uncertainties and risks associated with the global SC seems to be irreversible. The longer the supply chain network (from domestic SC to global SC, and more parties involved (suppliers, manufacturers, transportation and logistics provider, etc.), etc.), the greater the risk of failure of the supply chain (Gurtu and Johny, 2021).

The team of Ho, Zheng, Yildizc and Talluric (2015) developed a more precise risk management model to cope with global supply chain: identify global SC risks, diagnose the risks lead to global SC disruption, control global SC risks, and mitigate global SC risks.

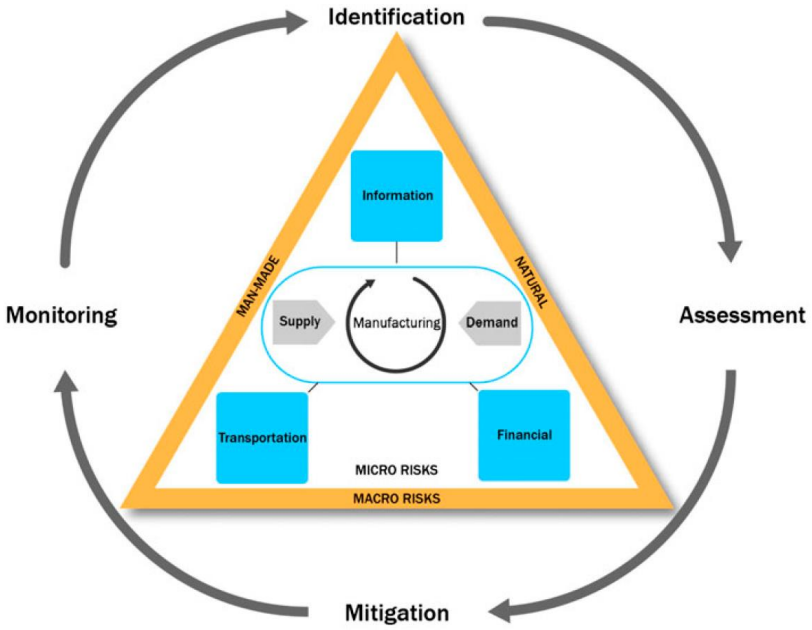

Figure 9 - Global SCRM model (Ho et al., 2015)

In light of the heightened concerns of global SC safety and security, business practitioners and entrepreneurs shall erect a global SCRM strategy on the company's upper-level management (Manuj and Mentzer, 2008).

With the help of SCRM, global SC can be safeguarded working toward the direction of being more resilient, more sustainable and more agile. (Calvo, Olmo and Berlanga, 2020).

2.8 Geodemocratic Risks Impact Global Sourcing

2.8.1 Global Sourcing

Global sourcing, global procurement, and international sourcing are often used synonymously in the academic field. Two hundred years ago, father of modern economics, Smith (1776) affirmed that "If a foreign country can supply us with a commodity cheaper than we ourselves can make it, better buy it." Which could be the prototype of today's global sourcing.

Global sourcing is the process buying the raw materials or components (or basic components) that go into an organization's products input from around the world, not just from the headquarters' country (host country) (Monczka and Trent, 1991), and is widely accepted as procurement strategy for its competitive advantages by multinational corporations (Quintens, Pauwels and Matthyssens, 2006). A typical example, Gereffi (2001) found out in US apparel industry a significant upward tendency is to augment global sourcing hence the apparel supply chain has become more actively and more extensively involved in offshore sourcing.

After detailed investigation Minahan (1996) and Mankiw (1999) declared that global sourcing could result in 10% to 40% cost-saving to different international corporations. The recent research by Schiele, Horn and Vos (2011) revealed that average 20% cost-saving could be achieved to most of the multi-national organizations. In the extreme, global sourcing can bring up to 80% saving potential with optimized global sourcing strategy.

2.8.2 Geodemocratic Risks Impact Global Sourcing

To pursue those advantages (cost control, e.g.), either small and medium-sized enterprises (SMEs) or multinational enterprises (MNEs) highly prefer sourcing globally instead of regionally (or domestically) (Gualandris, Golini and Kalchschmidt, 2014). While enjoying the benefits global sourcing readily gain, there ae comprehensive risks that international business organizations have to deal with (Holweg, Reichhart and Hong, 2011). In other words, global sourcing process is often full of complexities, difficulties and risks (Androniceanu et al., 2020). When selecting international suppliers, risks can originate from economics and political uncertainty of the countries these suppliers located (Su and Chen, 2018). Risk factors that can impact the implementation of global sourcing

mainly are political, legal and cultural differences among countries (Jiang and Tian, 2010).

Before Ukraine War, EU countries purchased 49% crude oil and condensate, 74% natural gas and 32% coal of Russia's exports in 2021, as the key destination of Russia resources (www.eia.gov, 2022). From April 2022, EU have imposed sanctions on coal and other fossil fuels from Russia. Furthermore, around 140 companies (many of them are the world's top 300 companies) have pulled their business out of Russia and re-build their global sourcing strategies (Kiplinger, n.d.).

2.8.3 Global Sourcing Risk Management

Similar as global supply chain risk management, global sourcing risk management is to identity and mitigate the potential risk when doing international sourcing (Dragulanescu and Androniceanu, 2017). The principle of global sourcing is to purchase low-cost products around the world to gain competence, but the lower prices offered by international low-cost suppliers rarely brought out significant low-cost benefits to the entrepreneurs (Steinle and Schiele, 2008). Apparently, this is caused by unrecognized global supply risks.

Dragulanescu and Androniceanu (2017) introduced a risk management model to optimize supplier selections. Trent and Monczka (2003) brought out the five-stage global sourcing process model in 2003, which is widely utilized in the International Business Society (IBS).

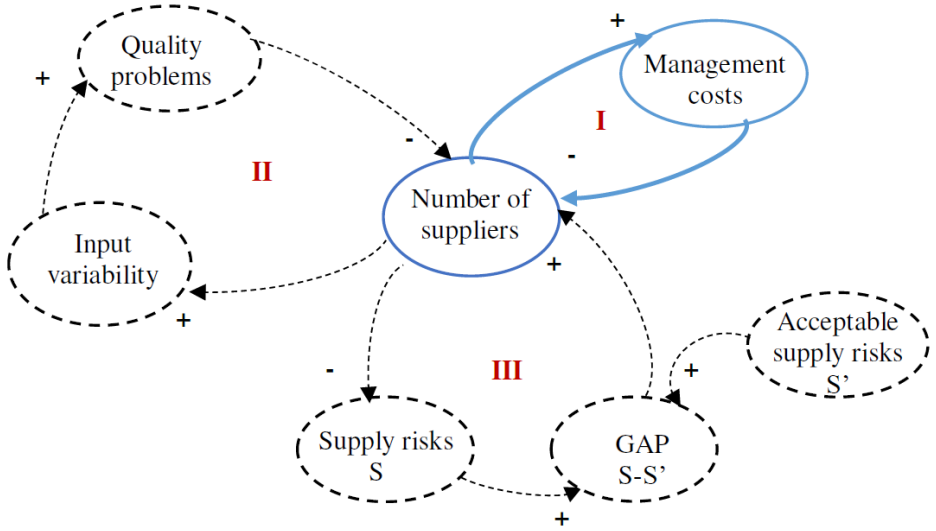

Figure 10 - Risks and better suppliers (Dragulanescu and Androniceanu (2017)

Figure 11 - Global Sourcing Process Model (Trent and Monczka, 2003)

2.9 Geodemocratic Risk Management

Geodemocratic Risks are the inevitable side effects global supply chain and global sourcing bring out, "an enterprise may have the lowest over-all costs in a stable world environment, but may also have the highest level of risks (Barry, 2004)." Risk management, or risk mitigation, "is the broad activity of planning and decision making designed to deal with the occurrence of hazards or risks (Kouvelis, 2012)." Kouvelis created one widely-used risk management model to mitigate potential risks in four stages: identification, assessment, review, and implementation. Cooper and Broadleaf Capital

International (2005) originated a similar model and provided more detailed guideline to control / remove risks.

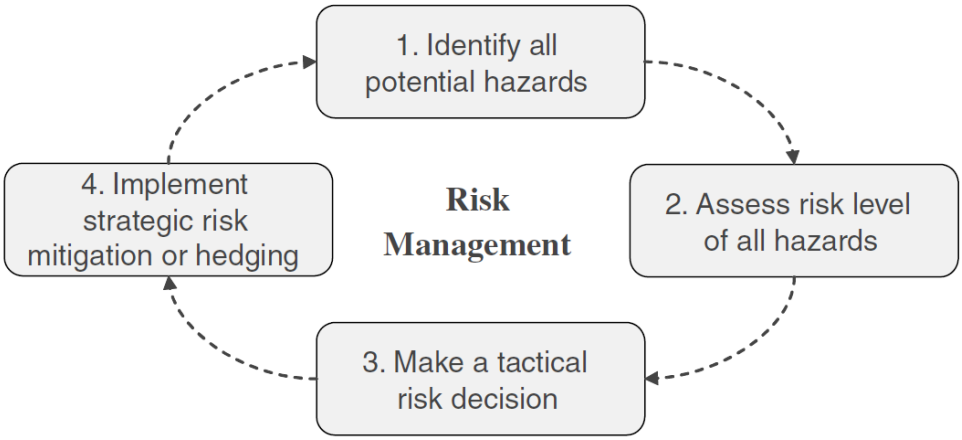

Figure 12 - Risk Management Model (Kouvelis, 2012)

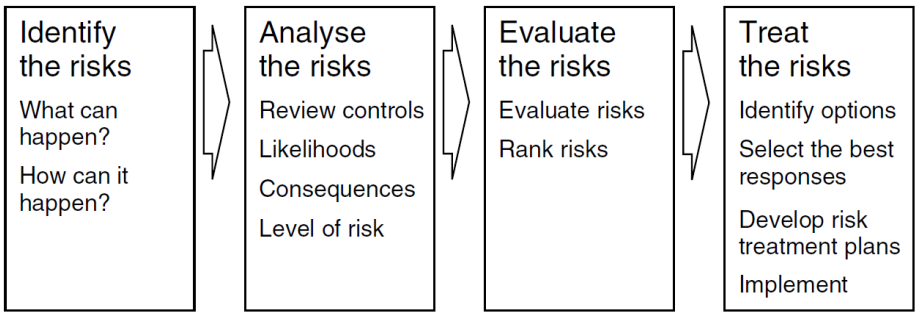

Figure 13- Risk Management Model (Cooper, 2005)

Ukraine War (starting from 24 February 2022) is a typical geodemocratic catastrophic event, which drastically disrupted the global supply chain (School, n.d.). EU countries promptly agreed a wide-range deal on banning Russian imports (Economics, n.d.). Consequently, EU countries reached historical high Harmonized index of consumer prices (HICP) inflation rate 9.8% in July 2022, and the highest HICP inflation rate is 23.2% in Estonia.

Furthermore, around 140 companies (many of them are the world's 300 companies) have pulled their business out of Russia (Kiplinger, n.d.) after Ukraine War. Because of the low Geodemocracy Index of Russia, more and more international business organizations

will re-build their supply chains to bypass Russia. There is no doubt that EU countries are executing the re-building supply chain tasks now.

It is becoming more and more significant to formula and implement strategies to identify a structured and systematic approaches to achieve fit with business environment disrupted by geopolitical events (Roscoe et al., 2020).

2.10 Methodologies and Approaches

Research methodologies in geodemocracy studies are diverse and interdisciplinary, incorporating techniques from political science, geography, history, economics, and other fields. The followings are some of the key methodologies can be used in the geodemocracy study.

2.10.1 Qualitative Methods

Qualitative methods focus on the meanings and interpretations that individuals or groups assign to social phenomena (Maxwell, 2021), and are particularly useful when exploring new areas of research, understanding complex phenomena, and gaining insights into the study.

- Using Case Studies in Research (Rowley, 2002). In-depth examinations of specific geopolitical events, regions, or phenomena. This method allows for detailed contextual analysis and understanding of complex geodemocratic dynamics.
- Apply Historical Analysis in analysis (Tilly, 2001). Investigating past events to understand current geopolitical contexts and predict future trends. This involves the study of historical documents, treaties, conflicts, and political movements.

- Interviews and Oral Histories. Gathering insights from key informants, such as policymakers, diplomats, military officials, and local populations. This method provides personal perspectives and firsthand accounts of geodemocratic events.
- Textual Analysis / Textual Research. Analyzing official documents, speeches, policy papers, media articles, and other texts to understand the narratives and discourses that shape geodemocratic thinking and actions.

2.10.2 Quantitative Methods

Quantitative methods are widely used in various fields (Lerche, 2012) including social sciences, economics, education, health sciences, and marketing, and are particularly useful for establishing relationships, predicting outcomes, measuring variables, etc. (Stockemer, Stockemer and Glaeser, 2019).

- Statistical Analysis. Using statistical tools to analyze data related to geodemocratic variables, such as economic indicators, military expenditures, demographic trends, and voting patterns. This can help identify correlations and trends.
- Geospatial Analysis. Employing Geographic Information Systems (GIS) (Fatima et al., 2021) and other spatial analysis tools to map and visualize geodemocratic data. This includes studying spatial patterns of conflict, resource distribution, and territorial claims.
- Surveys. Conducting surveys to gather data on public opinion, perceptions, and attitudes related to geodemocratic issues. Surveys can be used to gauge the impact of geodemocratic events on populations and to assess policy support.

2.10.3 Mixed Methods

Mixed methods research combines both qualitative and quantitative approaches to provide a more comprehensive understanding of research problems (Brannen, 2017), and

this approach leverages the strengths of both methods. Mixed methods integrates qualitative insights with quantitative data to provide a more comprehensive analysis. For example, a study might use statistical analysis to identify a trend and then employ case studies to explore the underlying causes.

2.10.4 Scenario Planning and Forecasting

Scenario planning and forecasting are strategic tools used by organizations to anticipate future conditions and make informed decisions.

- Using Scenario Analysis in Research (Tosoni, Salo and Zio, 2017). Developing and analyzing potential future scenarios based on current geodemocratic trends and variables. This method helps in understanding possible future developments and preparing strategic responses.
- Risk Assessment. Evaluating the likelihood and potential impact of various geodemocratic risks, such as conflicts, economic crises, and environmental disasters. This involves both qualitative judgment and quantitative modeling.

2.10.5 Comparative Analysis

Comparative Case Studies, Compare different geodemocratic cases to identify patterns, similarities, and differences. This method helps in understanding broader geodemocratic phenomena and testing the generalizability of theories.

2.10.6 Policy Analysis

Policy analysis is a systematic approach (Weimer and Vining, 2017) to evaluating and comparing public policies or proposals to solve societal problems.

- Use Policy Evaluation in research (MacLennan, 1978). Assess the effectiveness and impact of geodemocratic policies and strategies. This involves analyzing policy documents implementation processes, and outcomes (Vedung, 2017).

- Apply Stakeholder Analysis (Bryson, 2004). Identifying and evaluating the interests and influences of various stakeholders involved in geodemocratic issues, and finalize the actions “what to do” (Bryson, 2004). This helps in understanding power dynamics and decision-making processes.

In summary, these methodologies and approaches are often utilized in combination to provide a comprehensive understanding of geodemocratic phenomena. The choice of methodology depends on the research question, the nature of the data, and the theoretical framework guiding the study.

2.11 Challenges to Estimate International Investment, GSC, and GS

2.11.1 Challenges to Estimate International Investment Risk / Uncertainty

Analyzing international investment risk and uncertainty presents several challenges due to the complex and dynamic nature of global markets:

- Geopolitical and Regulatory Risks. International investments are subject to geodemocratic risks (Leader, 2006) such as political instability, regime changes, trade disputes, and regulatory uncertainties. Analyzing the impact of geodemocratic events on investment returns requires understanding the political landscape, regulatory frameworks, and the potential for policy changes in different countries.
- Currency and Exchange Rate Risk. Fluctuations in exchange rates can significantly impact the returns of international investments (Bhargava and Korku, 2023), especially when investing in currencies other than the investor's base currency. Analyzing currency risk involves forecasting exchange rate movements, hedging strategies, and assessing the correlation between currency movements and investment returns.

- Market Volatility and Liquidity Risk. International markets can be more volatile and less liquid than domestic markets (Kregel, 2009), making it challenging to accurately assess investment risk. Analyzing market volatility and liquidity risk requires understanding market dynamics, trading volumes, bid-ask spreads, and the availability of liquidity in different asset classes and regions.
- Country-Specific Risks. Each country has its unique economic, social, and business environment (Gibb, 2007), which can pose specific risks to international investors. Analyzing risks correlated to each country involves assessing factors such as economic growth prospects, inflation rates, fiscal policies, legal systems, property rights protection, and cultural differences that may impact investment returns.
- Sectoral and Industry Risks. Different sectors and industries may face specific risks (Allen and Powell, 2010) and challenges in international markets, depending on factors such as technology trends, regulatory changes, competitive dynamics, and supply chain vulnerabilities. Analyzing sectoral and industry risks involves evaluating industry trends, competitive positioning, and the potential for disruptive innovation or regulatory changes.
- Emerging Market Risks. Investing in emerging markets can offer opportunities for high growth but also entails higher risks (Smith and Walter, 1997) due to factors such as political instability, currency volatility, limited transparency, and governance issues. Analyzing risks in emerging markets requires understanding the unique challenges and opportunities of these economies and conducting thorough due diligence on potential investments.
- Financial Risk and Leverage. International investments may involve financial risk factors such as leverage, debt levels, credit ratings, and financial market stability.

Analyzing financial risk involves assessing the financial health and leverage ratios of companies, governments, and financial institutions in different countries and regions.

- Environmental, Social, and Governance (ESG) Risks. Increasingly, investors are considering environmental, social, and governance factors when assessing international investment opportunities (Dunn, Fitzgibbons and Pomorski, 2018). Analyzing ESG risks involves evaluating factors such as environmental sustainability, social responsibility, corporate governance practices, and ethical considerations that may impact long-term investment performance.
- Black Swan Events and Risks. International investments are exposed to the risk of rare and unpredictable events, often referred to as "black swan" events (Bekiros et al., 2017), which can have significant and unexpected impacts on investment returns. The COVID-19 crisis, a typical black swan event, had a varying degree of impact on FDI flows for different countries (Hysa et al., 2022). For instance, developed countries were hit harder as their FDI flows fell by 69% in 2020, according to Global Affaires Canada, State of Trade 2021 report, “A Closer Look at Foreign Direct Investment ” (Canada, 2021).
- Data Limitations and Uncertainty. Analyzing international investment risks is complicated by data limitations, uncertainties (Doshi, Kumar and Yerramilli, 2018), and the inherent unpredictability of financial markets. Quantifying uncertainty requires probabilistic modeling, sensitivity analysis, and scenario planning to account for various possible outcomes and their likelihoods.

Addressing these challenges requires a comprehensive approach that combines quantitative analysis, qualitative insights, risk management techniques, and active portfolio management strategies. By adopting a disciplined and rigorous approach to

analyzing international investment risks, investors can make informed decisions, manage their risk exposure effectively, and achieve their investment objectives in a globalized and interconnected world.

2.11.2 Challenges to analyze global supply chain risk / uncertainty

Analyzing global supply chain risk and uncertainty presents several challenges due to the complex and interconnected nature of supply chains:

- Supply Chain Complexity. Global supply chains involve multiple tiers of suppliers manufacturing facilities, distribution channels, and transportation networks (Transportation routes across land, ocean, and air) spanning across different countries and regions (Meixell and Gargeya, 2005). Analyzing supply chain risk requires understanding the complex interactions and dependencies within these networks, which can be challenging to model accurately.
- Supplier Reliability and Performance. Global supply chains rely on a network of suppliers and vendors, each with their own capabilities, capacities, and reliability levels (Kamalahmadi and Mellat-Parast, 2016). Analyzing supplier reliability and performance involves assessing factors such as production capacity, quality standards, delivery reliability, financial stability, and compliance with regulations. Gathering comprehensive data on supplier performance and reliability can be difficult, especially when dealing with a large number of suppliers across multiple geographies.
- Demand Uncertainty. Global supply chains are subject to demand uncertainty (Sepulveda Rojas and Frein, 2008) arising from factors such as changing consumer preferences, market trends, and economic conditions. Analyzing demand uncertainty requires forecasting future demand accurately, which can be

challenging due to the volatility and unpredictability of market conditions. Variability in demand forecasts can lead to inventory imbalances, excess inventory, or stockouts, impacting supply chain performance and profitability.

- Supply Chain Disruptions. Global supply chains are vulnerable to various sources of disruptions (Stecke and Kumar, 2009), including natural disasters, geodemocratic events, trade disputes, transportation delays, labor strikes, and supplier bankruptcies. Analyzing supply chain disruptions involves identifying potential risk factors, assessing their likelihood and impact, and developing mitigation strategies to minimize their effects on supply chain operations. Predicting and managing supply chain disruptions require advanced risk modeling techniques, scenario analysis, and real-time monitoring capabilities.
- Inventory Management. Global supply chains often involve complex inventory management processes with inventory (Tien, Anh and Thuc, 2019) held at multiple locations, including suppliers, warehouses, distribution centers, and retail stores. Analyzing inventory management risks involves optimizing inventory levels, balancing inventory costs with service levels, and managing inventory obsolescence and write-offs. Variability in lead times, demand patterns, and supply chain disruptions can make inventory management challenging, requiring sophisticated analytical tools and techniques to optimize inventory decisions.
- Supply Chain Finance. Global supply chains require adequate financing (Lamoureux and Evans, 2011) to support procurement, production, and distribution activities. Analyzing supply chain finance risks involves assessing factors (Wetzel and Hofmann, 2019) such as working capital requirements, payment terms, credit risk, and liquidity constraints. Lack of access to affordable

financing, payment delays, and credit defaults can disrupt supply chain operations and impact the financial health of companies within the supply chain.

- Regulatory and Compliance Risks. Global supply chains are subject to various regulatory requirements and compliance standards across different countries and industries (Locke, Rissing and Pal, 2013). Analyzing regulatory and compliance risks (Längle, Burgess and Funlade Sunmola, 2024) involves ensuring compliance with regulations related to product safety, environmental protection, labor practices, trade restrictions, and customs clearance procedures. Keeping abreast of changing regulations and ensuring compliance throughout the supply chain can be challenging, especially in highly regulated industries or regions with complex regulatory environments.
- Data and Information Sharing. Analyzing supply chain risk requires access to timely and accurate data from multiple sources (Shore, 2001), including suppliers, logistics providers, and market intelligence sources. However, data sharing and visibility across supply chain partners can be limited (Huong, Childerhouse and Deakins, 2016) due to concerns about data security, confidentiality, and competitive advantage. Establishing effective data sharing mechanisms and leveraging technologies such as blockchain, IoT, and cloud-based platforms can improve supply chain visibility and enable more informed risk analysis and decision-making.

Addressing these challenges requires a holistic approach that combines quantitative analysis, qualitative insights, risk management techniques, and supply chain resilience strategies. By adopting a proactive and collaborative approach to managing supply chain risk and uncertainty, companies can enhance their resilience, agility, and competitiveness in a globalized and volatile business environment.

2.11.3 Challenges to Analyze Global Sourcing Risk / Uncertainty

Analyzing global sourcing risk and uncertainty presents several challenges due to the complexities and dynamics inherent in global supply chains and sourcing strategies.

- Supplier Reliability and Performance. Assessing the reliability and performance of global suppliers can be challenging (Kumar, Stern and Achrol, 1992) due to factors such as geographic distance, cultural differences, language barriers, and varying levels of transparency. Gathering accurate and comprehensive data on supplier capabilities, production capacity, quality standards, delivery reliability, and financial stability can be difficult, especially when dealing with a large number of suppliers across different countries and regions.
- Supply Chain Disruptions. Global sourcing exposes organizations to various sources of supply chain disruptions (Jain, Girotra and Netessine, 2022), including natural disasters, geodemocratic events, transportation delays, labor strikes, and supplier bankruptcies. Analyzing supply chain disruptions involves identifying potential risk factors, assessing their likelihood and impact, and developing mitigation strategies to minimize their effects on sourcing operations. Predicting and managing supply chain disruptions require advanced risk modeling techniques, scenario analysis, and real-time monitoring capabilities.
- Geodemocratic and Regulatory Risks. Global sourcing involves navigating complex geodemocratic landscapes and regulatory environments (Hudson, 2000) across different countries and regions. Analyzing geodemocratic and regulatory risks requires understanding factors such as political stability, trade policies, import/export regulations, currency controls, and intellectual property protection laws. Changes in government policies, trade agreements, or legal frameworks can

impact sourcing decisions and supply chain operations, requiring organizations to stay informed and adapt quickly to regulatory changes.

- Currency and Exchange Rate Risk. Fluctuations in exchange rates can impact the costs and profitability of global sourcing activities (Kouvelis, 1999), especially when sourcing from countries with volatile currencies. Analyzing currency risk involves forecasting exchange rate movements, hedging strategies, and assessing the correlation between currency movements and sourcing costs. Variability in exchange rates can introduce uncertainty into sourcing decisions and impact the competitiveness of sourced products in international markets.
- Supplier Capacity and Scalability. Global sourcing requires evaluating supplier capacity and scalability to meet fluctuating demand and business growth requirements (Min, 1994). Assessing supplier capacity involves understanding factors such as production capabilities, lead times, production flexibility, and scalability of operations. Limited supplier capacity or production bottlenecks can lead to supply shortages, production delays, and lost sales opportunities, affecting sourcing performance and customer satisfaction.
- Quality and Compliance Standards. Ensuring product quality and compliance with regulatory standards is essential (Nadvi, 2008) when sourcing products from international suppliers. Analyzing quality and compliance risks involves evaluating factors such as product specifications, manufacturing processes, quality control measures, and adherence to regulatory requirements. Non-compliance with quality standards or regulatory requirements can result in product defects, recalls, legal liabilities, and damage to brand reputation.
- Cultural and Communication Challenges. These cultural differences and communication barriers can pose challenges (Durach, Glasen and Straube, 2017)

when sourcing products from international suppliers. Misunderstandings, language barriers, and cultural differences in business practices can lead to delays, conflicts, and misunderstandings in sourcing relationships. Building effective communication channels, fostering cultural awareness, and establishing trust-based relationships with suppliers are essential for mitigating communication risks in global sourcing.

- Supply Chain Transparency and Traceability. Ensuring transparency and traceability across the global supply chain is critical (Sunny, Undralla and Madhusudanan Pillai, 2020) for managing risks related to product quality, safety, and ethical sourcing practices. Analyzing supply chain transparency involves tracking the movement of goods, verifying the authenticity of products, and ensuring compliance with environmental, social, and governance (ESG) standards. Lack of visibility into supplier operations and sub-tier suppliers can increase the risk of counterfeit products, supply chain disruptions, and reputational damage.

Addressing these challenges requires a comprehensive approach that combines quantitative analysis, qualitative insights, risk management techniques, and supply chain resilience strategies. By adopting a proactive and holistic approach to managing global sourcing risk and uncertainty, organizations can enhance their sourcing capabilities, mitigate supply chain risks, and drive sustainable business growth in a globalized marketplace.

2.12 Thoughts on Geoeconomics

The terminology geoeconomics, which has been quite popular recently, was generally understood to reflect the study of economy and resources from spatial, political and

strategic aspects. One common definition is “one can think of geoeconomics as the interplay of international economics, geopolitics and strategy (www.chathamhouse.org, 2016).”

American strategist Edward Luttwak and French economist Pascal Lorot were the two major contributors to the development of geoeconomics idea. Edward Luttwak (1990) firstly argued that geoeconomic power, instead of military power, would dominate the global order after the Cold War, by a post “From Geopolitics to Geo-Economics: Logic of Conflict, Grammar of Commerce” on the journal “The National Interest”. Lorot (1999) followed Luttwak’s opinion and broadened the idea of geoeconomics.

Unfortunately, after thirty years, the terminology geoeconomics have not approached a widely agreed definition in the field of academia (www.chathamhouse.org, 2016), hence it will not be included in the GMI design of this dissertation.

2.13 Research Constraints & Limitations and Mitigation Methods

2.13.1 Research Constraints and Limitations

While literature reviews are essential for synthesizing existing knowledge and identifying research gaps, they are subject to various constraints and limitations.

- Scope and Coverage. It is challenging to cover all relevant literature comprehensively, due to the first development of Geodemocracy theory. Some important studies may be inadvertently omitted, leading to incomplete conclusions.
- Access to Resources. Access to academic journals, books, and other resources can be limited by expensive subscription fees and SSBM university access. The limited access or no access can restrict the review scope and potentially bias the findings toward freely available sources.

- Time Constraints. Conducting a thorough literature review can be quite time-consuming. Therefore, these time constraints limit the depth or breadth of the review, potentially overlooking significant research.
- Language Barriers Constraint. Relevant researches published in languages other than English (Germany, French, Dutch, e.g.) are inaccessible, which can result in a geographically or culturally biased understanding of the review topic.
- Budget Constrains. Budget, funding, etc. are the limitation or restriction on the financial resources available to support the research and writing process. Adequate budget funding is essential for conducting high-quality dissertation research.

2.13.2 Strategies to Mitigate Constraints and Limitations

Research constraints and limitations are inevitable (Theofanidis and Fountouki, 2018), but recognizing and addressing these issues can enhance the rigor and comprehensiveness of the review, leading to more robust and reliable conclusions.

- Defining clear criteria. Establish clear inclusion and exclusion criteria to manage scope and ensure relevant literature is reviewed.
- Using multiple databases. Utilize a variety of academic databases and resources to ensure comprehensive coverage.
- Systematic review methods. Apply systematic review methods to minimize bias and improve the reliability of the review.
- Interdisciplinary approaches. Incorporate literature from various disciplines to gain a more holistic understanding of the topic.

- Collaboration and peer review. Engage with other researchers for collaboration and seek peer reviews to reduce personal biases and improve the review's quality.
- Actively seek and secure funding opportunities. Adequate budget funding plays a crucial role in facilitating better dissertation writing by providing access to resources, supporting research activities, enhancing research quality, and promoting academic and professional development.
- Continuous updates. Regularly update the literature review to incorporate new research and developments in the geodemocracy field.

2.14 Future Directions in Geodemocratic Research

There are considerable emerging trends and areas for future research offer exciting opportunities for scholars to deepen our understanding of contemporary geodemocratic challenges and contribute to the development of innovative strategies and policies to address them.

- Cyber warfare. As cyber capabilities become increasingly integral to national security and international relations (Wolff, 2023), there is a growing need to understand the geodemocratic implications of cyber warfare, espionage, and information manipulation. Future research could explore the dynamics of cyber conflicts, the role of state and non-state actors in cyber operations, and the development of international norms and regulations governing cyberspace.
- Outer space. The growing commercialization and militarization of space (Naheed, 2023) raise important Geodemocratic questions regarding access, governance, and security in outer space. Future research could examine the strategic competition among space-faring nations, the impact of emerging space

technologies on global power dynamics, and the potential for conflict or cooperation in space exploration and exploitation.

- Arctic tension. Climate change is rapidly transforming the Arctic region, opening up new opportunities and challenges for geopolitical actors (sthagen and Rottem, 2023). Future research could investigate the Geodemocratic implications of melting ice caps, expanding maritime routes, and resource extraction in the Arctic. Topics of interest may include territorial disputes, environmental conservation, indigenous rights, and the role of regional organizations in Arctic governance.
- Geoeconomics and economic impaction. Economic factors increasingly shape Geodemocratic competition and cooperation, giving rise to concepts such as "geoeconomics" (Clayton, Maggiori and Schreger, 2023) and "economic statecraft" (Breslin and Nesadurai, 2023). Future research could investigate the use of economic tools such as trade policy, investment, and sanctions as instruments of statecraft, as well as the role of economic interdependence and globalization in shaping geodemocratic outcomes.
- Emerging technologies. Advances in emerging technologies such as artificial intelligence (AI), biotechnology, and quantum computing have profound implications for geodemocracy and national security (Sayler, 2020). Future research could explore the geodemocratic consequences of technological innovation, including the race for technological dominance, the impact on military capabilities and strategies, and the ethical and regulatory challenges associated with emerging technologies. As studied by Wright (2019) and Paz (2020), The highly developed Artificial Intelligence (AI) and machine learning (ML) technologies (act as the fourth industrial revolution (The Observer, n.d.)) and machine learning, as a new frontier in the competition between the United

States and China, is poised to fundamentally re-shape various aspects of global society.

Figure 14 - Robot dog used by Chinese troop (CTVNews, 2024)

- Technological Advancement - robot dog soldiers used in military troop. In the past a few decades several countries are actively producing robotics for use on the modern battlefield. During recent military drills with Cambodia, China's military showed off robot dogs with an automatic rifle mounted on its back, and some robot dogs equipped with cameras (CTVNews, 2024; Gan, 2024), which immediately drew attention of the International Society. Robot dog soldiers have the potential to revolutionize the battlefield (Jadhav, 2022) by enhancing reconnaissance, reducing risks, and providing tactical advantages. However, their deployment also raises complex ethical, legal, psychological, and strategic considerations.
- Environmental Geodemocracy. Climate change, resource scarcity, and environmental degradation are driving geodemocratic shifts and conflicts around the world (O'lear, 2018). Future research could explore the geodemocracy implications of environmental challenges (Husnain et al., 2022), including

competition over natural resources, environmental migration, and the role of environmental agreements and institutions in addressing global environmental issues.

- Urban Geodemocracy. Cities are emerging as important actors in global affairs, influencing economic, cultural, and political trends beyond national borders. Future research could investigate the geodemocratic significance of urbanization (Bădescu, 2023), megacity networks, and city diplomacy in shaping global governance and security arrangements.
- Energy transition. The transition to renewable energy sources and decarbonization efforts are reshaping global energy markets and geodemocratic dynamics (Cheikh, and Zaied, 2023). Future research could examine the geodemocratic implications of the energy transition, including competition over renewable energy resources, energy security strategies, and the geodemocratic impact of shifting energy dependencies. One milestone event is in 2023 the United States became net petroleum exporter country (www.eia.gov, n.d.), as the world's fourth-largest exporter of oil (Twin, 2023) (just lagging behind Saudi Arabia, Russia, and Canada). Therefore, as the Director and Senior Fellow at the Center for Strategic and International Studies (CSIS), Ladislaw (2018) pinpointed, "The United States has experienced an oil and natural gas production renaissance that has changed the domestic and global energy landscape". Recently Hille (2023) claimed that Geopolitical risks (caused by Ukraine War) could accelerate the energy transition to renewable energy in Europe.
- New alliances and rivalries. The evolving landscape of technological advancements, demographic shifts, and environmental changes is leading to the formation of new alliances and the intensification of rivalries on the global stage.

For instance, the Quadrilateral Security Dialogue (QUAD), involving the United States, Japan, India, and Australia, focuses on technology cooperation, particularly in 5G, artificial intelligence, and cybersecurity. Another case study by Freddy and Bijukumar (2024) indicates the intense US-China competition is functioning the future international order, and is splitting the world in two (Founding Fuel, n.d.) most probably. Unsurprisingly, Achcar (2023) concluded that Ukraine War triggered the New Cold War, the Russia-China alliance against the International Society led by the United States (mainly US and North Atlantic Treaty Organization (NATO)).

3.0 METHODOLOGY

To develop the way in which how the analysis data of the selected country (or region) was collected and the method how the research questions will be explained, the research onion model (Saunders, Lewis and Thornhill, 2009) (being one of the most comprehensive business research frameworks), was adopted herein.

3.1 Research Philosophy

The research goal of this dissertation is to investigate potential uncertainties and risks that MNEs and MNCs may experience when executing global supply chain, pursuing global sourcing and performing international investment, and to formulate a suitable methodology / strategy to mitigate those uncertainties and risks. In light of these stated criteria, apparently the quantitative research is more suitable for this study requirements.

Nowadays it is commonly accepted that research methodology can be defined into three methods: quantitative research, qualitative research, and mixed research (the combination of quantitative and qualitative) (Swanson and Holton, 2005). Quantitative research method is both rigorous / deductive approach and systematic strategy for problem-solving (Mohajan, 2020), which provides real information for business practitioners to take the correct strategic decisions to manage uncertainties and risks in today's fierce competitive environment (Ramona, 2011).

During the literature review, it was found that there were not too much similar literature or research available. Most of them either simply focused on economic impact, or focused on economy and politics (locally and internationally), or focused on economy and society at large. Only some technically brilliant business managers dug out the root cause. Former Governor of the Bank of England and the Bank of Canada, Mark Carney (BIS central bankers' speeches, n.d.) clearly pointed out that uncertainties and risks "come in threes: geopolitical, economic, and policy uncertainty". Unfortunate till today, there is no

standardized procedures, or there is no clear quantitative way to analyze these uncertainties and risks combined with politics, economy, and geopolitics. Researchers, scholars and theorists, along with the business practitioners, have not reached a common consensus on the relations among these variables.

However, in recent years there is an increasing demand for assistance in creating effective appraisal process to help business organizations mitigate these business uncertainties and risks. The research works in this dissertation filled this analytical gap.

Eastman and Bailey (1996) believed that "philosophy is something to be bracketed in doing one's disciplinary work". During this dissertation, positivism is selected to build up the research and analysis:

Firstly, correlated data for the designated country (or region) will be gathered, by using document screening method (sourcing numerical data from financial reports, statistics, datasheet, etc.) from three major pillars: economic risk, political risk, and geopolitical risk. Each pillar was divided into four or five sub-categories to detail the index calculation (for details see Section 3.3 data collection). These parameter sets were finalized with reference to the following data sources:

- International Country Risk Guide (ICRG) researchers dataset from PRS group
- Business environment risk intelligence (BERI)
- Control risks information services (CRIS)
- Standard & Poor's rating (S&P)
- Political risk services - Coplin-O'leary rating
- Moody's Investor services
- TOP business Risks 2021 (Allianz Risk Barometer, 2021)

Totally 165 countries (or regions) around the world are selected into research study, because some countries' basic information cannot be easily found out from World Bank, UN, WTO, or IMF, or WHO.

The second step is to analyze these data, using formulas to calculate the risk index. Final step is to interpret results, draw the conclusion and develop recommendations, by comparing these calculated results.

Based on geopolitics and GCI, Canada, China and Russia are nominated as three typical countries, representing counties from America, Asia and Europe, and also representing countries whose mutual relationship with US: good, neutral and bad.

3.2 Research Design

Research design refers to the overall plan or strategy that outlines how a researcher will conduct a study to address specific research questions or objectives. It encompasses various components, including the research philosophy, approach, methods, and procedures used to collect and analyze data. Either qualitative method, or quantitative method, or mixed model (combined both qualitative and quantitative methods) could be used appropriately with any research or study (Denzin and Lincoln, 2000).

In this dissertation, quantitative methods will be utilized to answer those research questions (Sukamolson, 2007), as discussed by Bloomfield and Fisher (2019) "Quantitative research design". The conceptual research framework (procedure) was developed as below:

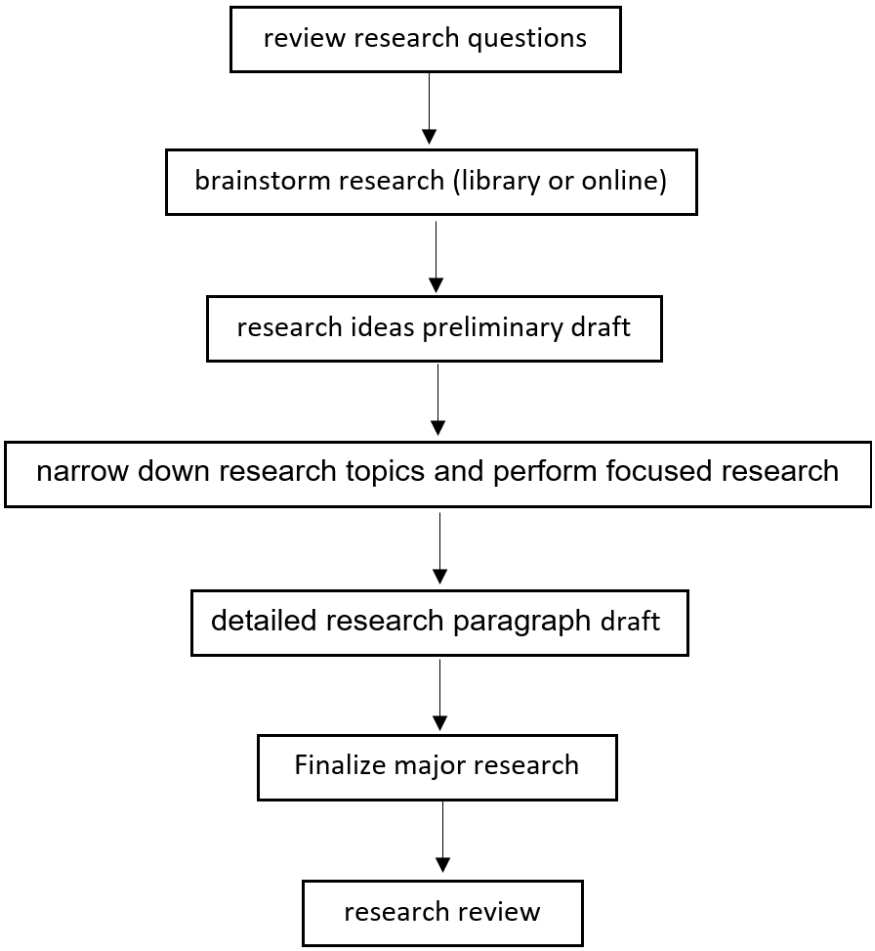

Figure 15 - Research framework in Geodemocracy Study

3.3 Data Collection

3.3.1 Data Collection – Key Parameters

To accurately calculate GMI of each country (or region), there are 38 (16 + 21 + 1) parameters to be collected.

Geodemocracy Index (GMI)		
Series #	**Key Parameter**	**Abbreviation**
1	Politics Risk Index	P
2	Economy Risk Index	B
3	Geopolitical Confidence Index (GCI)	GCI

Table 7 - Geodemocracy Index Parameters

Politics Risk Index (P)			
Series #	**Key Parameter**	**Design Parameter**	**Abbreviation**
1	Full Democracy (FD)	Federation System	FDS
2		Parliamentary System	PMS
3		Multi-Party System	MPS
4		Electoral System	ELS
5	Regime & Governance (RG)	Public Servants	PLS
6		National Crime Rate	NCR
7		Best Rule of Law (national	BRL
8		Transparency	TPC
9	Civil Service (CS)	Impartiality	IPT
10		Customer Service	CRS
11		Corruption Level	CRL
12		Communication skills	CMS
13	Citizen Rights (CR)	Democratic Rights	DMR
14		Mobility Rights	MBR
15		Legal Rights	LLR
16		Equality Rights	EQR

Table 8 - Politics Risk Index Parameters

Economy Risk Index (B)			
Series #	**Key Parameter**	**Design Parameter**	**Abbreviation**
1	International Investment Safety (BS)	Government Policies	GMP
2		Infrastructure Investment	IFV
3		GDP per Capita	GPC
4		Interest Rates	ETR
5	Economic Stability (ES)	Real GDP per Capita	RGG
6		Industry Employment	IEM
7		Consumer Price Index	CPL
8		Employment Rate	EPR
9	Real GDP Development (RD)	Consumption	CSM
10		Investment	IVT
11		Government Spending	GMS

Economy Risk Index (B)			
Series #	**Key Parameter**	**Design Parameter**	**Abbreviation**
12		National Exports and Imports	NEI
13	Economy Operation (EO)	Tariff & Non-tariff Barriers	TNB
14		Commodity Price	CMP
15		Inflation Rate	IFR
16		Corporation Tax Rate	CTR
17		National Cyber Security	NCS
18	Labor Market (LM)	Unemployment Rate	UMR
19		Job Creation	JBC
20		Labor Output	LBO
21		Level of Wage	LLW

Table 9 - Economy Risk Index Parameters

3.3.2 Data Collection Details

These parameters, some can be easily collected by observation, such as GCI; But most of them can be collected from secondary sources (Greenwood, 2015) and primary sources (questionnaire or survey, e.g.). Some reputable surveys, questionnaires, and statistics conducted by reliable surveyors or authorized institutions may be used for reference information (as listed below). The required data, the secondary data, which is related to the dissertation research, see below information.

- World Bank Group
- United Nations (UN)
- International Telecommunication Union (ITU) (Cyber security)
- World Trade Organization (WTO)
- World Health Organization (WHO)
- Organization for Economic Cooperation and Development (OECD)
- International Monetary Fund (IMF)

- Asia-Pacific Economic Cooperation (APEC)
- Kantar Group (leading dada analytics and brand consulting company, based in London, UK)
- Statista Database (an accredited Germany company specialized in market and consumer data)
- Pew Research Center (an accredited nonpartisan American think tank, based in Washington, DC, US)
- Economist Intelligence Unit (democracy index)
- Central Intelligence Agency (CIA)

The major referred data sources are as the following:

3.3.2.1 Crime rate by Countries 2022

Data source:

https://worldpopulationreview.com/country-rankings/crime-rate-by-country

3.3.2.2 CPIA (World bank) - Transparency Index 2020

Data source:

https://data.worldbank.org/indicator/IQ.CPA.TRAN.XQ

3.3.2.3 Easy doing business 2020 (World Bank)

Data source:

https://archive.doingbusiness.org/en/scores

3.3.2.4 Infrastructure ranking list 2019 (Statista)

Data source:

https://www.statista.com/statistics/264753/ranking-of-countries-according-to-the-general-quality-of-infrastructure/

3.3.2.5 GDP per Capita 2020 (World bank)

Data source:

https://data.worldbank.org/indicator/NY.GDP.PCAP.CD

3.3.2.6 Interest rate by county

Data source:

https://en.wikipedia.org/wiki/List_of_sovereign_states_by_central_bank_interest_rates#List

3.3.2.7 Real GDP per Capita (World Factbook)

Data source:

https://www.cia.gov/the-world-factbook/field/real-gdp-per-capita/country-comparison

3.3.2.8 Industry employment 2019 (World bank)

Data source:

https://data.worldbank.org/indicator/SL.IND.EMPL.ZS

3.3.2.9 Consumer price index 2021 (World Bank)

Data source:

https://data.worldbank.org/indicator/FP.CPI.TOTL?locations=US%E2%89%A4/SEURLD

3.3.2.10 Employment rate 2021 (Global economy)

Data source:

https://www.theglobaleconomy.com/rankings/employed_persons/

3.3.2.11 Consumption expenditure 2020 (World bank)

Data source:

https://data.worldbank.org/indicator/NE.CON.TOTL.CD

3.3.2.12 Gross fixed investment as percentage of GDP (World bank)

Data source:

https://data.worldbank.org/indicator/NE.GDI.FTOT.ZS

3.3.2.13 Government spending 2020 (Global Economy)

Data source:

https://data.worldbank.org/indicator/NE.CON.GOVT.CD

3.3.2.14 Net export 2020 (World bank)

Data source:

https://data.worldbank.org/indicator/BN.GSR.GNFS.CD

3.3.2.15 Inflation rate 2021 (World Bank)

Data source:

https://data.worldbank.org/indicator/FP.CPI.TOTL.ZG

3.3.2.16 Corporate tax rate by country (Tax foundation)

Data source:

https://taxfoundation.org/publications/corporate-tax-rates-around-the-world/#:~:text=The%20worldwide%20average%20statutory%20corporate,statutory%20rate%2C%20at%2027.97%20percent.

3.3.2.17 National Cyber Security Index 2021 (NCSI)

Data source:

https://ncsi.ega.ee/ncsi-index/?order=rank

3.3.2.18 Unemployment Rate 2021 (World bank)

Data source:

https://data.worldbank.org/indicator/SL.UEM.TOTL.ZS

3.3.2.19 Employment growth to population ratio 2021 (World bank)

Data source:

https://data.worldbank.org/indicator/SL.EMP.TOTL.SP.ZS

3.3.2.20 Labor productivity 2021 (ILOSTAT)

Data source:

https://ilostat.ilo.org/topics/labour-productivity/

3.3.2.21 Level of wage 2019 (World bank)

Data source:

https://data.worldbank.org/indicator/SL.EMP.WORK.MA.ZS

3.3.2.22 Democracy-index-2021

Data source:

https://en.wikipedia.org/wiki/Democracy_Index

3.3.3 Data Validity

Along with reliability, validity plays a critical role in scientific research – as the issue of validity always arises (Jenkins, 1946). In this dissertation, two kinds of data are collected: primary data (source) and secondary data (source):

- Primary data – Primary data is done by the researcher (s). This kind of data can be collected by interview or questionnaire, and each of them can be achieved by online survey, paper survey, telephonic survey, or one-to-one interview, etc. The more respondents (or more competent experts) participated, the more accurate the survey is.
- Secondary data – Secondary data was already done by someone else earlier. This kind of data can be collected from publicly published journals, books, websites, etc. The accuracy of them determines the accuracy of GMI calculation. Therefore, collecting information form reputable research institutions is a must, such as World Bank, UN, WTO, or IMF, or WHO, etc.

Series #	Design Parameter	Abbreviation	Primary (Secondary) Data Source
1	Federation System	FDS	Primary
2	Parliamentary System	PMS	Primary
3	Multi-Party System	MPS	Primary
4	Electoral System	ELS	Primary
5	Public Servants	PLS	Primary

Series #	Design Parameter	Abbreviation	Primary (Secondary) Data Source
6	National Crime Rate	NCR	Secondary
7	Best Rule of Law (national wide)	BRL	Primary
8	Transparency (national wide)	TPC	Secondary
9	Impartiality	IPT	Primary
10	Customer Service	CRS	Primary
11	Corruption Level	CRL	Secondary
12	Communication skills	CMS	Primary
13	Democratic Rights	DMR	Primary
14	Mobility Rights	MBR	Primary
15	Legal Rights (right to life, liberty and security of the person)	LLR	Primary
16	Equality Rights	EQR	Primary
17	Government Policies	GMP	Primary
18	Infrastructure Investment	IFV	Secondary
19	GDP per Capita	GPC	Secondary
20	Interest Rates	ETR	Secondary
21	Real GDP per Capita	RGG	Secondary
22	Industry Employment	IEM	Secondary
23	Consumer Price Index	CPL	Secondary
24	Employment Rate	EPR	Secondary
25	Consumption	CSM	Secondary
26	Investment	IVT	Secondary
27	Government Spending	GMS	Secondary
28	National Exports and Imports	NEI	Secondary
29	Tariff & Non-tariff Barriers	TNB	Secondary
30	Commodity Price	CMP	Secondary
31	Inflation Rate	IFR	Secondary
32	Corporation Tax Rate	CTR	Secondary
33	National Cyber Security	NCS	Secondary
34	Unemployment Rate	UMR	Secondary
35	Job Creation	JBC	Secondary
36	Labor Output	LBO	Secondary

Series #	Design Parameter	Abbreviation	Primary (Secondary) Data Source
37	Level of Wage	LLW	Secondary
38	Geopolitical Confidence Index	GCI	Primary

Table 10 - Primary / Secondary data source

3.4 Data Analysis

Data analysis plays a crucial role (Wickham and Wickham, 2016) in extracting meaningful insights from data to support decision-making processes, drive business strategies, and solve complex problems. This section focuses on the detailed calculation of each parameter, by using pre-determined design structure and methodology.

3.4.1 4M Rating System of Geodemocracy Index

There are four classes applied in the rating system of Geodemocracy Index: Max class, Major class, Minor class and Medium class, which is called as "4M" rating system in Geodemocracy Theory.

The higher the score a country achieved, the more confident for the international stakeholders execute business activities in that country at a given time.

3.4.1.1 Max Class

Max class is the highest class in Geodemocracy Index appraisal system, with score ≥85.

For example, Canada is classified as Max class in 2023, therefore it is one of the most favorable and most trusted place around the world for all business activities in 2023.

3.4.1.2 Major Class

Major Class is the second highest class in the Geodemocracy Index appraisal system, with 65≤ score <85.

For instance, China is classified as Major class in 2023, therefore it is a better place around the world for all business activities in 2023.

3.4.1.3 Medium Class

This is the in-between class for Geodemocracy Index, with 50< score <65.

All the business organizations need to monitor this country with caution before any business activities, and detailed investigation / risk analysis are required.

3.4.1.4 Minor Class

This is the lowest class, with score ≤50. These countries are not recommended because of facing high risks.

For example, Russia is classified as Minor class after Ukraine War. It is the worst place for all business activities, because of the vast uncertainties brought out by the war.

When all sub-categories of a given country was assessed as bad level, it was automatically classified as Minor class (score ≤50). By doing this a lot of time can be saved.

3.4.2 Data Formulization:

All the data sources, either primary or secondary, come from different research centers or institutions with different features. These data have to be formulized or normalized in the same scaling method before they are adapted into the index analyzation (Ali et al., 2006; Cohen and Berchenko, 2021).

For each set of data, using Min-Max normalization technique (or called feature scaling) performs a linear transformation on the original data, which sets all data in the same set in the range (0 ~ 1), then transforming them into percentage X%. the X value is the final mark of each country used for GMI calculation. But for all marks that are smaller than 50, 50 will be applied to them to simplify the calculation.

The outlier may be detected or may not be detected during the research and final index calculation (Aggarwal, 2017). In this dissertation, these outliers are those extremely big ones, which will be set as 100 automatically.

The Min-Max normalization formula:

$$x_{scaled} = \frac{x - x_{min}}{x_{max} - x_{min}}$$

3.4.3 Dynamic Trend of Geodemocracy Index

Geodemocracy Index is a dynamic system, which can be estimated at any given time (but if is for forecast purpose, maximum 10 years from now is preferred, because long term forecasts are largely a matter of guesswork).

Prior to any global business activities, It is recommended to calculate the following Geodemocracy Index for the international organizations:

3.4.3.1 Current Geodemocracy Index

Carefully collect the existing information of the designated county , then calculate the Geodemocracy Index.

3.4.3.2 Future Geodemocracy Index

Firstly, estimate a reasonable Geopolitical Confidence Index of the foreseeable future time (for example, 3 years from now, 5 years from now, but maximum 10 years from now).

Then calculate each future Geodemocracy Index. If the Geodemocracy Index falls into margin areas of any class (Max class, Major class, Minor class, or Medium class), then initiate more case scenarios for further analysis.

3.4.3.3 Previous Geodemocracy Index Records

Refer to historical data of Geodemocracy Index of the selected country, if applicable (Simonton, 2003). Geopolitical Confidence Index and Geodemocracy Index of any countries can not be changed in one second, these history records can help forecast the future changing paradigms.

3.4.4 Introduction of Geodemocracy Index Calculation

Geodemocracy Index is a weighted average, and each country is assessed based on its own performance at a given time, from three major pillars: political risks, economic risks, and geopolitical risks.

$$GMI_t = \frac{1}{n}\sum_{i=1}^{n}(P_{i,t}\alpha_t + B_{i,t}\,\beta_t)GCI_{i,t} \qquad \text{(GMI Formula 1)}$$

Where:

- GMI_t= Geodemocracy Index of each country at a given time t.
- $P_{i,t}$ = Politics Risk Index of each country at a given time t.
- $B_{i,t}$ = Economy Risk Index of each country at a given time t.
- $GCI_{i,t}$ = Geopolitical Confidence Index of each country at a given time t.
- n indicates the number of data (the total quantity one appraiser (or experts) conducts or many appraisers (or experts) conduct at the same time), which is equal to the sample size (S) (This is the standard sample size formula) (Cuemath, n.d.).

  For the calculation of sample size S, formula is:

$$Necessary\ \ Sample\ Size\ (S) = \frac{{Z_{score}}^2 * StdDev * (1 - StdDev)}{margin\ of\ error(M)^2}$$

Therefore,

$$S = \frac{Z^2 * P * (1-P)}{M^2} \qquad \text{(Sample size formula one)}$$

Where (Cuemath, n.d.),

S = Sample size for infinite population

Z = Z score

P = population proportion (Assumed as 50% or 0.5)

M = Margin of error

Note 1: Z score is determined based on the confidence level.

Note 2: Confidence Level: Probability that the value of a parameter falls within a specified range of values. For example, for 95% confidence level Z score is 1.960.

Note 3: The margin of error: It is defined as a small amount that is allowed for in case of miscalculation or change of circumstances. Generally, the margin of error is taken as 5% or 0.05 (Cuemath, n.d.).

Confidence Level	Z-score
80%	1.28
85%	1.44
90%	1.65
95%	1.96
99%	2.58

Note 4: when many appraisers conduct the appraisal at the same time, minimum three person is preferred.

Note 5: Once the sample size (S) was calculated, this will be applied to entire appraisal of the designated country / region.

- α and β are the weighting factors, α + β = 100%, the preferred setting is α=β=50%. Either economy or politics is placed on emphasis per Pareto

Principle (Forman and Peniwati, 1998), 20%≤ α ≤ 80% and 20%≤ β ≤ 80%, with α+ β = 100%. In this dissertation, α=50% and β=50%.

For quick analysis, GMI formula can be simplified as the following:

$$GMI = (P + B) * GCI/2 \qquad \text{(GMI Formula 2)}$$

By using different case scenarios, customers (or clients) can optimize the GMI calculation, and draw the final business decisions (for instance, whether to plan investment in a selected country or not).

3.4.5 Standard Geodemocracy Samples

Three standard samples (country / region stereotypes) are erected to lead the entire performance appraisal process of the Geodemocracy Index worldwide, which are Canada, China and Russia.

Canada is the tier 1 sample and can be applied to Western countries, or even all the countries around the world, referring to Section 3.8.

Russia (or Russia Federation) is the tier 2 sample and can be applied to those countries who previous belonged to New independent States (NIS), referring to Section 3.8

China is the tier 2 sample and can be applied to all the countries around the world, except Western countries and NIS, referring to Section 3.8.

3.5 Time horizon

Time horizon, or the longitudinal research studies in the research onion (Saunders, Lewis and Thornhill, 2009), indicates the timeframe of the research. In this dissertation, Timeframe will adhere to the idea of Caldara and Iacoviello (2018), which is roughly from 1945 to now.

3.6 Limitation

Research limitation is always there (Price and Murnan, 2004). Theofanidis and Fountouki (2018) believed "Limitations of any particular study are usually out of the researcher's control" and "Data analysis methodology is another area of potential limitation".

In this dissertation, collecting reasonable data of each country at a given time may be the most challenging part of GMI. To better the GMI calculation, Experts Grading Method (EGE) can be utilized.

$$W = \frac{1}{n}(\sum_{1}^{n} W_{i,t})$$

Where,

- W is the final mark of each design parameter of GMI (totally 38 design parameters in GMI calculation).
- $W_{i,t}$ is the mark of each design parameter estimated by one expert, at a given time of GMI.
- n is the number of experts (total experts that is included).

How many experts can be included in the GMI calculation? There is no doubt that more professionals can provide more accurate and more reasonable outcome, but more professionals mean more cost. Zamanzadeh and his team (Zamanzadeh et al., 2015) thought maximum 10 experts are preferred. Yusoff (2019) also recommended to have maximum 10 experts. This dissertation agreed with this approach: minimum one expert, and maximum 10 is preferred.

The COVID-19 pandemic has changed the way we communicate (Westgarth, 2021). Recently both Ontario Premier Doug Ford and Ontario's top doctor strongly recommended that the public should wear masks indoors as the new variants were

continuously generated (CBC, 2022). All of these hardship imposed strong constraint conditions to the community, and it's quite challenging to find competent survey respondents.

3.7 Ethical consideration

Ethical considerations are critical in any field of study or professional practice (Munhall, 1988; Arifin, 2018), which help ensure that actions and decisions are morally sound and respectful of the rights and dignity of all affected parties.

The ethical consideration principle was adhered during the entire project. All the reference data / materials, either primary sources or secondary sources, were publicly published. No potential for harm to the public, no personal privacy or no confidential information to be disclosed, and the results of the research will be beneficial to the academic community (Hunter, 2008). An Ethics approval application form was attached, referring to correlated Appendix A2.

In summary, ethical considerations are fundamental to ensuring that actions and decisions are just, respectful, and beneficial to all involved stakeholders. The ethical considerations also guide professionals and researchers in conducting their work responsibly (Cacciattolo, 2015), thereby fostering trust, integrity, and social responsibility.

3.8 GMI Key Parameters Analysis

3.8.1 Politics Risk Index Calculation

Politics Risk Index (abbreviated as "P" in the Geodemocracy formula) is assigned 100 marks, with four major pillars (Full Democracy, Regime & Governance, Civil Service, Citizen Rights), and each pillar was assigned 25 marks equally. Calculate the arithmetic averages to achieve the final Politics Risk Index.

$$P_{i,t} = \frac{1}{n}\sum_{i=1}^{n}(FD_{i,t} + RG_{i,t} + CS_{i,t} + CR_{i,t})/4 \quad \text{(GMI Formula 3)}$$

Where:

- $P_{i,t}$ = Politics Risk Index of each country at a given time t.
- $FD_{i,t}$ = Full Democracy of each country at a given time t.
- $RG_{i,t}$ = Regime & Governance of each country at a given time t.
- $CS_{i,t}$ = Civil Service of each country at a given time t.
- $CR_{i,t}$ = Citizen Rights of each country at a given time t.

3.8.1.1 Full Democracy Estimation

Full Democracy (abbreviated as "FD" in the Geodemocracy formula), or pure democracy, is the best democracy format around the current world. Canadian democracy system is the reference indicator (taking Canada as 100%, then estimate the scores by comparing other country with Canada).

Full Democracy are mostly related to election policy, electoral process, Charter of a country / Federal Constitution / Constitution amended, national law, federal law, provincial law, city law, city by-law, etc.

Examples of democracy: Full democracy (Canada, e.g.), flawed democracy (US, e.g.), hybrid democracy (combined with democracy and authoritarian, Russia, for instance), and authoritarian (North Korea, for example).

$$FD_{i,t} = \frac{1}{n}\sum_{i=1}^{n}(FDS_{i,t} + PMS_{i,t} + MPS_{i,t} + ELS_{i,t})/4 \quad \text{(GMI Formula 4)}$$

Where:

- $FD_{i,t}$ = Full Democracy of each country at a given time t.
- $FDS_{i,t}$ = Federation System of each country at a given time t.
- $PMS_{i,t}$ = Parliament System of each country at a given time t.

- $MPS_{i,t}$ = Multi-Party System of each country at a given time t.
- $ELS_{i,t}$ = Electoral System of each country at a given time t.

Full Democracy includes four equal sub-pillars:

- Federation system
- Parliamentary system
- Multi-party system
- Electoral system.

Based on the data of the designated country, there are three assessment levels of each sub-pillar:

- **Good level** (≥90%) - this is the positive margin. And the minimum score is assigned score*90%, and the maximum mark is assigned score*100%.
- **Bad level** (<65%) - this is the negative margin. And the minimum score is assigned score*50%, and the maximum mark is smaller than assigned score*65%.
- **In-between level** (≥65% and <90%) - this is the intermediate margin. And the minimum score is assigned score*65%, and the maximum mark is smaller than assigned score*90%.

The following **Standard Estimation Process** can be followed:

- **Step 1**: Gather democracy information of a designated country.
- **Step 2**: Calculate the Sample size of appraisal as required.
- **Step 3**: Compare these collected data with that of Canada. Firstly, thoroughly review these collected data, then compare them with that of Canada.

- **Step 4**: Assign the sub-category levels (Good, Bad, or In-between) for one area. This is the most vital step to estimate the Full Democracy score. After appraisal, the designated country may fall into one of the three sub-category levels, Good, Bad or In-between.
- **Step 5**: Repeat aforementioned steps 1 to 4 for the other areas.
- **Step 6**: Calculate the Full Democracy score of one country, by using Geodemocracy Formula 4.

3.8.1.2 Regime & Governance Estimation

Regime & Governance is combined performance of a country, included two parts: Regime and Governance. according to Oxford dictionary, Regime is the system of the country and Governance is the activity of governing a country or the way in which a country is governed.

The estimation of Regime & Governance includes four equal sub-pillars:

- Public servants
- National crime rate
- Best rule of law (national wide)
- Transparency (national wide)

Taking Canada as the reference indicator (taking Canada as 100%, then estimate the scores by comparing other country / region with Canada). Follow the aforementioned Standard Estimation Process to calculate the score.

$$RG_{i,t} = \frac{1}{n}\sum_{i=1}^{n}(PLS_{i,t} + NCR_{i,t} + BRL_{i,t} + TPC_{i,t})/4 \quad \text{(GMI Formula 5)}$$

Where:

- $RG_{i,t}$ = Regime & Governance of each country at a given time t.

- $PLS_{i,t}$ = Public Service of each country at a given time t.
- $NCR_{i,t}$ = National Crime Rate of each country at a given time t.
- $BRL_{i,t}$ = Best Rule of Law of each country at a given time t.
- $TPC_{i,t}$ = Transparency of each country at a given time t.

3.8.1.3 Civil Service Estimation

Civil Service, or public service, is the administrative service that a government provides from national level, to provincial level, and to municipal level.

Civil Service includes four equal sub-pillars:

- Impartiality,
- Customer service,
- Corruption level,
- Communication skills.

Taking Canada as the reference indicator (taking Canada as 100%, then estimate the scores by comparing other country with Canada). Follow the aforementioned Standard Estimation Process to finalize the score.

$$CS_{i,t} = \frac{1}{n}\sum_{i=1}^{n}(IPT_{i,t} + CRS_{i,t} + CRL_{i,t} + CMS_{i,t})/4 \quad \text{(GMI Formula 6)}$$

Where:

- $CS_{i,t}$ = Civil Service of each country at a given time t.
- $IPT_{i,t}$ = Impartiality of each country at a given time t.
- $CRS_{i,t}$ = Customer Service of each country at a given time t.
- $CRL_{i,t}$ = Corruption Level of each country at a given time t.
- $CMS_{i,t}$ = Communication Skills of each country at a given time t.

3.8.1.4 Citizen Rights Estimation

Citizen Rights are the essential rights of each citizen of a designated country posses which are declared by the charter of a country / Federal Constitution (note: this is not the human rights that every human being was born to have, but the civil rights that was put into the law).

Citizen Rights includes four equal sub-pillars:

- Democratic rights,
- Mobility rights,
- Legal rights (right to life, liberty and security of the person),
- Equality rights.

Taking Canada as the reference indicator (taking Canada as 100%, then estimate the scores by comparing other country / region with Canada). Follow the aforementioned Standard Estimation Process to finalize the score.

$$CR_{i,t} = \frac{1}{n}\sum_{i=1}^{n}(DMR_{i,t} + MBR_{i,t} + LLR_{i,t} + EQR_{i,t})/4 \quad \text{(GMI Formula 7)}$$

Where:

- $CR_{i,t}$ = Citizen Rights of each country at a given time t.
- $DMR_{i,t}$ = Democratic rights of each country at a given time t.
- $MBR_{i,t}$ = Mobility rights of each country at a given time t.
- $LLR_{i,t}$ = Legal rights of each country at a given time t.
- $EQR_{i,t}$ = Equality rights of each country at a given time t.

3.8.2 Economy Risk Index Calculation

Economy Risks are the major challenges / risks that the business organizations encounter in a designated country that they operate, and almost every international business

organization has to manage. Economy risk is often associated with business interruption, supply chain disruption, market development challenge, legislation / regulation changes, natural catastrophes, macroeconomic develops, political risks & violence, and so on, according to the global supply chain survey conducted by Allianz Risk Barometer (Ghosh, 2021).

Economy Risk Index (abbreviated as "B" in Geodemocracy formulas) includes five major pillars:

- International Investment Safety,
- Economic Stability,
- Real Gross Domestic Product (GDP) Development,
- Economy Operation,
- Labor Market.

Economy Risk Index is calculated as the following:

$$B_{i,t} = \frac{1}{n}\sum_{i=1}^{n}(BS_{i,t} + ES_{i,t} + RD_{i,t} + EO_{i,t} + LM_{i,t})/5 \quad \text{(GMI Formula 8)}$$

Where:

- $B_{i,t}$ = Economy Risk Index of each country at a given time t.
- $BS_{i,t}$ = International Investment Safety of each country at a given time t.
- $ES_{i,t}$ = Economic Stability of each country at a given time t.
- $RD_{i,t}$ = Real GDP Development of each country at a given time t.
- $EO_{i,t}$ = Economy Operation of each country at a given time t.
- $LM_{i,t}$ = Labor Market of each country at a given time t.

3.8.2.1 International Investment Safety Estimation

International Investment Safety is to assess the environment that the selected country prior to planning international investment. International Investment Safety includes four sub-pillars:

- Government Policies
- Infrastructure Investment
- GDP per Capita
- Interest Rates

International Investment Safety is calculated as the following:

$$BS_{i,t} = \frac{1}{n}\sum_{i=1}^{n}(GMP_{i,t} + IFV_{i,t} + GPC_{i,t} + ETR_{i,t})/4 \quad \text{(GMI Formula 9)}$$

Where:

- $BS_{i,t}$ = International Investment Safety of each country at a given time t.
- $GMP_{i,t}$ = Government Policies of each country at a given time t.
- $IFV_{i,t}$ = Infrastructure Investment of each country at a given time t.
- $GPC_{i,t}$ = GDP per Capita of each country at a given time t.
- $ETR_{i,t}$ = Interest Rates of each country at a given time t.

The following Standard Estimation Process can be followed:

- **Step 1**: Gather economy information of a selected country.
- **Step 2**: Calculate the Sample size of appraisal as required.

- **Step 3**: Compare these collected data with that of Canada. Firstly, thoroughly review these collected data, then compare them with that of Canada.
- **Step 4**: Assign the sub-category levels (Good, Bad, or In-between) for one area. This is the most vital step to estimate the economy risk score. After appraisal, the designated country may fall into one of the three sub-category levels, Good, Bad or In-between.
- **Step 5**: Repeat aforementioned steps 1 to 4 for the other areas.
- **Step 6**: Calculate the International Investment Safety score of one country, by using Geodemocracy Formula 9.

3.8.2.2 Economic Stability Estimation

Economic Stability, mainly referring to the macroeconomic stability, is to describe the financial system of a country. Economic Stability includes four sub-pillars:

- Real GDP per Capita
- Industry Employment
- Consumer Price Index
- Employment Rate

Economic Stability is calculated as the following:

$$ES_{i,t} = \frac{1}{n}\sum_{i=1}^{n}(RGC_{i,t} + IEM_{i,t} + CPI_{i,t} + EPR_{i,t})/4 \quad \text{(GMI Formula 10)}$$

Where:

- $ES_{i,t}$ = Economic Stability of each country at a given time t.
- $RGC_{i,t}$ = Real GDP per Capita of each country at a given time t.
- $IEM_{i,t}$ = Industry Employment of each country at a given time t.

- $CPI_{i,t}$ = Consumer Price Index of each country at a given time t, and the local Consumer Price Index can be directly utilized.
- $EPR_{i,t}$ = Employment Rate of each country at a given time t.

3.8.2.3 Real GDP Development Estimation

Real GDP Development is to measure the real economic growth in one country. Its GDP (from one period to another period) was adjusted for domestic inflation or deflation. Real GDP Development includes the following four sub-pillars:

- Consumption
- Investment
- Government Spending
- National Exports and Imports

Real GDP Development is calculated as the following:

$$RD_{i,t} = \frac{1}{n}\sum_{i=1}^{n}(CSM_{i,t} + IVT_{i,t} + GMS_{i,t} + NEI_{i,t})/4 \quad \text{(GMI Formula 11)}$$

Where:

- $RD_{i,t}$ = Real GDP Development of each country at a given time t.
- $CSM_{i,t}$ = Consumption of each country at a given time t.
- $IVT_{i,t}$ = Investment of each country at a given time t.
- $GMS_{i,t}$ = Government Spending of each country at a given time t.
- $NEI_{i,t}$ = National Exports and Imports of each country at a given time t.

3.8.2.4 Economy Operation Estimation

Economy Operation means the economic conditions where the international business organizations operate inside one county. Economy Operation includes following four sub-pillars:

- Tariff & Non-tariff Barriers
- Commodity Price
- Inflation Rate
- Corporation Tax Rate
- National Cyber Security

Economy Operation is calculated as the following:

$$EO_{i,t} = \frac{1}{n}\sum_{i=1}^{n}(TNB_{i,t} + CMP_{i,t} + IFR_{i,t} + CTR_{i,t} + NCS_{i,t})/5 \quad \text{(GMI Formula 12)}$$

Where,

- $EO_{i,t}$ = Economy Operation of each country at a given time t.
- $TNB_{i,t}$ = Tariff & Nontariff Barriers of each country at a given time t.
- $CMP_{i,t}$ = Commodity Price of each country at a given time t.
- $IFR_{i,t}$ = Inflation Rate of each country at a given time t.
- $CTR_{i,t}$ = Corporation Tax Rate of each country at a given time t.
- $NCS_{i,t}$ = National Cyber Security of each country at a given time t.

3.8.2.5 Labor Market Estimation

Labor Market, or job market, refers to the supply / demand for labor interacting between employees and employers. It is a major component of any economy. Cheap but skilled

labors can provide more values for the multinational companies. Labor Market includes following four sub-pillars:

- Unemployment Rate
- Job Creation
- Labor Output
- Level of Wage

Labor Market is calculated as the following:

$$LM_{i,t} = \frac{1}{n}\sum_{i=1}^{n}(UMR_{i,t} + JBC_{i,t} + LBO_{i,t} + LLW_{i,t})/4 \quad \text{(GMI Formula 13)}$$

Where,

- $LM_{i,t}$ = Labor Market of each country at a given time t.
- $UMR_{i,t}$ = Unemployment Rate of each country at a given time t.
- $JBC_{i,t}$= Job Creation of each country at a given time t.
- $LBO_{i,t}$ = Labor Output of each country at a given time t.
- $LLW_{i,t}$= Level of Wage of each country at a given time t.

3.8.3 Geopolitical Confidence Index Calculation

Geopolitical Confidence Index, as explained in Section 1.2 (Explanation of Geodemocracy Theory), is based on the existing rule-based international order. It reflects the relationship of that designated country with US, and is described as percentage, from 0% ~ 100%. For example, Canada, being a member of the Five Eyes nations, its Geopolitical Confidence Index is 100% now. if war happens between US and any designated country, its Geopolitical Confidence Index is set to 0%.

Geopolitical Confidence Index is a dynamic indicator (which can be changed when time changes), and can be based on any international order.

3.8.4 GMI of Canada

Canada, being a member of G7, is the role model of full democracy. Its Geodemocracy Index appraisal process can be an exact guidance for other Western nations or other similar countries. In addition, as a member of the Five Eyes nations (US, the United Kingdom (UK), Australia, New Zealand, and Canada), in most of the time Canada and US are in a linked honeymoon.

The Geopolitical Confidence Index of Canada is 100%, The estimated Geodemocracy Index of Canada keeps quite high and Canada is classified as Max class (the best place for international investment, global sourcing, etc.).

According to World Bank (Worldbank.org, 2010), Canada GDP grows excellent in the past 60 years (remained as the tenth-largest economy in the world in most of the time).

According to Organisation for Economic Co-operation and Development (OECD), Canada is the 3rd Foreign Direct Investment (FDI) recipient in 2021 around the world (www.oecd.org, n.d.), only staying behind US and China.

3.8.5 GMI of Russia

Russia, crossing Eastern Europe and Northern Asia, is another model for Geodemocracy Index appraisal. Russia is the world's 11th largest country (World Bank, 2020) by nominal GDP and member of WTO (from August 2012), with flawed democracy (authoritarian coexisted with vulnerable democracy).

Geodemocracy Index of Russia can be referred by many Central and Eastern Europe countries.

The Geodemocracy Index of Russia is dominantly determined by the Geopolitical Confidence Index, which changed drastically according to the relationship between US and Russia.

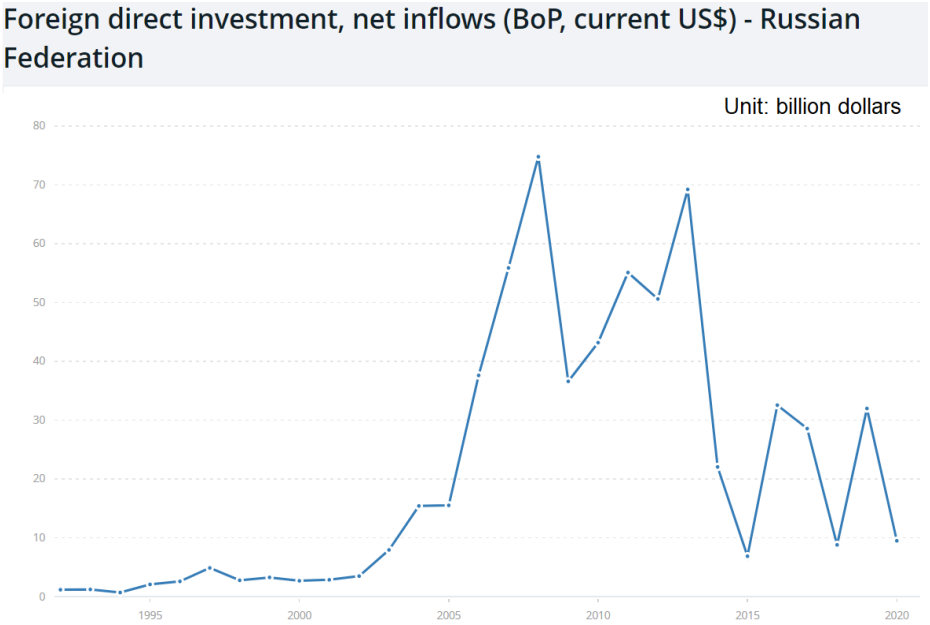

Figure 16 - FDI Inflows to Russia from 1992 to 2020 (World Bank, 2020)

The major stages are listed as the following:

- **Stage 1** - Geodemocracy Index of Russia before 1991

  This is a conflict time between US and Russia (former Soviet Union) because of Cold War, FDI Inflows to Russia before 1991 is nearly zero (data.worldbank.org, n.d.). The Geopolitical Confidence Index is very low, with poor Politics Risk Index and poor Economy Risk Index, the estimated Geodemocracy Index of Russia before 1991 is quite low and Russia is classified as Minor Class, therefore investing in Russia is highly risky.

- Stage 2 - Geodemocracy Index of Russia between1991 and 2021

With the Dissolution of Soviet Union (December 26, 1991), US and Russia were in a honeymoon.

The Geopolitical Confidence Index is 100%, The estimated Geodemocracy Index of Russia is quite high and Russia is classified as Major Class, foreign investment and international business ran into Russia. According to Organisation for Economic Co-operation and Development (OECD), in 2021 (just before Ukraine Ware) Russia is the 7th FDI recipient around the world (www.oecd.org, n.d.).

- Stage 3 - Geodemocracy Index of Russia in 2023

  Currently (at the time of writing of this dissertation) Ukraine War is ongoing between Russian and Ukraine, which was launched by Russia in February 2022.

  Ukraine was officially aided by Western nations leading by US, therefore, this is a conflict time between US and Russia (even these two parties do not fight face-to-face directly at the battle filed). Both GCI and GMI of Russia are quite low, hence Russia is classified as Minor Class. After 30 years (from 1991), planning a investment in Russia becomes highly risky again.

3.8.6 GMI of China

China (or, the People's Republic of China) is another typical model for Geodemocracy Index appraisal, who has a combined economy (market economy functions well in China), and an underdeveloped democracy (authoritarian coexisted with vulnerable

democracy). Geodemocracy Index of China can be referred by a lot of developing countries and underdeveloped countries.

The Geodemocracy Index of China is dominantly determined by the Geopolitical Confidence Index, which changed drastically according to the relationship between US and China.

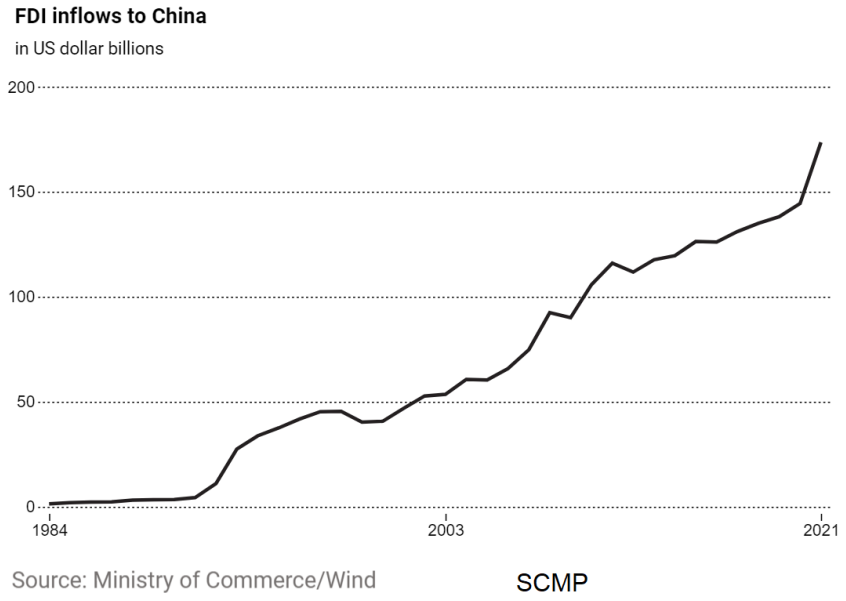

Figure 17 - FDI Inflows to China from 1984 to 2021 (World Bank, 2021)

The major stages are listed as the following:

- **Stage 1 - Geodemocracy Index of China before 1971**

  This is a conflict time between China and US, the FDI inflow into China before 1984 is around zero. The Geopolitical Confidence Index is very low (say around 30%), with poor Politics Risk Index and poor Economy Risk Index, the estimated Geodemocracy Index of China before 1971 is very low, so China is classified as Minor class and there is no doubt investing in China is highly risky.

- **Stage 2 - Geodemocracy Index of China between 1972 and 1978**

In February 1972 American president Nixon visited China, the Peace Ark of US-China relationship was ready to embark. But geopolitical situation is not with big change, the Geopolitical Confidence Index remained low, with poor Politics Risk Index and poor Economy Risk Index, so China is classified as Minor class and investing in China is highly risky.

- **Stage 3 - Geodemocracy Index of China between 1979 and 2021**

  This is the honeymoon time for China and US.

  Firstly, on December 18, 1978, China launched the Chinese economic reform (or reform and opening-up).

  Secondly, on January 01, 1979, US established diplomatic relations with China and recognized it as the sole legitimate government of China.

  Thirdly, on December 01, 2001, China officially joined World Trade Organization (WTO).

  All of these milestones set off a chain reaction, foreign investment and international business ran into China. According to (South China Morning Post, 2022), Foreign Direct Investment (FDI) in 2021 is 120 times more than that in 1984. This made China as the world-factory, and is one of the two leading engines (the other one is US) of world economy.

  The Geopolitical Confidence Index remains high, with better Politics Risk Index and Economy Risk Index, the estimated Geodemocracy Index of China at this time goes high and China is classified as Major Class. therefore, China is a good place for all business activities.

- **Stage 4 - Geodemocracy Index of China after 2021**

In January 2018, US President Donald Trump began setting tariffs and other trade barriers on China with the goal of forcing it to make changes to what the US said: unfair trade practices and intellectual property theft.

In 2022 / 2023 China followed most of the instructions originated by US during Ukraine War, and tried its best to maintain neutral position.

Although those conflicts and argues, Geopolitical Confidence Index still remains high, China is classified as Major Class, therefore China is a good place for all business activities.

- **Stage 5 - Geodemocracy Index of China during Taiwan War**

  If China and US fight against Taiwan, then China will be in the similar situation of Russia now.

  Its Geopolitical Confidence Index is 0%, hence the Geodemocracy Index of China during Taiwan War is zero and China will be classified as Minor: China will not be a safe country for FDI, global supply chain, and global sourcing. This will be tragical dilemma for the global economy.

4.0 RESULTS AND DISCUSSION

Geodemocratic studies highlight the complexity of global interactions and the multitude of factors influencing stability, security, and economic prosperity. The shifting power dynamics, regional conflicts, economic vulnerabilities, technological advancements, and environmental concerns identified by these studies provide valuable insights for shaping future policies and strategies. Understanding these results and engaging in informed discussions are crucial for navigating the challenges and opportunities of the contemporary geodemocratic landscape.

4.1 Executive Summary

The study in this dissertation firstly explains the Geodemocracy Theory, then contributes to the impact of geodemocracy on FDI, global supply chain, and global sourcing.

Geodemocracy Theory presented herein behaves like a funnel helping international business practitioners, policy makers, scholars / academic scholars, etc. By understanding and addressing geodemocratic challenges collaboratively, the correlated stakeholders can:

- Invest in resilience and adaptability,
- Enhance multilateral / multinational cooperation,
- Advance ethical technology governance. meanwhile,
- Promote Diplomacy and Conflict Resolution,
- Also meet the diversified criteria coming from politics, economy, geopolitics, and ethical mandate.

This geodemocracy study also provides a comprehensive analysis of key global geodemocratic trends, challenges, and implications for various stakeholders, including governments, businesses, and international organizations. The study examines

geodemocratic dynamics across regions / countries, with a focus on political, economic, social, and technological factors shaping international relations and security.

4.1.1 Key Findings

Geodemocracy studies encompass a wide range of issues and findings, reflecting the complex interplay between geography, politics, economics, and power on the global stage.

- Negative Impact of Geodemocratic Tensions on Trade Volume / Foreign Investment. The study found a clear negative correlation between geodemocratic tensions and trade volumes / foreign investment. among correlated countries. as geopolitical tensions increase, trade volumes foreign investment significantly decrease. The trade volume between Russia and European countries experienced a substantial decline following the onset of the Ukraine war (Statistics revealed that the total trade volume between Russia and Europe fell by approximately 40% within the first year of the conflict). Furthermore, sanctions, political instability, and territorial disputes, can undermine international investor confidence and increase perceptions of risk associated with investing in risky country (Russia, e.g.).
- Economic Resilience. Countries with diversified economies were better able to sustain trade relations despite sanctions and restrictions. China has demonstrated remarkable economic resilience in the face of sanctions and restrictions imposed by the United States, by actively diversified its trade partnerships to reduce dependence on any single market or region, and implemented various policies and initiatives attract foreign direct investment (opening-up policies, Free Trade Zone (FTZ) in Shanghai, Hainan, and more transparent & predictable legal framework for foreign investment, etc.).

- Western European countries perform much better in geodemocracy study. This is due to a combination of stable political systems, adherence to international law, strong and diversified economies, with well-developed infrastructure, advanced technology, and highly skilled workforces, and respecting sovereignty, and upholding human rights principles, and more. All of these geodemocratic factors enhance predictability and fosters confidence among international investors and global trading partners.
- Economic Interdependence. The study underscores the interconnected nature of the global economy and the increasing economic interdependence among nations. Trade relationships, supply chains, and investment flows are crucial factors shaping geopolitical dynamics, leading to both cooperation and competition among states.
- Technological Competition. The study highlights the growing importance of technology, with countries vying for dominance in areas such as artificial intelligence, cybersecurity, and 5G infrastructure. Technological competition has implications for national security, economic development, and global influence. In addition, exploration of technological innovations could shape the future of the global supply chain, such as blockchain for transparent and secure transactions, and artificial intelligence (AI) for predictive analytics and optimization.
- Vulnerabilities and Disruptions. Identification of vulnerabilities and common disruptions within the global supply chain, such as natural disasters, geopolitical tensions, trade disputes, and pandemics. Analysis of how disruptions in one region or sector can have cascading effects across the entire supply chain, highlighting interconnectedness and dependencies.

- Strategic Sourcing and Supplier Diversity. Analysis of strategic sourcing strategies, including make-or-buy decisions, single vs. multiple sourcing, and strategic supplier partnerships, to optimize supply chain performance and mitigate risks. Assessment of supplier diversity initiatives and strategies to promote inclusion, innovation, and resilience in global sourcing networks.

4.1.2 Implications from Geodemocracy Study

- Policy Adjustments: Policymakers need to adapt to the changing geopolitical landscape by formulating flexible and nuanced foreign policies that account for the rise of new powers, shifting alliances, and emerging threats. A proactive approach to diplomacy and strategic engagement is essential to safeguard national interests and promote international cooperation.
- Risk Management: Businesses operating in geopolitically sensitive regions or industries must assess and mitigate geopolitical risks effectively. This may involve diversifying supply chains, securing critical infrastructure, and staying abreast of geopolitical developments to anticipate potential disruptions.
- Multilateral Cooperation: The study underscores the importance of multilateral cooperation and diplomacy in addressing global challenges such as climate change, pandemics, and terrorism. Strengthening international institutions and fostering dialogue among nations is essential to find collective solutions to shared problems.
- Innovation and Resilience: In an increasingly uncertain geopolitical environment, fostering innovation and building resilience is critical for both states and businesses. Investing in research and development, education, and infrastructure can enhance competitiveness and mitigate vulnerabilities to geopolitical shocks.

Overall, the key findings and implications of the geodemocracy study highlight the complex interplay between geopolitics, economics, and technology in shaping the contemporary world order. Understanding these dynamics is crucial for policymakers, businesses, and other stakeholders to navigate geopolitical challenges and capitalize on emerging opportunities.

4.1.3 Theoretical Framework

The theoretical framework in a geodemocracy study provides the conceptual underpinning and structure for understanding, analyzing, and interpreting geodemocratic phenomena. It encompasses theories, concepts, and methodologies that guide the research process and shape the study's objectives, hypotheses, and findings:

- Geopolitics Theory. Geopolitics theory provides insights into the interaction between geography, power, and politics on the global stage. Classical geopolitical theories, emphasize the significance of geographical factors, such as land, sea, and resources, in shaping geopolitical dynamics. Contemporary geopolitical theories may focus on issues such as globalization, security, regionalism, and interdependence.
- International Relations Theory. International relations theories offer perspectives on state behavior, interstate relations, and global governance. Realism, liberalism, constructivism, and other schools of thought provide theoretical frameworks for understanding power dynamics, cooperation, conflict resolution, and state sovereignty in the international system. These theories inform the analysis of geopolitical actors, alliances, institutions, and norms.
- Strategic Studies. Strategic studies frameworks focus on military, security, and defense-related aspects of geopolitics. They analyze strategic doctrines,

military capabilities, deterrence strategies, and security threats in different geopolitical contexts. Strategic studies theories inform discussions on national security policies, defense strategies, arms races, and geopolitical rivalries.

- Geoeconomics and Political Economy. Geoeconomic and political economy perspectives examine the intersection of economics and geopolitics. They analyze how economic factors, such as trade, investment, energy resources, and technological innovation, influence geopolitical dynamics and vice versa. Geoeconomic theories inform discussions on economic statecraft, sanctions, trade wars, and the geopolitics of resources.
- Regional and Global Governance Frameworks. Regional and global governance frameworks focus on institutional arrangements, regimes, and mechanisms for managing geopolitical issues at different levels. They analyze the roles of international organizations, regional blocs, treaties, and multilateral agreements in addressing security, development, environmental, and humanitarian challenges. These frameworks inform discussions on collective security, conflict resolution, and global governance reform.
- Critical Geopolitics and Postcolonial Theory. Critical geopolitics and postcolonial theory provide critical perspectives on dominant narratives, power structures, and representations in geopolitics. They analyze how discourses, identities, and cultural practices shape geopolitical imaginations, territorial claims, and geopolitical hierarchies. Critical geopolitics theories emphasize the importance of deconstructing hegemonic narratives, challenging geopolitical binaries, and promoting pluralistic and inclusive approaches to geopolitical analysis.

- Methodological Approaches. Methodological approaches in geopolitical studies include qualitative, quantitative, and mixed methods research designs. Qualitative methods, such as case studies, interviews, and content analysis, help explore complex geopolitical phenomena, perceptions, and narratives. Quantitative methods, such as statistical analysis and GIS mapping, provide empirical insights into geopolitical trends, patterns, and correlations. Mixed methods approaches combine qualitative and quantitative techniques to enhance the comprehensiveness and validity of geopolitical research.

By integrating these theoretical frameworks and methodological approaches, a geodemocracy study can develop a comprehensive understanding of geodemocratic issues, dynamics, and implications at local, regional, and global levels.

4.2 Results

The results coming from Geodemocracy study are multifaceted and encompass various outcomes that contribute to understanding, managing, and navigating the complexities of international relations. Some key results of Geodemocracy studies include:

- Insights into Power Dynamics: Geodemocracy studies provide insights into the distribution of power among countries / regions and the factors that influence their behavior. By analyzing Geodemocracy dynamics, scholars, policymakers, and international business practitioners gain a deeper understanding of how power is exercised, contested, and transformed in the international system.
- Understanding of Regional Dynamics: Geodemocracy studies help elucidate the dynamics of specific regions, including the historical, cultural, and strategic factors that shape interactions among states and non-state actors. This

understanding is crucial for addressing regional conflicts, fostering cooperation, and promoting stability.

- Identification of Strategic Interests: Geodemocracy analysis helps identify the strategic interests and priorities of countries / regions and other actors in the international arena. By examining factors such as geography, resources, and security concerns, analysts can assess the combined environment of designated countries or regions then examine current business activities, or guide the future developments.
- Assessment of Risks and Opportunities: Geodemocracy studies enable the assessment of risks and opportunities in the international environment. By analyzing Geodemocracy factors such as political instability, economic trends, and technological advancements, decision-makers can identify potential threats to security and prosperity, as well as opportunities for cooperation and business growth.
- Development of Policy Recommendations: Geodemocracy studies inform the development of policy recommendations and strategies for addressing global challenges. By providing insights into the root causes of conflicts, tensions, and crises, Geodemocracy analysis helps policymakers design more effective responses and interventions.
- Enhancement of Strategic Planning: Geodemocracy studies enhance strategic planning and decision-making processes at various levels, from national security to business operations. By considering Geodemocracy factors in strategic assessments, international organizations, especially manufacturing companies (e.g. Apple (US), Tesla (US), BASF (Germany)), can better anticipate risks, identify opportunities, and adapt to changing circumstances.

Overall, Geodemocracy studies can help optimize company business plan, ameliorate investment strategy, and balance risk and return while aligning with the pre-set financial goals and risk tolerance. The well calculated Geodemocracy studies also provide valuable insights for addressing global challenges and advancing shared interests.

4.2.1 General Results

Geodemocracy theory is generally developed to guide the International Business Society (IBS) to execute global business activities in a smart way of risk aversion. Before the creation of Geodemocracy theory, there is no standardized or no clear quantitative way to analyze risks combined with politics, economy, and geopolitics. Researchers and business practitioners have not reached a common consensus on the relations among these variables. The research works and detailed calculations in the dissertation filled this analytical gap. To some extent, Geodemocracy theory also meets the public commitment of ethical mandate (Clark and Monk, 2009), socially responsible investment (SRI) (Jansson and Biel, 2011), and corporate social responsibility (CSR) (McWilliams and Siegel, 2000; Kim, 2017). Through the explanation and discussion within the aforementioned sections we replied to the research questions:

- What is Geodemocracy theory?

  We explained what Geodemocracy theory is – it is a dynamic assessment tool based on politics (democracy), economy, and geopolitics which can facilitate the decision making on FDI, global supply chain, and global sourcing. We also introduced the detailed arithmetic formulas. By conducting Geodemocracy Index (GMI), clients / customers can mitigate the social, economical, and geopolitical uncertainties / hazards coming from a designated country, and distinguish the best countries, better countries, not-recommended countries, and the worst countries

prior to executing global business activities, hence successfully manage potential risks and improve business profitability.

- What is the impact of the changing paradigm of Geodemocracy on FDI, global supply chain and global sourcing?

  We explained how Geodemocracy Index impacts FDI, global supply chain and global sourcing in details. By applying Geodemocracy theory, clients / customers can perform the GMI analysis to meet their own criteria on FDI, global supply chain, and global sourcing, either from economic side, or democratic side, or from geopolitical side, or from combined sides.

In summary, by calculating GMI of a designated country / region:

- Conduct a better strategic planning which enables business organizations to foresee future uncertainties / risks, being proactive instead of being reactive.
- Help the international business cooperations optimize their global supply chain hence advance their international supply chain management and supply chain risk management.
- Help decisionmakers / policymakers implement a successful global sourcing strategy hence retain the lower cost benefits.
- Meet the requirements of providing data / evidences to the organization senior executives for decision-making analysis.
- Meet the public commitment of ethical mandate, socially responsible investment (SRI), and corporate social responsibility (CSR).

4.2.2 Geodemocracy Index Ranking (2024)

Based on the current information of each country, Geodemocracy Index Ranking (2024) can be readily calculated (the given time is January 2024).

The following is the partial list for countries / regions worldwide (some countries are not included in this list, if their basic information cannot be easily found from World Bank, UN, WTO, or IMF, or WHO).

4.2.2.1 Max class classified countries

Max class classified counties could refer to regions known for the affluent society and lifestyle. These counties have high average incomes, highest GDP per capita, expensive real estate markets, top-tier amenities, and a reputation for luxury living. These countries are regarded as the best places for international business activities around the world.

Country	Region	Max Class Ranking
Germany	West Europe	1
Switzerland	West Europe	2
Netherlands	West Europe	3
United Kingdom	West Europe	4
Ireland	West Europe	5
Finland	West Europe	6
United States	North America	7
Sweden	West Europe	8
Austria	West Europe	9
Denmark	West Europe	10
Norway	West Europe	11
France	West Europe	12
Canada	North America	13
Australia	Oceania	14
New Zealand	Oceania	15
Italy	West Europe	16

Country	Region	Max Class Ranking
Belgium	West Europe	17

4.2.2.2 Major class classified countries

Major class classified counties typically refer to regions characterized by a predominantly middle-class population, with moderate to average income level, and high GDP per capita. These counties often offer affordable housing options, access to quality education, healthcare, and employment opportunities, making them desirable places to live for middle-class families seeking a comfortable and stable environment. These counties are the recommended places for international business activities around the world.

Country	Region	Major Class Ranking
Luxembourg	West Europe	18
Spain	West Europe	19
Singapore	Asia	20
Iceland	West Europe	21
Japan	Asia	22
Portugal	West Europe	23
Israel	Middle East	24
Czech Republic	Eastern & Central Europe	25
Cyprus	West Europe	26
Poland	Eastern & Central Europe	27
Malta	West Europe	28
Lithuania	Eastern & Central Europe	29
Romania	Eastern & Central Europe	30
Bulgaria	Eastern & Central Europe	31
Estonia	Eastern & Central Europe	32
Croatia	Eastern & Central Europe	33
Hong Kong	Asia	34

Country	Region	Major Class Ranking
South Korea	Asia	35
Slovenia	Eastern & Central Europe	36
Slovak Republic	Eastern & Central Europe	37
Greece	West Europe	38
Chile	Latin America	39
Taiwan	Asia	40
Costa Rica	Latin America	41
Latvia	Eastern & Central Europe	42
Colombia	Latin America	43
Malaysia	Asia	44

4.2.2.3 Medium class classified countries

Those countries which are not listed in Max class, Major class, and Minor class. These places are regarded as “investment with caution”. Due to the developmental imbalance, there shall always be some better developed cities / area in these countries where MNEs and MNCs would explore business and market opportunities. Investing in Medium class countries is at the discretion of the investors, and a more detailed risk management / analysis (based on these better developed cities / areas in each country) shall be finalized.

Country	Region	Medium Class Ranking
Albania	Eastern & Central Europe	45
Hungary	Eastern & Central Europe	46
Ukraine	Eastern & Central Europe	47
Peru	Latin America	48
Brazil	Latin America	49
Mexico	Latin America	50
Dominican Republic	Latin America	51
Armenia	Eastern & Central Europe	52

Country	Region	Medium Class Ranking
Türkiye	West Europe	53
Thailand	Asia	54
Argentina	Latin America	55
Kazakhstan	Eastern & Central Europe	56
Philippines	Asia	57
Azerbaijan	Eastern & Central Europe	58
Panama	Latin America	59
Qatar	Middle East	60
Uruguay	Latin America	61
United Arab Emirates	Middle East	62
Jamaica	Latin America	63
Ecuador	Latin America	64
Serbia	Eastern & Central Europe	65
Trinidad and Tobago	Latin America	66
Georgia	Eastern & Central Europe	67
Indonesia	Asia	68
India	Asia	69
Guyana	Latin America	70
Guatemala	Latin America	71
Bolivia	Latin America	72
Honduras	Latin America	73
Oman	Middle East	74
Bahrain	Middle East	75
Saudi Arabia	Middle East	76
Uzbekistan	Eastern & Central Europe	77
China	Asia	78
Mongolia	Asia	79
Tajikistan	Eastern & Central Europe	80
Paraguay	Latin America	81

Country	Region	Medium Class Ranking
Vietnam	Asia	82
Kuwait	Middle East	83
South Africa	Africa	84
Suriname	Latin America	85
Belize	Latin America	86
Morocco	Africa	87
Turkmenistan	Eastern & Central Europe	88
Tunisia	Africa	89
Cambodia	Asia	90
Nepal	Asia	91
Jordan	Middle East	92
Lao PDR	Asia	93
Sri Lanka	Asia	94
Moldova	Eastern & Central Europe	95
Bangladesh	Asia	96
Botswana	Africa	97
Fiji	Oceania	98
Ethiopia	Africa	99

4.2.2.4 Minor class classified countries

Minor class classified counties may have lower average income levels, fewer resources, and higher levels of poverty. These areas often face socioeconomic challenges such as limited access to education, healthcare, and employment opportunities.

These countries are generally not recommended to international business society (IBS) because of facing high potential uncertainties and risks for FDI, global sourcing and global supply chain.

Country	Region	Minor Class Ranking
Mali	Africa	100
Nicaragua	Latin America	101
Tanzania	Africa	102
Cameroon	Africa	103
Solomon Islands	Oceania	104
Ghana	Africa	105
Mozambique	Africa	106
Haiti	Latin America	107
Madagascar	Africa	108
Zambia	Africa	109
Togo	Africa	110
Pakistan	Asia	111
Uganda	Africa	112
Chad	Africa	113
Algeria	Africa	114
Kyrgyz Republic	Eastern & Central Europe	115
Kenya	Africa	116
Montenegro	Eastern & Central Europe	117
Rwanda	Africa	118
Namibia	Africa	119
North Macedonia	Eastern & Central Europe	120
Angola	Africa	121
Guinea	Africa	122
El Salvador	Latin America	123
Egypt	Middle East	124
Bosnia and Herzegovina	Eastern & Central Europe	125
Guinea-Bissau	Africa	126
Zimbabwe	Africa	127

Country	Region	Minor Class Ranking
Mauritius	Africa	128
Malawi	Africa	129
Gambia	Africa	130
Venezuela	Latin America	131
Lebanon	Middle East	132
Nigeria	Africa	133
Belarus	Eastern & Central Europe	134
Timor-Leste	Asia	135
Iraq	Middle East	136
Burkina Faso	Africa	137
Sudan	Africa	138
Niger	Africa	139
Somalia	Africa	140
Vanuatu	Oceania	141
Djibouti	Africa	142
Senegal	Africa	143
Lesotho	Africa	144
Benin	Africa	145
Papua New Guinea	Oceania	146
Central African Republic	Africa	147
Comoros	Africa	148
Mauritania	Africa	149
Gabon	Africa	150
Yemen	Middle East	151
Burundi	Africa	152
Equatorial Guinea	Africa	153
Bhutan	Asia	154
Sierra Leone	Africa	155
Myanmar	Asia	156

Country	Region	Minor Class Ranking
Eritrea	Africa	157
Syrian Arab Republic	Middle East	158
Democratic. Rep. Congo	Africa	159
Iran	Middle East	160
Afghanistan	Asia	161
Libya	Middle East	162
North Korea	Asia	163
Cuba	Latin America	164
Russia	Eastern & Central Europe	165

4.3 Discussions - General

Geodemocracy studies extensively delve into the complex interplay among three major pillars (democracy, economy, and geopolitics) to understand how these factors shape the behavior of countries, regions, and the global system as a whole. At its core, Geodemocracy analysis aims to uncover the underlying dynamics that influence decision-making processes at various levels, from local, domestic to international.

- One fundamental aspect of Geodemocracy study is the examination of territoriality and borders. Understanding how borders are defined, contested, and managed is crucial for comprehending the relationships among countries and the potential for conflicts or cooperation. Additionally, Geodemocracy analysis considers the significance of natural resources, transportation routes, and strategic locations in shaping the interests and strategies of states.
- Geodemocracy also involves the study of power dynamics and alliances. This includes assessing the distribution of power among states, the emergence of hegemonic powers, and the formation of alliances and partnerships to pursue

common objectives or counterbalance perceived threats. Moreover, Geodemocracy analysis examines the role of international institutions and norms in shaping behavior and regulating interactions between states.

- Economic factors play a significant role in Geodemocracy studies as well. The distribution of wealth, trade patterns, and economic dependencies influence state behavior and can serve as both sources of cooperation and sources of tension. Additionally, the rise of economic globalization has blurred the lines between domestic and international affairs, leading to new challenges and opportunities for states.
- Finally, Geodemocracy studies often explore the role of ideology, culture, and identity in shaping perceptions and influencing international relations. Understanding the values, beliefs, and narratives that underpin state behavior is essential for anticipating actions and reactions in the Geodemocracy arena.

Overall, Geodemocracy studies offer a multidisciplinary framework for analyzing the complexities of international relations and understanding the forces that drive political, economic, and social developments on a global scale.

4.4 Discussion - Current Geodemocratic Trends

The geodemocratic landscape in 2024 is shaped by several dynamic trends that reflect shifts in power, alliances, and global challenges. These trends are influenced by economic developments, technological advancements, military strategies, and social changes.

4.4.1 Fall of China

China has long been a key destination for foreign investment due to its massive market size, rapid economic growth, and integration into the global economy. However, in recent years, there have been increasing concerns about a potential collapse in foreign investment in China. In the 2024 Geodemocracy Index, China is only ranked 78th globally

as the Medium Class. Several factors contribute to this phenomenon, ranging from economic and regulatory changes to geodemocratic tensions, and market dynamics, etc.

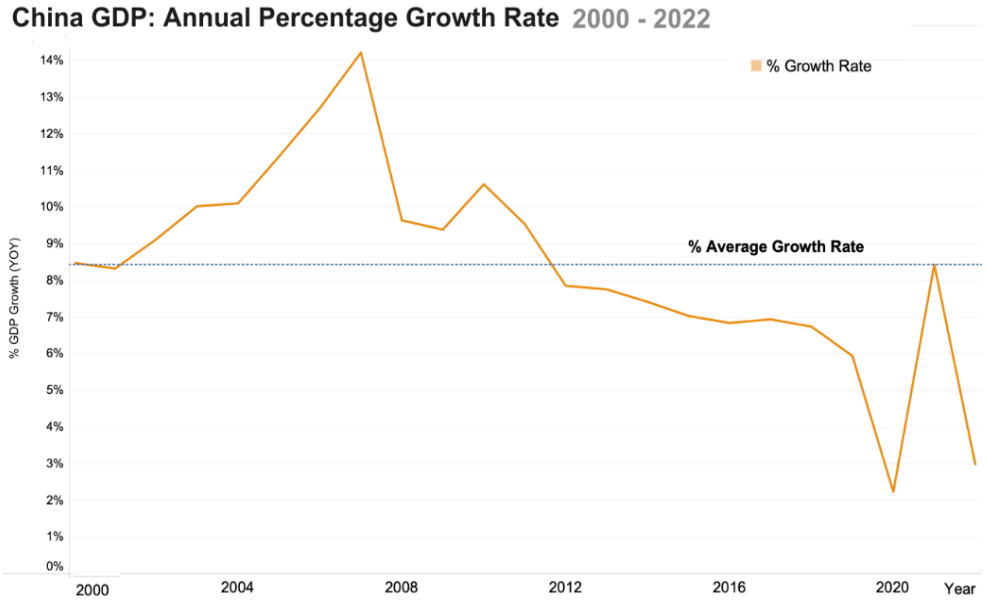

Figure 18 - China Average Growth Rate (Source from EconoFact.org)

- Economic Slowdown. China's economic growth has been decelerating, with GDP growth rates slowing (Fang, 2023) from the double digits of the early 2000s to more moderate levels in recent years, and will continue to slow down in 2024 (Jung, 2024; Chor and Li, 2024). Slower growth can deter foreign investors seeking high returns on their investments. To attract and retain foreign investment, China strived to maintain stable and robust economic growth, and kept pressures to more stimulus.
- Regulatory Environment. China's regulatory landscape is often perceived as unpredictable and opaque. Increased regulatory scrutiny, new laws targeting foreign companies, and a tightening of control over technology and data have made the investment climate more challenging. As pinpointed by United States Department of State (2023) that “China remains a relatively restrictive

environment for foreign investors due, in part, to prohibitions on investment in key sectors and unpredictable regulatory enforcement".

- US-China Trade Tensions. The trade war initiated during the Trump administration led to tariffs and increased scrutiny of Chinese investments. Although there have been phases of negotiation and temporary truces, ongoing tensions contribute to uncertainty for foreign investors. Up to 2022, US exports to China fell by 26.3% while China exports to US declined by 8.5% (Gorman, 2022). When the White House changed its national strategy with China from Engagement to decoupling (or de-risk), economist Stephen Roach (2024) (Fortune, n.d.) thought China would have a gloomy economic future and these two superpowers headed "into a forever trade war".
- Supply Chain Diversification. The COVID-19 pandemic exposed vulnerabilities in global supply chains, leading many companies to consider diversifying their manufacturing bases away from China. The "China Plus One" strategy (Basu and Ray, 2022), where companies seek additional production locations outside China, has gained traction. Bloomberg (News, 2023) reported President Joe Biden had adopted a two-prolonged approach to constrain China's semiconductor industry advance. In May 2024 Bloomberg (www.bloomberg.com, n.d.) announced the White House's ambitious strategy to "secure more of the semiconductor supply chain is paying off".
- Geopolitical Risks. Increasing geopolitical tensions, particularly between China and Western countries, create an environment of uncertainty. Issues such as human rights concerns, the situation in Hong Kong, and military posturing in the South China Sea exacerbate these risks.

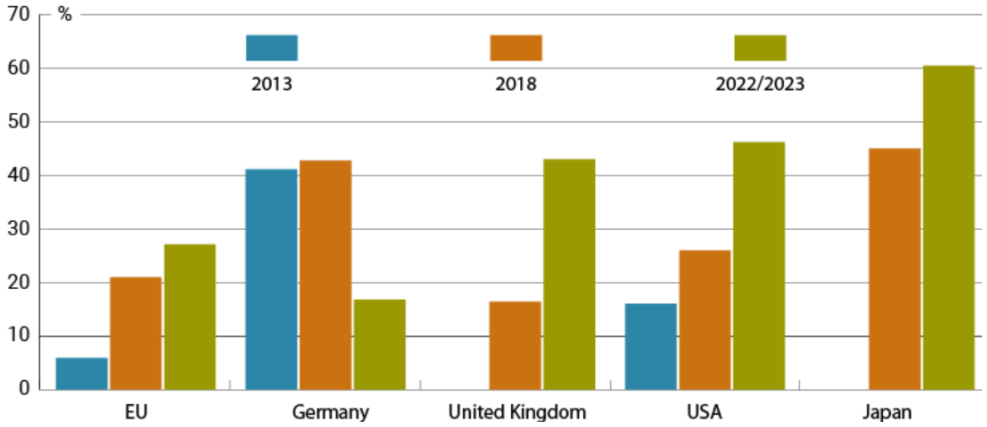

Figure 19 - Companies not planed to invest in China (Kratz and Boullenois, 2023)

- Capital Controls and Financial Risks. China's stringent capital controls and concerns over financial stability (Pan et al., 2021), including rising debt levels and potential property market bubbles, can deter foreign investment. Investors worry about the safety and ease of repatriating profits. A recent survey indicated more and more foreign companies (mostly from EU, UK, US, Germany and Japan) were not interested to increase investment in China due to the increasingly potential risks and less profit margin (Kratz and Boullenois, 2023) in the next one or two years (OSW Centre for Eastern Studies, 2024). “Staying in China, but not expanding” is the strategy that most of the US investors executed as revealed by the survey from American Chamber of Commerce in China (Cheng, 2024).
- More Stringent State Secrets Law (SSL). The Chinese newly revised SSL will be effective from May 01, 2024, and Hong Kong’s new security law (also called Article 23) will come into effect on March 23, 2024. These security laws have raised significant concerns among foreign businesses, international investors, and foreign governments. The Secretary of State Antony Blinken (China, 2024) announced that “This law will have broad implications for the people in Hong Kong as well as U.S. citizens and companies operating there and threatens to

further undermine the rights and freedoms of people in Hong Kong". According to the analysis from Nikkei Asia (Nikkei Asia, n.d.), the 2024 Foreign direct investment (FDI) in China falls to 30-year low, which sparked "a sign that foreign corporations are leaving China due to tougher crackdowns on spying and U.S. sanctions" (Nikkei Asia, n.d.).

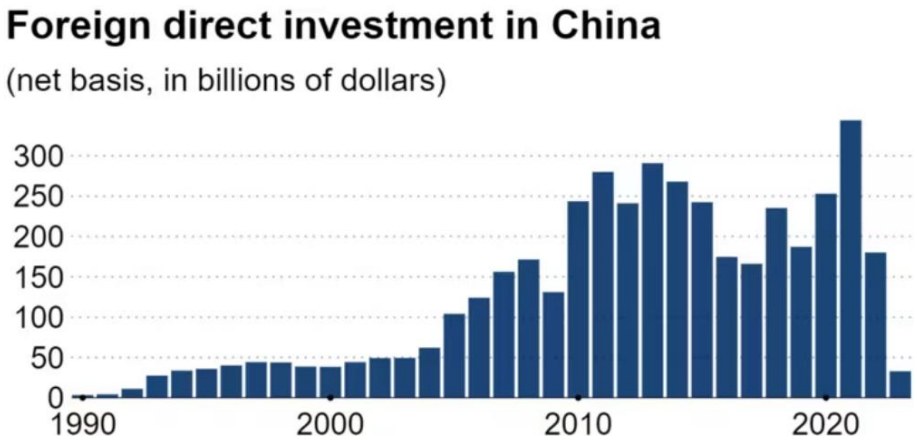

Figure 20 - FDI in China in the Past 30 years (Nikkei Asia, n.d.)

- Domestic Competition and Innovation. Chinese companies have become more competitive and innovative, reducing the need for foreign technology and investment. The rise of local champions in sectors like technology, finance, and manufacturing can limit opportunities for foreign firms.

4.4.2 Rise of India

India's rise in the geodemocratic landscape is a significant development that reflects its economic potential, robust democratic setup and governance, and proactive diplomatic engagements, especially after US (along with the Western Society) "failed to turn Beijing into a responsible stakeholder" (Taffer, 2024). As the world's largest democracy and a rapidly developing economy, India is increasingly becoming a key player in regional and global affairs. In the 2024 Geodemocracy Index, India is ranked 69th globally as the Medium Class, with a higher ranking than China.

- Rapid Economic Development. India has experienced robust economic growth over the past few decades (Pradhan et al., 2021), emerging as one of the world's largest economies. Its GDP growth, driven by a burgeoning middle class, technological innovation, and a young population, positions it as a major economic power.
- Market Size. With a population of over 1.4 billion, India represents a vast and growing market (Wilson and Keim, 2006) for goods and services. This demographic dividend is a significant attraction for foreign investment and international businesses.
- Technological Advancements. India is a global leader in information technology and software services (Upadhya, 2020). Cities like Bangalore and Hyderabad have become tech hubs, contributing to India's reputation as an innovation-driven economy.
- Strategic Location. India's geographical position, straddling the Indian Ocean, provides it with strategic maritime advantages. It has a significant influence over crucial sea lanes and chokepoints that are vital for global trade.
- Robust Democratic Setup and Governance. India’s Constitution, adopted in 1950, is one of the longest and most detailed in the world (Backman, 2004). It establishes the country as a sovereign, socialist, secular, and democratic republic, laying down the principles of justice, liberty, equality, and fraternity. India follows a parliamentary system of governance, with a bicameral legislature comprising the Lok Sabha (House of the People) and the Rajya Sabha (Council of States). The Prime Minister, elected from the Lok Sabha, is the head of government, while the President is the ceremonial head of state.

- Quad Alliance. India is a key member of the Quadrilateral Security Dialogue (Quad), along with the United States, Japan, and Australia. This strategic alliance focuses on ensuring a free and open Indo-Pacific region and addressing shared security concerns.
- BRICS and SCO. India is an active participant in multilateral organizations like BRICS (Brazil, Russia, India, China, South Africa) and the Shanghai Cooperation Organization (SCO), which are platforms for collaboration on economic and security issues.

4.4.3 Collapse of Russia

The potential collapse of Russia is a topic of considerable debate among political analysts and academic researchers. The war in Ukraine has significantly impacted Russia (Yudin, 2022), exacerbating existing vulnerabilities and creating new challenges that could contribute to a potential collapse. After a series of comprehensive study, Alexander Motyl (2023), a professor of political science at Professor Rutgers University (US), declared that “It’s High Time to prepare for Russia’s Collapse”. In the 2024 Geodemocracy Index, Russia is ranked the last one globally as the Minor Class. Here's a detailed analysis of how the conflict could lead to such an outcome, considering economic, political, social, and geopolitical factors.

- Sanctions and Isolation. Western countries have imposed severe economic sanctions on Russia in response to its invasion of Ukraine (Hosoe, 2023; Schott, 2023). These sanctions target key sectors such as finance, energy, and technology, cutting off Russia from international markets and capital.
- Energy Export Decline. Europe, previously a major consumer of Russian energy, is reducing its dependency on Russian oil and gas. The decline in energy exports

diminishes Russia's primary revenue source, leading to budget deficits and economic contraction.

- Industrial and Technological Isolation. Sanctions on technology imports hamper Russia's industrial and technological sectors. Restrictions on critical components and software impact manufacturing, aerospace, and defense industries, hindering economic modernization and innovation.
- Inflation and Currency Devaluation. Sanctions and the war's economic disruption have led to inflation and a decline in the value of the ruble. Rising prices for goods and services erode living standards and create economic hardship for the general population.
- Authoritarian Rule and Legitimacy. The war has strengthened President Vladimir Putin's grip on power but has also heightened domestic repression. The crackdown on dissent and the suppression of opposition figures could lead to increased political instability if the war becomes prolonged or unpopular. On March 17, 2023, the International Criminal Court (ICC) issued Warrant of Arrest against Russia president Vladimir Putin (Sarkin, 2023; Bonta, 2023).
- Public Discontent and Protests. Economic hardships and casualties from the war may fuel public discontent and protests. If the government fails to address these issues, it could face widespread civil unrest, challenging its stability and control.
- Elite Fractures. The war and its repercussions might lead to fractures within the political and business elite. Discontent among oligarchs and power brokers, especially those adversely affected by sanctions, could lead to internal power struggles and destabilize the regime.

- Humanitarian Crisis. The war has caused significant loss of life and displacement, affecting Russian soldiers and their families. The human cost of the conflict can lead to social strain and undermine public support for the government. An analysis released by New York Times stated that approximately half million solders from both Ukraine and Russia were either killed or wounded in Ukraine War (Hicks and Santora, 2024). Moreover, nearly 11000 civilian casualties plus another 20000 were injured, reported by Statista Research (Statista Research Department, 2024), and over 6 million Ukrainian refugees (www.unrefugees.org, n.d.).
- Demographic Challenges. Russia's already declining population is further stressed by the war. In early 2024 Bloomberg (www.bloomberg.com, n.d.) reported "Russia population fell by around 1.7 million people in the five years from January 2019 to January 2024, to 146 million". Young men being conscripted or killed in the conflict exacerbate demographic challenges, impacting long-term economic and social stability.
- Public Services and Infrastructure. Economic decline and redirected resources towards the war effort strain public services and infrastructure. Reduced investment in healthcare, education, and social welfare could lead to deteriorating living conditions and public discontent.
- International Isolation. Russia's aggressive actions have led to international isolation, reducing its influence in global affairs. Loss of alliances and partnerships limits its ability to maneuver diplomatically and economically. With an extensive analysis how Ukraine War impacted Russia, Roth (2023) concluded that "Russia has lost its soft power".

- Regional Instability. The war exacerbates regional instability, with potential spillover effects in neighboring countries. This instability could strain Russia's borders and create additional security challenges.

While the collapse of Russia is not inevitable, the convergence of economic, political, social, and geopolitical pressures presents significant risks to its stability. Addressing these challenges requires comprehensive reforms, diversification of the economy, and improved governance. While a total collapse is not certain, the confluence of these pressures creates a precarious situation. The followings are Potential Scenarios and Implications:

- Economic Collapse. Sustained economic decline (Liadze et al., 2023) which was driven by sanctions, reduced energy exports, and internal mismanagement, could lead to a collapse in public services and increase poverty (Baqaee et al., 2022). This economic collapse might trigger widespread social unrest and political instability.
- Political Upheaval. Growing public discontent, elite fractures, and internal power struggles could lead to political upheaval, as observed by Tatiana Stanovaya (2021) - "Russia saw extreme political upheaval" from 2020. A weakened government might face challenges in maintaining control, potentially leading to a change in leadership or regime. Charushin (2023) predicted that "Another Upheaval is on the horizon" in Russia, based on his analysis on the possibility of a political crisis unfolding caused by Ukraine War.
- Regional Fragmentation. In extreme scenarios, economic and political instability could provoke regional fragmentation. Ethnic and regional separatist movements might gain momentum, particularly in resource-rich areas like Siberia and the North Caucasus. Dyer (2023) concluded that Russia is seriously "Cornered in

Ukraine and isolated by the West", and he believed Russia was trying all measures now it could to avoid total collapse, including the recent peace negotiation with Ukraine (Roush, n.d.).

- Geopolitical Realignment. A weakened Russia could shift the balance of power in Europe and Eurasia. Regional powers like China might expand their influence, while Western countries could seek to reshape security dynamics in Eastern Europe and Central Asia. China, Kyrgyzstan, and Uzbekistan officially signed an agreement to build a key railway on June 6, 2024, after 27 years' of negotiations from 1997. This 525-kilometer-long railway will connect China and EU countries as a part of China's Belt and Road Initiative, although Russia was not enthusiastic about the railway because the entire Russia was bypassed (AsiaNews.it, n.d.), which is key sign that Russia is increasingly reliant on China (CBC, 2024) after Ukraine War. Furthermore, the newly signed China- Kyrgyzstan-Uzbekistan railway agreement is a symbolic milestone that Russia has weakened its influence in Central Asia (guillermo, 2023).

4.4.4 Dominance of the Western Countries

The Western countries, or more precisely, the core Western countries, are all classified as Max Class, ranked the top 17 counties in the 2024 Geodemocracy Index. The dominance of Western countries in global systems (economic, political, cultural, and technological, e.g.) has been a defining characteristic of modern history, and has shaped the modern world in profound ways. The prominent British economist Niall Ferguson (2021) claimed in his book "Civilization: the West and the rest" that the western countries dominated the global stage for the last 500 years and probably could do the same in the foreseeable future.

4.4.4.1 Economic Dominance

The Western countries are a primary driver or influencer of global economic activities, and It implies a significant level of economic power, control, and influence over key aspects of the global economy.

- Global Trade and Finance. Western countries, particularly the United States and members of the European Union, dominate global trade and finance. Lehne (2024) strongly believed that “EU remains the world's largest trading power”. Major financial centers like New York, London, and Frankfurt are pivotal in global markets. Western currencies, especially the US dollar and the Euro, serve as primary reserve currencies. Fortune 500 Europe 2023 revealed that London could continue to be the top leader in the worldwide big-money businesses (Fortune Europe, n.d.).
- Multinational Corporations. Many of the world’s largest multinational corporations (MNCs) are based in Western countries, influencing global supply chains, labor markets, and economic policies. These MNCs lead in sectors such as technology (Apple, Google, Microsoft, Facebook, Nvidia, e.g.), finance (Goldman Sachs, JPMorgan, e.g.), and consumer goods (Procter & Gamble, Nestle, Walmart, e.g.).
- Economic Institutions. Western countries play a dominant role in major economic institutions like the International Monetary Fund (IMF), World Bank, and World Trade Organization (WTO). Leadership positions in these organizations are often held by individuals from Western countries, reflecting their influence in global economic governance.

4.4.4.2 Political Dominance

The Western countries are a political dominance power, and pose significant influence to democratic governance, human rights, and social cohesion of global societies.

- International Organizations. Western countries are key players in international organizations such as the United Nations (UN), NATO, and the European Union (EU). They often shape the agendas and policies of these institutions. The United States, as a permanent member of the UN Security Council, wields significant influence over international security and diplomatic decisions.
- Global Policymaking. Western nations lead in setting global policies on issues like climate change, human rights, and international law. Agreements such as the Paris Climate Accord are heavily influenced by Western leadership. Through foreign aid and diplomacy, Western countries often shape the political landscapes of developing nations.

4.4.4.3 Cultural Dominance

The culture of the western countries owns influential position over other counties around the world, which is often called as cultural hegemony as proposed by Italian Marxist thinker Antonio Gramsci (Badino and Omodeo, 2021). The “Americanisation phenomenon” has been particularly prominent in the 20th and 21st centuries (Hallin and Mancini, 2004) due to the United States' status as a sole global superpower, its influential media and entertainment industries, and its dominant position in the global economy.

- Media and Entertainment. Western media, particularly from the United States (Hollywood, major news networks), has a vast global reach, shaping cultural norms, values, and perceptions worldwide. English, as a dominant global language, facilitates the spread of Western cultural products, including movies, music, literature, and news. Many scholars researched the phenomenon that “Is

the World Being Americanized by the Dominance of American Culture?" (Dębska, 2010; Carlson, 2022).

- Education and Academia. Many of the world's leading universities (Harvard, MIT, Oxford, Cambridge, e.g.) are located in Western countries, attracting students and scholars globally. This contributes to the dissemination of Western ideas and academic standards. Western educational systems and curricula often set benchmarks that other countries aspire to, and somehow in an idol worship way by other countries.

4.4.4.4 Technological Dominance

The western countries are as a leading authority or influencer in the development, deployment, and utilization of advanced technologies across various domains.

- Innovation and Research. Western countries, particularly the US, lead in technological innovation and research. Silicon Valley is a global hub for tech startups and innovation. Western nations invest heavily in research and development (R&D), producing groundbreaking advancements in fields like artificial intelligence, biotechnology, and renewable energy.
- Information Technology. Western companies like Google, Microsoft, and Apple dominate the global IT landscape, influencing how information is accessed, processed, and communicated. The development of the internet and major digital platforms originated primarily in Western countries, shaping the digital infrastructure of the modern world.

4.4.4.5 Military Dominance

The western countries, or US and EU, are as a preeminent force in military capabilities, strategies, and influence relative to other actors in the international system.

- Defense Alliances. NATO, led predominantly by Western countries, is the world's most powerful military alliance, ensuring collective security and projecting power globally. Western countries, especially the US, have advanced military technology and significant defense budgets, allowing them to maintain a global military presence. Ellis (2016) heartily demonstrated "The United States is the world's most powerful country by far", and Michael Beckley (2019) emphatically described that "US will remain the world's sole superpower" (American Enterprise Institute - AEI, n.d.).
- Global Security. Western nations play crucial roles in global security operations (Booth, 2007), peacekeeping missions, and conflict resolution efforts. Their military bases around the world enable rapid response to international crises. As of 2024, the United States Navy operates 11 active aircraft carriers, which are a central element of US naval power projection and are crucial for maintaining global maritime dominance (Baer, 1994; Smith, 2010) With no doubt, the western counties play indispensable roles in advancing global security objectives, fostering cooperation among nations, and addressing shared security threats and challenges.

4.4.5 Higher Geodemocratic Risks lead to Poverty and Social Upheaval

Geodemocratic risks refer to the potential for political instability, conflict, or other political events to negatively impact the security, economy, and overall functioning of a country (or region). Higher geodemocratic risks can have far-reaching and multifaceted consequences that affect various aspects of a country (or region).

As of June 2024 several countries like Iran, Afghanistan, Libya, North Korean, Cuba, and Russia have experienced varying degrees of conflict, wars, or tensions (although these kinds of situations may change over time).

- **Iran.** Iran faced regional tensions and conflicts in recent years, including the proxy conflicts and tensions with regional rivals, e.g. Saudi Arabia, Israel. With the recent missile attack from both sides, Cohen (2024) declared “The Iran-Israel war is just getting started”.
- **Afghanistan.** Afghanistan has faced prolonged conflict, including the presence of the Taliban insurgency and the involvement of international forces. In August 2021, the Taliban regained control of the country, leading to significant changes in governance and security dynamics.
- **Libya.** Libya has experienced instability and conflict since the overthrow of Muammar Gaddafi in 2011. The country has been divided between competing political factions and armed groups.
- **North Korea.** North Korea has been a source of regional tensions due to its nuclear weapons program and missile tests.
- **Cuba.** Cuba has faced political tensions, economic challenges, and strained relations with the United States.
- **Russia.** Russia has been involved in several conflicts and geodemocratic tensions, including its annexation of Crimea in 2014, and the ongoing Ukraine War (starting from 2022). Moreover, it has also been engaged in military intervention in Syria in support of the Assad regime.

African countries face significant development challenges. 33 of 54 countries are classified by UN as " the least developed countries" (AriseNews, 2023). As of June 2024 several African countries have been affected by conflicts and wars.

- **Democratic Republic of Congo (DRC).** The DRC has experienced protracted conflict, particularly in its eastern region, involving multiple armed groups, government forces, and regional actors.
- **South Sudan.** South Sudan has faced ongoing conflict since gaining independence in 2011, primarily between forces loyal to President Salva Kiir and those supporting opposition leader Riek Machar.
- **Somalia.** Somalia has been affected by conflict and instability for decades, driven by clan-based politics, weak governance, and the presence of militant groups such as al-Shabaab.
- **Nigeria.** Nigeria has faced various conflicts, including the Boko Haram insurgency in the northeast, clashes between herders and farmers in central regions, and separatist tensions in the southeast.
- **Sudan:** Sudan has experienced conflict in several regions, including Darfur, South Kordofan, and Blue Nile.
- **Central African Republic (CAR):** CAR has faced recurrent cycles of violence and instability, and also experienced conflict between various armed groups.
- **Mali:** Mali has faced a complex security crisis, involving Islamist militant groups, ethnic militias, and government forces. The conflict has spread from the north to central regions.

- **Ethiopia:** Ethiopia has experienced internal conflict, particularly in the Tigray region, where fighting erupted in late 2020 between federal government forces and regional forces.

Unsurprisingly, almost all of the African countries are classified as Minor class in 2024 Geodemocracy Index, and Iran, Afghanistan, Libya, North Korean, Cuba, and Russia are ranked the last six countries. Higher geopolitical risks can lead to poverty and social upheaval through several interconnected mechanisms.

4.4.5.1 Economic Disruption

Economic disruption refers to significant disturbances or interruptions in the normal functioning of an economy, and can exacerbate poverty and contribute to social upheaval in various ways. Potential investors are discouraged or dissuaded from investing in a particular region or country due to various factors that create uncertainty or risk. A survey conducted in 2024 by Ontario Teachers' Pension Plan (OTPP) (www.otpp.com, n.d.) disclosed that almost half of the investors regarded "Financial market volatility is a big issue", and up to 69% of global investors concerned about geopolitical instability than they were one year ago.

- Less Foreign Direct Investment (FDI). High geodemocratic risks deter foreign investors (Bussy and Zheng, 2023) due to the uncertainty and potential for conflict. Without FDI, economies miss out on capital, technology transfer, and management expertise, which are critical for economic growth and job creation.
- Less Domestic Investment. Local investors may also withhold investments in an unstable environment, fearing loss of capital or property.
- Geodemocratic tensions can lead to trade sanctions, blockades, or disruptions in supply chains, affecting both exports and imports. This can reduce national

income and lead to shortages of goods, driving up prices and contributing to poverty.

4.4.5.2 Humanitarian Crises

Humanitarian crises such as conflicts, wars, natural disasters, or epidemics can force people to flee their homes, leading to displacement and loss of livelihoods. Displaced populations often face increased poverty due to the loss of assets, income opportunities, and access to basic services. EU Commission (joint-research-centre.ec.europa.eu, 2024) claimed "the world has become a riskier place over the past decade" due to Ukraine War, COVID-19 pandemic, Libyan civil war, and Middle East conflicts, etc.

- Governance challenges, including lack of respect for human rights and the rule of law, can result in abuses such as arbitrary detention, extrajudicial killings, and suppression of freedom of speech and expression. Human rights violations can fuel grievances and resentment, leading to social unrest and instability.
- Conflicts, wars, and instability can force people to flee their homes, leading to internal displacement or refugee crises. Displaced populations often face extreme poverty, lack of shelter, food insecurity, and limited access to healthcare and education.
- Food insecurity is a significant driver of poverty in a country and can lead to social upheaval. Geodemocratic risks can disrupt agricultural production and supply chains, leading to food shortages and higher prices. This exacerbates food insecurity and contributes to poverty, especially in rural areas where livelihoods depend on agriculture.

4.4.5.3 Social and Political Instability

social and political instability can indeed cause poverty and social upheaval (Bernal-Verdugo, Furceri and Guillaume, 2013) through various interconnected mechanisms. For

instance, Sidamor, Lemtaouch and Bensouici (2016) thought “Egypt will plunge into recession and Tunisia will struggle to recover if political instability continue”.

- Persistent poverty and inequality, exacerbated by geopolitical risks, can lead to widespread dissatisfaction and frustration among the populace. When people's basic needs are unmet, and they perceive injustice, social unrest is likely to follow.
- Economic hardship and inequality can drive people to protest, strike, or engage in civil disobedience, leading to social upheaval.
- Geodemocratic risks often exacerbate existing ethnic, religious, or sectarian divides. Competition for scarce resources can lead to violent conflicts, further destabilizing societies and creating cycles of poverty and unrest.

4.4.5.4 Governance Challenges

Governance challenges can indeed contribute to social unrest (Chukwu and Chidume, 2014) and poverty through various mechanisms.

- Corruption. When government officials engage in corrupt practices, diverting public funds for personal gain, it undermines trust in public institutions. This can lead to widespread dissatisfaction and anger among the populace, often manifesting in protests, strikes, or even violent unrest.
- Poor governance can result in ineffective delivery of public services such as education, healthcare, and infrastructure, particularly in marginalized and remote areas. Inadequate access to essential services can perpetuate poverty and exacerbate social disparities, leading to frustration and discontent among the population.
- Lack of Accountability and Transparency. Governments that operate without transparency and accountability can create environments where grievances go

unaddressed. The perception or reality of impunity can lead to frustration and anger, prompting social unrest.

4.5 Discussion - Key factors in Geodemocracy study

Geodemocracy theory combines elements of geography, demography, and political science to understand the spatial distribution of political power and its impact on democracy. Those key components play crucial role in the geodemocracy study.

4.5.1 Electoral Geography

Electoral geography is a subfield of political geography that focuses on the spatial patterns and effects of electoral processes and voting behavior. It examines how geographic and demographic factors influence election outcomes and political representation.

- Gerrymandering. The manipulation of electoral district boundaries to favor a particular political party or group (Stephanopoulos, 2017), which often results in oddly shaped districts designed to maximize electoral advantage. In 2022 the Delimitation Commission of India was accused to favor the ruling Bharatiya Janata Party (BJP) (Sappal and Deshpande, 2023) by increasing the representation of Jammu, a BJP stronghold, relative to the Kashmir Valley, which has traditionally supported other parties. Other notable cases in North Carolina (US), Wisconsin (US), Maryland (US), and Texas (US) illustrate various methods and impacts of gerrymandering (Niven, Cover and Solimine, 2021), highlighting the ongoing challenges to achieving fair play of democracy.
- Districting and Redistricting. The process of defining electoral districts (Morrill, 1987), which can significantly affect political representation and party dominance. By meticulously studied the redistricting reform in Virginia, DeFord

and Duchin (2019) concluded that “a high priority on preserving localities intact does change the partisan picture”.

- Voter Distribution. Redrawing districts to dilute or concentrate the voting power of voter groups, which can impact their political representation. Through an election model analysis, Borodin, Shah and Strangway (2018) believed the designated party could maximize the number of districts who could win by manipulate boundaries of electoral districts (changing the selected voter distribution).

4.5.2 Policy and Governance

Policy and governance are crucial components of geodemocracy study as they directly influence how countries interact on the global stage, shape international relations, and address global challenges.

- Centralization and Decentralization of government. The distribution of political power and decision-making authority whether transferred to local or regional governments or not, and its impact on democracy and governance. Centralization and Decentralization, just like the two sides of one coin, each brings out advantages and disadvantages (Tommasi, and Weinschelbaum, 2007). During the developing period of a country, Centralized government offers advantages such as policies and laws consistency, reducing regional disparities and conflicts, efficient decision-making, and coordination on national development. Centralized government examples, France, China, and Japan, and the United Kingdom (UK). But during the developed period of a country, Decentralized government may be a better option, which can enhance local responsiveness, improve efficiency and innovation, increase democratic participation, promote balanced regional

development, and better manage resources. Decentralized government examples, Switzerland, Germany, Canada, India.

- Federalism. The relationship between national and subnational governments in federal systems and its influence on political dynamics and policy implementation. Federalism offers numerous advantages (Friedman, 1997) by distributing power across multiple levels of government, enhancing local responsiveness, promoting policy innovation, encouraging democratic participation, and accommodating diversity. Federal government examples, Germany, US, Canada, Australia.
- Urban Planning and Development. Urban planning and development are crucial aspects of geodemocracy study as they directly impact the economic, social, and environmental dynamics of cities and regions. Effective urban planning can drive sustainable development, enhance social equity, and improve quality of life. Successful cases like Smart Cities Initiative in India (Gupta and Hall, 2017), Sustainable Development in Copenhagen (Denmark) (Krähmer, 2021), and Urban Renewal in Shanghai (China).
- Government Stability and Policies / Laws Continuity. Government stability and the continuity of policies and laws are crucial components in the study of geodemocracy. These elements influence international relations, economic stability, and the strategic behavior of countries. A stable government and consistent policies foster a predictable environment (Notermans, 1999) that can facilitate domestic growth and international cooperation, while instability can lead to uncertainty, conflict, and economic disruption.

4.5.3 Technology and Communication

Technology and communication play pivotal roles in shaping geodemocratic dynamics. Advances in these fields influence country behavior, international relations, and the global balance of power.

- Telecommunication Infrastructure. Access to the internet and reliable communication networks is crucial for economic development (Röller and Waverman, 2001), governance, and social interaction. Kala Seetharam Sridhar and Sridhar (2008) examined how improved Information and Communications Technologies (ICT) and telecom infrastructure could be used to accelerate economic growth and alleviate poverty in developing countries.
- Social Media and digital platforms. The role of social media and digital platforms, like Twitter (X), Facebook, and WhatsApp, in shaping political discourse, mobilization, and public opinion across different regions (Karakiza, 2015). In recent years social media and digital platforms have experienced tremendous growth, as declared by Kamruzzaman (2022), which has greatly impacted individuals, economic growth and geopolitical dynamics.
- Political Campaigns. Digital platforms are increasingly used in political campaigns to mobilize voters, spread messages, and influence public opinion. Twitter (X), in particular, played a crucial role in Donald Trump's 2016 presidential election victory and public communication (Tufekci, 2018). Smialek (2018) claimed that Twitter Had Boosted Donald Trump’s Votes by 3.23%. Now with nearly 90 million followers on Twitter (X), Donald Trump is ready to repeat his success with Twitter (re-named as “X” now) in 2024 US Presidential campaign.

4.5.4 Political Culture and Identity

Political culture and identity are integral to the study of geodemocracy, as they shape the political behavior, values, and perceptions of individuals and societies. These elements influence how countries interact on the global stage, form alliances, and address conflicts.

- Regional Political Cultures. Distinct political traditions, values, and behaviors prevalent in different geographic areas. During one case study of China, Li, Li and Shi (2021) concluded that regional culture had a significant impact on the development of regional economy.
- Local Identity. The role of local and regional identities in shaping political attitudes and behaviors. This local identity influences how people perceive political issues, engage in civic activities, and support policies or candidates. Tortella (2018) systematically explored the complex history of Catalonia in relation to Spain from an economic and political perspective in his book "Catalonia in Spain: History and myth".
- Historical Context. Historical events and developments that have shaped the political landscape of different regions. Major events in the human history such as American Revolution (1765 ~ 1783), World War I (1914 ~ 1918), World War II (1939 ~ 1945), the Cold War (1947 ~ 1991), and Fall of the Berlin Wall (9 November 1989), have drastically shifted the political climate worldwide: socially and economically. Mwewa (2023) believed that "the Cold War created a sense of mistrust between countries, which led to a decrease in international cooperation and an increase in international tensions".

4.5.5 Demographic Trends

Population dynamics, which encompass factors such as population growth, migration patterns and demographic shifts, play a significant role in shaping geodemocracy.

Changes in population demographics can have profound implications for a country's economic strength, political stability, security, and global influence.

- Population Dynamics. Countries with large and growing populations, such as China and India, have considerable economic potential (Kuznets, 1967; Dao, 2012) due to their expanding labor forces and consumer markets. Their economic rise influences global trade patterns, investment flows, and geodemocratic alignments. Furthermore, population growth and decline can affect a country's geodemocratic influence and strategic priorities (Coale and Hoover, 2015). Rapidly growing populations may seek to expand their influence regionally or globally, while declining populations may focus on maintaining stability and addressing internal challenges.

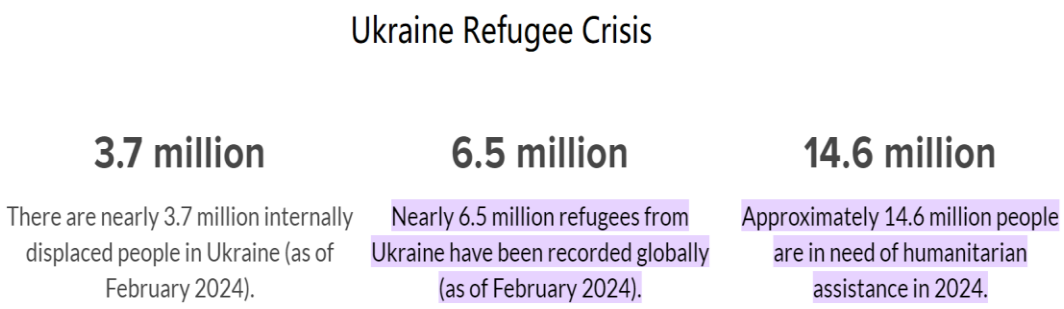

Figure 21 - Ukraine Refugee Crisis (www.unrefugees.org, n.d.)

- Migration Patterns. Migration flows driven by conflict, persecution, or environmental factors can create refugee crises with significant geodemocratic implications. These crises can strain host countries, trigger political instability, and exacerbate regional tensions. An ongoing refugee crisis with Ukraine War (over 6 million Ukrainian fleeing their homes from February 2022 reported by UN Refugee Agency (www.unrefugees.org, n.d.) have extraordinarily affected EU countries both immediately and directly (Opioła et al., 2022).

4.5.6 Geographic Location

Geographic location is one of the fundamental factors in geodemocracy, shaping a country's strategic significance, access to resources, and vulnerabilities.

- Strategic Importance. Countries situated at key geographic locations, such as crossroads of trade routes, chokepoints, or regions with proximity to major powers, hold strategic importance. Situated at the crossroads of Europe and Asia, Turkey's location has historically made it a pivotal player (Austvik and Rzayeva, 2017) in regional and international politics.
- Global Connectivity. It refers to the interlinkages between countries through various means such as trade, transportation, communication networks, and international organizations. Singapore is a quintessential example of global connectivity (Martinez and Bunnell, 2024), leveraging its strategic location, advanced infrastructure, robust economy, and proactive diplomacy to enhance its geopolitical and economic influence.

4.5.7 Natural Resources

Access to Resources is a critical factor in geodemocracy shaping the economic power, security strategies, and international relations of countries. Resources such as energy (oil, gas), minerals, water, and agricultural products are essential for the functioning and development of societies. Countries with abundant oil and gas reserves, such as Saudi Arabia, Russia, and the United States, hold significant economic power (Overland, 2015) due to the global incessant demand for these resources.

Resource-rich countries often wield significant influence in international affairs (Aarts and Nonneman, 2007), while resource scarcity can lead to competition and conflict.

4.5.8 Cultural Influence

Cultural factors, including language, religion, values, and historical narratives, shape a nation's soft power and its ability to influence global perceptions and alliances (Nisbett, and Miyamoto, 2005). This cultural influence, often termed "soft power," extends through media, fashion, technology, food, language, and more. The influence of US culture on the global stage is pervasive and multifaceted, affecting various aspects of life around the world (Haneş, and Andrei, 2015).

4.6 Discussion - Contemporary Issues in Geodemocracy Study

Contemporary issues in geodemocracy are multifaceted and complex, reflecting the dynamic nature of global power structures, economic interdependencies, and sociopolitical changes.

4.6.1 Great Power Rivalries

Great power rivalries, for instance, US and Imperial Japan, US and Soviet Union, US and China, have historically shaped international relations and continue to be a defining feature of contemporary geodemocracy.

- US-China Rivalry. The strategic competition between the United States and China is reshaping global geopolitics. Issues include trade disputes, technological competition (e.g., 5G, AI), intellectual property (IP), military presence in the South China Sea, and influence in international organizations. Shambaugh (2018) realized US and China would be a competitive coexistence in South China Sea. During the relentless competition between China and US for global hegemony, Modebadze (2020) believed face-to-face conflict would erupt at any time if US and China could not escape the “Thucydides Trap” in the foreseeable future.

- Russia and the West conflict. The conflict between Russia and the West, primarily involving the United States and the European Union, is a complex and multifaceted geodemocratic struggle that encompasses various dimensions, including political, military, economic, and ideological aspects. In addition, tensions also involves NATO expansion, energy politics, and the ongoing Ukraine War. The key reason of these conflicts is which side, either Russia or the US and EU alliance, could dominate the international order (Minkina, 2019).

4.6.2 Regional Conflicts and Stability

Regional conflicts and stability are critical components of global geopolitics, influencing international relations, economic stability, human security, and development. These conflicts often have deep historical roots and complex socio-political dynamics, with significant implications for regional and global stability.

- Middle East. The ongoing conflicts in Syria, Yemen, and the Israeli-Palestinian dispute, which are the long-standing conflicts rooted in competing nationalisms, territorial disputes, and religious significance. These conflict and wars caused immense human suffering. Bluedorn and Koranchelian (2023) drew the conclusion that “The more prolonged the conflict, the more impacted the tourism, trade, investment, and other financial channels would become”.
- Africa. Those conflicts and tensions happened in Sahel Region (Mali, Niger, Burkina Faso, and Chad, e.g.), Horn of Africa (Ethiopia, Somali, e.g.), and caused by resource conflicts, political instability, and the influence of external powers like China and the US. These conflicts lead to massive displacement, regional spillovers, and international humanitarian interventions.
- Asia. The conflict comes from Afghanistan (Taliban terrorist). The Taliban's return to power has led to an uncertain future (Khan, Kosar and Sarfaraz, 2021),

with concerns over human rights, especially women's rights, and potential re-emergence of terrorist groups. This regional instability affects Pakistan, Iran, Central Asia, and beyond, with refugee flows and potential for increased terrorism.

- Latin America – the Venezuela Crisis. Political and economic crisis under the Maduro regime, marked by hyperinflation, severe shortages, and a mass exodus of refugees. Ellis (2017) claimed that "The crisis in Venezuela is a tragedy with grave implications for its neighbors and the region".

4.6.3 Global Trade and Economics

Global trade and economics are pivotal to understanding contemporary geodemocracy, as they shape international relations, influence domestic policies, and impact the global balance of power.

- Trade Wars. Tariffs and trade barriers, particularly between the US and China, affect global markets and political relations. After evaluating the impact of the US-China trade war, Itakura (2020) concluded both countries were drastically impacted from GDP to bilateral trade.

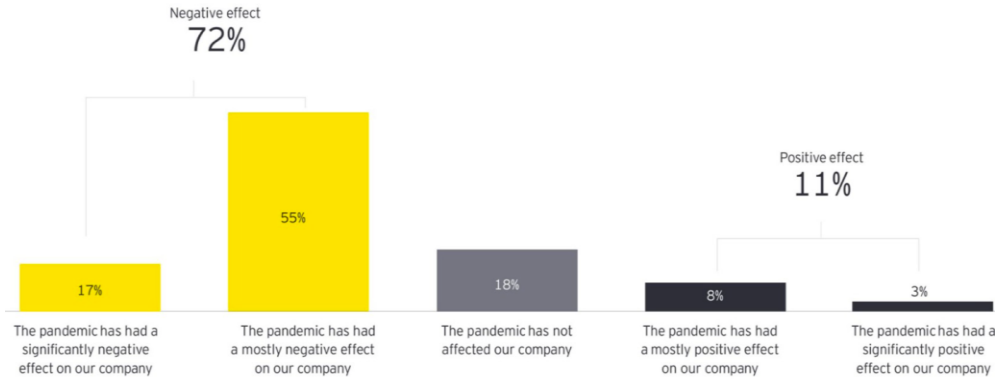

Figure 22 - Covid 19 impacted Global Supply Chain (Harapko, 2021)

- Global Supply Chains. Global supply chains have become complex, with components sourced from various countries and final assembly often taking place in another. Events like natural disasters, geodemocratic tensions, and pandemics (COVID-19, e.g.) can disrupt supply chains, leading to shortages and economic instability. Research by Harapko (2021) indicated that more than 72% of the survey companies were impacted by supply chain disruption.

4.6.4 Development of Geodemocracy on FDI

Geodemocracy studies can significantly enhance international investment strategies by providing a deeper understanding of global political dynamics, economic conditions, and regional risks and opportunities. By integrating Geodemocracy analysis into investment strategy, international business practitioners can better navigate the complexities of international markets, capitalize on emerging opportunities, and mitigate potential risks (in other words, to avoid the investment pitfalls).

When analyzing or engaging in Foreign Direct Investment (FDI), several key questions typically arise. These questions help investors, policymakers, and researchers evaluate the potential and implications of FDI from various perspectives.

4.6.4.1 Strategic and Economic Considerations

- Market Potential. What is the market potential in the host country? How large and growing is the target market?
- Cost Advantages, What are the cost advantages (e.g., labor, materials, production) of investing in the host country?
- Competitive Landscape, Who are the major competitors in the host country? What is the level of competition?

- Economic Stability, What is the economic stability of the host country? What are the risks related to inflation, exchange rates, and economic growth?

4.6.4.2 Legal and Regulatory Environment

- Regulatory Framework, What are the legal and regulatory requirements for FDI in the host country? Are there any restrictions or incentives for foreign investors?
- Property Rights, How strong are property rights protections in the host country?
- Taxation, What are the tax implications for FDI? Are there any tax incentives or advantages?
- Compliance, What are the compliance requirements for labor, environmental standards, and corporate governance?

4.6.4.3 Political and Social Considerations

- Political Stability, How politically stable is the host country? What are the risks of political upheaval or changes in government policies?
- Government Support, Is there government support or opposition to FDI? What is the government's attitude towards foreign investors?
- Social and Cultural Factors, What are the social and cultural factors that might impact the investment? How can cultural differences be managed?

4.6.4.4 Operational Considerations

- Infrastructure, What is the quality of infrastructure (transportation, communication, utilities) in the host country?
- Supply Chain, How developed is the supply chain? Are there reliable suppliers and logistics networks?

- Human Resources, What is the availability and skill level of the local workforce? Are there training and development programs?
- Local Partnerships, Are there opportunities for local partnerships or joint ventures?

4.6.4.5 Financial Considerations

- Funding and Capital Structure, How will the investment be financed? What is the optimal capital structure for the investment?
- Return on Investment, What are the expected returns on the investment? How does it compare to other investment opportunities?
- Risk Management, What are the major financial risks (e.g., currency risk, repatriation of profits) and how can they be mitigated?

4.6.4.6 Environmental and Ethical Considerations

- Environmental Impact, What will be the environmental impact of the investment? How can environmental risks be managed?
- Corporate Social Responsibility, What are the expectations for corporate social responsibility in the host country? How can the investment benefit the local community?
- Ethical Standards, How can ethical standards be maintained, particularly in areas like labor practices and environmental sustainability?

4.6.4.7 Exit Strategy

- Repatriation of Profits, What are the regulations regarding the repatriation of profits? Are there any restrictions or taxes on profit repatriation?
- Divestment Options, What are the potential exit strategies if the investment does not meet expectations? What are the procedures for divestment?

GMI, acting as a screening process and risk management strategy, can advise global investors, bankers, and policymakers the best places where their money should go: the first choices are those Max class countries, and the second choices are those Major class countries. In addition, investing in Minor class nations is highly risky.

The ongoing campaigns that nearly all pension funds are obliged to take account of moral considerations regarding investment planning are gaining more adherents (Richardson, 2008), by calculating Politics Risk Index, Geodemocracy theory meets the public commitment of ethical mandate.

The Treasury of New Zealand (www.treasury.govt.nz, n.d.) defined the investment procedure as 4 steps: Think, Plan, Do and Review.

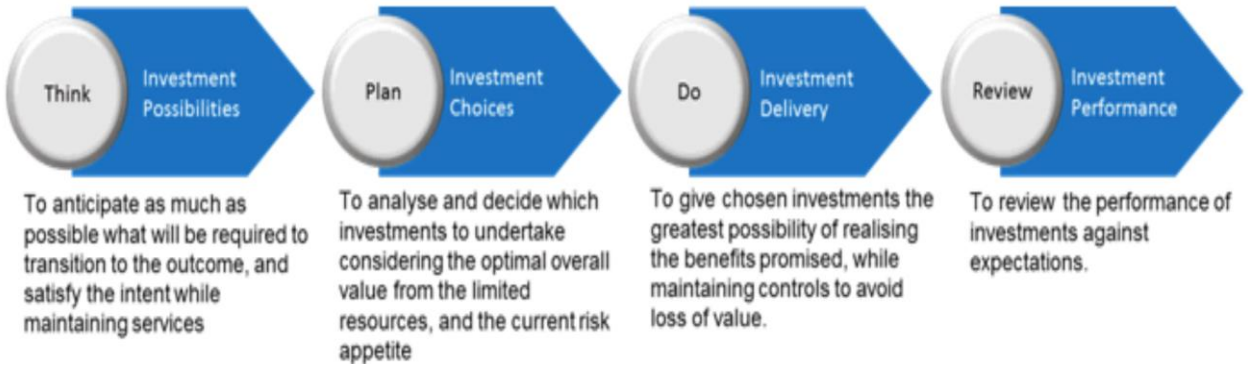

Figure 23 - Investment Procedure (Treasury of New Zealand, 2021)

With the assistance of Geodemocracy Theory, the investment model can be optimized as a positive feedback loop – TPDR+G model (T, P, D, R, G stand for Think, Plan, Do, Review and Geodemocracy Index analysis respectively). During any step of the investment, Geodemocracy Theory can erect a firm foundation to expedite the detailed financial analysis.

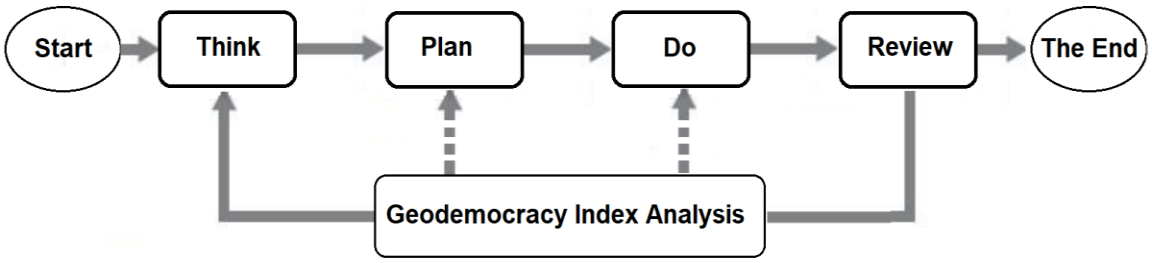

Figure 24 - Proposed TPDR+G Model

4.6.5 Development of Geodemocracy on Global Supply Chain

The geodemocracy studies has indeed intersected significantly with the development of global supply chains. As globalization progressed, economic activities became increasingly interconnected across borders, leading to the emergence of complex networks of production, distribution, and consumption. Geodemocratic factors have played a crucial role in shaping the structure and dynamics of these global supply chains in several ways:

- Geodemocracy Risk Assessment, Geodemocracy studies provide valuable insights into the risks and uncertainties associated with operating in different regions / different countries around the world. Factors such as political instability, regulatory changes, trade tensions, and security threats can impact the reliability and efficiency of supply chains. Geodemocracy risk assessments can be conducted to identify potential vulnerabilities and develop strategies to mitigate them.
- Trade Policies and Agreements, Geodemocracy dynamics influence trade policies and agreements between countries, which, in turn, shape the flow of goods and services across borders. Trade agreements, tariffs, and trade barriers can affect the cost, speed, and flexibility of supply chains. Geodemocracy

studies help businesses anticipate changes in trade regulations and adapt their supply chain strategies accordingly.

- Infrastructure Development, Geodemocracy considerations influence investment decisions in infrastructure projects such as ports, roads, railways, and telecommunications networks. The development of efficient transportation and communication infrastructure is essential for facilitating the movement of goods along supply chains. Geodemocracy studies help identify strategic locations for infrastructure development and assess the risks and opportunities associated with different investment options.
- Resource Access and Security, Geodemocracy tensions over access to natural resources, such as energy, minerals, and water, can disrupt global supply chains. Competition for scarce resources, territorial disputes, and Geodemocracy conflicts may lead to supply disruptions or price fluctuations. Geodemocracy studies help businesses assess the Geodemocracy risks associated with their supply chains and diversify their sourcing strategies to minimize vulnerabilities.
- Regulatory Compliance, Geodemocracy factors influence regulatory frameworks related to labor, environmental standards, intellectual property rights, and product safety. Businesses must navigate complex regulatory landscapes in different countries to ensure compliance throughout their supply chains. Geodemocracy studies help businesses understand the legal and regulatory environments in which they operate and adapt their supply chain practices accordingly.

Overall, the intersection of Geodemocracy studies and global supply chains highlights the importance of considering political, economic, and social factors in supply chain management. Businesses that incorporate Geodemocracy analysis into their strategic

planning processes are better equipped to anticipate risks, seize opportunities, and build resilient supply chains in an increasingly interconnected world.

Furthermore, global supply chain is a worldwide supply chain system (Skjott-Larsen, 2007) that help business organizations be more efficient, more profitable, and expand more market share into global markets (winning more customers). Typical questions that were often asked by the investors, entrepreneurs, and policymakers are addressed as below.

4.6.5.1 Strategic Questions

- What are the key drivers of supply chain globalization, and how do they impact operational efficiency?
- How can we align our supply chain strategy with our overall business strategy to achieve competitive advantage?
- What are the benefits and risks of offshoring and outsourcing production activities?

4.6.5.2 Risk Management

- What are the major risks in our global supply chain, and how can we mitigate them?
- How can we ensure supply chain resilience against disruptions like natural disasters, geopolitical tensions, and pandemics?
- What are the best practices for managing supply chain security and compliance with international regulations?

4.6.5.3 Supplier Management

- How do we evaluate and select suppliers to ensure quality, reliability, and cost-effectiveness?

- What strategies can we use to build strong relationships with key suppliers and ensure long-term collaboration?
- How can we manage supplier performance and conduct effective supplier audits?

4.6.5.4 Logistics and Transportation

- What are the most efficient and cost-effective modes of transportation for our goods?
- How can we optimize our logistics network to reduce lead times and transportation costs?
- What technologies and strategies can we use to improve visibility and traceability in our supply chain?

4.6.5.5 Inventory Management

- How can we balance inventory levels to minimize costs while meeting customer demand?
- What are the best practices for managing inventory across multiple locations and regions?
- How can we use inventory management techniques like Just-In-Time (JIT) or Economic Order Quantity (EOQ) in a global context?

4.6.5.6 Sustainability and Ethics

- How can we ensure our supply chain practices are environmentally sustainable and socially responsible?
- What are the best practices for implementing and monitoring sustainable sourcing and production practices?

- How can we ensure compliance with ethical standards and labor laws in all countries where we operate?

4.6.5.7 Technology and Innovation

- What role can advance technologies like AI, IoT, and blockchain play in enhancing supply chain management?
- How can we leverage data analytics to improve supply chain forecasting, planning, and decision-making?
- What are the benefits and challenges of implementing an integrated supply chain management system?

4.6.5.8 Customer Service

- How can we ensure timely and accurate delivery of products to meet customer expectations?
- What strategies can we use to improve customer satisfaction and loyalty through better supply chain management?
- How can we handle reverse logistics and returns management effectively in a global context?

4.6.5.9 Regulatory and Trade Compliance

- What are the key international trade regulations and customs procedures we need to comply with?
- How can we navigate trade barriers, tariffs, and trade agreements to optimize our global supply chain?
- What strategies can we use to manage and minimize the impact of regulatory changes on our supply chain operations?

Those ambiguous uncertainties and potential risks often perplex the international business society (IBS) and lead to prisoner's dilemma. Now with the explicit guidance of GMI, by using statistical and mathematical techniques, investors, entrepreneurs, and policymakers (or decisionmakers) can easily determine where to establish, expand or consolidate their operations / investment, and where to bypass potential risks from economical aspects, social aspects, or geopolitical aspects.

For the traditional global supply chain, supplier, manufacturer, retailer, and end-users are in a loose mode and are not interrelated & interacted on each other.

Figure 25 - Traditional Global Supply Chain Stages

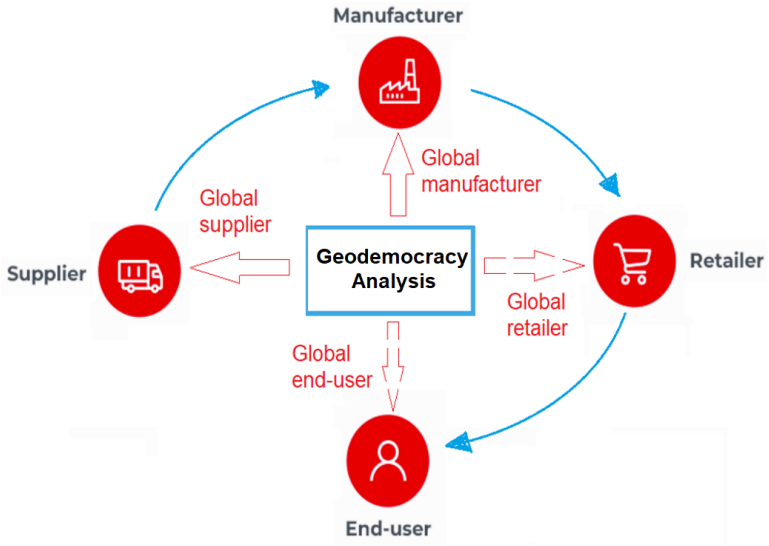

Figure 26 - Global Supply Chain Stages (optimized)

With the assistance of Geodemocracy theory, the existing four-stage global supply chain process model can be revised into new four-plus-one-stage global supply chain process

model, which can facilitate business organizations to better determines the global suppliers, global manufacturers, and potential global retailers, and potential global end-users.

By Geodemocracy Index analysis, it can provide accredited data analysis to optimize the decision making, mitigate the potential risk, and bring out steady cash flow for the organizations while standing on the base of SRI and CSR.

4.6.6 Development of Geodemocracy on Global Sourcing

Geodemocracy studies have significantly influenced the practice of global sourcing, which involves sourcing goods, services, and raw materials from suppliers located in different countries around the world. Here's how Geodemocracy analysis has shaped and informed global sourcing strategies:

- Risk Assessment and Mitigation. Geodemocracy studies help businesses assess the risks associated with sourcing from different countries and regions. Factors such as political stability, regulatory environment, trade policies, currency fluctuations, and Geodemocracy tensions are evaluated to understand the potential impact on the supply chain. By identifying potential risks upfront, businesses can develop mitigation strategies to diversify sourcing, build redundancy, and ensure continuity of supply.
- Supplier Selection and Evaluation. Geodemocracy analysis informs the process of selecting and evaluating suppliers in global sourcing. Businesses consider Geodemocracy factors such as political stability, labor conditions, infrastructure quality, and regulatory compliance when assessing the suitability of potential suppliers. Geodemocracy studies also help identify potential risks associated

with specific suppliers, such as supply chain disruptions, quality issues, and ethical concerns.

- Supply Chain Mapping and Transparency. Geodemocracy studies facilitate supply chain mapping and transparency, allowing businesses to understand the geographic and Geodemocracy complexities of their supply chains. By mapping out the various nodes and dependencies within the supply chain, businesses can identify potential vulnerabilities and dependencies on high-risk regions or suppliers. This visibility enables businesses to make informed decisions about sourcing strategies and prioritize risk management efforts.
- Resilience and Contingency Planning. Geodemocracy analysis helps businesses build resilience and develop contingency plans for potential Geodemocracy disruptions in the global supply chain. By considering different Geodemocracy scenarios and their potential impact on sourcing operations, businesses can develop proactive strategies to mitigate risks and ensure business continuity. This may involve diversifying sourcing locations, establishing alternative supply sources, and pre-negotiating contracts with backup suppliers.
- Adapting to Geodemocracy Changes. Geodemocracy studies enable businesses to adapt to changes in the Geodemocracy landscape and adjust their sourcing strategies accordingly. For example, shifts in trade policies, sanctions, or Geodemocracy tensions may necessitate the re-evaluation of sourcing relationships and the identification of new supply sources. By staying informed about Geodemocracy developments, businesses can anticipate changes in the sourcing environment and proactively adjust their strategies to minimize disruptions and capitalize on emerging opportunities.

To navigate the complexities of global sourcing effectively, businesses must consider a variety of factors. These questions help businesses comprehensively evaluate and manage the complexities of global sourcing.

4.6.6.1 Supplier Selection and Evaluation

- Supplier Capabilities. What are the capabilities and strengths of potential suppliers? Do they have the capacity to meet your quality and quantity requirements?
- Reputation and Reliability. What is the reputation of the suppliers in the industry? Are they known for reliability and ethical practices?
- Certifications and Standards. Do potential suppliers have the necessary certifications and adhere to industry standards?
- Financial Stability. What is the financial health of the suppliers? Can they sustain long-term partnerships?

4.6.6.2 Cost Considerations

- Total Cost of Ownership (TCO). What are the total costs involved, including purchase price, transportation, tariffs, duties, and any hidden costs?
- Cost Savings. How do the costs compare to domestic sourcing? Are there significant cost savings that justify the global sourcing effort?
- Currency Risk. What are the risks related to currency fluctuations, and how can they be managed or hedged?

4.6.6.3 Quality and Compliance

- Quality Control. How will the quality of products or services be assured and maintained? What quality control processes are in place?

- Compliance. Are the suppliers compliant with local and international regulations and standards, including labor laws, environmental regulations, and safety standards?
- Audit and Inspection. What are the procedures for auditing and inspecting supplier facilities to ensure compliance and quality?

4.6.6.4 Logistics and Supply Chain Management

- Transportation and Lead Time. What are the transportation options, costs, and lead times associated with global sourcing?
- Supply Chain Reliability. How reliable is the supply chain? Are there risks of disruptions, and how can they be mitigated?
- Inventory Management. How will inventory be managed to balance costs and ensure timely availability of products?

4.6.6.5 Political and Economic Factors

- Political Stability. What is the political stability of the sourcing country? Are there risks of political unrest or changes in trade policies?
- Economic Conditions. What are the economic conditions in the sourcing country? How do factors like inflation, exchange rates, and economic growth impact sourcing decisions?
- Trade Policies and Tariffs. What are the trade policies, tariffs, and duties applicable to the goods being sourced? Are there any trade agreements that can be leveraged?

4.6.6.6 Cultural and Ethical Considerations

- Cultural Differences. How do cultural differences impact business practices and communication with suppliers? How can these differences be effectively managed?
- Ethical Sourcing. Are the suppliers adhering to ethical practices, including fair labor practices, environmental sustainability, and anti-corruption measures?
- Corporate Social Responsibility (CSR). How does global sourcing align with the company's CSR policies and goals?

4.6.6.7 Risk Management

- Risk Assessment. What are the major risks associated with global sourcing (e.g., geopolitical risks, natural disasters, supply chain disruptions)?
- Risk Mitigation. What strategies are in place to mitigate these risks? Are there contingency plans for supply chain disruptions?
- Supplier Diversification. Is there a strategy to diversify suppliers to avoid dependency on a single source?

4.6.6.8 Technology and Information Systems

- Technology Integration. How will technology be used to manage global sourcing operations? Are there systems in place for tracking and managing orders, inventory, and supplier performance?
- Data Security. How will sensitive information be protected in global transactions? What measures are in place to ensure data security and privacy?

4.6.6.9 Legal and Contractual Issues

- Contracts and Agreements. What are the terms and conditions of contracts with suppliers? How are issues like payment terms, delivery schedules, and penalties for non-compliance addressed?

- Intellectual Property Protection. How will intellectual property be protected when sourcing from international suppliers?
- Dispute Resolution. What mechanisms are in place for resolving disputes with suppliers?

4.6.6.10 Sustainability

- Environmental Impact. What is the environmental impact of sourcing from different suppliers? How can sustainability be incorporated into sourcing decisions?
- Sustainable Practices. Are suppliers implementing sustainable practices in their operations? How can sustainability be monitored and enforced?

Overall, the integration of Geodemocracy analysis into global sourcing strategies helps businesses navigate the complexities and uncertainties of the global marketplace. By understanding the Geodemocratic context in which they operate, businesses can make informed decisions about supplier selection, risk management, and supply chain resilience to optimize their sourcing operations and achieve competitive advantage.

The last but not least, outsourcing is nowadays widely utilized by almost all kinds of organizations, which is showed off as a popular way of cost reduction (Belcourt, 2006; Aghazadeh, 2011). According to the statistic data by Statista (2020), the global outsourcing market size surpassed US$92.5 billion in 2019. Another survey conducted by Deloitte (2018) indicated “84% of the respondents either have already discussed outsourcing possibilities or have delegated several solutions to third-parties”.

Global sourcing or global sourcing strategy was hotly applied over the past decades (Franz Bedacht, 1995; Pol Antràs and Elhanan Helpman, 2004; Kotabe and Murray,

2004). Because of the US-China Trade War and tensions between EU and China, the recent trend for global sourcing is shifting from China to Mexico (Allon and Van Mieghem, 2010), and somehow to Vietnam (Eckhardt, 2011).

Before 2003 researchers and business practitioners had limited progress in the development of global sourcing research. Trent and Monczka (2003) made a milestone by creating the five-stage global sourcing process model in 2003.

Figure 27 - Global Sourcing Process Model (Trent and Monczka, 2003)

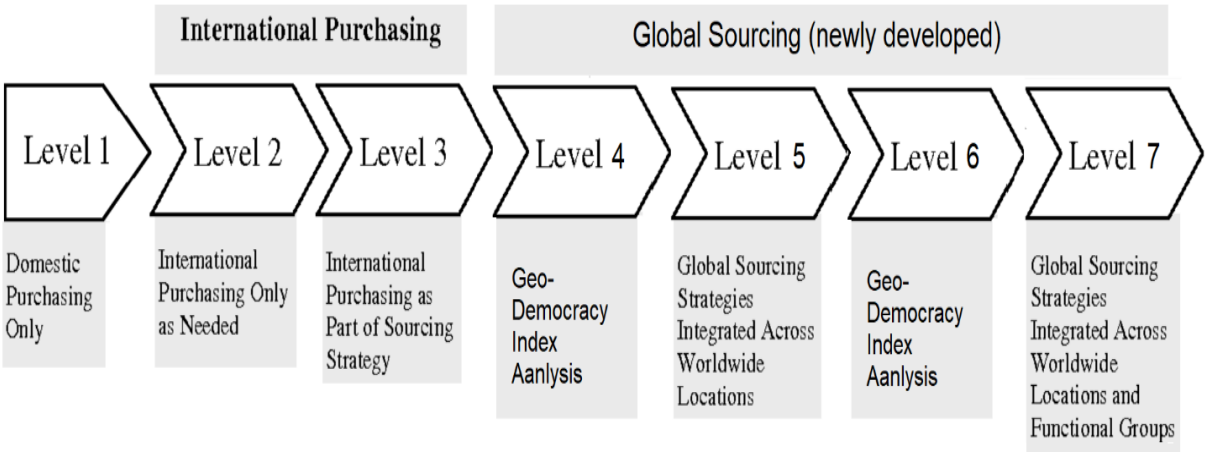

Figure 28 - Global Sourcing Process Model (Optimized)

Geodemocracy theory can be easily applied to optimize the Global sourcing process model. With the help of Geodemocracy theory, the existing five-stage global sourcing process model can be revised into new seven-stage global sourcing process model, which can facilitate business organizations to better determines the global suppliers. By Geodemocracy analysis, it can provide accredited data analysis for final sourcing locations (suppliers) selection, mitigate the potential risk, and bring out tremendous advantages for the company.

4.6.7 Deal with International Order Dialectically

Dealing with the international order dialectically involves recognizing and navigating the contradictions, tensions, and complexities inherent in the global system. Here's how one might approach this:

- Understanding Contradictions. Recognize that the international order is characterized by contradictions between competing interests, values, and actors. These contradictions manifest in various forms, such as power struggles between states, economic disparities between nations, and cultural clashes between societies. By understanding these contradictions, one can analyze the underlying dynamics shaping the international order.
- Analyzing Interconnections. Appreciate the interconnectedness of different elements within the international order. Recognize that political, economic, social, and cultural factors are interrelated and mutually influencing. For example, economic globalization can impact political dynamics, while social movements can shape cultural norms and values. Analyzing these interconnections helps to understand the complexity of the international order.

- Recognizing Hegemony and Resistance. Acknowledge the existence of hegemonic powers and structures within the international order, as well as resistance movements and counterforces seeking to challenge or transform these structures. Understand that hegemony is not static and can be contested or subverted by alternative visions of world order. This dialectical perspective allows for a nuanced analysis of power dynamics and agency within the international system.
- Navigating Change and Continuity. Recognize that the international order is characterized by both change and continuity over time. Historical patterns and structures persist, but they are also subject to transformation and evolution. Dialectical thinking involves understanding how change emerges from the interplay of opposing forces, and how continuity is maintained through adaptation and resilience.
- Promoting Dialogue and Cooperation. Embrace dialogue, cooperation, and diplomacy as essential tools for managing contradictions and conflicts within the international order. Recognize the importance of negotiation, compromise, and mutual understanding in addressing common challenges and advancing shared interests. Dialectical engagement encourages engagement with diverse perspectives and the search for common ground amid differences.
- Fostering Reflexivity and Critical Thinking. Cultivate reflexivity and critical thinking in analyzing the international order. Question assumptions, challenge dominant narratives, and interrogate power structures to uncover underlying tensions and contradictions. Dialectical thinking involves a process of constant inquiry and self-reflection, which enables a deeper understanding of the complexities of the global system.

By approaching the international order dialectically, one can develop a more nuanced and holistic understanding of the dynamics shaping global politics, economics, and society. This perspective encourages engagement with complexity, contradiction, and change, fostering a deeper appreciation of the multifaceted nature of the international order.

Recently, US Secretary of State Blinken Antony J. Blinken declared in 2021 that one of the most paramount commitments of US (or US with its allies) was to strengthen the rule-based international order since the late 1940s (Fernandes, 2021). The liberal international order (LIO) is a relatively recent concept reflecting the global structure from unipolar system to the combined system - one superpower US plus a few major powers and a few minor powers (Huntington, 1999; Christie, Wagner and Du, 2008; Lake, Martin and Risse, 2021), but the core value retained the same - US and the Western Europe dominated (Lake, Martin and Risse, 2021).

World order is the fundamental measurement of international relations or international affairs among sovereign countries. After Cold War 'end, the world order led by US or by US and its allies prevailed over the international society (Blackwill and Wright, 2020). Although the nature of this so-called rule based international order has been hotly debated by scholars, theorists and politicians, the US-led international order expedited the unprecedented cooperation among North America, Western Europe and some of Asia (Japan, South Korea, Singapore, etc. (Lake, Martin and Risse, 2021). In recent decades, the US-led international order facilitated the spread of economic liberalism to the rest of the world, and consolidated democracy, and promoted the common prosperity globally.

We have to deal with this rule based international order dialectically. Every coin has two sides. Some day the US-led international order may come to an end (Zondi, 2018; Blackwill and Wright, 2020), like other superpowers in the world history: Dutch Empire,

Ottoman Empire, Polish Empire, Austrian Empire, etc. Therefore, maintaining bilateral understanding, cooperation, and acting on EDI (Equity, Diversity and Inclusion) initiative (Government of Canada, 2012) are important to uphold the world trend of peace, security, and development (Scanlon and Murithi, 2007; United Nations, n.d.).

From this point of view, the non-aligned national defense policy known as “four no and one-opened” pursed by Vietnam Government from 2019 (Vietnam Defense White Paper 2019) (Asia Maritime Transparency Initiative, 2019; Roy, 2020) is one practical example of exact application of Geodemocracy theory.

4.6.8 Further Development on Risk Management

Geodemocracy studies have significantly influenced the development of risk management practices, particularly in the realm of international business and global operations. Here's how Geodemocracy analysis has evolved into an integral part of risk management:

- Identifying Geodemocracy Risks. Geodemocracy studies help identify and analyze potential risks arising from political, economic, social, and cultural factors in different regions of the world. These risks may include political instability, regulatory changes, trade disputes, social unrest, terrorism, and Geodemocracy conflicts. By understanding the Geodemocracy landscape, businesses can assess the likelihood and potential impact of various risks on their operations.
- Assessing Country and Regional Risk Profiles. Geodemocracy analysis provides insights into the risk profiles of different countries and regions. Factors such as political stability, rule of law, government transparency, corruption levels, and regulatory environment are evaluated to assess the overall riskiness of operating

in a particular location. Businesses use this information to make informed decisions about market entry, investment strategies, and supply chain management.

- Supply Chain Risk Management. Geodemocracy studies play a critical role in supply chain risk management by helping businesses identify and mitigate risks along their supply chains. This includes assessing the vulnerability of supply chains to Geodemocracy disruptions, such as trade barriers, sanctions, natural disasters, and Geodemocracy conflicts. Businesses develop contingency plans, diversify sourcing strategies, and build redundancy into their supply chains to minimize the impact of Geodemocracy risks.
- Scenario Planning and Contingency Planning. Geodemocracy analysis enables businesses to conduct scenario planning and develop contingency plans for various Geodemocracy scenarios. By considering different Geodemocracy outcomes and their potential implications, businesses can anticipate risks, identify early warning signs, and implement proactive measures to mitigate adverse effects. This proactive approach helps businesses maintain operational resilience and adaptability in the face of Geodemocracy uncertainties.
- Political Risk Insurance and Risk Transfer Mechanisms. Geodemocracy studies inform the design and implementation of political risk insurance and other risk transfer mechanisms to protect businesses against Geodemocracy risks. Political risk insurance provides coverage for losses arising from political events such as expropriation, currency inconvertibility, and political violence. By understanding the Geodemocracy context, businesses can assess their insurance needs and select appropriate risk management tools to safeguard their investments and operations.

Overall, the integration of Geodemocracy analysis into risk management practices helps businesses navigate the complexities of operating in an increasingly volatile and uncertain global environment. By proactively identifying, assessing, and managing Geodemocracy risks, businesses can enhance their resilience, protect their interests, and capitalize on opportunities in the global marketplace.

Most importantly, recent events around the world have brought risks into higher profile (Hopkin, 2018) – Ukraine War, COVID-19 pandemic and the imminent financial crisis represent the extreme risks that are facing the international society, industry and commerce. Risk management becomes more prevailing than ever before, GMI analysis provides a new tool to help organizations (SMEs, MNCs, etc.) strengthen their risk management strategy.

Risk management, risk assessment and risk analysis are three levels of risk processing, from macro-level, to meso-level, and to micro-level (Dunkelberger, 2021), while GMI analysis can mitigate the risks from the core area.

Figure 29 - Three levels of risk processing (Dunkelberger, 2021)

Figure 30 - GMI in risk processing

Wilson and Crouch (1987) insisted that "Risk assessment is largely concerned with uncertainty and hence with a concept of probability that is hard to grasp. The results of even the simplest risk assessments need to be compared with similar assessments of commonplace situations to give them some meaning", with the assistance of GMI analysis, the International Business Society (IBS) can perform a combined risk assessment from the core level hence to optimize the company risk management strategy: those Max class classified countries shall be at the highest priority for investment, global sourcing and supply chain activities, and then followed by those Major class countries, while those Minor class countries shall be ignored.

In terms of large number of specific observation, discussion and analysis, a generic conclusion can be clearly drawn: because of Russia-Ukraine War, Russia, the 7th largest FDI recipient country around the world in 2021 (data.worldbank.org, n.d.; www.oecd.org, n.d.), has been regarded as the worst investment country in 2024.

5.0 CONCLUSIONS AND RECOMMENDATIONS

5.1 Conclusions

The research goal is to investigate potential uncertainties and risks that MNEs and MNCs may experience when executing oversea investment, global supply chain and global sourcing, and to provide an auxiliary business analysis tool to mitigate them.

In a nutshell, this academic dissertation:

- Defined the concept of Geodemocracy Theory, referring to Section 2.3 (Definition of Geodemocracy).
- Explained the GMI quantitative methodology, referring to Section 3.0 (Methodology).
- Outlined the application of GMI on risk management of FDI, GSC operation and global sourcing, referring to Section 5.1.2 (Application of geodemocracy theory).

The dissertation provides an auxiliary risk management / risk analysis tool to be utilized, which meets the highly increased interests from international business society (IBS) and policymakers, and provides them a guideline in a volatile world to control, mitigate, and eradicate the potential uncertainties / risks associated with FDI failure, GSC disruption, and global sourcing disorder, and help them optimize the investment plan or resources structure from comprehensive aspects: politics, economy, and geopolitics (in some extent, meet the criteria of being profitable and being ethical).

On the one hand, by classifying all countries into four categories as Max class, Major class, Medium class and Minor class with 38 parameters, business practitioners can easily mitigate the risks by shedding those highly risky countries: those countries are either with high violent crime rates, or with the worst quality of life, or are involved in the war. In addition, those Max class and Major class countries can readily attract global investment

from MNEs and MNCs with their better developed social and economic environment. Based on the newest survey done in Europe in 2022 (Investment Monitor, 2022), the top 10 best investment countries are all from Max class countries except Japan (from Major class).

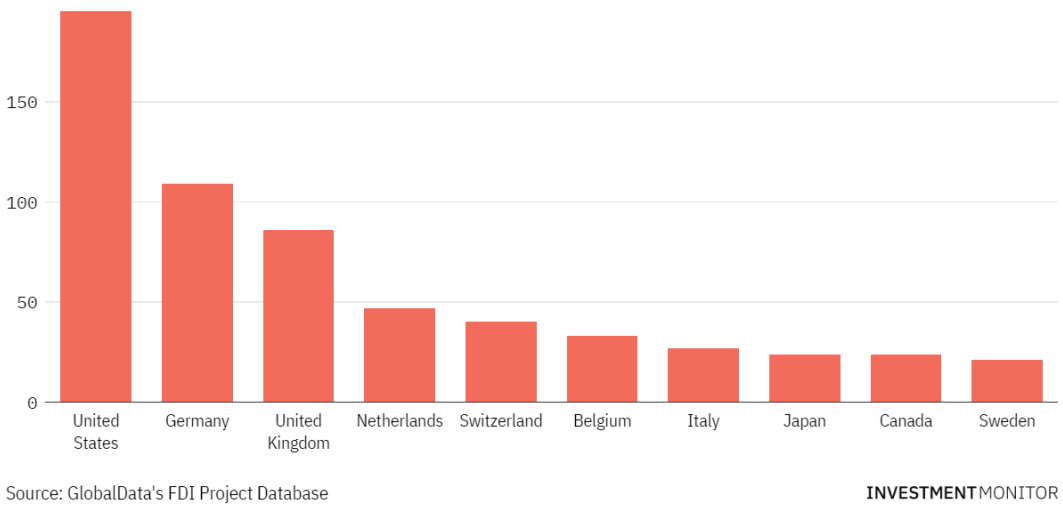

Figure 31 - Top 10 best investment countries (Investment Monitor, 2022)

On the other hand, the GMI accuracy depends on the correctness of these predefined 38 parameters - The final conclusion depends on the calculation of these predefined parameters and the criteria. Using wrong parameters absolutely affects the validity of the final conclusions, which may be easily overturned by any experienced business practitioners. Some of these parameters are collected from secondary data sources, while the others are from primary data sources. Therefore, ensuring the correctness of those basic input data determines the reliability and validity of GMI. The bigger the sample size is (more interview or more survey), the more accurate the GMI is, but apparently this is subject to the budget and time constraints.

GMI analysis will not, however, be a universal panacea. To enhance the credibility of GMI analysis, further research and optimization can be performed, like as the following:

- Select more suitable key parameters, based on these predefined 38 parameters, to better reflect the potential uncertainties and risk coming from democracy, economy, and geopolitics.
- Erect more reasonable and convincing criteria, which can reflects the root causes of risk management and risk mitigation.
- Find a funding to support primary data collection (interview or questionnaire), and ensure enough competent respondents.
- Analyze the correctness of secondary data collected, for example, requesting more detailed information by communicating with those research institutes.
- Further develop those correlated GMI formulas to mature the index calculation, by introducing error correction factors, for example.
- Utilize Interdisciplinary Approach by Fostering collaboration between academia, think tanks, and policymakers to ensure research is more relevant, more exhaustive, and more actionable.

Finally, the Geodemocratic landscape is a dynamic and multifaceted domain where the interactions among states, non-state actors, and international institutions shape the global order. This study delves into the critical aspects of contemporary geopolitics, including the roles of major Geodemocracy actors, the nature of alliances and conflicts, regional dynamics, the influence of non-state actors, the impact of economic strategies, and the transformative power of technological advancements. By understanding these elements, we can better anticipate future trends and craft strategic responses to emerging challenges.

Key Findings and Insights as below:

- Major Geodemocratic Actors. The actions and strategies of leading powers, such as the United States, China, Russia, and the European Union, significantly influence global stability and order. Each actor employs a mix of military, economic, and diplomatic tools to advance its interests, often leading to complex interactions that shape international relations.
- Alliances and Conflicts. International alliances and rivalries, exemplified by organizations like NATO and conflicts such as those in Ukraine and the South China Sea, highlight the persistent nature of Geodemocracy competition. These alliances and conflicts not only affect the immediate regions but also have far-reaching implications for global security and economic systems.
- Regional Dynamics. The Geodemocracy landscape within key regions, such as the Middle East, Asia-Pacific, Europe, and Africa, reveals the interplay between local and global forces. Regional issues, including territorial disputes, economic integration, and political instability, contribute to broader global trends and challenges.
- Non-State Actors. Multinational corporations, international organizations, and non-governmental organizations increasingly influence Geodemocracy outcomes. Their roles in areas like conflict resolution, humanitarian aid, and economic development highlight the growing importance of non-state actors in shaping international relations.
- Economic Strategies. Geoeconomic tools, such as trade policies, sanctions, and control over critical resources, are crucial components of Geodemocracy strategy. The economic interdependencies between nations create both opportunities for cooperation and vulnerabilities to economic coercion.

- Technological Advancements. Emerging technologies, including cyber capabilities, artificial intelligence, and advanced surveillance, are transforming the nature of Geodemocracy competition. These technologies introduce new dimensions of power and influence, requiring states to adapt their strategies accordingly.
- Emerging Trends. Current Geodemocracy trends, such as the rise of populism, shifting global power dynamics, and evolving international norms, suggest a future characterized by uncertainty and change. Anticipating these trends is essential for formulating effective policies and strategies.

Key strategic recommendations to balance geodemocratic dynamics as below:

- Strengthen Alliances and Partnerships. Enhancing international cooperation through robust alliances and partnerships can help address shared security challenges and promote global stability. Diplomatic efforts should focus on building trust and fostering multilateral dialogue.
- Promote Economic Resilience. Developing strategies to manage economic risks, such as diversifying trade relationships and investing in critical infrastructure, can help mitigate the impact of economic volatility and geopolitical disruptions.
- Enhance Technological Capabilities. Investing in technological innovation and cybersecurity is crucial for maintaining competitive advantage and protecting national interests in an increasingly digital world.
- Address Ethical and Social Issues. Ensuring that geopolitical strategies are aligned with ethical standards and social responsibility is vital for maintaining legitimacy and public support. This includes promoting human rights, environmental sustainability, and fair labor practices.

- Foster Regional Stability. Supporting regional stability through targeted diplomatic, economic, and development initiatives can help address the root causes of conflict and foster sustainable peace.

The geodemocracy study provides critical insights into the forces that shape our world. By understanding the complex interactions among states, non-state actors, and international institutions, we can better navigate the challenges and opportunities of the global order. Moving forward, it is essential to adopt a holistic and adaptive approach to geodemocratic strategy, one that recognizes the interconnectedness of global issues and the need for cooperative and innovative solutions. This will enable policymakers and leaders to effectively manage risks, leverage opportunities, and promote a more stable, prosperous, and just world.

5.2 Application of Geodemocracy theory

The GMI analysis can be easily applied. When applying Geodemocracy theory into business analysis, the TPDR+G model (as suggested in previous section) is recommended. Steps can be followed:

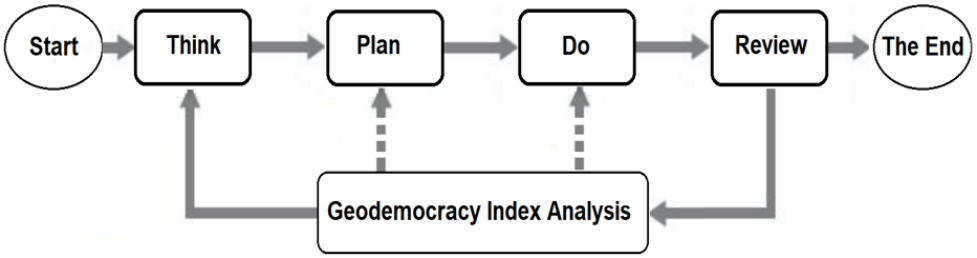

Figure 32 - Proposed TPDR+G Model

- Step 1: Think. This is the first but utmost step. Brainstorm the possible variables, collect basic uncertainty / risk information, and prioritize the pre-determined countries for investment, global supply chain, and global sourcing.
- Step 2: Plan. One of the most importance activities in Step 2 is to calculate GMI of designated country (countries) at a given time. GMI is dynamically changed hence a given time is vital ensuring correctness.
- Firstly, calculate Politics Risk Index.
- Secondly Calculate Economy Risk Index.
- Thirdly estimate Geopolitical Confidence Index.
- Finally calculate final Geodemocracy Index at a given time.
- Step 3: Do. At this step, apply the newly calculated GMI to the business analysis. Only select Max class and Major class countries as destination for investment, global supply chain and global sourcing.
- Step 4: Review. At this step, validate the final business plan, using the business analysis as a primary source and Geodemocracy Index as a secondary source (which is so-called the dual modular redundancy), to cross-check the correctness. If any discrepancy or significant difference, adjust the variables and repeat the TPDR+G model.

Furthermore, Geodemocracy theory is a framework that helps understand the interplay between geography, power, and politics on a global scale. Its applications are broad and diverse, spanning various fields including international relations, economics, military strategy, and even environmental studies. Here are some key applications:

- Foreign Policy Formulation. Geopolitical theories provide insights into how states perceive and pursue their interests in the international arena. Decision-

makers often use geopolitical analysis to assess the strategic significance of territories, resources, and alliances when formulating foreign policies.

- Military Strategy and Defense Planning. Geopolitical theories help military planners understand the geographic factors that influence military operations. Concepts such as the "rimland" and "heartland" in Mackinder's theory or the "pivot area" in Spykman's theory have been influential in shaping military strategies throughout history.
- Resource Management and Energy Security. Geopolitical theories inform the understanding of resource distribution and its implications for economic and security policies. Control over vital resources such as oil, natural gas, and rare earth minerals often becomes a focal point in geopolitical competition.
- Regional Studies. Geopolitical theories are applied to analyze regional dynamics and conflicts. For example, scholars use theories like "pivotal states" and "geopolitical pivots" to understand the strategic importance of certain countries within specific regions.
- International Trade and Economic Development. Geopolitical theories help explain patterns of international trade, economic alliances, and development strategies. The concept of "sea power" versus "land power," for instance, influences maritime trade routes, port development, and economic policies of coastal states.
- Conflict Analysis and Resolution. Geopolitical theories provide frameworks for understanding the causes of conflicts and identifying potential solutions. By analyzing territorial disputes, ethnic rivalries, and historical animosities through a geopolitical lens, policymakers and mediators can work towards conflict resolution.

- Environmental Security. Geopolitical theories are increasingly applied to analyze environmental challenges such as climate change, resource scarcity, and ecological degradation. Understanding how these issues intersect with political boundaries and power dynamics is crucial for devising effective environmental policies.
- Infrastructure Planning and Development. Geopolitical considerations influence the planning and development of critical infrastructure such as transportation networks, pipelines, and communication systems. Projects like the Belt and Road Initiative are driven by geopolitical imperatives aimed at enhancing connectivity and influence.
- Intelligence Analysis. Geopolitical theories provide a framework for intelligence agencies to assess global threats, anticipate strategic moves by adversaries, and prioritize intelligence collection efforts.
- Global Governance and International Institutions. Geopolitical theories shed light on power dynamics within international institutions and the competition for influence among major powers. Understanding these dynamics is essential for reforming existing institutions and creating new frameworks for global governance.

In essence, geodemocracy theory serves as a lens through which scholars, policymakers, and practitioners analyze and navigate the complexities of global politics, security, and economic interactions.

5.3 Recommendations

In this dissertation, the newly developed Geodemocracy theory is applied into FDI, global supply chain operation and global sourcing. But it is apparently that

Geodemocracy theory can also be applied into other sectors, such as global energy / power supply, rare metal and rare earth production, natural resources supply, fossil fuel supply, and nuclear fuel, and even military security and national security / national defense of any country, etc.

5.3.1 How to start a Geodemocracy study

For a novice leaner, starting a geodemocracy study involves a structured approach to understanding the political, economic, and social dynamics that influence global and regional power relations. Here's a step-by-step guide to begin:

5.3.1.1 Define Objectives

- Purpose. Clearly outline why you are conducting the study. Are you analyzing a specific region, understanding the impact of a global event, or exploring the dynamics between specific countries?
- Scope. Determine the geographical and thematic scope of your study.

5.3.1.2 Explore Contemporary Literature

- Familiarize yourself with contemporary geopolitical analysis by reading books and articles written by leading scholars in the field. Look for works that cover a broad range of topics, from global power shifts to regional conflicts to emerging threats.

5.3.1.3 Gather Background Information

- Historical Context. Study the historical background of the region or countries involved to understand the roots of current geopolitical issues.
- Key Players. Identify the major countries, organizations, and leaders that influence the geopolitical landscape.

5.3.1.4 Identify Core Topics

- Political Structures. Examine the political systems, governance models, and political stability of the countries involved.
- Economic Factors. Analyze economic conditions, trade relationships, and economic policies that impact geopolitical dynamics.
- Social and Cultural Influences. Consider cultural, religious, and social factors that affect regional and global interactions.

5.3.1.5 Conduct In-Depth Analysis

- Current Events. Keep abreast of current events and news related to your study. Track developments through reliable news sources, academic journals, and expert analysis.
- Strategic Interests. Understand the strategic interests of the key players, including military capabilities, alliances, and geopolitical strategies.
- Conflict and Cooperation. Analyze areas of conflict and cooperation, such as territorial disputes, trade agreements, and diplomatic relations.

5.3.1.6 Use Analytical Frameworks

- Geodemocracy Theories. Apply geodemocracy theories and models to frame your analysis.
- SWOT Analysis. Conduct a SWOT analysis (Strengths, Weaknesses, Opportunities, Threats) for the countries or regions involved.
- Scenario Planning. Develop different scenarios based on potential developments and their implications.

5.3.1.7 Data Collection and Research Methods

- Primary Sources. Utilize primary sources such as government documents, official statements, and firsthand accounts.

- Secondary Sources. Refer to secondary sources including academic articles, books, and reports from think tanks and research institutions.
- Quantitative Data. Incorporate quantitative data such as economic indicators, military expenditures, and demographic statistics.

5.3.1.8 Develop Hypotheses and Questions

- Research Questions. Formulate specific research questions that guide your study. These should be clear, focused, and researchable.
- Hypotheses. Develop hypotheses based on your initial findings and theoretical frameworks.

5.3.1.9 Analyze and Interpret Findings

- Critical Analysis. Critically analyze your findings, identifying patterns, trends, and causal relationships.
- Comparative Analysis. Compare different regions or countries to highlight similarities and differences in their geopolitical dynamics.

5.3.1.10 Draw Conclusions and Make Recommendations

- Synthesize Findings. Summarize the key findings of your study, providing a coherent narrative that ties together various elements of your analysis.
- Recommendations. Based on your conclusions, make recommendations for policymakers, stakeholders, or further research.

5.3.1.11 Document and Communicate

- Report Writing. Prepare a detailed report documenting your research process, findings, and conclusions.
- Presentations. Consider presenting your findings through presentations, seminars, or conferences to engage with a wider audience.

5.3.1.12 Stay Updated

- Continuous Monitoring. Geopolitical dynamics are constantly evolving. Continuously monitor developments in your area of study.
- Ongoing Learning. Stay informed through continued reading, attending relevant events, and engaging with experts in the field.

By immersing in these resources and engaging with diverse perspectives, researchers can develop a comprehensive understanding of Geodemocracy studies and contribute to informed analysis and decision-making in the complex world of international relations.

5.3.2 How to apply Geodemocracy study into practice

When apply Geodemocracy study into practice, here are some recommendations:

- Focus Areas. Begin by selecting specific regions or countries of interest for your geopolitical study. Consider areas experiencing significant political upheaval, conflict, or strategic importance. Possible focus areas could include the Middle East, East Asia, Africa, or specific countries such as Russia, China, Iran, or North Korea.
- Research Objectives. Clearly define the objectives of your study. Are you seeking to analyze the root causes of geopolitical tensions, assess the impact of geopolitical events on regional stability, or explore potential scenarios and their implications for global security and economic dynamics?
- Data Collection and Analysis. Gather data from reputable sources such as government agencies, international organizations, think tanks, academic journals, and news outlets. Utilize qualitative and quantitative analysis techniques to examine historical trends, political dynamics, economic indicators, military capabilities, and social factors shaping geopolitical landscapes.

- Drivers of Geopolitical Tensions. Identify and analyze the key drivers of geopolitical tensions in your chosen regions or countries. This could include factors such as territorial disputes, resource competition, ideological rivalries, ethnic or religious conflicts, power struggles among state and non-state actors, or external interventions by major powers.
- Geopolitical Risk Assessment. Develop a framework for assessing geopolitical risks and vulnerabilities. Evaluate the likelihood and potential impact of various geopolitical scenarios, such as armed conflict, regime change, economic sanctions, terrorism, or cyber warfare. Consider both short-term and long-term implications for regional stability, global security, and economic prosperity.
- Policy Implications. Provide recommendations for policymakers, businesses, and other stakeholders based on your analysis. Identify strategies for mitigating geopolitical risks, promoting conflict resolution, fostering diplomatic dialogue, and enhancing international cooperation. Consider the role of multilateral institutions, diplomatic initiatives, economic incentives, and military alliances in managing geopolitical challenges.
- Future Trends and Scenarios. Explore potential future trends and scenarios in geopolitics. Consider how emerging technologies, demographic shifts, climate change, and other megatrends may shape geopolitical dynamics in the coming years. Conduct scenario planning exercises to anticipate and prepare for various geopolitical outcomes.
- Cross-Cutting Themes. Identify cross-cutting themes and interconnections between geopolitical issues and other global challenges, such as economic globalization, environmental degradation, public health crises, or technological

innovation. Examine how these factors intersect and influence geopolitical dynamics on a global scale.

- Stakeholder Engagement. Engage with experts, policymakers, academics, and practitioners working in the field of geopolitics. Seek feedback and input from diverse perspectives to enrich your analysis and enhance the relevance of your study. Consider organizing workshops, seminars, or conferences to facilitate dialogue and knowledge exchange among stakeholders.
- Ethical Considerations. Consider the ethical implications of your research, particularly in sensitive geopolitical contexts. Respect cultural sensitivities, protect the privacy and security of individuals, and adhere to ethical guidelines for conducting research in politically sensitive environments. Strive for objectivity, accuracy, and impartiality in your analysis and conclusions.

By following these recommendations, a comprehensive and insightful geodemocracy study can be conducted, which help understanding of complex global dynamics and informs policy decisions aimed at promoting peace, stability, and prosperity in an increasingly interconnected world.

5.3.3 Recommendations for National Defense

National defense refers to the measures taken by a country to protect its sovereignty, territorial integrity, and national interests from external threats and aggression (Chiş-Manolache and Chiş, 2019). It encompasses a wide range of activities and resources dedicated to safeguarding the nation against military attacks, espionage, terrorism, and other forms of external threats. The followings are some recommendations for a geodemocracy study focusing on national defense:

- Strategic Threat Assessment. Begin by conducting a comprehensive assessment of strategic threats facing your country. Identify potential adversaries, including

state actors, non-state actors, and transnational threats such as terrorism, cyber attacks, and organized crime. Analyze their capabilities, intentions, and evolving strategies to understand the nature of the threat environment.

- Defense Posture Analysis. Evaluate your country's defense posture, including military capabilities, force structure, and readiness levels. Assess strengths, weaknesses, opportunities, and threats (SWOT analysis) to identify areas for improvement and investment. Consider emerging technologies and asymmetric threats that may challenge traditional defense paradigms.
- Geopolitical Context. Situate your analysis within the broader geopolitical context, considering regional dynamics, alliances, rivalries, and historical grievances. Assess how geopolitical trends such as great power competition, territorial disputes, and proxy conflicts may impact national defense strategy and operations.
- Alliance Management. Examine your country's alliances and security partnerships. Evaluate the effectiveness of existing alliances in enhancing deterrence, collective defense, and interoperability. Consider opportunities for strengthening partnerships, expanding defense cooperation, and addressing shared security challenges.
- Threat Scenarios and Contingency Planning. Develop realistic threat scenarios and conduct contingency planning exercises to assess readiness and response capabilities. Consider a range of scenarios, including conventional warfare, hybrid threats, asymmetric attacks, and gray zone activities. Evaluate the resilience of critical infrastructure and supply chains against potential disruptions.

- Technology and Innovation. Explore the role of technology and innovation in national defense. Assess emerging technologies such as artificial intelligence, autonomous systems, space capabilities, and advanced weaponry. Consider the implications of technological advancements for military doctrine, force structure, and defense procurement.
- Defense Budget and Resource Allocation. Analyze defense budget priorities and resource allocation decisions. Assess the adequacy of funding levels to meet strategic objectives and operational requirements. Consider trade-offs between maintaining readiness, modernizing capabilities, and investing in research and development.
- Civil-Military Relations. Examine civil-military relations and the role of the armed forces in democratic governance. Assess mechanisms for civilian oversight, accountability, and transparency in defense decision-making. Consider the balance between national security imperatives and respect for democratic values and human rights.
- Strategic Communication and Public Diplomacy. Evaluate strategies for strategic communication and public diplomacy in support of national defense objectives. Assess the effectiveness of messaging campaigns, information operations, and public engagement efforts. Consider opportunities for building public support and fostering resilience against disinformation and propaganda.
- International Security Cooperation. Explore opportunities for international security cooperation and collaboration. Assess the role of multilateral organizations, peacekeeping operations, and diplomatic initiatives in promoting regional stability and conflict resolution. Consider the potential for confidence-

building measures, arms control agreements, and crisis management mechanisms to reduce tensions and prevent escalation.

By addressing these key areas into geodemocracy study on national defense, a valuable insights and recommendations can be provided to policymakers, military leaders, and other stakeholders.

At the UN General Assembly (September 2022) US president Joe Biden declared that Russia's invasion of Ukraine was violating the global order unscrupulously (Liptak, 2022) and created gigantic geopolitical risk.

The direct consequence caused by Ukraine War is that 15 NATO countries and Sweden have declared to vastly increase their national defense spending in April 2022 (www.mckinsey.com, n.d.), by boosting the defence spending close to or over 2% of GDP respectively.

When one country updates its national security, national defense, and strategic partnership with other countries, Geodemocracy Theory absolutely can help. For a long time, Pakistan has diversified its military spending from China, US and Europe to minimize its geodemocratic risks: to deter the military threats from India, and to strengthen the solidarity with international allies (Shahbaz and Shabbir, 2012; Mirza, Jaspal and Malik, 2015).

Similarly, in September 2022 Argentina finalized national defense budget $664 million to purchase new fighter jets JF-17 from China and $20 million to build up maintenance infrastructure to modernize its air force (Ansari and Higuera, 2022; Dangwal, 2022) in order to eradicate threats from UK because of Falklands War, and strengthen its military tie with China (one of the major powers).

After estimating geopolitical risks, Vietnam has pursued a non-aligned national defense policy known as "four no and one-opened" (Vietnam Defense White Paper in 2019), even

who has common concerns over China's provocation in the South China Sea with US (Roy, 2020).

5.3.4 Recommendations for re-build supply chain

Here are some recommendations for a geopolitical study focusing on rebuilding the supply chain:

- Identify Critical Nodes. Begin by identifying critical nodes and vulnerabilities in the supply chain that were exposed or exacerbated during recent disruptions such as the COVID-19 pandemic. This could include dependencies on single-source suppliers, transportation bottlenecks, geopolitical risks, or shortages of essential materials.
- Diversification Strategies. Assess the feasibility and effectiveness of diversification strategies to mitigate supply chain risks. Explore opportunities to diversify sourcing locations, suppliers, transportation routes, and inventory management practices. Consider factors such as cost, lead times, quality, and geopolitical stability when evaluating alternatives.
- Resilience Building. Develop a framework for enhancing supply chain resilience in the face of future disruptions. Identify resilience-building measures such as redundancy, flexibility, and agility. Evaluate the role of digital technologies, data analytics, and predictive modeling in improving visibility, forecasting, and risk management capabilities.
- Geopolitical Risk Analysis. Conduct a geopolitical risk analysis to identify potential threats to the supply chain from geopolitical tensions, trade disputes, sanctions, or regional conflicts. Assess the impact of political instability, regulatory changes, and protectionist measures on global trade and supply chain operations.

- Stakeholder Collaboration. Foster collaboration among stakeholders, including government agencies, industry associations, academia, and private sector companies. Establish forums for sharing best practices, lessons learned, and innovative solutions for rebuilding and strengthening the supply chain ecosystem.
- Policy Recommendations. Provide policy recommendations to policymakers and regulatory authorities to support the rebuilding of the supply chain. Consider measures such as investment incentives, trade facilitation agreements, infrastructure development projects, and regulatory reforms aimed at enhancing supply chain resilience and competitiveness.
- Technology Adoption. Explore opportunities for leveraging technology to modernize and optimize supply chain operations. Assess the potential of technologies such as blockchain, Internet of Things (IoT), artificial intelligence (AI), and robotics in improving visibility, traceability, and efficiency throughout the supply chain.
- Sustainability Integration. Integrate sustainability considerations into supply chain rebuilding efforts. Evaluate the environmental and social impacts of supply chain practices and explore opportunities for promoting sustainable sourcing, ethical labor practices, and circular economy principles.
- Scenario Planning. Conduct scenario planning exercises to anticipate and prepare for future supply chain disruptions. Develop contingency plans and risk mitigation strategies for various scenarios, including natural disasters, geopolitical crises, public health emergencies, and cyber attacks.
- Monitoring and Evaluation. Establish monitoring and evaluation mechanisms to track progress in rebuilding the supply chain and assessing the effectiveness of

resilience-building efforts. Regularly review and update strategies in response to evolving geopolitical dynamics, market conditions, and emerging technologies.

By addressing these recommendations into geodemocracy study focusing on rebuilding the supply chain, international business practitioners can develop strategies and policies that enhance supply chain resilience, promote economic recovery, and strengthen global trade and commerce in a post-pandemic world.

With the ongoing economic conflict between US and China (US-China Trade War), the White House (2022) initiated the Biden-Harris Plan in 2022 to rebuild critical supply chain to outcompete China and the rest of the world.

F-35 joint strike fighter, led by US Department of Defense (DoD), is the most advanced fifth-generation stealth fighter in the world, which is used to reinforce US air force superiority (U.S. Department of Defense, n.d.). But Pentagon stopped accepting F-35 fighters in September 2022 because of using magnet raw materials (cobalt and samarium alloy) made in China (Losey, 2022). The spokesperson from Lockheed Martin factory (F-35 fighters are built there) advised that they were working closely with the US Department of Defense to resolve this issue by replacing the supplier. This prompted immediate concern of US Air Force to rebuild its reliable supply chain and secure its steady delivering to US Force and allies , according to the Chief of Staff of the US Air Force General Charles Q. Brown (www.nationaldefensemagazine.org, n.d.).

Early in September 2020 President Donald Trump singed Executive Order #13817 which aims to fully restore Rare Earth Elements (RAEs) production to US and to deter China's dominance over the REE supply chain. After two months Pentagon awarded $9.6 million to MP Materials (it owns the largest REE mines in US) to boost refining the strategic minerals at the site of Mountain Pass mine in California, US. Before the support from

Pentagon, MP Materials sent the raw materials to China for refinement (Stone, 2022; www.nationaldefensemagazine.org, n.d.).

REEs are the key element for some vital productions of US Defense industry (F-35 fighter, advanced air-to-air missile, etc.), and currently China provides more than 85% of the worlds REEs (Mehmood, 2018; Mancheri, 2012). If China-dominated REE supply chain disrupted, these essential US weapon system would come to halt (Butler, 2014). For the interest of US national security, Butler (2014) stated a fully trusted and reliable REE supply chain in US had to be built up immediately, or became self-reliant with close allies such as Canada, Australia, and Japan.

In July 2022 Janet L. Yellen (secretary o the US Treasury), along with US government senior leaders, met Japanese government leaders and officers in Tokyo to discuss how to bolster supply chain resilience with trusted economic partners

(U.S. Department of the Treasury, n.d.). Early in April 2022 Japanese government earmarked 243.5-billion-yen supply chain rebuilding support package to help Japanese manufactures shift production exit China and 87 companies have done so up to July 2022, in light of the frosty geopolitical relations between Japan and China (The Japan Times, 2020).

5.3.5 Recommendations for Global Energy Security

Global energy security is a critical concern for ensuring stable, affordable, and sustainable energy supplies. This requires coordinated policies and strategies to address challenges such as geodemocratic tensions, market volatility, climate change, and technological advancements. Here are key recommendations for enhancing global energy security:

- Geopolitical Risk Assessment. Conduct a comprehensive assessment of geopolitical risks to global energy security, including supply disruptions,

geopolitical tensions, and regional conflicts. Identify key regions and chokepoints vulnerable to disruptions in energy supply chains, such as the Strait of Hormuz, the South China Sea, or transit routes for natural gas pipelines.

- Energy Resource Mapping. Map global energy resources and dependencies to understand the distribution of energy reserves, production capacity, and import/export patterns. Analyze the geopolitical implications of energy trade flows, resource nationalism, and energy infrastructure investments on regional and global energy security.
- Strategic Energy Players. Identify strategic energy players, including major oil and gas producers, transit countries, and energy consumers. Assess their geopolitical interests, alliances, and rivalries, and how they influence global energy markets and geopolitical dynamics. Consider the role of state-owned energy companies, sovereign wealth funds, and energy diplomacy in shaping energy security strategies.
- Energy Transition Dynamics. Analyze the geopolitical implications of the ongoing energy transition towards renewable energy sources, decarbonization efforts, and shifts in energy consumption patterns. Evaluate the geopolitical risks and opportunities associated with the rise of renewable energy technologies, energy storage solutions, and electric vehicles on global energy security.
- Geopolitical Hotspots. Focus on geopolitical hotspots with significant implications for global energy security, such as the Middle East, Russia, the Arctic, and the Asia-Pacific region. Assess the potential for conflict, cooperation, and competition over energy resources, transit routes, and energy infrastructure projects in these regions.

- Supply Chain Resilience. Evaluate the resilience of global energy supply chains to disruptions caused by geopolitical risks, natural disasters, cyber attacks, and pandemics. Identify vulnerabilities in energy infrastructure, transportation networks, and critical facilities, and develop strategies for enhancing resilience and diversification of energy sources.
- Energy Security Strategies. Analyze national and regional energy security strategies adopted by countries and international organizations to mitigate geopolitical risks and ensure stable energy supplies. Evaluate the effectiveness of energy security policies, energy cooperation agreements, and crisis response mechanisms in addressing emerging threats to energy security.
- Technology and Innovation. Explore the role of technology and innovation in enhancing global energy security. Assess the potential of advanced technologies such as digitalization, artificial intelligence, and blockchain in optimizing energy production, distribution, and consumption. Evaluate innovative solutions for improving energy efficiency, energy storage, and grid resilience.
- Climate Change Impacts. Consider the geopolitical implications of climate change on global energy security, including extreme weather events, sea-level rise, and resource scarcity. Analyze how climate-related risks and mitigation efforts affect energy infrastructure, supply chains, and geopolitical stability in vulnerable regions.
- Multilateral Cooperation. Promote multilateral cooperation and dialogue among governments, energy companies, international organizations, and civil society to address shared challenges and promote sustainable energy security. Advocate for transparent, rules-based approaches to energy governance, energy market

integration, and energy infrastructure development to enhance global resilience and stability.

By addressing these recommendations into a geodemocracy study focusing on global energy security, a valuable insights and policy recommendations can be submitted to policymakers, energy industry stakeholders, and international organizations working to ensure a stable, resilient, and sustainable energy future for all.

It is still too early to exactly assess the national losses and predict the long-time consequences caused by Ukraine War. But the energy crisis in EU countries underlined the fact that EU has extremely relied on Russia's supply, particularly natural gas, coal and oil (in 2021 EU imported more than 40% of its natural gas and one third of its oil from Russia) (International Institute for Sustainable Development, n.d.). The sanctions on Russia have brought out survival crisis – "Ukraine trade disruptions and inflation weigh on firms and households, threatening to derail Europe's recovery and push many into poverty (European Investment Bank, n.d.)."

Estimated by European Investment Bank (2022), EU cooperations profit losses sharply increased to 15%. EU countries reached historical high Harmonized index of consumer prices (HICP) inflation rate 9.8% in July 2022, and the highest HICP inflation rate is 23.2% in Estonia (Economics, n.d.). EU's economic prosperity based on Russia's cheap natural gas, oil and coal (Correljé and van der Linde, 2006) has gone with the war.

Early in 2014 McKillop (2014) believed that recasting Europe's energy dependence on Russia was an urgent agenda for EU. On 9 March 2014 the UK's Foreign minister William Hague announced vis-à-vis Russia's invasion on Crimea - "European nations will recast their approach to energy and economic links to Russia over time."

After eight years, Ukraine War was ongoing. It’s happy to see EU’s big policy U-turn on natural gas. EU leaders finally declared that they agreed to cut off their dependency on Russian natural gas, oil and coal imports as soon as possible (Simon and Taylor, 2022).

5.3.6 Recommendations for Oversea Investment Stakeholders

Geodemocracy theory can be trusted to guide the international business activities among International Business Society (IBS), which is to provide the investors, bankers and other business practitioners a transparent and explicit benchmark to finalize their final investment plan. Here are some recommendations for a geodemocracy study aimed at overseas investment stakeholders:

- Country Risk Assessment. Conduct a comprehensive assessment of geodemocratic risks in target countries for overseas investment. Evaluate factors such as political stability, regulatory environment, rule of law, corruption levels, security threats, and socio-economic conditions. Provide stakeholders with insights into the political and security landscape to inform investment decision-making.
- Regional Analysis. Analyze regional dynamics and interdependencies that may impact overseas investments. Consider regional alliances, trade agreements, geopolitical tensions, and security challenges that could affect investment opportunities and operations. Identify emerging trends and opportunities for diversification across regions.
- Policy and Regulatory Analysis. Examine the policy and regulatory environment governing foreign investment in target countries. Assess the stability of investment frameworks, transparency of regulatory processes, and legal

protections for investors. Highlight potential risks and uncertainties arising from changes in government policies or regulations.

- Market Entry Strategies. Develop market entry strategies tailored to the geopolitical context of target countries. Consider factors such as cultural differences, local business practices, and geopolitical sensitivities when designing investment approaches. Explore partnerships, joint ventures, or strategic alliances with local stakeholders to navigate political and regulatory complexities.
- Risk Mitigation Strategies. Identify strategies for mitigating geopolitical risks and safeguarding investments. This may include political risk insurance, contractual protections, diversification of investments, and contingency planning for worst-case scenarios. Provide stakeholders with practical tools and guidance for managing geopolitical uncertainties.
- Stakeholder Engagement. Foster dialogue and collaboration among stakeholders involved in overseas investments, including government agencies, private sector companies, financial institutions, and civil society organizations. Facilitate knowledge exchange, best practice sharing, and coordination of efforts to address common challenges and opportunities.
- Due Diligence Processes. Enhance due diligence processes to incorporate geopolitical risk factors into investment decision-making. Develop frameworks for assessing geopolitical risks alongside financial, operational, and legal considerations. Integrate geopolitical intelligence into investment screening, risk assessment, and portfolio management practices.
- Long-Term Outlook. Take a long-term perspective when evaluating overseas investment opportunities in geopolitically complex environments. Consider

geopolitical trends, demographic shifts, technological advancements, and other macroeconomic factors that may shape investment outcomes over time. Encourage stakeholders to adopt a strategic and adaptive approach to investment planning.

- Crisis Preparedness. Develop contingency plans and crisis management protocols to respond to geopolitical disruptions that may affect overseas investments. Establish communication channels, escalation procedures, and response mechanisms for addressing emergencies, such as political unrest, natural disasters, or security incidents. Conduct regular drills and scenario exercises to test preparedness and resilience.
- Monitoring and Evaluation. Establish mechanisms for monitoring and evaluating the impact of geopolitical factors on overseas investments. Track geopolitical developments, assess their implications for investment performance, and adjust strategies accordingly. Provide stakeholders with regular updates and analysis to inform decision-making and risk management practices.

By following these recommendations into a geodemocracy study for oversea investment, stakeholders can navigate complex geopolitical environments, mitigate risks, and capitalize on opportunities for sustainable and profitable investments abroad. In a nutshell:

1) Firstly, Invest wisely. GMI classified countries around the world into four categories: Max class, Major class, Medium class and Minor class, based on diversified criteria from economy, politics (democracy) and geopolitics, and also from ethical mandate. Hence those Max class and Major class countries are the chosen ones to be trustworthy. GMI directly tells the truth:
    - Which country (or region) is worthy investment at a given time?

- Which country (or region) will face geodemocracy crisis in the foreseeable future?
- Is the market opportunity big and risks less?
- What are the potential risks to the business?

By setting different weighting factors α and β and Geopolitical Confidence Index at different time t, clients / customers can optimize the business plans by comparing different case scenarios.

2) Secondly, focus on Max class and Major class countries with appropriate mix of investment (asset allocation). These countries are outlined as the best places for business activities, but don't put all your eggs in one basket. Instead, diversify the investment into top three countries, or top five countries, for example.
3) Finally, estimate the comfort zone in taking on risk, which is to consider reasonably aggressive investment goals to seize greater investment return. For example, by monitoring those countries rated as Medium Class, sell out or buy in stocks / bounds based on calculated GMI promptly.

5.3.7 Recommendations on Ethical Investment

Here are some recommendations for a geopolitical study aimed at ethical investment stakeholders:

- Ethical Risk Assessment. Conduct a thorough assessment of geopolitical risks in target regions or countries for ethical investment. Evaluate factors such as human rights violations, environmental degradation, corruption, political instability, and armed conflict. Identify high-risk areas where ethical considerations may be particularly relevant to investment decision-making.

- ESG Integration. Integrate environmental, social, and governance (ESG) factors into the investment analysis and decision-making process. Consider how geopolitical dynamics impact ESG risks and opportunities, such as regulatory changes, social unrest, and climate-related vulnerabilities. Incorporate ESG criteria into investment screening, due diligence, and portfolio management practices.
- Stakeholder Engagement. Engage with a diverse range of stakeholders, including local communities, civil society organizations, and advocacy groups, to understand their perspectives and concerns regarding ethical investment. Foster dialogue, transparency, and collaboration to build trust and address stakeholder expectations.
- Impact Assessment. Assess the potential social, environmental, and economic impacts of investments in geopolitical contexts. Conduct impact assessments to evaluate the positive and negative effects of investment projects on local communities, ecosystems, and livelihoods. Consider the long-term sustainability and resilience of investments in light of geopolitical risks.
- Ethical Screening Criteria. Develop ethical screening criteria to guide investment decisions and prioritize investments that align with ethical values and principles. Consider factors such as human rights, labor standards, environmental sustainability, community engagement, and corporate governance when evaluating investment opportunities.
- Due Diligence Processes. Enhance due diligence processes to incorporate ethical considerations into investment analysis and risk assessment. Conduct thorough investigations into the track record, practices, and values of potential investment

partners and portfolio companies. Screen investments for involvement in controversial activities or violations of ethical standards.

- Transparency and Disclosure. Promote transparency and disclosure of relevant information related to ethical investment decisions. Encourage companies to disclose ESG performance data, supply chain practices, and social impact metrics. Advocate for greater transparency in government policies, regulatory enforcement, and corporate accountability mechanisms.
- Engagement and Advocacy. Use shareholder engagement, proxy voting, and advocacy initiatives to promote ethical practices and responsible behavior among investee companies and government authorities. Advocate for policy reforms, regulatory changes, and industry standards that support ethical investment principles and promote sustainable development.
- Community Consultation. Prioritize meaningful consultation and engagement with affected communities to ensure their voices are heard and their rights are respected in investment decision-making processes. Empower local stakeholders to participate in decision-making, negotiate fair agreements, and hold investors accountable for their actions.
- Continuous Monitoring and Improvement. Establish mechanisms for ongoing monitoring, evaluation, and improvement of ethical investment practices. Track the social, environmental, and governance performance of investments over time and adjust strategies in response to changing geopolitical dynamics and stakeholder feedback.

By implementing these recommendations into a geodemocracy study for ethical investment stakeholders, you can help them navigate complex ethical dilemmas, mitigate

risks, and maximize positive impacts while pursuing financial returns in a responsible and sustainable manner.

Most of the entrepreneurs aim to perfect their investment portfolios to maximize the financial profitability, for example, to gain the Internal Rate of Return (IRR) as higher as possible (Michelson et al., 2004). This is universally accepted in terms of the principle of capitalism - capital accumulation (Marx, 1867). There are more and more business practitioners who consider ethical mandate or social responsibility in their investment (Angel and Rivoli, 1997; Stüttgen, 2019).

- What is ethical investing and how do we do it?
- Does ethical investing impose extra cost upon the company?
- What are the extra benefits of ethical investing?

These were the common concerns that every business organization needed to contemplate. Angel and Rivoli (1997) concluded "for certain types of firms, such screens may result in higher capital costs. But for other firms, the effects of this investor behavior are likely to be negligible."

The continuously happened full-blown economic crisis since 1929 (Wolf, 2014) forced the international society to reckon more sustainable financial models that would combine value accumulation, ethical mandate and moral order (Socially responsible investment, 2003; Langenhove, 2017). The socially responsible investing (SRI) has been a quickly growing segment in recent years (Ethical Investment, 2004). In 2020 the professionally managed SRI assets (by using sustainable investment strategies and considering environmental, social and governance (ESG)) reached $17.1 trillion (www.ussif.org, n.d.).

In the past decades profitability remained as a paramount outcome but nowadays it is not the sole requirement driving the investment, global supply chain and global sourcing (Ethical Investment, 2004; Ahamat, 2017). At FreedomFest 2012 Whole Foods CEO John Mackey insisted on the moral case of capitalism “There is nothing wrong with making money, but that's not particularly inspiring (Reason.com, n.d.)”.

From the questioning attitude, clients / customers can reset the weighting factors α and β in GMI formula 1. When democracy is placed on emphasis, weighting factor α could go higher up to 80% to meet the criteria of entrepreneurs and investors for investment, global supply chain and global sourcing. α=50% and β=50% are a preferred equilibrium condition. Speaking candidly, α=60% and β=40% are another recommended condition.

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7.0 APPENDIX

7.1 Appendix A1 - Declaration

SSBM Geneva

Declaration of Academic Integrity

I hereby confirm that the present paper / thesis

The Principle of Geodemocracy and its impact on FDI, global supply chain and global sourcing

Title

is the result of my own independent scholarly work, and that in all cases material from the work of others (in books, articles, essays, dissertations, and on the internet) is acknowledged, and quotations and paraphrases are clearly indicated. No material other than that listed has been used.

I have read and understood the Institute's regulations and procedures concerning plagiarism.

Kevin Bharrien 10 June 2024

Name, Date

Signature

7.2 Appendix A2 - Ethics Approval Application Form and research design

Ethical Review Application Form

Please complete **Relevant** sections of the form.
If you think a question is not applicable to your project, please provide an explanation as to why you think so.

Section 1: Applicant Details	
First Name	Kevin
Last Name	Bharrien
Faculty	Choose an item.
Co-researcher Names (internal and external) Please include names, institutions and roles. If there are no co-researchers, please state N/A.	N/A
Is this application for a staff or a student?	Student
Student Course details	Postgraduate Research
Name of Director of Studies / Supervisor	Dr. Sasa Petar

Comments from Director of Studies / Supervisor

For student applications, supervisors should ensure that all of the following are satisfied before the study begins:

- *The topic merits further research.*
- *The student has the skills to carry out the research.*
- *The participant information sheet is appropriate; and procedures for recruitment of research participants and obtained informed consent are appropriate.*

The supervisor must add comments here. Failure to do so will result in the application being returned.

Click or tap here to enter text.