Geopolitical Disruptions in Supply Chain (GDSC) and Internal Perceptions of Firm Performance (IPFP): Evidence from Multinational Enterprises (MNEs) in Sri Lanka

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Abstract

The study aims to explore the influence of Geopolitical Disruptions in Supply Chain over the Internal Perception of Firm Performance and the Supply Chain Modification Strategies. Study utilized qualitative approach and conducted eight interviews with managers from Multinationals in different sectors - Sri Lanka. Using Thematic analysis method study highlighted several themes such as Macro Environmental Risks, Firm Performance, Influence on Firm Performance, Supply Chain Modification Strategies and Strategies Influence on Firm Performance. The study found a significant direct influence over the Firm Performance as well as Supply Chain Modification Strategies for manufacturing and FMCG sector multinationals, whereas some geopolitical disruptions in supply chain lead to implicit impacts over the firm performance despite been in the manufacturing/FMCG sector. Conversely, service sector company does not have a direct impact on the company performance despite been facing the same geopolitical disruptions. Notably, Supply Chain Modification Strategies have a significant influence over the Firm Performance positively as well as negatively. By synthesizing these findings, this study extends the theoretical framework established by Christopher and Peck (2004) while offering insights and guidance for both managers and policy makers.

Keywords: *Firm Performance, Geopolitical Disruptions in Supply Chain, Supply Chain Modification Strategies*

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Introduction

Background of the study

"The War Against Iran and Global Risk: Tell Me How This Ends." The 2026 U.S.–Israeli strikes against Iran, initiated under *Operation Epic Fury*, represent one of the most consequential military interventions in recent Middle Eastern history making it one of the most prudent courses for policymakers to pursue strategies that carefully manage escalation and reduce the risks of a wider regional and global crisis. The article further discusses that the disruptions have led to skyrocketing energy costs, raising concerns about economic instability for the heavily energy dependent countries specially in Asia, from the Gulf Persian region.

This is a recent incident cited from the Georgetown Journal of International Affairs, and many other news articles also reported this incident as hot news in 2026 around the globe. This is just one example which evident the ongoing geopolitical tensions between nations, including specially USA and China. But, in the VUCA (Volatile, Uncertain, Complex and Ambiguous) world over the past decades, there were such events, tremendous risks and disruptions a lot, that organizations are often experiencing (Ambulkar et al., 2015; Fan et al., 2016; Finck & Tillmann, 2023; Gunessee & Subramanian, 2020; Kamalahmadi & Mellat-Parast, 2016; Roscoe et al., 2022). Among them, organizations are more prone to be vulnerable to supply chain disruptions significantly. Specifically, because of the ongoing geopolitical tensions between USA and China and some other countries, these supply chain disruptions affect a lot for the organizations (MNEs) in different aspects such as Organizational Performance and Supply Chain Modification Strategies.

For example, Parast and Subramanian (2021) and many other researchers have identified the relationship between Demand, Supply, Process Supply Chain Disruptions, and Firm Performance or Supply Chain Performance using financial indicators. Johnson and Haug (2020) examined the relationship between geopolitical disruptions, such as the USA-China trade war, the UK exit from the EU and tensions in Russia, the Middle East, Latin America, and Hong Kong, and global supply chain modification strategies, specifically short-term reactive strategies and long-term proactive strategies, utilizing six large firms in the United States. According to Jun and Rowley (2014) where non-financial indicators have been used to measure the Firm Performance as manager's subject perceptions in a quantitative study.

In such studies, the manager's views have been obtained in limited areas such as perceptions on profitability, cash flow, market share, etc., which are all reflections of financial performance. In many cases, financial performance was used (82%), with profitability as the main indicator to measure the Firm Performance (52%) (Selvam et al., 2016). Not only that, there is limited research on Environmental Disruptions, particularly on Geopolitical Disruptions in the Supply Chain, together with Firm Performance using non-financial indicators. Since the company has less control over environmental risk than other sources of risk in the supply chain, researchers recommended that managers emphasize the significance of environmental risk more (Parast & Shekarian, 2019). Still, the available studies have also been limited to the geopolitical disruptions in large nations such as the US, China, and the UK.

Considering all the above-mentioned research gaps, it is noticeable that the existing literature is scattered in multiple studies, plus there is a dearth in existing literature that has been conducted to explore all three concepts (GDSC, IPFP, and SCMC) as a holistic single study, especially for smaller economies such as Sri Lanka. And also, it is important to study this because countries that follow the middle path can be impacted differently than larger countries (Ito, 2024). Also, countries like Sri Lanka, which are influenced by BRI and the Malacca maritime route, strait-around 30% share of global trade (Notteboom et al. 2021), can be highly impacted by different geopolitical disruptions. Therefore, this study contributes by exploring how the Geopolitical Disruptions in Supply Chain (GDSC) Permeate on Internal Perceptions on Firm Performance (IPFP) and Supply Chain Modification Strategies (SCMS) of the organization.

Accordingly, this would lead to the following research questions,

1) How Geopolitical Disruptions in Supply Chain (GDSC) lead to Internal Perceptions on Firm Performance (IPFP)?
2) How Geopolitical Disruptions in Supply Chain (GDSC) lead to Supply Chain Modification Strategies (SCMS) of the organization?
3) How Supply Chain Modification Strategies (SCMS) of the organization lead to Internal Perceptions on Firm Performance (IPFP)?

Literature review

Internal Perceptions on Firm Performance (IPFP)

Organizational Performance is measured by market share, customer service level, competitive position, product quality, average selling price, and return on assets (Narasimhan et al., 2008). In a different way, Manhart et al. (2020) identify Firm Performance in three dimensions: financial costs, operational costs, and relational costs. "Firm performance means how firms achieve their operational, marketing, financial, and human resource goals" (Abeysekara et al., 2019, p. 5). Researchers who have conducted studies on firm performance in the supply chain context have proposed various measurement scales. Most studies have focused on financial performance, like profitability ratios, market value, sales growth, etc. (Yang, 2012). However, Jun and Rowley (2014) stated that using financial performance has some limitations and difficulties in evaluating the actual performance of firms. Critiques of the traditional use of financial-based performance measures, such as their relative incompleteness, lack of accuracy, and lack of neutrality, as well as their tendency to promote short-termism, lack of balance, excessive emphasis on pure profit measures, and inability to keep up with the pace of workplace change, led to the development of such a wide range of measuring techniques as not just using the corporate financial indicators which focused merely on profit-oriented performance; rather, they let managers to respond to the survey regarding their opinions of the performance of their organizations (that is their internal perceptions on Firm Performance), using both financial and non-financial aspects (Jun & Rowley, 2014). Building on this, consequently, Santos and Brito (2012) conceptualize firm performance as based on satisfying the stakeholders, which can be thought of as having at least seven facets: growth, profitability, market value, customer satisfaction, employee satisfaction, social performance, and environmental performance. Refining this approach, they explained profitability, growth, and market value as the financial performance indicators and the rest as Strategic Performance indicators. Broadening the scope, Selvan et al. (2016) developed this Strategic Performance subjective model by adding more concepts like corporate governance performance, environmental audit performance, etc.

However, literature relating to Strategic Performance emphasizes that some indicators have been studied as a unidimensional construct only. As an example, in Employee Satisfaction, most of the previous studies used overall satisfaction measures instead of job facet satisfaction measures (Satiago & Beatriz, 2014). While Schneider et al. (2003) highlighted that there are six facets of job satisfaction, namely, empowerment, job fulfillment, security, pay, work group, and work facilitation. Therefore, this study contributes by exploring these job satisfaction facets, which improves the definition of Firm Performance, adding more value to the concept. Next, in Customer Satisfaction scholars highlighted, depending on the situation, circumstances, the standards of comparison used by the customer and consumer attributes towards the product, also could vary (Pizam et al., 2016; Yuksel, 2008). In a different way, Ngo (2015) emphasized that to measure Customer Satisfaction, it has to focus on customer retention and revenue as well as the cost and investment spent to achieve customer satisfaction. By considering the above-mentioned prior studies, it is evident that the concept of Firm Performance is scattered and has been used in different ways in different studies. Our study stands as a study that has tried to deep down more in to the concept of Firm Performance specially using non-financial indicators. The concept of Strategic Performance and its facets, like Employee and Customer Satisfaction, are main concepts that have been discussed in this study.

Supply Chain Resilience Theory

Supply Chain Resilience Theory refers to the firm’s capacity to adapt for the changes and cope up with disruptions in order to maintain continues operations cycle by making fast adjustments to the firm’s supply chain (Abeysekara et al., 2019). The model introduced by Christopher and Peck (2004) is a typology for supply chain disruption conceptualization. This framework divides the five supply chain disruption risks into three groups, which are as; disruption risks external to the supply chain (environmental), disruption risks external to the firm but internal to the supply chain (demand and supply), and disruption risks internal to the firm (process and control).

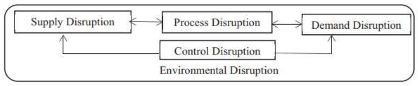

Figure I: Supply Chain Risk Drivers

Source: Christopher and Peck (2004)

Previous research has demonstrated how supply chain disruptions impair organizational performance. Similarly, the impact of supply chain disruption risk sources on supply chain performance was investigated by Wagner and Bode (2008). Their findings demonstrate that supply chain performance is significantly impacted by both supply and demand risk. In the same vein Chen et al. (2013) investigated how teamwork can reduce supply, demand, and process risks. Their findings indicate that only the reduction of process and demand risk directly affects supply chain performance, even though cooperation is a useful strategy for supply chain risk management. Building upon, a systematic literature review conducted by Zhu et al. (2017) identified three forms of environmental risks: catastrophic risks, infrastructural risks, and legal risks. However, according to Wagner and Bode (2008) classify the supply chain disruption risks into five types, namely, demand risks, supply risks, legal, bureaucratic and regulatory risks, infrastructure risks, and finally catastrophic risk.

Supply Chain Modification Strategies (SCMS)

Organizations develop different strategies to face for the supply chain disruptions rooting from the concepts of "supply chain resilience" and "managing supply chain uncertainty" (Colicchia et al., 2010; Dabhilkar et al., 2016; Fiksel et al., 2015; Knemeyer et al., 2009; Simangunsong et al., 201;; Simangunsong et al., 2016) accordingly two main strategies can be outlined: preparedness and mitigation. Mitigation strategies comprise reactive strategies that take to lessen the fuzziness that accompanies ambiguous circumstances (whether they are disruptive or normal). Conversely, supply chain preparedness strategies are proactive tactics that companies employ to handle ambiguous disruptions, regardless of how serious they are (Gunessee & Subramanian, 2020). In addition, supply chain adaptive strategies aim to maintain the supply chain's stability and continuity in the face of difficulties like disruptions, demand uncertainties, or unforeseen circumstances (Ishak et al., 2023).

A global supply chain risk mitigation framework was introduced by Kumar et al. (2014) to help a business create a suitable plan depending on the possibility of interruption and the seriousness of its effects. Based on these two aspects, the framework offers a corporate direction that includes the four strategies of act now, plan now and act later, plan to act later, and do nothing. Thun and Hoenig (2011) define preventive instruments as cause-related measurements that aim to reduce the likelihood that a risk will take place such as flexibility, agility, collaboration and location shifting. Diversification is another technique. On the contrary, Kleindorfer and Saad (2005), explain that mitigating the risk of disruption requires a diverse set of operational modes, sourcing options, logistics, and facility locations. However, according to Jüttner (2005) and Miller (1992), there are seven types of risk management strategies: sharing risk, speculation, hedging, avoidance, postponement, security and control. Consistently, Tang (2006) introduced nine tactics to cope up with macro supply chain risks: keeping strategic stocks, postponement, flexible transportation, a flexible supply base, make-and-buy, economic supply incentives, revenue management, dynamic assortment planning and silent product rollover. A framework for lowering supply chain risk is provided by Hopp (2008) and consists of crisis management, buffering, pooling, and planning for the worst. Buffering and Bridging strategies have been studied together with firm performance by Manhart et al. (2020). In a more elaborative way, Cui et al. (2023) introduce four MNEs' response strategies- a matrix based on two dimensions namely specificity and destructiveness. The impact of supply chain adaptive strategies (Robustness, Agility, Resilience) on the performance of companies in Malaysia's semiconductor industries during the Covid-19 pandemic has been studied by Ishak et al. (2023). Going beyond the two main supply chain modification strategies, some scholars conceptualized an integrated strategy where organizations use a proper mix of reactive and proactive strategies (Althaqafi, 2023). Despite these strategies, some literature suggests a wait-and-see strategy approach and also do-nothing/passive strategy approaches as supply chain modification strategies (Roscoe et al., 2020; Belhadi et al., 2024). The above-mentioned existing literature related to the concept of SCMS is very extensive and scattered. In most of the studies, researchers have used two main strategies – reactive and/or proactive only. Therefore, our study stands as a study that has been tried to investigate all the types of SCMS (including Integrated and Passive strategies) giving a more nuanced and a holistic view for the reader.

Geopolitical Disruptions in Supply Chain (GDSC)

Any incident that impact adversely on the flow of commodities in the supply chain is known as a supply chain disruption (Revilla & Saenz, 2017; Truong & Hara, 2018). These disruptions can have a significant detrimental influence on organizational performance as well as various stakeholders like customers, employees and suppliers. Companies have started to recognize the significance of investing in supply chain disruption management to lessen the effects of these interruptions (Prasat & Subramanian, 2021). Incidents like epidemics and pandemics, natural disasters (such as floods, earthquakes), political turmoil, economic downturns, and acts of terrorism serve as examples of environmental disruption. Although they are uncommon, these events have a significant impact on a company's supply network and on the business. Production facilities, logistics, and transportation systems are highly vulnerable to natural disasters or terrorist attacks, environmental disturbances (Gunessee & Subramanian, 2020; Kamalahmadi & Parast, 2017; Parast, 2020). However, Geopolitical Disruptions are defined as "risks associated with wars, terrorist acts, and tensions between state actors that affect the normal and peaceful course of international relations" (Caldara & Iacoviello, 2018, p. 2). Similarly, Geopolitical Disruptions in the supply chain are the ones stemming as a result of tensions, instability, and direct conflict between countries (Moradlou et al., 2021; Roscoe et al., 2020). Geopolitical tensions like Brexit in the UK, the trade war between the US and China, and Russia's invasion of Ukraine have caused a wave of unprecedented disruptions that have affected trade and logistics operations around the world (Moradlou et al., 2021).

Scholars have put supply chain risks into two main groups in the literature: Micro and Macro (Parast & Shekarian, 2019). Micro risks are things that happen inside the company all the time and are related to demand risk, supply risk, manufacturing risk, and infrastructure risk. In contrast, macro risks are rare events that happen outside of the company and are usually worse for the supply chain than micro risks (Ho et al., 2015). Natural and man-made risks are both types of macro risks. Natural risks come from things like earthquakes, floods, hurricanes, or fires that happen in nature. These events can have terrible effects on a company's supply chain (Chopra & Sodhi, 2014; Pettit et al., 2013). While, Man-made risks include things like war, terrorism, trade barriers, and unstable politics, where particularly the geopolitical disruptions in the supply chain fall into (Wagner & Bode, 2008). Given the extensive studies carried out with regard to Micro risks, our study focuses only on Macro risks. Despite some of the Natural risks that are discussed in the latter part of the study, the main focus is centered towards the Man made risks particularly on Geopolitical Disruptions in Supply Chain.

Conceptual Model

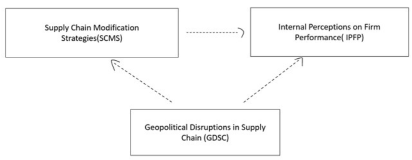

Figure II: Conceptual Model

Source: Author's Contribution

Research methodology

Interpretivist research philosophy will be adopted in this research. Based on the prior studies Gunessee and Subramanian (2020), Johnson and Haug (2020), Roscoe et al. (2022), an inductive research approach would be appropriate for this study. In inductive approach, it usually highlights the contexts of the particular incidents or the case (Gioia et al., 2013).

Therefore, as with the deductive approach, it might be more appropriate to study a small sample of subjects rather than a large number. Researchers in this tradition are more likely to use qualitative data and a variety of methods to get it in order to get different points of view on events (Easterby-Smith et al., 2004). To explore and to acquire a holistic understanding of the topic, a mono-method approach will be adopted, incorporating a qualitative methodology. An adapted interview guide will be used to collect data using semi-structured questions plus data will be analyzed by using the thematic analysis method. Thematic analysis should be considered as a core method for qualitative analysis, because qualitative methodologies are so numerous, complicated, and subtle (Holloway & Todres, 2003).

A case study design was selected to align with the methodological precedents set by prior scholars. For examples, qualitative research conducted by Gunessee and Subramanian (2020) studied the affected electronics and automotive supply chain with a focused examination of two companies from each industry. Redesigning Global Supply Chain During Compounding Geopolitical Disruptions- a study with senior supply chain executives was conducted by Roscoe et al. (2022). Roscoe et al. (2020) also investigated how firms of various sizes formulate and implement strategies to align with current geopolitical events such as Brexit, using eight case companies and eight interviews with experts from pharmaceutical trade associations and standards institutes. Build Supply Chain Resilience During Compounding Geopolitical Disruptions to Manage Agri-Food Supply Chain Uncertainties was studied by Belhadi et al. (2024) using 14 African agri-food firms as a multi-case study approach during the Russia-Ukraine war.

In terms of data collection method, in-depth interviews will be conducted with the use of an adapted interview guide because previous studies that have done regarding the above mentioned three research concepts were measured using more structured questionnaires and surveys as quantitatively (Althaqafi, 2023; Parast, 2020; Prasat & Subramanian, 2021). Whereas, few studies on qualitative basis (Roscoe et al., 2022; Gunessee & Subramanian, 2020). A study conducted by Johnson and Haug (2020) utilized six in-depth interviews of senior supply chain executives from US multinationals to study the influence of very recent trade and geopolitical disruptions on supply chain modification strategies in the United States context. Therefore, to get a deeper understanding on these concepts, semi-structured questions will be used as the instrument for data collection.

Since the research strategy for the study utilizes a case study approach, the sample for the study is basically the employees of the supply chain division, that is, managers and subordinates of the selected multinationals in Sri Lanka who are directly involve with supply chain decisions. Furthermore, the sampling technique for the study is purposive sampling. Purposive sampling is often used with very small samples, such as in case study research where researchers wish to select cases that are particularly informative (Neuman, 2000).

Additionally, this study assures that the quality of the study is maximize plus the welfare of participants is guaranteed throughout the study. Specifically, in data collection and analysis, the participants and the companies (MNEs) identity are anonymized by using pseudonyms. Hence, the employees will be comfortable for sharing information plus the confidentiality of information is also protected. Stringent measures were employed to minimize bias and any unavoidable biases have been documented to ensure methodological transparency. In reporting and publication phases, every measure will be taken to ensure data transparency and to prevent any potential misrepresentation of the findings.

Data analysis and findings

The researcher was able to carry out eight interviews with a diverse range of participants from the multinationals who is actively engaging for the supply chain decisions of the company. This would allow the study to investigate how different multinationals in different industries would interpret GDSC and how they would modify their supply chain strategies plus how differently effects it to their firm performance. All the interviews were held virtually through the zoom platform While the study acknowledges for the potential limitations, such as technical difficulties and challenges in building rapport with interviewees because of the use of online interviews via Zoom. The communication was done using English and each interview lasted for around 30 – 60 minutes which allowed for insightful thoughts and discussions. Further, the sample size was determined by the principal of saturation suggesting that the current sample size of 8 interviews was sufficient to capture the core dynamics of the study as there was no new themes or significant variations were emerging in the data. Further, this study position as a foundational step for future similar studies where can be use more sample sizes.

Table I: Profile of the Participants

Name	Designation	Type of the Organization	Code
Anna	Procurement Manager	FMCG company	01
August	Operations Manager	Manufacturing company	02
Faris	Operations Manager	Manufacturing company	03
Mateo	Head of Logistics	FMCG company	04
Jennifer	Supervisor/Consultant	Service company	05
Eric	Head of Procurement	Manufacturing company	06
Kristyana	Operations Manager	Manufacturing company	07
Norbert	Head of Supply Chain	FMCG company	08

Source: Author's Contribution

To accomplish the objectives of the study, the data were collected through semi structured interviews from the selected multinationals. The interviews were held online via zoom because of the busy schedules of the managers. After listening and watching to the audio and video files of the interviews several times carefully interview transcripts were created. After transcribing the data, the researcher was able to identify different opinions and perspectives of managers which gave a better and more holistic understanding about the research objectives. Finally, the transcribed data were analyzed using thematic analysis following its steps. After studying each interview transcript, the themes, sub-themes, and codes were created related to research questions and objectives. The codes were derived inductively from the data, whereas some are informed by the existing literature. Themes were refined through a process of constant comparison, ensuring both internal homogeneity and external heterogeneity. While the analysis was grounded in the raw data, the development of these themes was also informed by the researcher’s theoretical sensitivity and contextual knowledge within the context, and the generated themes are presented in the table below.

Table II: Themes, Sub Themes and Codes

Themes	Sub Themes	Code
1. Macro Environmental	1.1 Man Made Risk	Conflicts
		Wars
		International Terrorism
		Trade Wars
	1.2 Natural Risks	Pandemics and Epidemics
2. Firm Performance	2.1Financial Performance	Profitability
		Growth
	2.2 Supply Chain Performance	Supplier Performance
		Internal Business Performance
		Customer Service Performance
	2.3Strategic Performance	Customer Satisfaction
		Employee satisfaction
		Environmental Performance
		Social Performance
		Corporate Governance Performance
3. Influence on Firm Performance	3.1Influence on Financial Performance	Profits/Revenue Decrease
		Cost/Price Increase
		Production Volume Decrease
		Production Cost Increased

		Influence on Service Levels
	3.2 Influence on Supply Chain Performance	Shipping Cost Increased Production Delayed Delivery Cost Increase Extended Lead Time Inventory Cost Increase RM Shortage Equipment Unbalance
	3.3 Influence on Customer Satisfaction	General Customer Satisfaction Reduced Order Cancelations Customer Feedbacks Customer Complains Increased Customer Churn Rates Increased Customer Retention Reduced Impact on On Time Delivery
	3.4 Influence on Employee Satisfaction	Pay/Wages Reduced Flexible Working Arrangements Employee Stress Level Increased Increase of Additional Works General Employee Satisfaction Reduced Work Life Balance Employee Retention Reduced
4. Supply Chain Modification Strategies	4.1 Reactive Strategies	Keeping Strategic Stocks Supplier Collaborations Capacity Developments Customer Collaborations Digitalization of Processes

	4.2 Proactive Strategies	Diversification of Suppliers Location Shifting/Near Shoring Supply Chain Agility/Resilience Localization/Nationalizing
	4.3 Integrative Strategies	Analysis Past and Forecast
	4.4 Passive Strategies	Do Nothing
5. Strategies Influence on Firm Performance	5.1 Positive Influence	Company's Mindset Changed/Learning Opportunity Efficiency Increase/Automation Ensure Business Continuity Achieve Higher Service Levels Reduced Material Cost Reduced Freight Cost Customer Satisfaction Increased Product availability Increased Volume, Profitability and Market Growth
	5.2 Negative Influence	Production Delayed Customer Satisfaction Decreased Raw Material Delayed Quality Concerns Brand Reputation Decreased Employee Satisfaction Reduced Cost of Inventory Increase Revenue/Profitability Reduced Increased Internal Control

Source: Author's Contribution

After deriving the codes and sub codes the researcher was able to examine them and categorized in to groups which are based on similar characteristics and was able to identify patterns that connect to create initial core themes. Next, researcher reviewed the generated themes to identify whether the themes are appeared with the initial codes and sub-codes. In this study, each and every theme is closely connected with the codes and sub codes where it implies robust data analysis, making it diverse range of findings for the study.

Discussion of findings

The main objective of the study is to explore how Geopolitical Disruptions in Supply Chain permeate on the Firm Performance as well as Supply Chain Modification Strategies. By conducting the study, it found that there is a significant direct influence over the Firm Performance as well as Supply Chain Modification Strategies for the manufacturing and FMCG sector multinationals which confirms the studies of Parast and Subramanian (2021) plus Johnson and Haug (2020).

"No limit to say, this problem is bigger than this, this is the extend, where its start becoming severe, how small the problem, how big the problem it doesn't really matter. As a multinational we get the first-hand impact every time." (08)

In particular, some geopolitical disruptions in the supply chain lead to implicit impacts over the firm performance despite been in the manufacturing/FMCG sector. Conversely, service sector company does not have a direct impact on the company performance despite been facing for same geopolitical disruptions. Notably, Supply Chain Modification Strategies have a significant influence over the Firm Performance positively as well as negatively which supports for the studies conducted by Li et al. (2006) and Abeysekara et al. (2019). The methodology for the study confirms the studies conducted by Saunders et al. (2007); Gioia et al. (2013); Braun and Clarke (2006).

"Almost all the geopolitical disruptions in supply chain impacts the supply chain of the company. Even the South Chinna sea disputes and how it indirectly impacts." (01)

"Geopolitical disruptions in supply chain ,they don't have much of a direct impact on our company operations. But, they actually do have like an implicit impact overall. But, from what I observed mostly it's like an implicit impact." (05)

In terms of the Macro Environmental Risks, it can be basically classified in to two sub-themes- Man-made risks and Natural risks, which confirms the approach introduced by Ho et al. (2015). Macro Environmental Risks are the external disruptions that have a more devastating influence over the firms' operations. Man-made risks cover disruptions that result from a mankind activity such as wars and conflicts, international terrorism, trade wars and etc. Our study found that despite been Sri Lankan multinationals the wars, conflicts plus even trade wars between the countries like the US and China significantly influence over the companies' operations.

"US and China are the two main markets in the world. Shipping companies were trying to cater those I mean Chinna to US lanes where they can generate higher revenues. it may not be that; we can't say that Chinna will not be completely out. Because, you can't do that…" (04)

"Red sea crisis is a biproduct of Isreal and Palestine war. You know, if there is no war, then I think this Houthi also will not tracking the ships going through the Canal…" (04)

Additionally, Natural risks are the events that occurs without the involvement of humans such as natural disasters, epidemics and pandemics (Gunessee & Subramanian, 2020). Also, this study confirms the classification conceptualized by Christopher and Peck (2004) where he classified the supply chain risks into four categories – Demand risks, Supply risks, Process risks and Environmental risks.

The theoretical foundation used for this study basically adapted from this framework, due to the dearth of studies particularly related to Environmental risks (Baghersad & Zobel, 2021; Zhu et al., 2017). Hence, our study found that risks that occur naturally without human intervention like Covid 19 pandemic also have a devastating influence specially for the multinationals.

"And the other side, the flip of the coin, these are things that can be directly happened when we are not having enough business. we were in the covid situation because of the restriction of the global so, our revenue has been little bit dropped down. And, it has hit the entire operation." (03)

Firm Performance can be identified as the combination of both financial and non-financial aspects, which are Financial performance, Supply chain performance and Strategic performance. This confirms the suggestion introduced by Manhart et al. (2020), where he suggested to investigate impact on specific supply chain risk management strategies on overall firm performance. Also, this supports the approach introduce by Jun and Rowley (2014), where they suggested to conduct future studies with ample of different data sources. Therefore, this study conducted in qualitative nature with the focus of internal perceptions of firm performance of managers. In terms of Financial performance study mainly focus on the two aspects profitability and growth. In terms of the growth, companies focus to grow in different perspectives like revenue growth, volume growth, organic growth, internal growth and etc. Beyond growth profitability also matters a lot because whatever they do as a company should be able to sustain in the industry by running smoothly and its plan years to come. While, Supplier performance, Internal business performance and Customer service performance are the main aspects of Supply Chain performance. Making sure that the suppliers are reliable and fulfill the company's quality requirements is considered as supplier performance. Internal business performance means the continuous coordination and evaluation of the internal key performance indicators (KPIs) like operational efficiency, supply chain resilience and etc. within the company. Assessing the on time delivery (OTD) and delivery performance refers as customer service performance.

"First measurement is organic growth, that means without any promotions, without any substitutions, without any incentivization, how much volume have been truly grown vs last year for each Sock Keeping Unit (SKU)…" (08)

"Supply chain KPIs like service levels, the percentage of orders that we fulfill..." (01)

Also, the study further confirms the concept of Strategic Performance by focusing on different indicators like employee satisfaction and customer satisfaction (Santos & Brito, 2012; Selvan et al., 2016). In most of the previous research these concepts have been studied together with geopolitical disruptions in supply chain as a unidimensional construct only. Therefore, by conducting this study it has been able to bring those areas into the literature by focusing more deeper into different facets of Strategic Performance such as Customer satisfaction, Employee satisfaction plus Environmental, Social and Corporate governance performance. To measure the customer satisfaction companies usually use mail reminders, surveys and different forms to get to know whether they are satisfied or not, in what ways the company needed to improve to give a better customer service. From the customers side they usually give feedbacks and complains as the response to the company. Therefore, we identified that Customer Responsiveness is a key indicator coming under customer satisfaction which can be measured through different ways.

"Regarding customer satisfaction, yes, we are sending customer survey in every year. Asking about how they satisfied with the products, what are the areas that we have to improve to give a better customer satisfaction to you. Likewise, we are sending forms to them." (07)

Employee surveys, KPIs, employee retention and turnover rates are the measurements use by the companies to evaluate employee satisfaction. Whether the organization is safe place to work, good working condition environment, satisfied wage for the work, carrier development opportunities while empowering workers are the indicators of employee satisfaction.

"We have 360 degree feedback kind of thing, where each employee will evaluate by their team members and give feedbacks and the bosses give the feedbacks and rest of the team members give the feedbacks." (05)

Other than the two main strategic performance indicators mentioned above environmental and social performance (Santos & Brito, 2012) and corporate governance performance (Selvam et al., 2016) also some other key indicators that highlighted in this study. Making sure that the company is adhering to the social and corporate governance compliances with a goal of achieving sustainability is key to sustain in the industry in modern business world.

"We ask the question, whether they are complying with the all legal requirements of child labor…" (06)

"Really putting in cash for our recycling efforts… So, all this has a cost. So, if you had only financial metrics in the mind, you will not be able to achieve most these objectives." (08)

Influence on the Firm Performance due to geopolitical disruptions is very significant. Some multinationals have a direct influence whereas some companies have an indirect influence for the same disruption (Parast & Subramanian, 2021; Queiroz et al., 2023). Revenue losses, profits decline, production and overall cost increase, production volume decline, impact on the service levels can be identified as the crucial aspects of financial performance (Baghersad & Zobel, 2021; Ishak et al., 2023). Increase in the freight/shipping cost, production delayed, delivery cost increment, extended lead time, inventory cost increment, raw material shortage, equipment unbalance and etc. are the main aspects of influence on supply chain performance (Parast & Shekarian, 2019; Parast, 2020).

"There are some legal requirements at the movement not to buy anything origin from Russia!" (06)

"Red sea Crisis now the shipping lines have to you know they have changed their root to via Cape of Good Hope. That is via Africa. Now they have to I think more than around nearly 10 to 14 days more…" (04)

"Unbalance situation where, I mean the total equipment is containers. container might go to the US and then it stuck, the goods unloaded and empty container is returned and when it takes more than two weeks, an unbalance in the entire market… creates a capacity imbalance." (01)

"Impacted directly for our total inventory value, freight cost and currier charges and everything." (03)

Influence on customer satisfaction can be led to the reduction of general customer satisfaction, order cancelations, increase in customer complaints and feedbacks, decline in customer retention, increasing customer churn rates, and impact on on time delivery. Conversely, for certain companies, customer satisfaction is less influenced by disruptions because of inherent resilience of their supply chains. Ultimately, these analysis on facets of customer satisfaction confirms the importance of considering overall customer satisfaction in literature (Yuksel, 2008; Ngo, 2015).

"Customer satisfaction is like mushrooms pop up. We see only like one customer complain. But, there may be more than 100 of complains but, they are not may be selecting again us." (02)

"Our supply chain is building such a way that those disruptions do not largely impact any of our customers unless, if it's a completely out of control like covid…" (01)

"When you extend the lead time by 2 weeks, that's a big impact to the customer you know. I mean the end consumer might seek for alternative options." (04)

Geopolitical disruptions have a significant influence on different facets of employee satisfaction both positively and negatively. Reduced wages, flexible working arrangements, employee stress level increase, employee additional works, reduction in general employee satisfaction, work-life balance and reduced employee retention are the main findings (Jun & Rowley, 2014; Satiago & Beatriz, 2014). Conversely, some management perspectives suggest a negligible influence for employee satisfaction due to geopolitical disruptions in supply chain.

"It is kind of an embarrassing movement because, we have to tell them the reasons why they are canceling the orders. Likewise, it is kind of a stress situation because, we have to achieve the budgeted volumes somehow." (07)

"For a guy who check vessel timing or the vessel updates once a day, now have to check in 3 times a day." (08)

"I am not very sure about the relevance of employee satisfaction to geopolitical disruptions…" (01)

Supply Chain Modification Strategies are the strategies taken by the organizations to cope up with geopolitical disruptions in supply chain. Sometimes companies take actions after a certain disruption occurred as a re-act. (Reactive strategies) Reactive strategies are the strategies that take after a certain disruption occurred to reduce further influence that could create due to future uncertain situations. Despite sometimes companies take actions before a certain disruption occurred as a pro-act (Proactive strategies). Proactive strategies are the strategies that are taken by organizations before a certain geopolitical disruption happened. Moreover, this study has been able to explore Integrated strategies- Combination of reactive and proactive strategies as well as Passive strategies- where the company do nothing due to couple of reasons (Althaqafi, 2023; Belhadi et al., 2024; Roscoe et al., 2020). As per the Reactive strategies study highlighted on keeping strategic stocks, collaborations with suppliers and customers, developing and investing in capacities and incorporating digitalization techniques. As per the Proactive strategies diversification of suppliers, location shifting or nearshoring/ friendshoring strategies, focus on supply chain agility and resilience and local sourcing options are highlighted. These findings prove the studies conducted related to reactive and proactive strategies by Dabhilkar et al. (2016); Fiksel et al. (2015); Johnson and Haug (2020); Simangunsong et al. (2016). In Integrated strategies companies analysis the past records (re-act to the past) and based on that they forecast what strategies to be taken in the future. (pro-act for future) Conversely, some companies behave passively without taking any reaction or a beforehand strategy towards certain geopolitical tensions in the world. The reason might be, the event might completely out of control over the company or it might not be the right time to take any action or that decision will increase the complexity of the business.

"In terms of collaborations yes, I think that's a one of the key measures. As far you have a collaboration with good partners then you will be able to overcome these challengers due to these supply disruptions." (04)

"Find out new suppliers out of China. we have lot of requirements from the senior management to move out from China for our purchases…" (06)

"In the summer we don't have much work. Because they are not doing sailing much products. So. Likewise we need to tracking, how much we need at this time in these periods. In winter for Europe we have more work. Because, they do sail in summer mainly and spring. So, for them we need to send ,we need to manufacture during the winter…" (02)

"No any strategies now. Like moving for other areas. Because, the movement you bring in a second location or an alternative place to the picture, it does give you that leverage of having a you know a Business Continuity Planning (BCP) place for in case of there is an issue. Also add a whole new level of complexity…" (08)

Finally, study found that supply chain modification strategies have a significant influence over the firm performance both positive as well as negative. The successful implementation of strategies has led the companies to have a significant positive influence over the both financial and non financial performance. Increasing efficiency, changed companies' mindset to learn, ensure business continuity, able to achieve higher service levels, reduced material and freight cost, increasing customer satisfaction, product availability increased due to continues supply, volume and market share growth and increase in profitability are the found positive influences.

"It has been hugely positively impact for their subconscious mind. So, as well as they are trying to maintain that one. Not to loose that one any situation. Because, it has been continually given us learning opportunity…" (03)

"I mean the demand will be met. That's the ultimate goal of improving the service levels. So, customer satisfaction definitely goes up…" (01)

"So, I think that has an impact on the company's performance when it's come to like improving the efficiency." (05)

Furthermore, if companies were unable to incorporate modifications to the supply chain effectively, they have to experience some negative consequences as well. Production and raw materials delayed, increasing quality concerns, reduced customer loyalty, trust and satisfaction, tarnish brand reputation, reduced employee satisfaction, reduced revenue and profitability and increased internal control are some of those adverse consequences. Therefore, these findings of positive and negative influence on the firm performance confirms the studies conducted by Belhadi et al. (2024); Chen et al. (2012); Parast and Kamalahmadi (2017); Lin et al. (2021).

"And, quality issues also raised. Because, when we are sourcing new suppliers, new RM suppliers sometimes we need to have much more work to approve them. So, we need to check them before we move forward. Otherwise, it will compromise to our product quality, it will impact to our customer satisfaction. and also, the brand reputation…" (02)

"Rising the freight traits this will negatively impact for the company's revenue. Because company is paying the freight traits from our end for the

customer. Because, at the end of the day all matters is our revenues…" (07)

"when there is a delay in the RM, people are waiting in their production line. There is no work. They are idle. Sometimes, because of the quality they need to do more things. More re-works. Sometimes, they need to do again" (02)

A notable counter argument is that every decision has a trade off! Even the company adapted those modifications to the supply chain still there are compromises which need to bear. As an example, if company decided to increase on their strategic stocks to reduce the impact on those disruptions, holding more stocks will impact on the cost of inventory and cashflows.

"For some of these actions like strategic stock build ups would impact on our inventory levels which is our cash holding. so, these are the negative impacts on supply chain; mostly on the cash." (01)

While, geopolitical disruptions in supply chain influence as a macro level disruption to the entire globe, our study reveal its contextual relevance within the Sri Lankan business landscape. Being a strategic maritime hub in the Indian Ocean, Sri Lanka is uniquely sensitive for global trade routes. As highlighted in the findings some disruptions like US China trade war, Red sea crisis and even war conflicts like Israel - Palestine conflicts do not merely delay shipments or increase material cost rather it creates a macro economic shock to the Sri Lanka's economy. Consequently, for Sri Lankan multinationals, building resilient supply chain against geopolitical disruptions is not a secondary goal rather it's a matter of survival. Because being an emerging market and as a nation which is recovering from recent crises, the findings evident that it is much more prone to be vulnerable to these geopolitical disruptions in the middle of global power struggles.

Implications for theory and practice

In terms of the implications of the study from theoretically, it would extend the related studies. In previous literature there are ample of studies which has been used as financial indicators like market share, profitability, cash flows, average selling price and etc. to measure Firm Performance. But there are very limited studies which used to measure Firm Performance in a non-financial way (Abeysekara et al., 2019; Baghersad & Zobel, 2021; Li et al., 2006; Parast, 2020; Parast & Shekarian, 2019). Therefore, this study focused on Strategic Performance concept by deeply exploring the different indicators of it (Santos & Brito, 2012; Selvam et al., 2016). Not only that, in terms of the Supply Chain Modification Strategies also, this study was able to explore Reactive and Proactive Strategies deeply along with more strategies like Intergraded and Passive Strategies (Althaqafi, 2023; Belhadi et al., 2024; Roscoe et al., 2020). Furthermore, this study has been able to extend other studies as well. The theory used in this study- Supply Chain Resilience Theory by Christopher and Peck (2004) has been used by many other researchers yet, out of the four main supply chain disruption risk drivers a little attention has given to the environmental disruptions particularly the Geopolitical Disruptions in Supply Chain (Parast & Shekarian, 2019). Therefore, through this study it has been able to give much more attention to this by studying the influence of current geopolitical disruptions over Firm Performance and the Supply Chain Modification Strategies.

From a practical standpoint, this study has been able to focus some of the major geopolitical disruptions in supply chain like the US-China trade war, Russia invasion of Ukraine, Isreal Palestine Conflict plus very recent geopolitical incidents like South China Sea disputes and Red Sea crisis as well. According to the study conducted by Ito (2024) has emphasized countries in middle power can be highly vulnerable to these geopolitical disruptions in supply chain, so the organizations also will possibly get affected. Specifically, when it's come to Sri Lanka, as a middle power in the South Asian region and the unique geographical location with the influence of BRI and Malacca strait trade route are key to consider for conducting this study to the Sri Lankan context. Therefore, by doing this research it will help the managers of companies especially multinational enterprises to take appropriate strategies and measures for facing geopolitical disruptions successfully plus it will provide a guide and insights for policy makers also for a better execution of geopolitical tensions in the world.

Limitations and avenues for future research

While conducting the study the researcher has to face some of the challenges as well. One of the major limitations of this study is the limited sample size. Due to the time constraints and some practical issues the researcher was able to conduct only eight interviews with the mangers of multinationals. Another limitation is the subjectivity of the qualitative data. Even though qualitative data provides valuable perspectives and opinions which usually can not be observed through quantitative data, while conducting data analysis and writings on findings there can be possible biasness that could impact on the reliability of the study. Furthermore, this study mainly focuses only about the internal perceptions of firm performance of managers only. But according the studies conducted by Yuksel (2008) and Ngo (2015) emphasized that depending on the situations, circumstances and the standards of comparison used by the customer also customer satisfaction could vary. Due to the limited data availability, the researcher could not be able to find important insights regarding this. Not only that, this study had a limited focus on the wait and see strategies due to the available data constraints.

The above mentioned limitations can be overcome by considering the following things in the future researches. Limited sample size, can be overcome by conducting more in dept interviews using a larger sample size. To avoid the possible biasness due to the nature of qualitative data, future researchers can consider more data in different context as well as more multiple case studies with comparisons of similar sectors. Also, future researchers can consider to do further studies regarding the internal perception of customers and employees by exploring in dept on different facets of employee satisfaction and customer satisfaction. Also, researchers can consider to do more studies on the very recent evolving geopolitical incidents like Isreal Iran conflict and their influence on firm performance and supply chain modification strategies.

Conclusion

The study identified a significant influence of Geopolitical Disruptions in Supply Chain over the Firm Performance and the Supply Chain Modification Strategies. Also, supply chain modification strategies can have significant positive as well as negative influence over the Firm Performance. By conducting eight in dept interviews with the managers of the Multinationals in different sectors, study highlighted several themes which are Macro Environmental Risks, Firm Performance, Influence on Firm Performance, Supply Chain Partners, Supply Chain Modification Strategies and Strategies Influence on Firm Performance. Further, by conducting this study it has been able to extend the related studies as well as other studies which have used to explain the theoretical framework by Christopher and Peck (2004). Not only that, study gives many insights and guidance to the managers of the multinationals as well as policy makers of the countries for an effective management of geopolitical disruptions. The study faced several limitations as well. Limited data collection, subjective nature of qualitative data and only investigating the perception of managers on customer satisfaction and employee satisfaction are some of them. Anyway, the above mentioned limitations can be overcome by conducting more in dept researches in the different context using larger sample size in the future.

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