MODERN TRADE WARFARE: TRADE WAR RESPONSE AND CONTINGENCY FRAMEWORKS

- A case study on optimal response and contingency strategies for MNCs in complex trade war environments

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Abstract

A recent rise in protectionism has led to an increase in trade disputes and trade wars which cause changes to the trade environment. These changes often cause negative impacts on multinational companies (MNCs), which MNCs are strategically ill-prepared to cope with. This paper utilizes the case of the Sino-US trade war to conduct quantitative and qualitative analyses which empirically test theoretical insights regarding optimal strategic MNC behavior in a trade war. The paper finds that MNCs can optimally mitigate trade war impacts by utilizing strategies that fit their commitment to the affected market. Strategies with different costs and different impact mitigation potentials are presented in strategic frameworks which showcase recommendations for optimal strategic MNC behavior given certain impact and commitment levels. This paper thus establishes strategic frameworks MNCs can utilize in trade war situations and paves the way for further research in the underexplored field of firm trade war strategy.

Keywords: International Business Strategy, Trade War Impact, MNC Contingency and Response Strategy, Firm Commitment, MNC Trade War Strategy.

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1. Introduction

Over the last decades, globalization has accelerated at unprecedented speeds. Through the advent of information technology and competitive pricing in commercial flight industries, humankind has never interacted more across cultural and political borders. This surge in globalization has led to the dispersal of new ideas, technologies, products, services, and cultures (Hill, 2009). This surge increasingly affects the way international business and politics are conducted. While these developments prove profitable to some, others oppose the growing interconnectedness of the world.

In recent years, populist leaders around the globe have increased their influence by pursuing an anti-globalist rhetoric. These leaders have in many cases implemented policies attempting to reverse international integration processes by rolling back existing legislation which eases international collaboration. Especially the complex international trade framework has been the target of criticism from these leaders (Berthou et al., 2020; Casaroes, 2019). Global trade relations have become increasingly complex, with most countries in the world being members of the World Trade Organization (WTO) and a multitude of free trade agreements being in place between many parties around the world (Baier, Yotov, & Zylkin, 2019). Populist leaders in high- and middle-income countries have criticized free trade efforts for allegedly leading to a loss of manufacturing employment due to increased imports from predominantly middle- and lower-income countries (C. Li & Whalley, 2020). The policies that are enacted to work against these free trade efforts are referred to under the umbrella of 'protectionism'.

Perhaps the most prominent example of protectionist policies is the United Kingdom's recent exit from the European Union in 2020. Led by Brexit Party leader Nigel Farage, it has marked a massive split in Europe's international trade and disrupted the continent's economy (Berthou et al., 2020). Similar examples of domestic protectionism can be seen in other regions as well. In Brazil, incumbent President Jair Bolsonaro is engaging in a "crusade" to make God, the nation, and "traditional" family values the defining elements of Brazil's domestic and international spheres (Casaroes, 2019). In the United States, Donald Trump unexpectedly won the 2016 US presidential election mainly through promoting protectionist policies under the "America first" policy banner (Economist, 2016). The trend of these rising

protectionist tendencies is working against the ongoing globalization trends that have long been relatively unopposed.

As nations adopt more protectionist policies, arguments concerning “unfair trade deals” can result in conflicts between countries. Occasionally, these conflicts culminate in a trade dispute, where two or more countries disagree on a certain aspect of trade policy and attempt to negotiate a solution. These disputes can be the disagreement that leads to a ‘trade war’ (Melatos, Møller, & Gibson, 2007). A trade war is commonly defined as “an extended period during which a pair of countries, or groups of countries, apply instruments of trade policy with the intention of affecting a substantial share of the trade between those countries (or groups of countries)” (Bekkers, Francois, Nelson, & Rojas-Romagosa, 2019). These instruments of trade policy often involve raising import duties on each other’s goods, often referred to as additional tariffs. Tariffs are defined as “customs duties levied on merchandise imports on a specific basis (i.e., a fixed charge per unit of import, such as a pound/kilogram, gallon, or case) or an ad valorem basis (i.e., a fixed percentage of the value of the good imported)” (Suranovic, 2010).

Trade wars can have devasting consequences for the underlying companies and can in some cases result in substantial financial losses (Melatos et al., 2007). These consequences are especially impactful for multinational corporations (MNCs), which often conduct large parts of their business in or with other countries. In 2018, the ‘Sino-US Trade War’ began, which is an instance of the two largest economies in the world, the United States of America (US) and the People’s Republic of China (China), engaging in a trade war (Bekkers et al., 2019). This trade war has had, and continues to have, a strong economic impact on US MNCs, as many US firms have strong business ties to China, for either sourcing or consumer market factors. As trade wars were, until recently, a relatively rare phenomenon, many firms did not have contingency or response strategies in place to mitigate the effects of the trade war. With other recent disputes such as the Japan-South Korea 2019 trade war and a looming US-EU trade war casting a shadow on international trade relations, the subject of how MNCs can understand and strategically navigate trade wars appears more relevant now than ever before (K. Johnson, 2020).

This paper aims to develop strategic frameworks with the objective of assisting MNCs in accounting for trade wars in their strategic planning. It develops tools which firms can utilize

to establish their strategic position in a given trade war centered around the dimensions of 'Impact' and 'Commitment'. Based on the MNC's position with regards to these dimensions, optimal response and contingency strategies are recommended. The strategies proposed in these frameworks are tested on a sample of twelve US case MNCs, with the aim of observing whether the theoretical foundation of the frameworks can be applied in an empirical context. The paper utilizes the ongoing Sino-US trade war as a trade war case, the details of which are briefly outlined in the subchapter below.

1.1 The Sino-US Trade War

During Donald Trump's 2016 campaign for the US. Presidency, he was criticizing the previous U.S. presidency for being too soft when it came to negotiating trade policies with China (Bremer, 2016). During his campaign in early 2015, he labelled China as an economic foe claiming they have taken advantage of the US "like no other country in history" (Phelps, 2017). After his election in 2016, he pledged to put "America first", implying an impending rise in American nationalism and economic protectionism (Bremer, 2016). Meanwhile, China had rapidly grown to be one of the largest global economic superpowers. Since the implementations of international trade policies in 1979, China has changed from a closed country with little trade to an economic force with a booming export-oriented economy (Petras, 2018). Over the last decades, China has also established itself as a highly attractive consumer market, which has prompted numerous foreign companies to pursue gaining a market share in the country (Petras, 2018). Despite these economic developments, China is still being led under a communist regime, led by President Xi Jin Ping, who has eagerly been promoting the 'Chinese Dream' to the Chinese people. The Chinese dream is a slogan invented by Xi which concerns Chinese nationalism, collective effort, socialism, and rejuvenation of the Chinese nation (Economist, 2013).

In the beginning of 2018, the ideologies of 'America First' and the 'Chinese Dream' clashed, which resulted in the early phase of the Sino-US trade war. The early phase of the trade war was characterized by the first protectionist measures and announcements of further policies that caused great uncertainty. While practical reasons were provided for the implementation of additional import tariffs, the greater reasons for the tariff measures enacted by the US government are considered to be driven by domestic political motives and aspirations towards geo-political supremacy (Chong & Li, 2019). The trade war started with the

announcement of import tariffs on solar panels and washing machines by the US on 23.01.2018 which would affect all its trading partners (Rascoe & Chiacu, 2018). The US then imposed global tariffs on steel and aluminum as well (Swanson, 2018a), triggering retaliatory tariffs from many trading partners, including China (Wee & Bradsher, 2018). The trade conflict between these two powers then further escalated, when the US announced significant import tariffs against China, citing “unfair trade practices” as the reason (Swanson, 2018b). China retaliated in kind, announcing import tariffs of an equal value on US goods (Meredith, 2018).

The main phase of the trade war began with the first large tariff rounds going into effect between the US and China on 15. and 16.06.2018 (Zhong, 2018). These bilateral tariffs can be viewed as a turning point in the conflict, as they mark the beginning of targeted tariffs against the other country, rather than global import tariffs. This phase continued over the course of more than a year, during which numerous different tariff rounds were threatened, announced, enacted, redacted, and dropped altogether. Additionally, China made concessions by committing itself to purchasing certain quantities of US goods (BBC, 2018). These concessions and some relaxations in tariffs were the result of the ongoing bilateral negotiations that were taking place throughout this phase, which were frequently suspended and reopened. Over the course of this phase, both parties implemented import tariffs on the majority of imports from the other country with the US demanding extra tariffs on almost all Chinese imports.

The de-escalation phase began with a breakthrough in negotiations on 11.10.2019 that led to China dropping the tariffs on certain products and the US delaying planned tariff hikes (Rushe, 2019). Shortly after, an additional settlement was announced that had China committing to more rigorous trade rules while the US dropped its proposed tariff hike completely (Donnan, Han, & Leonard, 2019). These negotiations culminated in the signing of a ‘Phase One Deal’ which was officially signed by trade representatives of the two sides on 15.01.2020 and included tariff reductions on both sides and purchasing commitments of US goods by China (Donnan, Wingrove, & Mohsin, 2020). This deal is regarded as the first step towards a complete trade deal between the two powers.

Since then, the Sino-US trade war has been at a steady truce, with both sides reducing tariff barriers as agreed upon in the “Phase One Deal” (Bloomberg, 2020). However, the 2019

Coronavirus (COVID-19) outbreak in early 2020 has highlighted the consequences of the trade war, as international trade of medical supplies has become more important than ever. Tariff barriers and export restrictions on medical supplies have since slowed the international trade of medical supplies and led to greater uncertainty and distrust in the global trade system (Bown, 2020). To prevent supply shortages, the US lifted import tariffs on certain medical supplies that are imported from China (Lawder, 2020), highlighting the value of international cooperation in an emergency situation. This global crisis has also slowed down trade talks between China and the US, meaning that a phase two deal could be further away than initially thought. With the outlook still being highly uncertain, there is still room for speculation on how long and impactful the trade war will turn out to be (Toosi & Behsudi, 2020). A detailed account of the most important events of the trade war can be found in Appendix 1.

While both countries have suffered economically from the trade war on a national level, some of the most affected entities are the underlying firms which have business activities involving both opposing trade forces. Both nations' MNCs have strategically reacted differently with regards to the trade war. The main strategy for Chinese MNCs seems to be pulling back activities and focusing on their domestic market, mainly due to the favorable political and cultural landscape (P. Li & Goh, 2019). US MNCs, however, seem to have more strategic opportunities than their Chinese counterparts, as their businesses are not as closely tied to the government.

A 2019 DHL Resilience360 survey of 267 MNCs showed that while more than two-thirds of the total respondents had been impacted by the Sino-US trade war, more than one-quarter of respondents had not planned any contingency plans (DHL Resilience360, 2019). 35% of respondents also stated that they were currently not planning to take any actions with regards to the trade war, but intend to continue monitoring the situation closely. In 2019, the American Chamber of Commerce in China conducted a survey of their member companies to assess the impact of the increase in U.S. and Chinese tariffs on US companies operating in China. 74.9% of the 250 respondents said the increases in U.S. and Chinese tariffs are having a negative impact on their businesses, specifically more than 37% reported a strong negative impact (AmCham-China, 2019). As trade wars are historically rare, it is not unexpected for MNCs to lack specific contingency and response strategies with regards to a trade war. However, as tensions and conflicts between nations grow, it raises the

questions whether MNCs should consider how committed they are to foreign markets and how much they could be impacted by potential future trade disputes and wars. Furthermore, how they can, based on these considerations, strategically prepare themselves and respond to trade war related risks or even turn the situation into a potential gain.

1.2 Problem Statement and Research Questions

The empirical background presented above, showcase a need for contingency and response strategies which MNCs facing high levels of external trade war complexity can utilize. This paper aims to fill this need by attempting to solve the following problem statement:

"With the recent emergence of major trade wars and disputes, MNCs are ill-equipped to overcome the strategic challenges triggered by these external threats. As little to no literature exists on how MNCs can strategically navigate trade wars, addressing this problem will have practical benefits for MNCs and increase the theoretical understanding of this growing phenomenon."

This problem statement is highly relevant for internationally active businesses, as they possibly stand to be affected greatly by the consequences of future trade wars. The Sino-US trade war serves as a prime example of these consequences, which leads the paper to the following main research question:

RQ: "*Based on the case of the Sino-US trade war, how can MNCs strategically navigate future trade wars?*"

The case consists of the whole Sino-US trade war from early 2018 through 2020 and focusses on the US MNCs' perspective. However, the findings aim to be of general utility to any MNCs regardless of size and country of incorporation. With "strategically navigate" the paper refers to how firms can choose and pursue optimal response and contingency strategies, which benefit them in a trade war context. The paper aims to support MNCs' strategic decision-making by taking a forward-looking perspective that focusses on future trade wars. The paper's main focus does not lie on minor trade disputes but instead concerns trade wars with far-reaching economic effects, as defined earlier.

To answer the main research question above, the paper establishes three sub-research questions:

SRQ1: "*How do impact and commitment determine MNCs' relationships to a trade war?*"

In order to answer the main research question, it is necessary to establish how MNCs relate to trade wars in general. For this reason, by answering this sub-research question the role impact and commitment play for MNCs in a trade war is established. This approach allows for a more nuanced discussion of how a given MNC may navigate a trade war, as it establishes the foundation for how firms are positioned in a trade war context.

SRQ2: "*Given certain impact and commitment levels, how can MNCs utilize international business strategy in a trade war context?*"

This sub-research question builds on the answer to sub-research question 1, utilizing the established knowledge of MNCs' relationships to a trade war. With this knowledge, the paper aims to provide theoretical strategic guidance for MNCs with certain types of impact and commitment relationships. It therefore enables an answer to the main research question, as navigation of the trade war requires the usage of appropriate strategies.

SRQ3: "*Based on empirical MNC performance data from the Sino-US trade war, how do the proposed strategic trade war frameworks perform?*"

By supplying an empirical angle to the answers of the first two sub-research questions, this sub-research question utilizes a practical perspective by incorporating empirical data from the Sino-US trade war. It further provides an evaluation of the frameworks' performance, therefore enabling an answer to the main research question of optimal trade war navigation.

The combination of these sub-research questions provides the paper with a structural guideline that ensures a purpose-driven approach to answering the main research question. This approach is two-sided, incorporating both theoretical findings and empirical evidence to arrive at the answer of the main research question. Sub-research questions 1 and 2 are answered from a theoretical perspective in the literature review and are then empirically tested in the analysis chapter. Sub-research question 1's theoretical answer is tested through a quantitative research method, whereas sub-research question 2's theoretical answer is tested through qualitative case analysis. Sub-research question 3 is then answered based on the findings of the qualitative case analysis. This approach enables the

answering of the main research question based on the findings of all of the above sub-research questions. The paper thus incorporates both theoretical and empirical approaches based on quantitative and qualitative evidence into the final conclusion.

1.3 Structure of the Paper

The paper is divided into six chapters, which each contain up to three structural levels below the chapter level. Each chapter thus contains subchapters, which can in turn contain sections and subsections. The aim of this paper is to test and evaluate strategies which assist MNCs in navigating trade wars.

To establish these strategies, this paper will initially review literature on the theory of international trade, trade wars, firm commitment, and international business strategy. The literature review is structured into three subchapters. The first subchapter lays the theoretical foundation for classifying a firm's relationship to a trade war. The second subchapter reviews possible strategies for firms to pursue given their relationship with the trade war. Based on the theoretic findings in this subchapter, the paper states propositions concerning the optimal strategic position for each strategy in a trade war context. The third subchapter aggregates the literature review by developing general strategic frameworks to be used by firms to support their strategic decision making in a trade war. Finally, the findings from the literature review are summarized in a sub-conclusion.

The next chapter concerns the presentation of the paper's research methods and perspectives. First, the general scientific theory and perspective the paper is based on are explained. Next, the foundational quantitative data used as a basis for the analysis is presented. Event study methodology is introduced as a means of analyzing quantitative trade war impacts, furthermore the data necessary for the event study is described. Subsequently, case selection methodology is described and the data collection methods for the qualitative data are presented.

In the following analysis chapter, the presented data is analyzed using the introduced methods. In the first subchapter, an event study is conducted to test the theorized relationship between impact and commitment. The next subchapter concerns the testing of the theoretically proposed strategies based on the collected qualitative data. The third subchapter analyzes general trends found in the qualitative data, while the fourth classifies

and evaluates the analyzed strategies. The fifth subchapter evaluates the developed frameworks and the sixth subchapter presents revised strategic frameworks based on the previous analysis. Finally, a sub-conclusion to the analysis chapter is drawn.

In the subsequent fifth chapter, a conclusion to the paper is drawn, summarizing its process and main findings. The sixth and final chapter discusses future implications of trade wars and limitations to the paper's findings and research.

2. Literature Review

In the following chapter, theories and concepts relevant to this paper's field of research and problem statement will be explained and examined. As this paper addresses topics and issues on both the international and firm level, the literature review will include academic theories and frameworks from both perspectives. This dualistic approach enables an initial broader macro-based focus on international trade and theory on how countries' competitive relationships can lead to trade wars in a modern globalized environment. Theory concerning the measurement of negative impacts is especially highlighted. Thereafter, the literature review will focus on firm level international business theory. More precisely, how MNCs commit themselves to foreign markets and trade, furthermore how the level of commitment affects the availability and ultimately choice of international business strategies. Different strategic options with the potential to mitigate trade war impacts were drawn from international business literature and the most relevant strategies are presented. Based on the theoretical findings concerning each strategy, propositions are raised regarding how international business strategies would be optimally utilized in a trade war context. Finally, the findings are combined and visualized in strategic frameworks.

Subchapter 2.1 aims to provide a theoretically founded answer to sub-research question 1, regarding the relationship between impact and commitment. Consequently, subchapter 2.2 and 2.3 present the theoretical answer to sub-research question 2 regarding the use of international business strategy in a trade war context. Finally, a sub-conclusion to the chapter is provided in subchapter 2.4, which provides a summary of the literature review's main findings and the theoretical answers to sub-research questions 1 and 2.

2.1 MNC - Trade War Dimensions: Impact and Commitment

Although a trade war affects an array of factors relevant to the MNC, this study focuses on those related to 'Impact' and 'Commitment'. These dimensions where chosen based on the literature highlighted in the following paragraphs. As a trade war is a highly uncertain external threat, it is complex to measure what impact it can potentially have on a firm. Hence, it is important to understand the term from an in-depth perspective. Commitment is an equally complicated term for firms to utilize, as there are numerous different approaches of committing to markets. The dual complexity of these terms warrants a theoretical review of

their relationship. While much literature on these topics exists separately, little literature addresses their relationship. This subchapter of the literature review establishes impact and commitment as relevant dimensions that determine an MNC's relationship to a trade war.

Impact in a trade war context is a term much discussed from different perspectives, both in literature and press (Amiti, Redding, & Weinstein, 2019; Casselman, Chokshi, & Tankersley, 2020). The word "Impact" is generally defined as: "the force of impression of one thing on another, constituting a major effect" (Merriam-Webster, 2020). In the specific case of the Sino-US trade war, this paper aims to shed light on the impact of the trade war on MNCs. As impacts can have different directions and magnitudes, the scale of the impact determines how the firm is negatively affected by the change. These impacts can be direct or indirect and include, but are not limited to, changes in costs, supply chain structure, and market positioning (Egger & Zhu, 2019; Huang, Lin, Liu, & Tang, 2018). Simultaneously, uncertainty concerning the scale of the impact plays a significant role, as frequent changes in the regulatory environment introduce high levels of uncertainty (Chae, Mena, Polyviou, Rogers, & Wiedmer, 2019).

Commitment is a key factor in international business theory, encompassing the many ways a firm dedicates itself to domestic and foreign markets. A firm's commitment is arguably the main controllable factor which affects foreign business activities on a fundamental level (Johanson & Vahlne, 1977). It is important to note that commitment decisions are usually long term oriented and costly to reverse, hence it is considered a crucial business decision to decide how committed a firm should be to a certain market. The more committed a firm is, the less flexible it usually is in times of high uncertainty (Robinson & Lundstrom, 2003). While in most cases it is considered difficult to reduce commitment significantly over a short period of time, it can be utilized as a potential instrument to mitigate trade war impacts. For this reduction to be effective, it is essential to understand how the impact and commitment dimensions interrelate. This essentiality leads the study to the following sub-research question:

SRQ1: How do impact and commitment determine an MNC's relationship to a trade war?

To answer this question, the first part of this subchapter of the literature review focuses on putting trade wars into perspective through the lens of international trade theory. When a foundational understanding of trade wars has been established, the paper thoroughly

reviews impact literature on a macro and micro level. The second part of this subchapter centers around commitment with a focus on firm level trade, internationalization, and modes of control. To put commitment in a trade war context, the term is split into two new different types of commitment: ‘direct market commitment’ and ‘direct trade commitment’. Through examining existing literature related to impact and commitment through a trade war perspective, their theoretical relationship is established.

2.1.1 Trade War Impact

This section concerns the review of literature regarding the effects trade wars have on economies and their underlying firms. The aim is to arrive at an understanding of what causes these effects and to develop this paper’s definition of trade war impacts on MNCs.
The section starts by providing an overview of the history of international trade theory and the place trade wars take therein. The subsequent subsection moves on to the level of the specific trade war at hand, examining the drivers and policy instruments of the Sino-US trade war. Afterwards, the focus is shifted to a forward-looking perspective, reviewing literature concerning scenario analyses that aim to predict macroeconomic trade war impacts in the future. The next subsection reviews existing literature on the direct effects of trade war measures on firms through fluctuation patterns in their stock prices. Finally, based on the reviewed literature, a definition for the impact of a trade war on a firm is presented.

2.1.1.1 International Trade Theory and Trade Wars

Initially, a brief chronological review of international trade theory through the lens of disputes is conducted to provide a general overview of how trading conflicts between nations have developed through time. Understanding this development is crucial for creating a foundation of knowledge on how international trade has evolved to the current trade war conditions that impact firms today.

The early beginnings of international trade theory trace back to the industrial revolution and economist Adam Smith’s publication “The Wealth of Nations” (1776). The book offers one of the earliest descriptions of how nations accumulate wealth. In Smith’s view, the division of labor provided the base for lowering labor costs, which ensured effective competition across nations. At the time, most countries attempted to hoard gold to maintain wealth (Myint, 1977). Smith was one of the first economist who argued that free trade eventually benefits all actors (Adam Smith, 1776). However, one of the main criticisms against his free trade

argument is that Smith's theory of foreign trade is so strongly interlinked with his theory of domestic economic development that they must be considered collectively (Myint, 1977). It is important to note that while Smith is a well-regarded theorist in the field of economics, he is generally not esteemed as an international trade theorist (Myint, 1977).

For a first distinct theory which lays the basic premises of free trade as it exists today, one would have to look at David Ricardo's publication "On the Principles of Political Economy and Taxation" (1817). At the time of Ricardo's publication, the industrial revolution was at a more advanced stage than in Smith's time, with rapid growth of large-scale industries and captive markets in overseas colonies. Ricardo also challenged the idea that the purpose of trade was simply to gather gold by introducing the concept of 'comparative advantage'. With this concept, Ricardo argued in favor of specialized industry and free trade. He advocated that industry specialization mixed with international free trade continuously results in positive outcomes (Ricardo, 1817). With comparative advantage, Ricardo suggested that even though there are asymmetrical levels of trading competitiveness between countries, mutual benefits from trading still exist. Furthermore, a nation should concentrate resources only in industries where it has a comparative advantage, that is in those industries in which it has the greatest competitive edge in the international environment (Ricardo, 1817). Ricardo's trade theories set the foundation for the free trade argument and established the idea that the concept of free trade is advantageous for all nations involved.

The Ricardian and Smithian belief that free international trade is beneficial for all parties involved was and still is widely held by nations, firms and individuals all around the world. However, if this stands true, why does such a thing as trade policy exist and how do trade disputes escalate to outright trade wars? The trade literature has provided several theoretical explanations for the existence of trade policy. The most popular explanations are imperfect competition, increasing returns, distributional effects, and other WTO and national security-related reasons (Sen, 2012).

Chang and Katayama (1995) describe how free trade has changed since the Ricardian model, emphasizing the removal of two traditional key assumptions, perfect competition and constant returns to scale. Instead, they emphasize two new fundamental insights, imperfect competition and increasing returns to scale. There can be many sources for the existence of market imperfection. For example, the presence of increasing returns to scale gives a

cost advantage, and therefore more market power to the larger firm. Market imperfection may also be the result of entry barriers. These barriers may exist due to technological features, the existing firms' strategic behaviors, patent protection, and government regulation (Chang & Katayama, 1995). In addition, the existence of different physical characteristics of goods or differing brand images may contribute to product differentiation, which adds market power to the producers. Imperfect competition and increasing returns to scales add many new features to free trade theory including differentiated products and unique strategic firm behavior. Trade patterns, therefore, can be based on cost, demand, and strategic variables (Chang & Katayama, 1995).

The distributional effect is another factor which changed the perception of the original free trade argument. It refers to the fact that the distributional changes went in the opposite direction from the one suggested by conventional free trade wisdom. While globalization was expected to help the less skilled workers, there is overwhelming evidence that they are generally not better off, at least not relative to workers with higher skill or education levels. Free trade policies are thus set up to ensure that this is not the case (Goldberg & Pavcnik, 2007).

Paul Krugman is a key economist in the field of trade theory. Krugman's publication "Is Free Trade Passé?" (1987) provides two arguments for trade policy: 'external economies' and 'strategic trade policy'. The external economies argument refers to the claim that protection of domestic industries which contain large externalities can be advantageous for the whole economy. External economies can be defined as "those dependent on the general development of the industry" (Arndt, 1955), for instance monetary policies or more recently the internet. As Krugman puts it, nations now also compete over these externalities which is not in line with the traditional free trade concept. Despite the restriction that only externalities at the national level make industrial policy a source of international conflict of interest, it is clear that the changes in trade theory have strengthened the view that nations are competing over who gets to realize these externalities (Krugman, 1987).

The other argument Krugman presents for trade policy is that of strategic trade policy. The main argument of strategic trade policy is that with increasing returns and imperfect competition, protection may be able to make some industries earn returns higher than if it was in pure free trade environment (Krugman, 1987). Especially in industries with oligopolistic competition, a government may approve an appropriate trade policy to affect

the strategic interaction between domestic and foreign competing firms so the domestic firms' profits can be improved at the expense of the foreign firms (Krugman, 1987). Thus, with the external economies and strategic trade policy arguments, reasons exist for nations to have trade policies which both protect and strengthen their economies on the global stage.

With trade policy established as a tool for the strengthening and protection of industries and the overall domestic economy, one may ask oneself whether nations do compete economically. Krugman (1994) argues against the idea of nations competing stating that competitiveness is a meaningless word when applied to national economies. His main statement being that countries "do not go out of business". This expression refers to the notion that countries may be pleased or displeased with their economic performance, but they have no well-defined bottom line, thus making national competitiveness elusive. He argues against the trade balance being this so-called "bottom-line", reasoning that a trade balance deficit could both be a sign of strength or weakness. Furthermore, he argues that the success of one country does not cause the demise of another one (Krugman, 1994). Dunn (1994) disputes Krugman's arguments, countering that nations actually do compete, but not in the same sense as firms. Dunn advocates that simplistic rhetoric and reality need to be distinguished when it comes to nations competing (Dunn, 1994). Their arguments emphasize the high complexity of countries' relationships with each other. Whether competitive or not, it must be acknowledged that the international trade environment is vastly different from the times of Smith and Ricardo.

To summarize, this sub-section of the literature review has established a brief theoretical foundation of both traditional and modern free trade theory, along with critiques of the term. While the free trade arguments have opened markets and led to a more globalized world, they also enabled countries to compete by restricting access to their markets in ways they see beneficial. If there were no exceptions to Ricardo's free trade argument, there would be no trade wars and thus no impact on MNCs. It is deemed necessary to establish an understanding of the free trade argument before describing the more detailed intentions and instruments that goes into trade wars, especially the current Sino-US trade war.

2.1.1.2 Intentions and Instruments of the Sino-US Trade War

Trade war theory can assist in understanding the trade war environment firms find themselves in by explaining the patterns underlying the conflict and thus creating a greater

awareness for the uncertainties at hand. The economic theory of trade wars has mainly studied how optimal import tariffs should be structured given certain parameters. With the help of game theory introduced by Nash (1951), economic theory of trade wars has aimed to build a framework enabling policy makers to theoretically calculate optimal tariffs in a Nash equilibrium (Bekkers et al., 2019). The declared goal in this theory is to maximize the national welfare of a certain economy by affecting its terms of trade with other economies through the use of tariffs and quantitative restrictions (Bekkers et al., 2019). A trade war is thus considered a prisoner's dilemma in game theory terms, meaning both parties receive worse results from optimizing their strategies individually than they would through cooperation (Riezman, 1982). The current WTO structure and the increasing amount of free trade arrangements in the world are a clear indicator towards this, as reliable cooperation adds value to the economies in question (Osborne, 2004).

This theoretic foundation became a focus for research again with the beginning of the Sino-US trade war in 2018. Since then, researchers have not found evidence for the trade war tariff rounds to be in line with social welfare maximization, reelection chance maximization, or geopolitical strategic goals, so the applicability of traditional trade war theory seems impossible in this particular case (Bekkers et al., 2019). It is also argued that trade war theory would not be directly applicable regardless, as its assumption of perfect information in a game theory sense is not realistic in a real-world environment (Bekkers et al., 2019).

As economic theory alone does not sufficiently explain the advent of the Sino-US trade war, researchers have thus focused on describing and understanding the reasons for the trade war and the different "weapons" it is fought with. The main reasons for the protectionist measures are theorized to be the continuous growth of the trade deficit between the US and China, the populist appeal of the trade war measures which may aid US President Trump's domestic political goals, and the rather abstract struggle for economic dominance in the world (Chong & Li, 2019). While some of these concerns might seem to be of an economic nature, economists posit that trade policy is not the appropriate tool to reduce trade imbalances, as those are driven by savings and investments on a macroeconomic level (Obstfeld, 2018). Further, only 15% of the recent drop in US manufacturing jobs can be attributed to trade deficits, as it is more a reflection of a systemic shift in the US economy rather than its trade behavior (Kehoe, Ruhl, & Steinberg, 2018). The current trade war is thus considered by some researchers to be inherently politically motivated (Bekkers et al.,

2019). Li et al. (2018) argue in their analysis of the trade war that tariffs are not the only protectionary measure implemented in the trade war, but that technical barriers, standards barriers, IP barriers, and other factors that may increase the cost of the trade war for the other party also have to be considered.

These theoretical insights provide this paper with a possible explanation for the trade war and an economic view of the rationale behind the measures taken. It is thus clear that economic theory alone is not suitable to fully explain or predict the actions and outcomes of the trade war, but that political factors must be considered as well.

2.1.1.3 Review of Economic Scenario Analyses

Despite the difficulties listed above, researchers have been continuously describing and analyzing the Sino-US trade war. Their main goal is to measure the impacts of the trade war on the affected economies concerning both the impacts' net and redistribution effects. In a scenario analysis of possible trade war outcomes, Thompson and Jones (2019) have found that the effect of the trade war on US GDP is not dependent on the model used for scenario estimation. Instead, it hinges on the assumptions made about the severity of imposed tariffs, financial market reactions and possible reactions of central banks to the spike in inflation that is expected to occur due to the price increases resulting from the tariffs.

Guo et al. (2019) proposed a scenario with increased tariffs of up to 45% with different retaliation patterns and trade balance assumptions, and came to the conclusion that the US would in any case face social welfare and real wage losses. These losses would not be of a large absolute magnitude, but their analysis also showed a significant change in the bilateral trade between China and the US, with trade quantities shrinking by more than 90% in certain sectors (Guo et al., 2019). A different scenario analysis by Chong and Li (2019) proposes continued tariff rates of 25% and forecasts GDP and employment decreases in the US of around 1% respectively.

Li, He and Lin (2018) take a different approach in their scenario analysis by shedding light on the affordability of the trade war for each side. They find that both the US and China can afford a trade war, but that it will hamper economic development worldwide, with China potentially being more affected than the US (C. Li et al., 2018). It is also stated that from a game theory perspective, the US has more to gain from a negotiation as it has more

bargaining power and can thus end up in preferable Nash equilibriums, both cooperative and non-cooperative (C. Li et al., 2018).

On a firm level, these outcomes can help to predict the macroeconomic impacts that the trade war might have and thus change the business environment in certain sectors. It can also help to anticipate the reactions of other players in the market or provide long-term guidance towards possible outcomes of the trade war. These discussions about the wider effects of trade wars on economies, and the Sino-US trade war's effects on the US and Chinese economies in particular, provide a fundamental understanding of trade war impacts. This understanding in turn informs the definition of trade war impacts in a later subsection and provides the background knowledge necessary for the selection of applicable trade war strategies in the next subchapter.

2.1.1.4 Event Studies of Protectionist Measures on US Firms

In order to gauge the impact of the trade war on US firms, it is important to first understand the nature of the tariffs and the ways current data can be used to describe their consequences. So far, the imposed tariffs target the goods that are imported by each country from the other by charging a certain percentual import tax on the value of the imported goods. This tax has the declared goal of reducing the trade imbalance between the two nations on part of the US, while the Chinese government retaliates in kind, not willing to allow for unilateral trade barriers to be built up (MOFCOM, 2019). What is important to remember when assessing the impacts of the trade war on the US economy, is that more than 75% of its GDP is generated in the service sector (World Bank, 2020), which is not hit directly by the tariffs. China on the other hand only generates just over half of its GDP in the service sector (National Bureau of Statistics of China, 2020), making it more susceptible to tariffs targeting the manufacturing and agriculture industries.

In a perfect world, an in-depth economic analysis of the measures would be possible using real-time data such as manufacturing outputs, employment and sales. As such effects can be delayed substantially from the triggering events (Mankiw & Scarth, 2008), such as the implementation of tariffs, they are difficult to assign to a certain event in general, and detailed economic data is only available months, sometimes years later, which makes it impossible to use this type of analysis for this paper.

This leaves one traditional avenue for measuring the economic effects of legislature changes: event studies of stock markets. Introduced by Fama *et al.* (1969), event studies use stock market data to estimate the effects of time-specific events on investor sentiment and company performance. Under the efficient market hypothesis (Fama, 1991), changes in the economic environment are represented in the pricing of company shares affected by said changes. These event studies can thus provide an indication of the direction and intensity of an event effect produced by the announcement or implementation of import tariffs on publicly listed firms.

Due to the recency and continuous nature of the Sino-US trade war, there are not many studies of its effect on the US, Chinese, and global economies. While numerous estimates and scenario analyses as the ones discussed before exist, quantitative analyses of historical data are less common. There are however two recent event studies which were published on the topic, taking different approaches to the focus of their studies both from a data input and a data output perspective.

In a study conducted by Huang *et al.* (2018), the empirical focus was put on identifying companies in the US and China that would be most likely to be affected by the trade war and to assess the effects of the trade war announcement of 22.03.2018 on the firm's stock returns, bond performance and credit default swap spreads. For this purpose, they utilized four different databases with import and export data, company shares of revenue in the other country, and counts of firms mentioning trade with China in their annual reports. From these databases they identify more than 2000 firms that are likely to be impacted by import tariffs on Chinese or US goods. They then conduct an event study with an event period from 21. to 23.03.2018. In doing so, they focus on cumulative stock returns (CRR) and cumulative abnormal returns (CAR) as their dependent variables of interest. They also account for differences in firm characteristics such as size and industry, among others.

Huang *et al.'s* (2018) findings are especially relevant for this paper, as they strongly indicate a negative correlation between the implementation of import tariffs and the stock performance of stocks dependent on such trade. In a more concrete sense, the higher a firm's revenue share in China, the worse their stock performance. Additionally, a firm that purchases inputs from China or is located downstream of an industry that relies on such imports also suffers with regards to their stock performance. Curiously, no effect could be

found that proves a positive impact on firms that would theoretically benefit from the reduced import competition by Chinese firms.

The findings listed above suggest that at least for the first significant trade war announcement, firms with economic links to China were negatively impacted by the imposed import tariffs in various ways.

Another more recent event study by Egger and Zhu (2019) takes a different approach to a similar issue, as they use a wider scope in order to gain more general industry insights. They look at 31,217 public firms across 40 economies and analyze 19 events over five different event periods. Their study thus provides a larger sample size than the previous one, although the effect sizes might be less pronounced as the firms included in the sample were not curated as in the paper by Huang *et al.* (2018).

The outputs of Egger and Zhu's (2019) paper focus on the effects of US and Chinese measures on different economies in the world. It constructs measures for the direct impact of tariff announcements and implementations on China and the US, as well as indirect tariff effects through third countries. In doing so, they find negative cumulative reactions to US and Chinese measures on the US stock market, with the magnitude of US measures being greater. As expected, these effects are especially prominent when considering firms within the manufacturing, mining, and agriculture industries. Their event study lends further support to this paper, as it provides a large amount of data of the specific stock market impacts of a number of tariff measures across varying time horizons. It thus strengthens the argument that the measures enacted by both the US and China generally affect US firms negatively.

Combined, the above event studies warrant the assumption that public firms in the US are affected differently, but that the general trend is negative. Particularly firms in the manufacturing, mining, and agriculture industries and firms that operate downstream of import-reliant firms are likely to incur negative effects. Useful tools for measuring this impact can thus be the firm's stock return in critical time frames as a measure of the market's evaluation of the firm's exposure. Further, a firm can investigate their suppliers' reliance on US-China trade by utilizing measures such as their revenue share from the Chinese market and changes in the pricing of input goods.

2.1.1.5 Definition of a Firm's Trade War Impact

Overall, this review of trade war literature and studies conducted on the impacts of the Sino-US trade war shows that gauging the impact of a trade war of a firm is complex as there are many facets of business activity that can be impacted in various ways. For the purpose of this paper, it is important that firms have guidelines that help them determine their level of trade war impact. From the literature outlined before, it becomes apparent that firms should be aware of their dependence on a single export market, as import tariffs will result in rising purchasing cost for their customers (Egger & Zhu, 2019), thus weakening their market position. While this represents the most direct impact for a firm's bottom line, other factors such as changes in IP-protection and introduction of standards barriers can also compromise a firm's competitive position (C. Li et al., 2018). Further, firms must be aware of the status of their industry in the political sphere, as some industries are more likely to be targeted by tariffs for political reasons (Bekkers et al., 2019).

On another note, stronger negative trade war impacts on competitors could lead to an improved competitive position for some firms, resulting in a positive trade war impact. While this paper acknowledges the possibility of this effect, it is only included as a mitigating effect on negative trade war impacts as outlined before. A firm that experiences high negative trade war impacts in certain areas of their business could thus experience positive trade war effects in other areas, thus decreasing and possibly negating the net negative effect. A positive net effect is also possible, but due to the focus of this paper on examining the mitigation of negative trade war impacts it is considered a 'double- negative' effect. This paper thus defines trade war impact as "a negative effect on a firm's competitive position induced by trade war measures". The definition enables the paper to have a clear indication of the term "impact" going forward.

As all the main factors mentioned above contain a set of subfactors that influence them, it is beyond the scope of this paper to devise an accurate quantitative model of measuring trade war impacts. Thus, the assessment of a firm's trade war impact and potential trade war impact remains on a binary high-low level and must be assessed individually for each company. While this approach leads to a very simplified representation of business reality, it allows for the identification of general trends based on firm data. Further, it enables the creation of general strategic frameworks built on this lower level of complexity that may be adapted by firms to account for their individual situations.

The main indicators for a high impact are significant loss in revenue, net income, and stock price attributable to the trade war, as well as long-term structural shifts that decrease the firm's profitability outlooks. These effects can be difficult to quantify, as these factors are constantly influenced by many different variables. Firms that are not in trade war situations can assess their risks by simulating the effects of increased tariffs between different countries in their value chain. This way possible cluster risks can be uncovered. The likelihood of such scenarios becoming reality must always be assessed based on the current political situation.

A low impact is accordingly indicated by the opposite factors as a high impact. When no significant loss in revenue, net income, or stock performance can be attributed to trade war effects, it is likely that the firm is experiencing a comparatively low impact. A low impact does however not mean that there are no trade war effects impacting the firm negatively, it simply means that the impacts are not significant enough to warrant a classification of high impact.

This definition of trade war impact will inform the usage of trade war strategies and the development of general strategic frameworks later in this chapter. Further, it enables the answering of the sub-research question 1, "*How do impact and commitment determine an MNC's relationship to a trade war?*". The next section discusses the meaning of "commitment" in a trade war context as developed in the literature.

2.1.2 Commitment: Direct Market and Direct Trade

In this section, the concept of 'commitment' will be reviewed through the lens of international business literature. Commitment in this context is defined as: "agreeing to use money, time, or people in order to achieve something" (Cambridge Dictionary, 2020). The definition is deliberately vague, as this paper examines the term from multiple perspectives. The main focus will be on internationalization theory and the different types of commitment related to firms' geographical expansion. This paper makes the distinction between two concepts of commitment, direct market commitment and direct trade commitment, which will be defined separately in the subsections below. Direct market commitment reflects how committed a firm is staying on the foreign market because of its general attractiveness, revenue generation, and strategic importance. Direct trade commitment on the other hand refers to the degree a firm is dependent on the trade with between two countries. Both of these

commitment types are highly intertwined and display similar related characteristics, but also have significant differences which will be explored theoretically in the subsections below.

2.1.2.1 Direct Market Commitment

In this subsection, the paper introduces the commitment type 'Direct Market Commitment'. The term is first described and given a definition. Consequently, related literature is presented to establish the theorical foundation of the commitment type. Direct market commitment is centered around the firm's commitment to remaining in a market due its market specific locational advantages and the company's equity in the market. As MNCs conduct business in multiple countries, they will most likely find some markets more attractive than others. This attractiveness can have a direct influence on the firm's bottom line, for instance when the market accounts for a significant part of the company's revenue. It can also have more indirect origins, such as the market being a strategic knowledge and technology hub.

This paper defines the term direct market commitment as: "A multinational corporation's reliance on a specific market's business environment in terms of revenue generation, technological factors, cultural integration, and ownership of tangible and intangible assets". In this paper, the term will be applied in a trade war context focusing on MNC's trade reliance on the opposing country involved in a trade war.

Firms have been expanding internationally since before the industrial revolution centuries ago. Explaining how firms commit to foreign markets has been one of international business literature's main focuses for an extended period of time (Johanson & Vahlne, 1977; Robinson & Lundstrom, 2003). Johanson & Vahlne (1977) introduced the original 'Uppsala model' which describes the internationalization of a firm as a process of experiential learning and incremental commitments. According to the model, firms initially gain experience from the domestic market before they move to foreign markets. They then start their foreign operations from culturally and geographically close countries and gradually move to culturally and geographically more distant countries (Johanson & Vahlne, 1977). The model has since received criticism from many different angles. Researchers have criticized the model's deterministic nature and its focus on learning only through experience (Forsgren, 2002; Johanson & Vahlne, 1990). As a result, the model has since been modified to include a more network focused perspective (Johanson & Vahlne, 1990). While the model has been

through many changes and received a fair amount of criticism, the original model's principles are still a staple in international business literature and considered relevant by many firms and researchers to this day (Welch, Nummela, & Liesch, 2016). Firms therefore still need to carefully consider the factors of the model, as their future strategy will heavily depend on the environmental factors in the host country and how committed they are to the market.

Market commitment in the Uppsala model is reflected by the amount of resources committed to the foreign market. The investment of these resources is highly related to the firms 'market knowledge', which is the knowledge about foreign markets and operations possessed by the firm at a given time (Johanson & Vahlne, 1977). While this definition is not entirely aligned with this paper's definition of direct market commitment, it is acknowledged that resources do play a crucial part in how committed a firm is to a market. When observing a market from the perspective of how much potential it has, both in terms of strategic knowledge and financial gain, it is clear that resources need to be invested in the market to realize its potential. As firms progress and invest in more commitment intensive modes of control, it is an evident sign of increased commitment to the market (Johanson & Vahlne, 1977; Robinson & Lundstrom, 2003).

According to Buckley & Casson (1998) entry into foreign markets involves two interdependent decisions: location and mode of control. Firms need to carefully consider these two factors, as their future strategy will heavily depend on the environmental factors in the host country and how committed they are to the market. In terms of entry mode, firms traditionally start their foreign operations by exporting and then gradually move to using more commitment intensive and demanding operation modes. In internationalization literature, entry mode has generally been categorized into either non-equity based modes such as exporting, or equity based modes such as establishing a wholly-owned subsidiary (WOS) (Surdu & Mellahi, 2016). Non-equity modes are mostly associated with a lower level of commitment as firms invest fewer resources and are not tied to equity in the host country. By exporting or licensing their products or services, MNCs can remain flexible while taking advantage of the location specific benefits. However, if the location specific benefits are highly attractive, it might be advantageous to engage in more equity centered entry modes such as foreign direct investment (FDI). By making an FDI, an MNC has control or a significant degree of influence on the management of an enterprise in another economy. FDI is considered the ultimate commitment-level of internationalization. Unlike non-equity

modes, if a company has invested heavily in FDIs, it can be very costly to exit a market due to external conditions. Therefore, the more firms increase their commitment to markets, the more control they gain but lose flexibility as a lot of resources are invested (Surdu & Mellahi, 2016).

Regional strategic elements also play a role in a firm's decision to pursue a certain entry mode. According to Ghemawat's (2005) research, MNCs pursue different regional strategies depending on their strategic firm goals. These regional strategies require different commitment levels to foreign markets. A home base strategy for example only requires minimal commitment through export connections, while a regional hub strategy requires a large FDI through the development of an independent organization in the region. By choosing a regional strategy in accordance with its firm goals, an MNC can effectively utilize their commitment to a market to achieve its goals (Ghemawat, 2005).

While FDI is a significant indicator of high commitment, most large MNCs have FDIs in the form of subsidiaries in their key markets around the world. This decision does however not always mean that all these markets are of equal importance. Naturally, to determine importance one would identify sales in a region compared to the total sales as indicator of how large a revenue generator the market is overall (Huang et al., 2018). The more revenue a foreign country market generates, the more committed the firm will be to keep operations running in the specific market. It is also possible for firms to have subsidiaries represent regional headquarters, implying the nation's regional strategic importance. Firms can also have more than one subsidiary, especially if the market is large geographically and economically, and culturally diverse. By investing in multiple subsidiaries, the firm shows commitment by investing resources in understanding the market's regional and local complexities (Ghemawat, 2005).

Overall, direct market commitment can be considered a key determinant in to what degree a firm is committed to staying on the market from a location, equity, customer, and knowledge perspective. The firm's direct market commitment is not only determined by the amount of revenue the foreign market generates, but also by the market's strategic importance and the firm's mode of control. Direct market commitment plays a significant role in a trade war context, which will be explored in the upcoming trade war response and contingency strategies subchapter.

2.1.2.2 Direct Trade Commitment

In following subsection, the paper introduces the commitment type 'Direct Trade Commitment'. This term is initially defined, hereafter related literature is presented to establish the theorical foundation of the commitment type. Direct trade commitment differs from direct market commitment in that it is centered around the firm's trade flows concerning two specific countries. As MNCs have business activities in one or more foreign countries, they will always have some degree of dependence on exporting or importing goods and/or services across the borders of these nations.

This paper defines the term direct trade commitment as: "An MNC's reliance on the trade of goods and services between two specific countries". In this paper, the term will be applied in a trade war context by focusing on MNCs' trade reliance between the opposing countries involved in a trade war.

In recent periods there has been a strong increase in flows of goods and services between countries and between firms, driven by technological advancement and easing cross-border restrictions. The growing opportunities to maintain or outsource various production stages within firms and across country borders has encouraged fragmentation of supply chains and the emergence of global value chains. Cross-border manufacturing, financing, and trade in final and intermediate goods by MNCs are key drivers of this trend (Alfaro & Chen, 2014). As supply chains increasingly become more global, firms are able to geographically diversify their production, manufacturing, and logistical setup (Rugman, Li, & Oh, 2009). However, some MNCs still to varying degrees rely on their trade flows with regards to specific countries or regions. This reliance can stem from location-based technology, their industry's characteristics, knowledge centers, high amounts of tangible assets (Rugman et al., 2009). An MNC can therefore find themselves highly committed to exports or imports from the specific host-country, whether desired or not. This commitment to trade affects the terms strategic options, especially with regards to supply chain related decisions (Fawcett & Magnan, 2002; Prater, Biehl, & Smith, 2001).

Commitment plays an essential role in relational exchanges among a firm and its partners, whether they be firms or countries. It is a challenge to establish pervasive commitment, which few companies are equipped to overcome (Fawcett & Magnan, 2002). Commitment is an important component for successful and durable relations that are fundamental for the

management of the Supply Chain (Gundlach, Achrol, & Mentzer, 1995). It is however costly and time-consuming to build a strong commitment with partners, often rendering the firm in a difficult situation under conditions of high uncertainty. Direct trade commitment is highly related to supply chains, as they manage the flow of goods and services in a firm. It is rare that a firm has ownership of its entire supply chain, therefore the commitment tied to the contractual relationships between partners are of paramount importance (Gundlach et al., 1995). Furthermore, firms might also have intangible trust-based relationships which are crucial to the trade structure of their organization (Dwyer, Schurr, & Oh, 1987). The inter-organizational and cross-functional nature of supply chain management makes broad-based commitment a requirement.

The term 'supply chain commitment' is central to direct trade commitment. Dwyer et al. (1987) describe the term supply chain commitment as: "an implied or clear assurance of the continued relationship among trade partners" (Dwyer et al., 1987). Their definition is relatively aligned with that of direct trade commitment as it revolves around the relationship assurance among trade partners. A firm's direct trade commitment is considered high if this relationship amounts to a large part of the firm's total global trade and is difficult to reestablish with other partners in another country or region. Another definition of supply chain commitment is provided by Morgan and Hunt (1994) which define the term as: "an exchange partner believing that the current relationship with the other partner has so much importance that it deserves the optimum level of efforts to sustain it" (Morgan & Hunt, 1994). This definition adds to the foundation of direct trade commitment in its emphasis on the amount of effort and resources it takes to sustain the relationship. It is important to note that for direct trade commitment to be high a firm does not necessarily need to have relationships with other companies. The relationship can also be exemplified by for instance its own factories or other FDI in a foreign country. If the firm relies on these FDIs to export a large percentage of their products back to the domestic nation, it is highly committed from a direct trade perspective.

It can be challenging for a firm to determine what level of direct trade commitment is optimal. Having a strong reliance on one country or region can provide many advantages such as economies of scale, streamlined logistics, and strengthened institutional relationships. If the level is too high however, the firm is vulnerable to external uncertainty. Prater et al. (2001) describe this decision as a trade-off between supply chain flexibility and uncertainty.

Uncertainty and environmental complexity are two main factors which affect the external vulnerability of the supply chain. Whereas sourcing-, manufacturing- and logistical flexibility and speed affect the overall agility of the supply chain. The interplay between the external vulnerability and agility of the supply chain is described as supply chain exposure, which is the degree to which a supply chain is 'overextended'. The supply chain exposure should be restructured, improved, or adjusted in order to minimize the impact from the uncertain environments. Firms can do this by focusing on the degree of supply chain exposure such as the number of geographic areas covered by the supply chain, the number of transportation modes used and their speed, the number of political areas and borders, technical infrastructures, and environmental issues (Prater et al., 2001).

Based on the theoretical foundations described above, a firm's direct trade commitment is high if a larger part of an MNCs goods and services are dependent on either export or import between the host- and domestic country. Due to this dependence, sourcing, manufacturing and logistical factors highly influence the level of direct trade commitment. If the firm only has few supply chain entities in the country and possesses a more diversified supply chain, it is more flexible and thus has a lower commitment from a direct trade perspective. It is important to note that this also true from an exporting perspective. If the firm has high amounts of exports to the specific country without other countries as fallback options, their direct commitment will also be high.

To summarize, direct trade commitment is defined as a firm's reliance on its trade connections between two specific countries. It is a key determinant in to what degree a firm is committed to the supply chain entities, flow of goods and services in foreign nations. The term draws from previous literature concerning supply chain management, trade flows, and internationalization. Direct trade commitment also plays a significant role in a trade war context, which will be explored in the following trade war response and contingency strategies subchapter.

2.2 Trade War Response and Contingency Strategies

This subchapter concerns the theoretic foundations of potential trade war response and contingency strategies. Typically, a strategy is defined in the literature as a business activity which makes the firm different from others, thus looking to achieve a distinct superiority over its competitors (Porter, 1996). For that reason, this part of the literature review seeks to

gather general strategies that firms can utilize to gain a competitive advantage in a trade war environment through different means. By gathering these strategies, the paper aims to provide a theoretical answer to sub-research question 2 regarding firms utilizing international business theory in a trade war context.

In this subchapter, international business literature on the topic of possible mitigation strategies is reviewed. The literature was adapted to the trade war context by making use of the similarities of trade wars and other high uncertainty and complexity environments. A trade war can be considered a high uncertainty and complexity environment as those are defined to include market and customer demand turbulence, changes in competition intensity, and technological changes (Slater & Narver, 1994). A trade war displays these characteristics as tariffs change pricing patterns across the market, leading to demand turbulence and changes in the competitive landscape.
While the proposed strategies may not initially fit directly into the context of a trade war, the adaptations enable this paper to utilize them through the established link between trade wars and environmental uncertainty. This method was deemed the best available approach, as there is little to no literature on firm trade war strategies themselves. These adaptations are done by replacing the trade war term with how the strategies are utilized in a highly uncertain and complex context. Based on this literature, propositions towards the relationships of these strategies with the trade war dimensions and types outlined before are developed to enable later empirical testing of the strategies.

For clarity, the strategies are categorized as either commitment neutral or commitment trade-off strategies. Commitment neutral strategies aim to mitigate trade war impacts without causing significant changes to a firm's commitment. Commitment trade-off strategies on the other hand use a change in certain areas of commitment to trigger a change in impact. This distinction serves the purpose of separating the strategies thematically, as strategies that entail changes in commitment are expected to be used differently than those that do not.

2.2.1 Commitment Neutral Strategies

In this section, strategies firms can utilize to mitigate trade war impacts without making changes to their direct market or direct trade commitment levels are reviewed. While these strategies do consume resources to be successful, they do not lead to significant changes in either commitment type.

2.2.1.1 Non-market Strategy: Lobbying

Choosing to pursue a non-market strategy is not always the preferred choice among MNCs. Getting involved with non-markets entities requires specific political capabilities and a certain level of knowledge, as they are complex to influence (Hillman & Hitt, 1999). Previous studies have suggested that political capabilities are required for MNCs to grow in global markets and that they are crucial for building productive relations with governments in politically risky host countries (Yasuda & Mitsuhashi, 2017). Therefore, in the event of a trade war, a firm might find it difficult to decide whether it is appropriate and effective to pursue a non-market strategy to mitigate related risks. According to Baron (1995), a business strategy must be consistent with the capabilities of the firm and the characteristics of its environment from both a market and non-market perspective. For most firms, the market perspective is considered the main focus, but Baron (1995) argues that for many firms the non-market is just as crucial. Especially, when opportunities or threats of a firm are controlled by governments or challenged by non-market uncertainty. Examples of non-market strategies include, but are not limited to, lobbying critical law and policy makers, selecting and making political campaign contributions, and mobilizing political actors to gain support for firms' strategic initiatives (Lawton & Rajwani, 2011). Baron (1995) advocates for integration of both the market and the non-market strategy, instead of viewing them as separate entities.

Keillor et al. (2005) explore the relationship between specific forms of political risk and how firms can utilize different political responses to manage these risks. Their findings showed that when having to deal with risks related to import/export restrictions, firms were shown to attach high levels of importance to lobbying. Hence, if the firm is highly impacted by trade related barriers, the appropriate non-market response to mitigate these risks would be seeking to influence a legislator on the issue (Keillor et al., 2005). Lobbying is an information based non-market strategy, which can be approached from multiple angles. By meeting with policy makers, hiring lawyers and policy experts, submitting briefs, conveying research results and technical information, engaging in media advertising and PR campaigns, and participating in protests, firms build and maintain influence over policies (Gregor, 2012; Hillman & Hitt, 1999). The aim of lobbying is to seek "rents" through favorable regulations, tax treatment, and public procurements and aid, or to shelter from rent-extraction by means of arbitrary tax demands (Gregor, 2012).

Hillman and Hitt (1999) assert that firms with greater financial resources and/or other intangible resources, such as knowledge of how to influence public policy, are more likely to take an individual approach to political strategy. Conversely, firms with fewer financial resources and/or other intangible resources are more likely to participate collectively. By following the developments of the Uppsala model, firms incrementally increase their commitment through investing resources in the foreign market, thus gaining knowledge concerning the market (Johanson & Vahlne, 1977). Information strategies such as lobbying require not only a certain level of resources but also a high commitment if pursued individually, as the company has already invested sizable resources in understanding the market and non-market setup of the country. A firm with lower commitment would likely not have the same desire to pursue lobbying efforts alone, unless they did so in a collaborative manner (Hillman & Hitt, 1999). Gregor (2012) further addresses the difference between collective and individual lobbying. He states that collective lobbying usually has industry benefits and includes some degree of 'nonparticipation', such as writing a firm's name on a collective letter to specific governing body. Collective lobbying is usually motivated by free-riding, which is different from individual lobbying in that it requires less resources. It is in turn difficult for other companies to free-ride on the individual type of lobbying, as the favors given are usually specific to the individual firm (Gregor, 2012).

Based on the literature reviewed, lobbying is deemed a relevant strategy for further testing. The political nature of the strategy further increases its relevance in a trade war context. Due to the versatile nature of the strategy, it is deemed a usable strategy regardless of commitment type. The academic findings above indicate the following theoretical propositions:

Proposition 1a: *"The lobbying strategy will be pursued by firms with a high trade war impact."*

Proposition 1b: "*An individual lobbying strategy will be pursued by firms with a high commitment, regardless of commitment type."*

Proposition 1c: *"A collective lobbying strategy will be pursued by firms with a low commitment, regardless of commitment type."*

2.2.1.2 Price Pass-through Strategy

During a trade war, MNCs are impacted in multiple facets. However, the most direct impact often stems from the increased tariffs (Amiti et al., 2019). Depending on the industry and context, there are numerous ways to manage the effect from the increased tariffs. When most of these options are not available to the firm, they may have no other choice than to increase the price of their products, thus passing the tariff cost onto their customers (Amiti et al., 2019). While this can in some cases be the initial preferred strategy for firms, it is often not an optimal solution as it is likely to decrease sales through the market demand mechanism.

Tariff pass-through is crucial for trade policy. When a country raises its tariff on a product, foreign exporters to that country may absorb part of the tariff increase by lowering their tariff-exclusive export prices, thus improving the importing country's terms of trade (Ludema & Yu, 2016). However, companies that are not in a position to lower their prices have no other choice than to keep their tariff-exclusive prices flat, especially if they are highly impacted by the tariffs. This decision will in turn increase tariff-inclusive prices. In the absence of tariffs, markets will clear with an equilibrium price. Often an import tariff will raise the domestic price and, in the case of a large country, lower the foreign price. The tariff will drive a price difference, equal to the value of the tariff, between the foreign price and the domestic price of the product. The increased prices of imported goods reduce domestic demand and raise production by domestic firms (Smith, 2012). Previous studies have shown that foreign tariff cuts make firms upgrade the quality of their exported goods and thus increase price (Ludema & Yu, 2016). Firm-level tariff absorption elasticity lowers with firm productivity for high quality products, but increases with firm productivity for low quality products (Ludema & Yu, 2016).

The impact-level of the tariffs can be argued to play a role in the significance of the price increase of the product or service (Ludema & Yu, 2016). Under the assumption that a firm has no other approach to mitigate the effects from tariffs, they will have to raise the prices of their product. From a logical perspective, the more impacted a firm is from a tariff, the more significantly they will raise the product price. If a firm is in an industry depending on a high amount of imports from the tariff imposed country, they will hence be forced to raise price significantly (Smith, 2012). In both cases a firm might choose to pass on only a part of

the tariff cost to their customers, thus internalizing a part of the cost. This means that the price pass-through strategy can be used by firms to varying extent, even at the same level of trade war impact. However, generally based on the presented literature, the significance of the trade war impact on pass-through of prices leads the paper to the following propositions:

Proposition 2a: *"The price pass-through strategy will result in a significant price increase from firms with a high trade war impact, regardless of commitment level and type."*

Proposition 2b: *"The price pass-through strategy will result in a marginal price increase from firms with a low trade war impact, regardless of commitment level and type."*

2.2.1.3 Wait-and-see Strategy

When an unexpected international event happens, many firms' natural initial response would be to briefly 'wait-and-see' what happens in the near future so they can promptly gauge the level of uncertainty and react accordingly. When the wait-and-see strategy is pursued deliberately it is a measured decision by the firm to maintain current commitments to its business relationships in one or more international markets (Sull, 2005). Clarke and Liesch (2017) found that the wait-and-see strategy is an option that the firm can exercise to defer changes to its commitments, as reversals of strategic decisions can be costly. As previously mentioned, the more committed you are, the more costly it is to reverse strategic decisions. They also concluded that for a prolonged wait-and-see strategy to be effective it must be a focused and deliberate effort in the firm rather than a passive response in contexts characterized by high uncertainty (Clarke & Liesch, 2017).

Sull (2005) builds on this perception, as he introduces the concept of active waiting. He argues for "active waiting" as an efficient strategy, especially during times of high uncertainty. By "waiting actively" companies can position themselves to seize advantage of fast appearing opportunities and escape critical threats without committing high amounts of resources. Sull's Active Waiting concept consists of five principles centered around the waiting period. Most of the principles involve keeping the firm's vision fuzzy and priorities clear, while continuously preparing for the future by assessing environmental factors. These actions allow the company to remain flexible in the waiting period. Another focal point of active waiting entails handling possible threats and opportunities, which are more abundant due to the assumed high level of uncertainty. When the company encounters an opportunity

or threat, they need to declare it their “main effort”. By mainly focusing intensively on this effort, it allows the company to reevaluate other investments in terms of how well they support the main effort (Sull, 2005).

The focus on threats and opportunities is closely connected with the choice of entry mode and level of commitment. It is well argued that for entry modes that have a high level of equity, such as a WOS, there are more risks and a higher resource demand attached to the entry and following operation (Agarwal & Ramaswami, 1992; Johanson & Vahlne, 1977). If a firm has a large amount of resources and equity invested in a market, it is therefore more likely to be affected by risks. Whereas, a firm which has a low level of commitment to a market in terms of equity will be more flexible and less likely to be affected by risks. Both these firms will be affected by risks but generally the more committed firm will have a threat-based approach, while the less committed will be able to have an opportunity-based approach in a wait-and-see scenario.

While there are many benefits to active waiting, as listed above, it is not always a desired strategy in uncertain conditions. Figueira-de-Lemos and Hadjikhani’s (2014) commitment decision framework also advocates for the wait-and-see strategy depending on the firm’s level of commitment and the degree of uncertainty in the environment. In the framework, if the firm is highly committed and the level of uncertainty is well above the firm’s accepted risk level, it should “wait-and-see”. The complete lack of knowledge immobilizes the company’s options for possible reactions and they will thus wait out their options. They also advocate the strategy for firms with less commitment in a highly uncertain environment. In this case, the framework recommends that firms only wait-and-see with regards to changing tangible assets, as it might be risky to increase these under trade war conditions. In this scenario, it is however recommended to increase their intangible assets, for instance through hiring consultancy services to enhance their understanding of the uncertainty’s drivers. According to Figueira-de-Lemos and Hadjikhani (2014), the wait-and-see strategy is a tool which can be used when the firm desires to be cautious and the uncertainty’s impact is not yet established.

In the event of a trade war, which can be categorized as highly uncertain context, the wait-and-see strategy is determined as a relevant strategy for further analysis. The literature indicates that the strategy will mainly be pursued by low impact firms and the level of activity

is based on their direct market commitment. Based on the wait-and-see strategy literature highlighted, the paper provides the following propositions:

Proposition 3a: “The *wait-and-see strategy will be pursued by firms with a low trade war impac*t."

Proposition 3b: “*A passive wait-and-see strategy will be pursued by firms with a low commitment, regardless of commitment type*.”

Proposition 3c: “*An active wait-and-see strategy will be pursued by firms with a high commitment, regardless of commitment type.”*

2.2.2 Commitment Trade-off Strategies

In the following, strategies that include a change in direct market or direct trade commitment to mitigate trade war impacts are laid out. These strategies share the common thread of changing one’s commitment to trigger a decrease in impact and a lower chance of being highly impacted by external shocks in the future, constituting a trade-off between commitment and impact.

2.2.2.1 Supply Chain Flexibility Strategy

An important factor to consider with regards to market commitment strategies is the viability of the supply chain. For firms with substantial commitments in a foreign market, it is especially important that the supply chain fits the environment it operates in (Lee, 2002; Vivek & Richey, 2013). Flexibility has been put forward as the appropriate response to environmental uncertainty in the literature (R. Mason & Nair, 2013; Tipu & A. Fantazy, 2014) which also extends to a firm’s supply chain strategy (Stevenson & Spring, 2009; Vickery, Calantone, & Dröge, 1999). According to foundational supply chain literature, supply chain flexibility consists of two dimensions: physical distribution flexibility and demand management flexibility (Day, 1994; Zhang, Vonderembse, & Lim, 2005). The main goal of supply chain flexibility is to achieve customer satisfaction by offering low prices and efficient logistics procedures (Day, 1994). Firms should strive to find a level of supply chain flexibility that constitutes an optimal fit with their level of environmental uncertainty (J. L. Johnson, Lee, Saini, & Grohmann, 2003; Yu, Cadeaux, & Song, 2012) to optimize flexibility gains under consideration of flexibility cost (Adler, Goldoftas, & Levine, 1999; Ebben & Johnson, 2005). Luo and Yu’s (2016) research finds a further level of complexity, as they investigate

the effect of an “overfit” or “underfit” of flexibility related to uncertainty. Their results indicate that it is more efficient for firms to risk an overfit, defined as more flexibility than necessary, than risking an underfit, defined as too little flexibility.

For firms impacted by a trade war, these findings mean that higher levels of environmental uncertainty such as customer demand turbulence (Slater & Narver, 1994) induced by the inability to plan for future trade policy announcements lead to a higher need for supply chain flexibility. Especially firms that have a high direct market or direct trade commitment and a high impact from the trade war would be advised to invest in more flexible supply chains, as their environmental uncertainty increases the most due to the changes in trade policy. This investment in supply chain flexibility entails a coordinated and strategic configuration of suppliers and logistics processes that allows the firm to meet customer service, price, and expedience needs (Zhang et al., 2005). More specifically, a certain combination of manufacturing flexibility enablers such as flexible production plant capacities and part commonalities can support a firm in optimizing its global supply chain in the light of uncertainty in the marketplace (Chandra, Everson, & Grabis, 2005).

Because of supply chain flexibility’s focus on customer satisfaction in the foreign country, this strategy is best suited for firms with substantial sales in the market in question, thus exhibiting a high direct market commitment. Additionally, firms with a high direct trade commitment can utilize the strategy to better mitigate trade war induced uncertainties in their supply chain connections between the opposing forces. As supply chain flexibility is further connected to a certain cost, it is expected that it will be pursued by firms with a high trade war impact, as it is more likely to be profitable for them. While this supply chain strategy requires a long-term perspective to develop, its gains derive from its ability to adapt to short-term changes in the business environment, such as those introduced by trade war measures. This ability to adapt entails the movement of supply chain functions among existing supply chain actors, rather than the introduction of new actors or removal of established ones. Making these flexibility options available can cause significant changes in a firm’s direct market and trade commitment, and this trade-off must be considered when deciding a firm’s supply chain design.

The supply chain flexibility strategy’s ability to ease firms’ management of uncertainty in the international trade system caused by a trade war can be highly useful for firms looking to mitigate trade war impacts. Due to this uncertainty being present in all affected markets,

firms with high direct market or direct trade commitment stand to gain from pursuing such a strategy. Further, as the strategy is rather costly to implement, it is more suitable for firms experiencing a high trade war impact and thus have a higher need for mitigation measures. Based on these conditions, the paper makes the following proposition:

Proposition 4: "*The supply chain flexibility strategy will be pursued by firms with a high trade war impact and a high commitment, regardless of commitment type."*

2.2.2.2 Supply Base Strategies

In their efforts to accommodate for the changes the trade war tariffs caused in their business environment, an important factor MNCs must consider is cost. As tariffs increase, sourcing costs for companies whose supply chains cross the border between the conflicting economies increase as well. Consequently, the total cost of ownership (TCO) for firms sourcing globally will also increase. TCO is defined as "all costs associated with a product, service, or capital equipment that are incurred over its expected life" (Monczka, Handfield, Giunipero, & Patterson, 2015), which among others includes product price, transportation, and logistics costs.

To mitigate these cost increases, Chae et al. (2019) propose a framework of four strategies that firms will pursue given different levels of severity and timing uncertainty of expected tariff increases. They argue that firms will alter their supply base (Choi & Krause, 2006) and thus manipulate the firms' supply base complexity as a response to the increase in TCO. In this context, a firm's supply base is defined as "those suppliers that are actively managed through contracts and the purchase of parts, materials and services" (Choi & Krause, 2006). Chae et al. utilize three dimensions of supply chain complexity: number of suppliers (Bode & Wagner, 2015), relationships among suppliers (Choi & Krause, 2006), and geographical complexity (Handley & Benton, 2013). Firms will thus change a firm's number of suppliers, the kinds of relationships it has with its suppliers, and where these suppliers are located.

The following strategies concern the adaptation of the firm's supply base to the current situation, which is a decision with a mid- to long-term time horizon. It is different from a supply chain flexibility strategy, as instead of the strategic movement of business functions among existing business ties, the supply base strategies concern the strategic cutting of old business ties and formation of new ones (Chae et al., 2019).

Firstly, for a firm that faces a tariff increase of high severity and low uncertainty, their analysis proposes a “Swift Response” strategy, where old suppliers are partly replaced by new ones that optimize TCO in the new environment (Pfeffer & Salancik, 1978).
Secondly, in a similar but more cautious “Securing Alternatives” strategy, firms faced with a high severity and high uncertainty scenario will keep their old suppliers. Simultaneously, they will form ties to new foreign or domestic suppliers to be utilized at a point of greater certainty. These two strategies lead to an increase in supply base complexity due to the ties to new suppliers in different geographic areas (Chae et al., 2019).

Thirdly, for a low severity and low uncertainty scenario, the paper (Chae et al., 2019) proposes a “Deliberate Response” strategy, which takes the same approach as the “Swift Response” scenario, but will do so at a slower pace to reduce switching costs (Ellram, Tate, & Billington, 2008). This strategy lowers supply chain complexity, as firms use it as an opportunity to consolidate their supply chain and reduce geographic complexity. Lastly, the lowest level of firm activity can be found in the low severity, high uncertainty scenario, which the researchers connect to a “Wait-and-See” strategy in which few old ties are replaced and supply base complexity remains constant, as the firm is not incentivized to disrupt its supply base for the uncertain event of a low severity tariff introduction (Chae et al., 2019). Being a commitment neutral strategy, the “Wait-and-See” strategy was previously discussed in its own respective section and is thus not included in the propositions for supply base strategies to avoid unnecessary repetition.

When applied to the main dimensions put forward earlier in this literature review, Chae et al.’s (2019) research fits well into the proposed direct trade commitment framework. As the tariffs imposed in a trade war cover a wide range of industries and products, most affected firms will face the same level of uncertainty. However, firms with high direct trade commitment are more likely to encounter a low uncertainty situation, as their supply base in the country is more diversified and thus more likely to be impacted by trade war tariffs. On the other hand, firms with low direct trade commitment will be likely to find themselves in a high uncertainty situation, as it is more uncertain whether potential tariff measures will impact their supply base. Regardless of present commitment level and type, in most cases employing a supply base strategy will alter a firm’s direct trade commitment to a certain country. In most cases connected to a trade war situation, the trade-off between trade war

impacts and direct trade commitment will be utilized by reducing direct trade commitment, to decrease the firm's trade war impact.

By matching the presented strategies to the trade war dimensions as outlined above, this paper makes the following propositions with regards to supply base strategies in a trade war context:

Proposition 5a: "*A 'Swift Response' supply base strategy will be pursued by firms with a high direct trade commitment and high trade war impact."*

Proposition 5b: "*A 'Deliberate Response' supply base strategy will be pursued by firms with a high direct trade commitment and low trade war impact."*

Proposition 5c: "*A 'Securing Alternatives' supply base strategy will be pursued by firms with a low direct trade commitment and high trade war impact."*

2.2.2.3 Market Exit or Partial Deinternationalization Strategy

As established earlier, firms gain direct market and direct trade commitment to foreign markets as they internationalize into them. Depending on the internationalization mode different commitment levels are expected (Surdu & Mellahi, 2016). The inversion of that argument thus implies that it is possible for a firm to reduce its commitment by deinternationalizing from a market. The most extreme example of this strategy is to exit the market completely. For a firm that is confronted with a trade war situation that made a foreign market unprofitable to operate, this strategy might be appropriate (Yayla, Yeniyurt, Uslay, & Cavusgil, 2018). For other firms that experience a less extreme loss in market profitability or cannot fully exit the market due to high direct market commitment, a partial deinternationalization strategy seems more attractive (Benito, 1997). As both of these strategies are connected to significant costs, it is expected that they will only be pursued by firms with a high trade war impact, as these firms are more likely to take drastic measures to mitigate the impact. This strategy is considered a commitment trade-off strategy, as the mitigation of impact through drastic divestment constitutes a direct trade-off of direct market commitment to reduce trade war impacts.

As a full market exit strategy is quite extreme and results in the loss of the revenue streams that market represents, it is expected that firms with a low direct market commitment will be more likely to pursue this strategy. A full market exit concerns the complete divestment of a

firm's operations in a certain, most likely foreign, market. Contemporary research in the area of involuntary market exits under turbulent conditions (Yayla et al., 2018) strongly suggests that market orientation and relational capital play crucial roles in the decision of firms to leave a market.

Market orientation describes a firm's ability to acquire and use market information in order to navigate a market environment effectively (Armario, Ruiz, & Armario, 2008; Huber, 1991; Sinkula, 1994). This in turn allows firms to better avoid threats (Atuahene-Gima, 1995) as they are faster and more flexible in their market strategy. This in turn enables more efficient market exits as they are able to switch to more favorable market environments quickly. It can thus be concluded that a firm with a higher market orientation is more likely to exit a market under turbulence (Yayla et al., 2018).

Relational capital describes a firm's market specific resources in the form of external relationships with partners and customers (Srivastava, Fahey, & Christensen, 2001). While having numerous positive performance effects in a foreign market, relational capital also leads to high switching cost and thus decreases a firm's propensity to exit a market in times of turbulence (Yayla et al., 2018). This effect is amplified by the increase in crisis resilience due to the help in managing uncertainty a firm can receive from pre-existing relationships in the foreign market (J. Li, 1995).

A firm with low direct market commitment can be expected to have less relational capital in a given foreign market compared to a highly committed firm because a firm with high direct market commitment has a higher need and more opportunities to build the necessary relationships. Ceteris paribus it is thus less likely for a firm with low direct market commitment to fully exit a given market.

To understand the mechanics of partial deinternationalization, it is imperative to review the internationalization process first. In their previously mentioned revised internationalization model, Johanson and Vahlne (2009) propose a network based view of internationalization, driven by exploiting opportunities stemming from business relations. They argue that firms will internationalize more quickly when realizing opportunities in a foreign market's business network given a certain level of knowledge about the market. With the inherently decreased opportunity level that import tariffs entail for bilateral business relations on a financial level,

it is expected that firms with high market commitment and high impact will look to reduce their market commitment in order to adjust to the new opportunity level.

As divestments and deinternationalization have not received the same academic attention as investments and internationalization, there is no clear academic consensus or dominant theory explaining such firm behavior (Arte & Larimo, 2019). However, a number of studies have indicated that an unstable and changing institutional environment in the host country has negative performance implications for MNCs (Benito, 1997; Chung & Beamish, 2005; Soule, Swaminathan, & Tihanyi, 2014). Abrupt changes in the institutional environment are thus connected to an increase in the probability of foreign divestment (Benito, 1997).
This literature thus further supports the strategic incentive of highly committed MNCs to reduce their commitment to a market by deinternationalizing should it fall under trade war-induced turbulences. This reduction can lead to a lessened negative impact by the trade war, but might be costly and necessitate alternative investments or a re-investment in the market at a later time.

For this reason, the literature indicates that highly committed firms are more likely to pursue only a partial deinternationalization strategy, as it is less costly and facilitates a future recovery of commitment compared to a full market exit. This strategy can further free resources for investment in other markets until the trade war situation is resolved. This paper thus makes the following propositions:

Proposition 6a: "*The market exit strategy will be pursued by firms with a low direct market commitment and high trade war impact."*

Proposition 6b: "*The partial de-internationalization strategy will be pursued by firms with a high direct market commitment and high trade war impact."*

2.3 Trade War Strategy Framework Development

Based on the propositions outlined above, the paper presents two decision frameworks which assist firms in adjusting their commitment to mitigate actual and possible negative impacts from a trade war. In doing so, different strategies are recommended depending on an MNC's impact and commitment levels. The frameworks are constructed in an open manner to account for the different individual situations companies might encounter. Both frameworks center around the two established trade war dimensions, impact and

commitment, which act as the two axis variables. They enable firms to determine their placement in the frameworks. Impact remains the same in both frameworks, they however differ in which type of commitment is applied. One framework is centered around direct market commitment and the other around direct trade commitment. Both frameworks are named after their commitment type, they are thus addressed as 'Direct Market Commitment Framework' and 'Direct Trade Commitment Framework'. The aim of these frameworks is to test them on empirical data and observe whether the propositions are confirmed and if so, how they performed. Based on these findings, the frameworks will be revised, if needed, so it better reflects the empirical evidence.

2.3.1 Description of Axis Variables: Impact and Commitment

The first axis denotes the negative impact of trade war measures on a given firm. Examples for methods to gauge a firm's impact level are its direct tariff exposure through its trade activities, its indirect trade exposure through its supply chains, and its exposure to non-tariff trade war measures such as product bans, purchasing agreements, and stricter IP regulations.

Impact is an absolute measure, where it is always favorable for a firm to have a lower negative impact. As such, it should be the goal of any firm that finds itself in a "high impact" situation to move into a "low impact" position. However, the impact of trade war measures on a firm is largely outside a firm's agency, as external shocks in the form of trade policy changes are the main drivers of this variable. This means that while firms can take steps to attempt to decrease their impact level by utilizing certain response strategies, governments can unilaterally increase it at any time. It is therefore imperative that firms monitor the trade war closely and prepare by readying response measures and implementing contingency measures that can mitigate anticipated policy changes. This uncertainty plays a major role in the way firms operate while under the effect of a trade war, as unexpected changes in legislation can occur rapidly and with little warning.

The second axis variable revolves around the variable "Commitment". Unlike impact, commitment can be regarded as a relative measure meaning that companies can have an interest in increasing or decreasing the variable depending on its context and preferred strategic response. This paper splits commitment into two types: Direct market commitment and direct trade commitment. Direct market commitment refers to the degree an MNC is

committed to the actual market either as an exporter or through offshore production and sales in the host-market. Generally, a company would have a high market commitment if a large amount of the total sales derives from the market, as it would prove to be a crucial revenue stream for the firm. It could also be that the market is of key strategic importance to the company, meaning they have invested a lot of resources into understanding customer behavior and expect to increase sales in the region in the future. Based on previous research, it is established that firms with a high revenue share in the foreign market are more likely to be highly impacted. Hence, firms with a higher direct market commitment are more likely to be highly impacted. Direct trade commitment acts as the other commitment type. It refers to the firm's reliance on trade of goods and services between the two countries in question. Trade is in this context defined from a flow perspective, referring to entities involved in the flow of goods and services across borders. These entities refer to, but are not limited to, production facilities, assembly facilities, key suppliers, R&D facilities and logistical facilities. The direct trade commitment is relative to the amount of resources the firm has invested in each of these entities. The firm can choose to increase or decrease these commitments at will depending on their contractual and relational set-up.

For each of the axis variables, these frameworks distinguish between a high and a low characterization, which a firm must assess at its own discretion given the factors outlined above. Beyond that, firms may anticipate certain developments in a trade war and estimate the likelihood and magnitude of a possible external shock that changes their position in the frameworks. The frameworks displaying the axis variables and four quadrants are presented below in Figure 1:

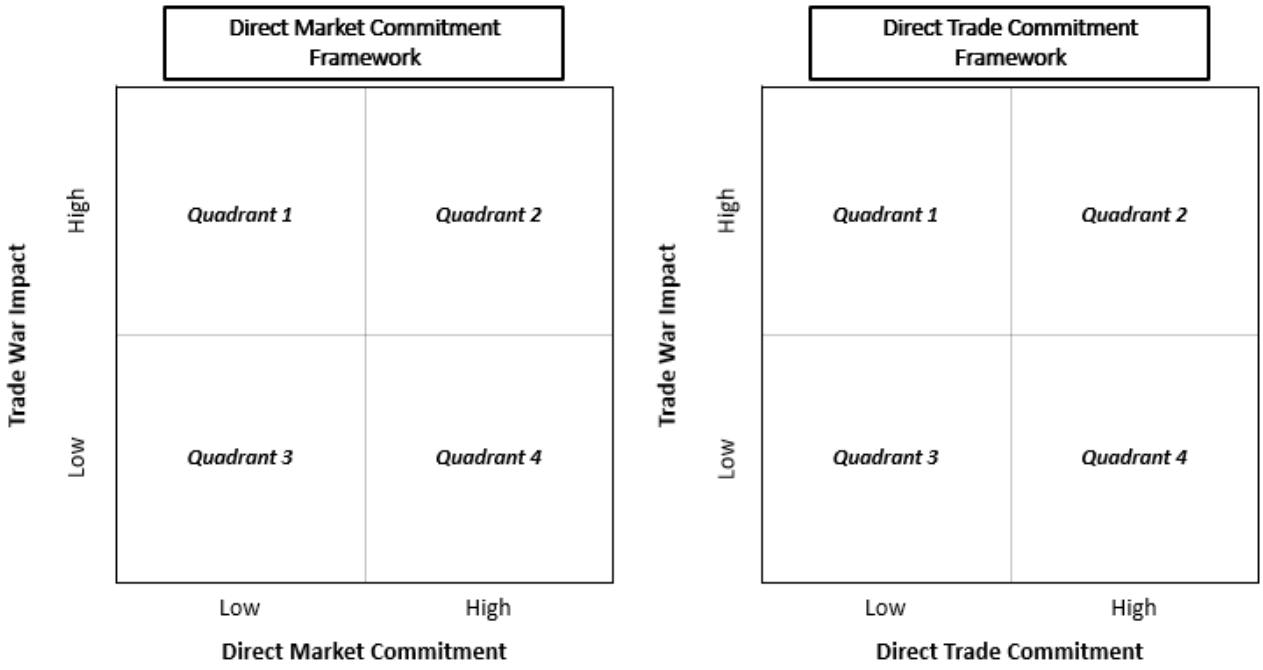

Figure 1: Concept Frameworks

2.3.2 Trade War Response and Contingency Strategy Frameworks

Based on the propositions formed in the literature review, trade war strategies are attached to their proposed appropriate quadrant. Depending on commitment type, strategies differ. The reason for this split is that firms might be committed differently according to the different types, which affects the optimal strategy mix. Each framework presents different strategies depending on what level a firm is connected to impact and the respective commitment type. In the frameworks, each strategy represents the assumed optimal strategy depending on whether the company is experiencing a high or low impact, and whether they are highly or lowly committed from a direct trade and/or direct market perspective. The aim of the frameworks is to test whether the propositions are aligned with the empirical data and if the axis variables are appropriate in a trade war context. If the empirical evidence showcases major deviations from the frameworks, they are revised to reflect the theoretical implications of the empirical findings. The strategic frameworks are visualized on the following page in Figure 2 and 3:

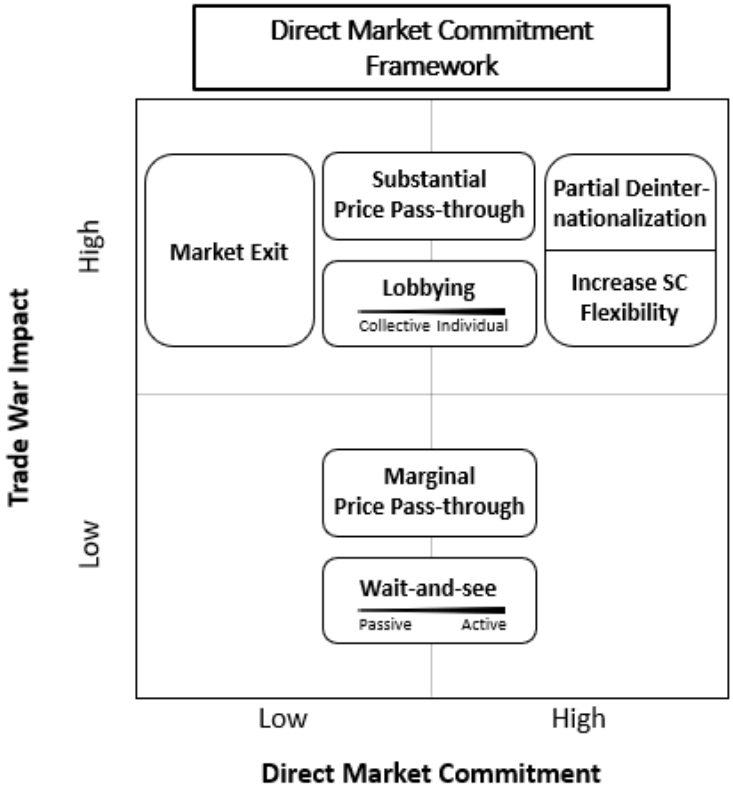

Figure 2: Direct Market Commitment Framework

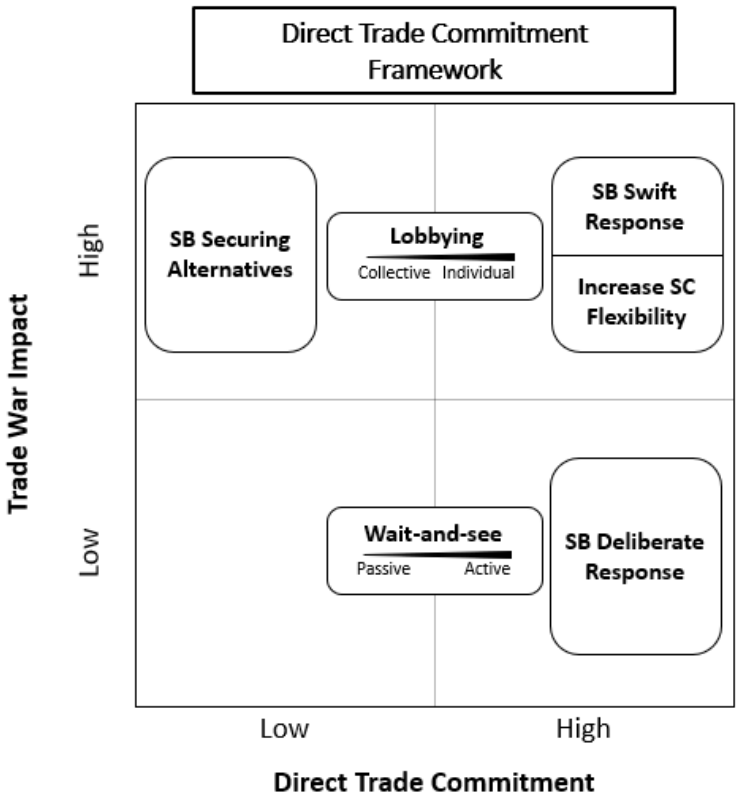

Figure 3: Direct Trade Commitment Framework

2.4 Literature Review: Sub-conclusion

This literature review sought to highlight a research gap in the field of international business strategy and trade wars. Its purpose is to provide foundational theory on the topic of trade wars and to present various international business strategies which are employed to address uncertainty. Furthermore, the connection between these two foundations was explored through the relationship between commitment and impact. The literature review provides a theoretical answer to the first sub-research question by establishing how commitment and impact determine an MNC's relationship to a trade war. A plethora of research in the field was considered, and strong indicators for a positive correlation between high firm commitment and high trade war impact were found. A firm's relationship to a trade war is thus determined by the impact it has on the firm, which is generally higher for firms with a greater direct market or direct trade commitment.

With this correlation established, the literature review scanned international business literature for strategies which could be utilized in a trade war context. Six main strategies were identified through the literature and 14 strategy propositions were raised for further empirical analysis. The propositions were formed based on the theoretical fit between the presented strategies and the two trade war dimensions. They were consolidated in a pair of two-by-two trade war centered strategic frameworks. The first framework places the strategies based on whether the strategy is classified as having a high or low impact and a high or low direct market commitment. The second framework is identical but utilizes direct trade commitment instead of direct market commitment. These propositions and frameworks act as the answers to the paper's second sub-research question, as they propose and visualize how MNCs can use international business strategy theory in a trade war context, given the firms' impact and commitment levels.

3. Research Methods

In this chapter, the paper's research methods are described. The paper initially explains its scientific theory and perspective to provide an understanding of its underlying approach. Thereafter, the collection of foundational data is described, hereafter event study methodology and case company selection methodology are explained. Further, the collected data for the event and case studies is described and prepared for the analysis.

3.1 Scientific Theory and Perspective

This paper takes a complexity scientific view in its attempt to answer its research questions. Complexity theory is related to the scientific perspective "post-positivism" and draws from research in the natural sciences to examine uncertainty and non-linearity (R. B. Mason, 2008; Mischen & Jackson, 2008). The post-positivistic perspective differs significantly from the traditional positivistic view, as it is almost a direct critique of it (Clark, 1998). In a traditional positivistic perspective, science is utilized as the method to identify the truth. The purpose is to understand the world to the degree it can predicted and controlled. Deductive reasoning is utilized to postulate theories that can be tested. Positivism as an ideology holds that only one objective truth exists which is analyzed through mainly quantitative analysis and interpreted through reason and logic (Clark, 1998; Groff, 2004). Post-positivism's epistemologically rejects these notions, as it recognizes that all observations are fallible, and that all theory is revisable. The post-positivists believe that the goal of science is to aim to reflect reality, even though it cannot possibly be achieved. Since all measurement is fallible, the post-positivists emphasize the significance of utilizing various measures and observations to uncover the truth, whereas each of these possesses different types of errors. Post-positivists use both quantitative and qualitative data methods across these multiple error types to achieve a better grasp of reality (Clark, 1998; Groff, 2004).

The reason for this paper being post-positivistic is that it believes that there is no one perfect solution to how a company can strategically navigate a trade war. However, by applying an exploratory approach combining both qualitative and quantitative data, the paper can provide an optimal answer based on the complex context of the MNC cases studied. Furthermore, this paper utilizes this perspective to achieve an understanding how firms adapt to their environments and how they cope with conditions of uncertainty. Moreover, it

allows the study to gain insight into the increasing presence of ambiguous embedded links and interdependencies on an international firm level and how trade wars affect them (Mischen & Jackson, 2008; Rumelt, 1995).The foundations of this study are built on recognized theoretic findings and empirical data, which will be utilized to analyze the subject matter from a strategic perspective.

The paper's approach to complexity theory is coupled with contingency theory to highlight the necessity for strategic alignment between an MNC's external and internal environment. Contingency theory claims that there is no best way to organize a corporation, to lead a company, or to make decisions (Freeman, 2015). While this paper presents normative strategic frameworks, it recognizes that due to the complexity and changing conditions of the environments, considering the context is essential to having a competent and flexible trade war strategy.

The paper attempts to showcase practical solutions based on quantitative and qualitative data to how MNCs can strategically navigate trade wars. This study also has a fallibilistic approach, as it constantly questions the methods and hereby acknowledges that the findings can be contested by the empirical material it is based on. Due to the recency of this paper's subject matter, naturally limitations in the data available will exist. Complexity and contingency theory's ontological position is neither realistic nor constructivist in that it possesses elements of both parts. Conditions exist objectively in the world, but they are at the same time processual and subject to change as consequence of new events (R. B. Mason, 2008; Mischen & Jackson, 2008). This implies that this paper's findings are not definitive, but a reflection of the time and space in which they have been obtained. As this paper utilizes cases to analyze the situation, a significant part of the findings will also be based these cases. Whereas the cases are a crucial part of the creation of knowledge, the aim of the paper is to establish general frameworks which can be applied by any firm involved in a trade war.

The study mainly takes a deductive approach in that it builds on existing theory, however the strategic firm theory presented in the literature review is not directly related to trade wars. This decision was however the only option given the limited theory on the subject matter. Aligned with the deductive approach, the paper then develops propositions based on the aforementioned theory. Data is then collected for analysis in order to test these propositions.

The paper differs from the deductive method in that it is exploratory to some degree and aims to develop theory based on its findings. While these characteristics are often more associated with the inductive approach, the study maintains its deductive method as it is theoretically founded with emphasis on testing propositions against empirical data. A study with the same problem statement as this paper which takes a pure inductive approach is a possible avenue for further research.

3.2 Methodology and Data Collection

In the following sections and sub-sections, the specific procedure or techniques used to identify, select, process, and analyze information about the paper's research area are described. Initially, the collection of foundational data utilized for both the event study and case selection is outlined. Thereafter, the event study methodology and data collection are described. Finally, the theoretical background for the case selection is established and the practical case selection is conducted.

3.2.1 Collection of Foundational Data

In order to assemble a pool of MNCs that sample companies for an event study and a case study can be sourced from, proxy measures of impact and commitment were constructed from the available data. For that purpose, Compustat segment data was sourced from Capital IQ. This database is composed of data collected from public statements made by companies that self-report business activities in different business, geographic, operating, and state segments. This data was extracted for the years 2017 to 2020. In reporting on these segments, not all companies have the same segment definitions and their self-reported nature might creates a certain selection bias, such as the decision whether to report on a segment at all and the type of information disclosed. Due to this inconsistency in reporting, this paper takes the pragmatic approach of including all firms that report on a geographic segment that is characterized as "China", "Greater China" or similar. Geographic segments such as "Hong Kong and Taiwan" or "APAC and China" are not included as to not distort the sample. This selection aims to ensure a focus on mainland China while maintaining the largest sample size possible. The figures most commonly reported variables for the China segment are "Total Revenue" and "Long-lived Assets", other extracted variables did not yield sufficient sample sizes for use in this analysis.

In the next step, Compustat data on the revenues, assets, industry, and four-year average market capitalization of the selected companies was exported from Capital IQ and matched to the existing data. This allowed for the usage of constructed variables that provided the percentage of revenue and assets that a company has located in China relative to its totals. Finally, additional data cleaning work was done in order to solely include US-firms and exclude firms from the financial services sector that would only be indirectly affected by the trade war. A US firm was defined as a firm with its corporate headquarters in the United States, which includes firms incorporated in tax havens such as the Cayman Islands. Financial services firms were excluded as per the definition of Compustat, as they are not directly involved in international goods trade and therefore not within the scope of this paper.

A secondary dataset was sourced from the work of Hoberg and Moon (2019), who developed a database of US firm's mentions of foreign trade in their annual reports for the years 1997 to 2017. The dataset provides a count for the number of mentions of purchasing inputs or selling goods from or to China which can be used as an indicative measurement of their reliance on US-China trade. This dataset was combined with the previously developed one through matching of company identification codes (gvkeys) in order to create a sortable list of firms that includes information on their share of assets and revenue in China and counts of their trade activity with China. This database can be used to find firms with different levels of reliance on US-China trade and thus serve as a baseline for the case company selection process. Due to the only partial overlap of analyzed years, this dataset serves as an indicative measure of firm commitment rather than an absolute one. The following table provides an example of the data used for this paper's analyses. The full datasets used for these analyses can be found in Appendix 2.

Company Name	**Annual Average Total Mentions**	**Annual Average Revenue Share**
QUALCOMM INC	43.5	0.615
BROADCOM INC	4	0.482
IPG PHOTONICS CORP	43.5	0.409
MAXIM INTEGRATED PRODUCTS	4	0.364
ADVANCED MICRO DEVICES	72	0.325

AMPHENOL CORP	3.5	0.302
SKYWORKS SOLUTIONS INC	22	0.260
APPLIED MATERIALS INC	30	0.245
INTEL CORP	23	0.235
CORNING INC	52	0.228
WESTERN DIGITAL CORP	49.5	0.213
METTLER-TOLEDO INTL INC	52.5	0.206

Table 1: Excerpt from the Foundational Dataset

3.2.2 Event Study Methodology

The above data can be utilized to create the sample for an event study. The event study is a tool which fits well for cases with limited data availability, which is exemplified by its usage in the papers by Egger and Zhu (2019) and Huang et al. (2018). The purpose of this event study is to test the claim developed in the literature review that impact and commitment jointly determine a firm's relationship to a trade war. It thus aims to strengthen the answer given to sub-research question 1 in the literature review. Event study methodology allows to test the proposed relationship by studying the quantitative effects of negative trade war shocks on firm stock prices. This section delves into the methodology of the case study as developed in the literature as it is applied to the event study which is conducted in the following analysis chapter.

Binder (1998) has studied the evolution of the general design of an event study since its introduction in 1969. The structure of the event study has changed from its origins in Fama et al.'s (1969) paper where the event period was proposed to be estimated over 60 months with the event placed in the middle of the estimation period, to an approach exemplified by Scholes (1972) that estimated the expected results over an estimation period that did not intersect with the event period itself. What these approaches have in common is their reliance on a market model to estimate a security's normal returns in order to reveal abnormal returns in the event period. Common market models used for this purpose are the Fama-French model and the CAPM model (Fama & French, 1992; Sharpe, 1964). In the following years many researchers have proposed methods to reduce bias (Malatesta & Thompson, 1985) and issues with heteroskedasticity (White, 1980), which expand the list available tools for conducting event studies precisely in different contexts.

Important caveats to the use of event studies are that short term stock market movements do not always reflect structural long-term changes, but rather reflect the ad-hoc interpretation of investors of the potential impact of an event (Egger & Zhu, 2019). Additionally, this methodology is not immune to external effects affecting regression results to a meaningful extent, distorting effect directions and magnitudes in many ways (Egger & Zhu, 2019). For this reason, events should additionally be studied using long-term macroeconomic data in order to ensure the robustness of results gained from stock-market event studies (Egger & Zhu, 2019)., once the necessary data becomes available.

McKinley (1997) has compiled a comprehensive account of event studies in economics and finance, providing a clear explanation of the event study's role in financial event analysis, its purpose, and the technicalities of its execution. As outlined before, the goal of an event study is to calculate a firm's abnormal returns over an event window compared to the normal returns predicted over a non-overlapping estimation window. Accordingly, the abnormal return for a firm i and event date τ is calculated as:

$$AR_{i\tau} = R_{i\tau} - E(R_{i\tau}|X_{\tau})$$

with $AR_{i\tau}$ being the abnormal, $R_{i\tau}$ the actual, and $E(R_{i\tau}|X_{\tau})$ the normal return for the time period τ.

In order to estimate the normal returns R_{it} over a period t, the market model is utilized as follows:

$$R_{it} = \alpha_i + \beta_i R_{mt} + \varepsilon_i$$

$$E(\varepsilon_{it} = 0)\ var(\varepsilon_{it} = \sigma_{\varepsilon i}^2)$$

with α_i, β_i, and $\sigma_{\varepsilon i}^2$ being the parameters of the market model. R_{mt} is the market return over time period t, which in this paper is represented by the returns of the S&P 500 index. The parameters are estimated using an ordinary least squares (OLS) estimator, which is a consistent estimation procedure under ordinary conditions.

To allow for precise notation of the estimators the temporal aspects are notated as follows. Returns are indexed in event time using τ. τ = 0 is the event date, with the estimation window reaching from

τ = T_0+1 to τ = T_1 with a length of L_1. The event window reaches from τ = T_1+1 to τ = T_2 with a length of L_2. The timeline is illustrated in the following Figure 4.

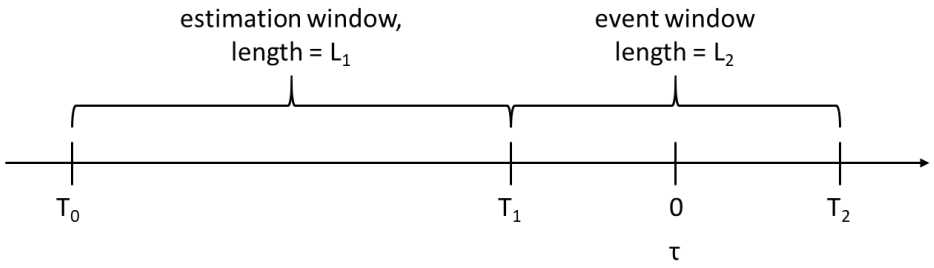

Figure 4: Timeline of an Event Study

The OLS parameter estimators of the market model are calculated as

$$\widehat{\beta_i} = \frac{\sum_{\tau=T_0+1}^{T_1}(R_{i\tau} - \hat{\mu}_i)(R_{m\tau} - \hat{\mu}_m)}{\sum_{\tau=T_0+1}^{T_1}(R_{m\tau} - \hat{\mu}_m)^2}$$

$$\hat{\alpha}_i = \hat{\mu}_i - \hat{\beta}_i\hat{\mu}_m$$

$$\hat{\sigma}_{\varepsilon_i}^2 = \frac{1}{L_1 - 2}\sum_{\tau=T_0+1}^{T_1}(R_{i\tau} - \hat{\alpha}_i - \hat{\beta}_i R_{m\tau})^2$$

where $\hat{\mu}_i$ and $\hat{\mu}_m$ are the respective mean returns for the firm and the for a given event time τ.

Abnormal returns for the sample can then be calculated as:

$$AR_{i\tau} = R_{i\tau} - \hat{\alpha}_i - \hat{\beta}_i R_{m\tau}$$

for a given firm i and event time τ. As per the market model, these abnormal returns represent the disturbance term, which is theorized to be zero. However, the event study analysis investigates this error term in the search for possible correlations with other economic figures.

Abnormal returns are aggregated to cumulative abnormal returns (CAR) for a given firm in the sample as the sum of the included abnormal returns,

$$CAR_i(\tau_1, \tau_2) = \sum_{\tau=\tau_1}^{\tau_2} AR_{i\tau}$$

with $T_1 < \tau_1 \leq \tau_2 \leq T_2$; thus including the observations within the event window. These CARs allow for the analysis of trade war events on the sample firms' stock performance, which is conducted in the analysis chapter. The following sub-section discusses the data collection process for that event study.

3.2.2.1 Event Study Data Collection

For the event study conducted on the sample of firms outlined in subchapter 3.1, daily time series data on firm stock returns was sourced from Capital IQ and daily S&P 500 returns were sourced from the ThomsonOne database.[1] Firms with revenue shares in China above 95% and below 5% were disregarded as outliers. Daily returns were calculated for each firm over the span of three years, reaching from 2017 to 2019. In accordance with standard event study literature, the estimation window is comprised of 200 days, going back from 20 days before the event date (MacKinlay, 1997; Schwert, 1981). It is important to note that the days used for this analysis are trading days, not calendar days. Each event is analyzed with 3-, 5-, and 7-day event windows with the event date being the second day of that timespan. This methodology is in line with (Egger & Zhu, 2019) and allows for a more complete view of the events in question. The events themselves were selected as major tariff announcements and implementations that took place over the cause of the trade war until now. This paper's analysis only takes into consideration events that concerned the increase of tariffs, thus creating economic tensions between the US and China, and hypothetically having a negative impact on the valuations of US firms with business activities in China. Events that lowered tariffs and de-escalated the situation are thus not included as they are outside of the scope of this paper. Table 2 below provides an overview of the selected events:

[1] These data sources might not be optimal with regards to data availability and thus decrease sample size for the analysis, but as the CBS data lab was not available due to the COVID-19 outbreak databases such as Bloomberg and Data Stream were not available to the authors at the time of writing.

Event Date	Event Description
01.03.2018	The US announces import tariffs on steel and aluminum.
03.04.2018	The US announces import tariffs on $50Bn of Chinese imports, China retaliates in kind the following day.
06.07.2018	A portion of the tariffs announced by the US and China on 03.04.2018 goes into effect.
10.07.2018	US announces import tariffs on $200Bn of Chinese imports.
03.08.2018	China announces import tariffs on $60Bn of US imports.
07.08.2018	The US and China announce the remaining tariffs originally announced on 03.04.2018.
23.08.2018	The tariffs announced on 07.08.2018 go into effect.
24.09.2018	US and Chinese tariffs announced on 10.07.2018 and 03.08.2018 go into effect.
01.08.2019	US announces import tariffs on $300Bn of Chinese imports.
23.08.2019	China announces import tariffs on $75Bn of US imports.
01.09.2019	A portion of the tariffs announced by the US and China on 01.08.2019 and 23.08.2019 goes into effect.

Table 2: Events Selected for Event Study

With the quantitative event study methodology in place to allow the testing of the theoretical answer to sub-research question 1, the following section delves into the methods that form the basis of the qualitative case study which further tests the theorized answers to sub-research questions 2 and 3.

3.2.3 Case Company Selection Methodology

In order to test the propositions established in the literature review, it is necessary to collect and analyze qualitative data concerning the specific strategies employed by MNCs which are affected by the trade war. This section outlines the methodology for selecting the cases, including case selection theory and data collection.

3.2.3.1 Theoretical Foundation of Case Selection

Case selection is an essential task for case centered research papers. In choosing cases, the agenda for the analysis is established. Based on the previously established foundational data, a list of relevant case companies was outlined for further potential analysis. Given the

insufficiencies of randomization as well as the problems posed by a purely pragmatic selection of cases, this paper opts for a purposive selection of cases (Fletcher, Zhao, Plakoyiannaki, & Buck, 2018; Seawright & Gerring, 2008). This selection method involves selecting cases based on the characteristics of the population and the objective of the study. By utilizing this selection method, the paper will be able to select the most appropriate cases given the research questions and problem statement (Seawright & Gerring, 2008). The aim of the selection is to build a representative sample of cases with a useful variation on the dimensions of theoretical interest. Based on the paper's research questions and theoretical approach, twelve cases are identified for further analysis. Using a typical case approach, the twelve cases are considered representative cases, according to the terms of the employed cross-case model (Seawright & Gerring, 2008). The objective of utilizing this approach is to discover typical cases entangled in certain conditions, which enables deeper exploration of the causal mechanisms at work (Fletcher et al., 2018). Firms were selected from nine different industries in order to broaden the understanding of the various conditions MNCs are experiencing with regards to the trade war.

Case driven papers are often criticized for not being able to provide generalizable results, as they are perceived to be too tied to the context of the cases. Another criticism is that the case study is generally subjective, which affords too much space for the researcher's own interpretations (Flyvbjerg, 2006). This paper does not entirely agree with these notions and argues that case studies can be significantly generalizable and effective, especially when the field studied is one of high complexity and uncertainty. According to Flyvbjerg (2006), the strategic choice of cases may greatly add to the generalizability of a case study. As this paper makes purposive choices of cases and attempt to cover multiple facets of MNC trade war behavior, it is confident that the findings will be generalizable to a certain degree. Flyvbjerg also addresses the supposed subjectivity of the case study: "The case study contains no greater bias toward verification of the researcher's preconceived notions than other methods of inquiry. On the contrary, experience indicates that the case study contains a greater bias toward falsification of preconceived notions than toward verification" (Flyvbjerg, 2006). While this paper acknowledges that some level of subjectivity is bound to the selection of its cases, the propositions and research questions it is structured around are established with both verification and falsification in mind. The aim of utilizing the cases

is to test the empirical evidence, so that the frameworks incorporate the findings from the case data.

3.2.3.2 Case Company Selection and Data Collection

With the theoretical foundation of the case selection in place, this subsection focuses on the practical selection of cases and collection of data from the companies. Consequently, case companies must be found which provide a diverse spectrum of firm properties to be analyzed in light of the frameworks.

The combined database developed for this paper as described earlier in this subchapter builds the basis for the case selection approach. In the initial step, firms with at least 5 average annual mentions of China and average annual revenue shares in China between 1% and 95% were included. These boundaries were set to ensure a strong data foundation for case selection and to remove outliers in both directions. The lower boundary is set lower than in the event study as the qualitative methodology allows for a more nuanced approach.

This approach produced a sample 46 firms, which were screened for publicly available data concerning their size, industry, trade war impact, direct market and direct trade commitment, and perceived strategic position using various types of sources. The main sources consulted for these purposes were annual reports, transcriptions of quarterly earnings calls, and journalistic interviews with the firms' top executives. This data provides a strong foundation for a qualitative analysis and the critical assessment of the developed frameworks.

In the next selection step, twelve firms were selected for further in-depth research. This guarantees an average of two case companies per overall strategy, which enables an in-depth analysis of the particular firms' strategies while maintaining a desirable level of firm diversity. The case companies were selected in a way that accounts for diversity in industry, size, impact and commitment levels, and perceived strategic position. While this selection introduces some selection bias, it is deemed necessary for a holistic assessment of the frameworks developed earlier. For these twelve firms, more detailed data was collected on their impact and commitment levels and strategic positioning relative to the trade war. In doing so, two firms were replaced for practical reasons: Amazon.com Inc. due to low trade war relevance, and BorgWarner Inc. due to insufficient data availability. They were replaced by the next two firms from the initial list that best filled the gap left by the removal of these companies, Tesla Inc. and Freeport-McMoRan Inc.

The final sample of case companies chosen for further analysis can be viewed in Table 3 below:

Company Name	GICS Sector	GICS Industry	4-year average market capitalization (in Bn USD)
AMD	Information Technology	Semiconductors & Semiconductor-Equipment	12.537
Apple	Information Technology	Technology Hardware, Storage & Peripherals	733.213
Cummins	Industrials	Machinery	23.223
Freeport-McMoRan	Materials	Metals & Mining	18.388
Intel	Information Technology	Semiconductors & Semiconductor-Equipment	187.678
Nike	Consumer Discretionary	Textiles, Apparel & Luxury Goods	104.569
PerkinElmer	Health Care	Life Sciences Tools & Services	7.453
Qualcomm	Information Technology	Semiconductors & Semiconductor-Equipment	82.601
Starbucks	Consumer Discretionary	Hotels, Restaurants & Leisure	84.207
Tapestry Inc	Consumer Discretionary	Textiles, Apparel & Luxury Goods	11.627
Tesla	Consumer Discretionary	Automobiles	44.102
Walmart	Consumer Staples	Food & Staples Retailing	260.313

Table 3: Case Company Base Data

(Source: Capital IQ)

4. Analysis

In this chapter, the collected quantitative and qualitative data are analyzed utilizing the methods described in the previous research methods chapter. The aim of this chapter is to support the theoretical answers given to sub-research questions 1 and 2 with empirical data, and to answer sub-research question 3 to allow for a final answer to the main research question. These answers are achieved by testing the claims and propositions made in the literature review using empirical data, by first analyzing the quantitative and then the qualitative data.

In the first subchapter of this analysis, an event study is performed and analyzed to test the theorized correlation between direct trade commitment and trade war impact. The second subchapter concerns the implementation of a case study which aims to test the strategy propositions developed in the literature review, based on the case companies established in the previous chapter. The following subchapter then presents general trends in the qualitative data, while the fourth subchapter classifies and evaluates the analyzed strategies. In the fifth subchapter, the strategic frameworks developed in the literature review and the strategies included therein are evaluated based on the previous analysis steps. Subsequently, revised frameworks based on the findings in the above analysis steps are developed. Finally, a sub-conclusion is drawn which summarizes the findings of the analysis and provides empirically based answers to the research questions.

4.1 Event Study Analysis

In this subchapter, the methods described in the previous chapter are utilized to conduct an event study of the stock returns of the sampled firms. This event study concerns the examination of the relationship between negative trade war impact and direct market commitment, with abnormal stock returns representing the impact by trade war measures and revenue share in China representing the direct market commitment to the Chinese market. This approach has the declared purpose of testing the theorized positive correlation between impact and commitment developed in the literature review as an answer to sub-research question 1. Hoberg and Moon's (2019) 'mentions data' is not used to this end as it's sample size is significantly smaller. As no quantitative data that is usable as a proxy for

direct trade commitment was available, this event study does not make claims towards the empirical relationship between direct market commitment and trade war impact.

After utilizing the introduced methodology to calculate the CAR for each firm in the sample over three different event windows for all selected events, firms with insufficient data availability were dropped from the analysis. To ensure a reasonable sample size, only firms with daily return data on at least 150 of the 200 days of the estimation window were considered. Further, all firms with missing daily return observations in the event window were disregarded as well. Finally, firms that generate more than 95% or less than 5% of their revenue in China were removed as outliers. For practical reasons, firms without any available average market capitalization data were disregarded as well.

After compiling these datasets, linear regression analysis was used to study the effect of different variables on the variation in CAR. CAR was transformed into a logarithmic variable to account for outliers and to ease interpretation. In order to account for the heteroskedasticity introduced by the time series data underlying the dataset, White robust standard errors were utilized (White, 1980). The independent variables used in the regressions are revenue share in China, market capitalization, and sector dummy variables in accordance with GICS sector classifications. Revenue share in China is the main variable of interest, while market capitalization and the sector dummies are used to control for size and sector respectively. Controlling for size is important to recognize unexpected biases introduced by firm size, while controlling for sector is especially important to control for industry effects as described by Egger & Zhu (2019). The results for the selected events are summarized in Table 4 below:

Event	**Result Category**	**3 day**	**5 day**	**7 day**
01.03.2018	Revshare	-.005	.019	.023
	MarketCap	.000*	.000***	.000**
	R^2	.100	.129	.164
	Observations	190	190	190

03.04.2018	Revshare	.015	.011	.013
	MarketCap	.000*	.000	.000
	R^2	.136	.097	.118
	Observations	183	183	183
06.07.2018	No significant results			
10.07.2018	No significant results			
03.08.2018	Revshare	.047	.026	.013
	MarketCap	.000*	.000	.000
	R^2	.084	.131	.134
	Observations	177	177	177
07.08.2018	No significant results			
23.08.2018	No significant results			
13.08.2019	No significant results			
01.08.2019	Revshare	-.059**	-.100***	-.097**
	MarketCap	.000	.000	-.000
	R^2	.096	.126	.1349
	Observations	193	193	193
23.08.2019	Revshare	.063*	.031	.016
	MarketCap	-.000	-.000	-.000
	R^2	.187	.142	.119
	Observations	183	183	183

01.09.2019	Revshare	-.006	-.024	-.021
	MarketCap	-.000	.000*	.000
	R^2	.162	.176	.091
	Observations	204	204	204
24.09.2018	Revshare	-.017	-.038	.119
	MarketCap	-.000***	-.000**	.000
	R^2	.151	.115	.022
	Observations	185	185	185

Table 4: Event Study Regression Results

, **, and * denote significance at the 10%, 5%, and 1% levels, respectively. Results controlled for sector fixed effects. Adjusted for heteroskedasticity using White robust standard errors.*

4.1.1 Event Study Findings

The regression results paint a blurred picture of the effect of direct market commitment on tariff announcements induced stock price changes. While the outcomes have indicated a non-effect of company size due to the consistent near-zero coefficients of the market capitalization variable, the effects of revenue share in China are more ambiguous. Most coefficients here are not statistically significant on an acceptable level and do not paint a coherent picture with regards to either sign or magnitude across events and event window lengths. The tie between abnormal returns and revenue share in China can thus be considered largely inconclusive from this event study analysis. This inconclusiveness is further highlighted by the absence of significant returns from five of the twelve studied events. However, for the event on 01.08.2019, which is the only event where all revenue share coefficients are statistically significant, this analysis supports existing literature on the topic by showing negative coefficients at a meaningful magnitude for this data point.

The R^2 values from the regressions can generally be considered low despite controlling for firm size and sector. This might be a sign of poor model fit or omitted variable bias. However, prior event studies on the subject matter by Huang *et al.* (2018) and Egger and Zhu (2019) have faced similar issues. Low values of R^2 can be considered an inherent problem in event study methodology in general due to the complex combination of factors that determines a

firm's stock price. Limited data availability could be a reason for the low R^2 and significance results, as larger amounts of available data could facilitate clearer results in the future by increasing sample size and adding relevant independent variables, thus enabling researchers to account for a higher number of factors that influence stock prices.

This event study analysis set out to strengthen the established link between negative trade war impact and commitment to the foreign market of the country the trade war is fought with, as established in the literature review. Using the Sino-US trade war as an example, this analysis supports existing literature on the matter only to a limited extend, providing reasons for heightened caution. For this paper's analysis going forward, these results hold relevance as they underline the fragility of the connection between impact and commitment. While it is intuitive that firms which rely on the economic prosperity of the two markets will be negatively impacted, the quantification of such effects remains difficult due to limited data availability and the difficulty of isolating trade war effects on impact measures. This necessitates either a larger, more sophisticated quantitative dataset, or a qualitative approach that allows for the consideration of individual firm properties.

Moving forward, the findings of this event study support this paper by lending credibility to the following qualitative analysis and by partially supporting the established interpretation of impact-market commitment relationships. Given the caveats listed above, it can thus be said that the answer to sub-research question 1 given in the literature review is upheld by this analysis, supporting the claim that a higher direct market commitment is positively correlated with a higher trade war impact. As this analysis does not cover direct trade commitment, impact to direct trade commitment relationships should be viewed more cautiously.

4.2 Case Company Strategy Analysis

With the relationship between impact and commitment having been established both theoretically in the literature review and empirically through the above event study, the analysis examines the trade war strategies in the following subchapter. By utilizing the case company data, this subchapter tests the propositions established in the literature review. Through this case company strategy analysis, the paper aims to answer the following sub-research question:

SRQ3: "*Based on empirical MNC performance data from the Sino-US trade war, how do the proposed strategic trade war frameworks perform?*"

The analysis is structured by grouping the strategies by whether they are commitment neutral or commitment trade-off based. As previously mentioned, commitment neutral strategies refer to strategies that when applied will not affect the commitment level of a firm, both with regards to direct trade and direct market commitment. Commitment trade-off strategies will however affect the firm's degree of commitment in either a higher or lower direction. This introduction to the subchapter will lay out the general analysis process for the propositions, which is conducted in the following sections.

To proceed with the testing of the propositions established in the literature review, it is imperative to provide a structure for the analysis of the gathered qualitative data. When considering an MNC's position and strategic outlook with regards to a trade war, the paper distinguishes between two dimensions, impact and commitment. The commitment dimension is separated into two types, direct market commitment and direct trade commitment. Determining each case company's position in these dimensions is necessary to determine their overall position in the trade war environment. When determined, the paper can then compare their actual trade war response strategies with the theoretically proposed strategies. The paper is thus testing whether the propositions raised in the literature review are aligned with empirical data and how the proposed strategies performed in practice.

4.2.1 Measuring Impact and Commitment

In order to measure trade war impact, the paper initially focused on observing the case companies' direct and measurable impacts during the trade war period such as changes in revenue, margins, and stock value. It is acknowledged that the trade war might only be one of several elements influencing these factors, therefore statements by the firm addressing the impact are utilized to support the degree of impact. The statements are mainly drawn from the case companies' quarterly earnings calls, in which the firm lays out its financial results for the quarter and answers questions from investors and analysts. Statements are also drawn from video interviews and transcripts from interviews or speeches by top executives. Indirect impacts such as changes to reputation, intellectual property rights, and political relations were not considered in the overall assessment of case company trade war impact, as inclusion of such factors would require additional qualitative analysis beyond the

scope of this paper. Additionally, it can be expected that significant indirect impacts will be represented in the direct impacts as well, as their effects carry into the tangible business results.

As the paper distinguishes between two types of commitment, each type is measured differently. Statements made by the firm are used to support the determination of both commitment levels. A main indicator of an MNC's direct market commitment is the revenue share of the host country market compared to the total sales. However, other factors can also point towards a high or low direct market commitment such the number of subsidiaries, large investments, and recent acquisitions in the market. The market can also be of a high strategic importance, as expressed either in annual reports or in statements made by the firm. Measuring direct trade commitment is relatively more complicated as little information exists on how much firms import and export between nations. Hence, the MNC's whole supply chain is observed and elements that involve connections between nations involved in the trade war. A firm is considered to have a high direct trade commitment, if a large part of the firms' business activities involves them importing and exporting goods between the nations engaging in the trade war. A firm can have high amounts of equity in the counterpart country and still have a low direct trade commitment, as long as they either have a diversified or flexible supply chain. The firm can also produce large amounts of their total products in the counterpart nations and still have a low commitment, as long what they produce there is sold in the counterpart market.

The resulting Table 5 shows the placement of each case company along the two trade war dimensions and their types, as assessed by the above criteria. It also lists each firm's pursued strategies:

Case Company	Impact	Direct Market Commitment	Direct Trade Commitment	Strategies
AMD	Low	High	Low	Supply Chain Flexibility
Apple	Low	High	High	Internalize Cost
				Individual Lobbying
				Supply Base: Securing Alternatives

Cummins	High	High	Low	Country for Country
				Individual and Collective Lobbying
				Significant Price Pass-Through
Freeport-McMoRan	Low	Low	Low	Passive Wait-and-see
Intel	High	High	High	Individual Lobbying
				Marginal Price Pass-Through
				Supply Chain Flexibility
Nike	Low	High	Low	Country for Country
				Collective Lobbying
				Marginal Price Pass-Through
				Supply Chain Flexibility
PerkinElmer	Low	High	Low	Country for Country
				Individual Lobbying
				Supply Base: Deliberate Response
				Supply Chain Flexibility
				Active Wait-and-see

Qualcomm	High	High	High	Individual Lobbying Significant Price Pass-Through Active Wait-and-see
Starbucks	Low	High	Low	Country for Country Active Wait-and-see
Tapestry Inc	Low	High	Low	Collective Lobbying Marginal Price Pass-Through Supply Chain Flexibility
Tesla	High → Low	High	High → Low	Country for Country Individual Lobbying Marginal and Significant Price Pass-Through Supply Base: Swift Response Active Wait-and-see
Walmart	High	Low	High	Collective Lobbying Significant Price Pass-Through Active Wait-and-see

Table 5: Case Company Impact and Commitment Levels, and Pursued Strategies

For an overview of the main indicators determining each impact and commitment level in the table above, please refer to Appendix 3.

In the following sections, the propositions made in the literature review are tested. For this purpose, each strategy and its connected propositions are briefly presented. Then, the gathered qualitative data on firms that pursued the given strategy is analyzed. Finally, the propositions are critically evaluated and the analysis results for the strategy are summarized.

4.2.2 Test of Commitment Neutral Strategies

The following subsections analyze commitment neutral strategies through testing their related propositions. The commitment neutral strategies will not affect the firms' direct market or trade commitment. The commitment neutral strategies consist of the lobbying strategy, the price pass-through strategy, and the wait-and-see strategy.

4.2.2.1 Test of Non-market strategy: Lobbying

In this subsection, propositions 1a, 1b, and 1c relating to lobbying as a commitment neutral strategy will be analyzed using the empirical case data at hand. The strategy is the most frequent among the sample as nine case companies applied it in varying aspects. Apple, Cummins, Intel, Nike, PerkinElmer, Qualcomm, Tapestry, Tesla, and Walmart utilized the strategy. The propositions raised on the basis of literature findings are as follows:

Proposition 1a: *"The lobbying strategy will be pursued by firms with a high trade war impact."*

Proposition 1b: "*An individual lobbying strategy will be pursued by firms with a high commitment, regardless of commitment type."*

Proposition 1c: *"A collective lobbying strategy will be pursued by firms with a low commitment, regardless of commitment type."*

Based on the theory outlined in literature review, the paper raised the proposition that lobbying is a high impact strategy, as it requires a significant amount of resources to establish political capabilities and relations. The main emphasis of proposition 1b and 1c is that firms will choose different types of lobbying strategies depending on their commitment level. The empirical data indicates that lobbying is a complex and versatile strategy which can be utilized in many ways and contexts. With regards to proposition 1a, findings were mixed but provided an overall coherent pattern. Five out of the nine cases which utilized the strategy had a high impact. These five highly impacted cases are the only cases in the sample which are categorized as high impact, meaning that there were no highly impacted cases in the sample that did not utilize the strategy.

Varied findings were observed in the remaining four, which had a low impact but also used the lobbying strategy. At the beginning of the trade war Apple stood to be highly impacted, for instance by a projected 25% tariff on the iPhone XS, however through intense lobbying by the company's CEO Tim Cook, they successfully remained in the low impact category. Apple displays lobbying at a significantly high level, as Tim Cook describes his relationship with US President Donald Trump: "I think [Trump and I] had very straightforward discussions, many of them. He listens to the comments, which I appreciate" (Appendix 4). This description implies that Apple has a direct influence on one of the two main leaders making executive decisions with regards to the trade war. Through this influence they managed to persuade US President Trump into exempting Apple from most of the tariffs which would have impacted their business, which Trump addressed in an interview: "Now the problem was that Samsung, a competitor, would not be paying taxes and Tim Cook would. I gotta help him out short term with that problem because it is a great American company" (CNBC, 2019). Apple in this case essentially receives a favor from the highest executive power in their domestic country. It must be noted that only very few companies have direct contact with the top political leaders of their domestic nation. Companies with less influence are advised to opt for lower levels or other kinds of government entities if they need to seek favors, which is observed in the case of PerkinElmer.

PerkinElmer was another case with a low impact which utilized the lobbying strategy however unlike Apple they were not projected to be highly impacted by the trade war. Nonetheless, they still lobbied in China, but not in the US. The company's CEO, Robert Friel, held several meetings with the Chinese government in order to ensure their firm's position in the trade war: "It was clear in my meetings with [Chinese] government officials, which included provincial leaders and the National Health Commission and the Ministry of Commerce, that they all value PerkinElmer's five decades plus history in China and our ongoing local commitments" (Appendix 5). This statement implies that the firm leverages its past, present, and future commitment to the market and the Chinese government, which is further emphasized when he addresses the trade war directly: "While the US-China trade tension creates additional risks and uncertainty to our business in the short term, I became really excited about [China's] commitment to healthcare investment, our business prospects in the region and our reputation in standing with local and national government" (Appendix 5). It is clear that the firm feels confident about their relationship with the Chinese

government and is not expecting significant impacts from the trade war due to this relationship. Lobbying is in this case used as a pre-emptive measure rather than as a tool for mitigating an already established impact. The theory described in the literature review did not include this specific use of lobbying, which makes it an unexpected finding.

In proposition 1b, the paper suggests that firms which are highly committed will pursue lobbying on an individual level, granted they have the resources to do so. This individual approach can be seen in the Apple and PerkinElmer cases listed above. Apple chose a highly individual approach by conversing directly with the main power behind one of the two opposing forces. As a firm with an abundance of resources and great influence, they had the opportunity to directly influence the tariffs that affected them. In Apple's case, the firm's direct trade commitment was high, as they manufacture and ship most of their products to the US from Mainland China. PerkinElmer also took an individual approach to lobbying, they however focused on the host-country side by leveraging their relationships with the Chinese government. As the firm has a high direct market commitment, they were more concerned about the trade war affecting their future potential in the Chinese market. Similar to Apple, the engine manufacturer Cummins pursued the individual lobbying approach as the CEO, Tom Linebarger, states in an interview:

[…] I have spoken with the U.S. trade representative, with the president and others in the White House. And in each time that the members of the Business Roundtable, and me specifically, have asked to talk with them, they have agreed to talk and been open to hear what we had to say. (Appendix 6)

The statement indicates that the company has addressed their issues with the trade war to the US government and that it has been receptive to the firm's perspective. The main difference from Apple to this case is that the firm also participated in lobbying as part of a business board, to be represented as a member of its industry.

Proposition 1c suggests that firms which have a low direct market and/or direct trade commitment would be more likely to engage in lobbying from a collective approach. The findings from the sample failed to confirm the proposition, as some firms which were highly committed would also utilize the strategy from the collective approach. Nike was one of these companies, as they had a high direct market and trade commitment, but ultimately

pursued a collective lobbying approach. In their 2019 annual report, they addressed their lobbying efforts directly:

With respect to proposed trade restrictions targeting China… we are working with a broad coalition of global businesses and trade associations representing a wide variety of sectors to help ensure that any legislation enacted and implemented (i) addresses legitimate and core concerns, (ii) is consistent with international trade rules and (iii) reflects and considers China's domestic economy and the important role it has in the global economic community (Nike Inc., 2019).

According to the propositions Nike should have engaged in individual lobbying. As they have a low impact and high commitment coupled together with large amounts of resources, they may not want to allocate large political capabilities in this issue and thus pursue a collective lobbying strategy. Tapestry used a similar approach in signing a letter in collaboration with the United States Hide, Skin and Leather Trade Association targeting US President Trump with the purpose of pleading him to avoid taxing Chinese leather goods imports. The two collectively appealed to the administration to save bags and travel accessories made in China using US leather from a potential 25% import duty (USHSLA, 2019). The case of Tesla also provided strong uses of the lobbying strategy, especially in China where the company was granted a tax exemption by the Chinese government and was incentivized to build a ‘Gigafactory’ in Shanghai. Tesla CEO Elon Musk personally went to China where he participated in public events such as the Artificial Intelligence Conference in Shanghai. These public appearances provided a great deal of positive media coverage from the Chinese media. More importantly, he also met with Xiao Yaqing, head of China’s State Administration for Market Regulation, where Musk discussed the vision behind the ‘Gigafactory’ in Shanghai. The factory was built in less than a year with assistance from the Chinese government (Du, 2019). The case data indicates that the lobbying strategy is utilized regardless of a firm’s commitment level and type. Lobbying is thus a strategy which can be utilized from many different approaches and has proven successful for many of the firms in the sample.

A relevant finding which was not addressed in the literature review and might necessitate changes to the proposed strategic frameworks, relates to the relationship between type of commitment and how it affects in which location a lobbying strategy is applied. The case

data indicates a connection between direct trade commitment and lobbying in the domestic country, and likewise a connection between direct market commitment and lobbying in the foreign country. All firms with a high direct trade commitment lobbied in the US with a focus on the supply chain, whereas firms with a high direct market commitment mainly lobbied in China with a focus on the market. It is evident that there is a strong interplay between the two commitment types when it involves lobbying.

As a whole, lobbying proved to be a favorable strategy which was employed by many case companies, especially those that were highly impacted. It was effectively used both as contingency plan to mitigate possible impacts from tariffs and as a response strategy to ease or completely remove existing impacts. The firms that optimally utilized lobbying were those which understood their political influence and utilized their capabilities to directly sway their non-market environment in their favor. The strategy was also observed in combination with other strategies, in which lobbying was arguably used as an amplifier or safety net to ensure another strategy's effectiveness. The findings proved there was no clear causal link between level of commitment and type of lobbying, however this proves that lobbying is a strategy which is fitting in most any context.

4.2.2.2 Test of the Price Pass-through Strategy:

In this subsection, propositions 2a and 2b will be analyzed using the empirical case data at hand. Passing through the cost in order to mitigate the impact from the tariffs was the second most frequent strategy observed in the sample. The case firms which passed on prices to varying degrees are Cummins, Intel, Nike, Qualcomm, and Walmart. The propositions raised on the basis of literature findings are as follows:

Proposition 2a: *"The price pass-through strategy will result in a significant price increase from firms with a high trade war impact, regardless of commitment level and type."*

Proposition 2b: *"The price pass-through strategy will result in a marginal price increase from firms with a low trade war impact, regardless of commitment level and type."*

These propositions are centered around the impact level of firms, suggesting that firms with a higher impact would be pressed to have a higher price increase than those which are impacted to a lesser degree. The notion here being that regardless of commitment level, the price pass-through strategy would be a "last resort". Hence, the higher the impact the higher

the price increase, as firms in theory would not have other strategic options available. The findings based on the data at hand largely confirmed both propositions.

Many firms suggest that if the trade war continued, they would not have any choice but to raise prices. This notion is confirmed by Tapestry, which states the following in their 2019 annual report: “If the U.S. follows through on its further proposed China tariffs, or if the U.S. or other countries impose additional duties, taxes, quotas […] the cost of our products manufactured in China and goods imported into the U.S. or other countries could increase” (Tapestry Inc, 2019). This statement implies that if their products are affected by future trade war tariffs, the firm would have to increase their prices. However, as the firm is currently experiencing a low impact, they have not done so yet. A firm with a low impact which has raised prices is Nike. In their Q1 2020 earnings call they assert that the tariffs were taken into consideration in the margin projections: “We now expect to deliver full year gross margin expansion within the 50 to 75 basis point range. That assumes that the negative impact of recently implemented tariffs remains in effect for the balance of our fiscal year” (Appendix 7). This statement is implying at least a partial pass-through of prices.

One of the cases which heavily increases prices was Walmart which is categorized as having a high trade war impact. With an estimated 26% of their imported merchandise coming from China, consumers saw a general price increase of 2.5% totaling $97.9 billion in the three months after the tariffs hit the firm in May 2019 (Meyersohn, 2019). Walmart CEO Doug McMillon confirmed the impact, addressing it in their Q4 2019 earnings call: “We've had some tariffs and there are places in which that does gets passed along and that does impact ticket” (Appendix 8). Walmart CFO Brett Biggs also underlines that they are doing everything they can to keep prices low, but that ultimately any tariff increase would lead to a spike in prices for consumers: “We're going to continue to do everything we can to keep prices low. That's who we are. However, increased tariffs will lead to increased prices, we believe, for our customers” (Meyersohn, 2019). These price increases have had a negative impact on the firm’s operating profit, as rising supply costs related to the trade war outstripped sales growth (Meyersohn, 2019). The cases of Tapestry, Nike and Walmart arguably confirm the two propositions, as their intentions and actions with regards to price increases align with their impact level as proposed earlier.

Qualcomm is one of the firms differing from the propositions by only increasing prices incrementally while being a high impact case. The CFO George Davis stated the following on impact of trade war tariffs: “For Chinese imports to the US, some networking products will be subject to US tariffs, potentially impacting end market demand if the incremental cost is passed to consumers” (Appendix 9). According to proposition 2a, Qualcomm should be proceeding with a more significant price increase, however this specific case is more complex than it seems. The above statement was made earlier on in the trade war, when the trade war impact was still low, suggesting that the proposition holds true considering the timing. Qualcomm’s pricing strategy after this period gets more murky, due to conflicts surrounding 5G technology and political trade blockades against key customers of Qualcomm (Timmons, 2019).

Cummins has a diversified approach to passing through the tariffs. The engine manufacturer is categorized as highly impacted due to the 150 million USD annual tariffs imposed on their products (WFYI, 2019). While the other case companies utilizing the strategy passed on the costs to their customers, Cummins also passed on the tariffs to their suppliers, reducing their 150 million USD tariffs to 100 million (WFYI, 2019). While the amount is still of a significant magnitude, this action showcases a firm’s ability to leverage its influence on their supply chain.

A firm that decided not to pursue a price pass-through strategy and internalized the tariff cost altogether was Apple. In Apple’s Q4 2019 earnings call their CEO Tim Cook stated that they were “paying some tariffs”, implying they absorb some of the cost internally instead of passing on the tariff costs to the consumer (Appendix 4). This exemplifies a case of the “partial price pass-through” in which none of the tariff costs are passed through to customers. As Apple is operating in the high-end spectrum of its industry and is running a highly profitable business, it controls the necessary resources to pursue such a strategy. Depending on a firm’s branding strategy and available resources, a full tariff cost internalization could therefore be a viable strategy in some cases.

In summation, the propositions were confirmed with a few deviations in some cases. Timing showed to be an important factor to consider when pursuing this strategy. Firms should consider whether they have other strategic options available before raising their price or they might suffer financially like Walmart. The findings also showed that when firms choose to

pursue the strategy, they have more options than simply passing the cost on to their customers. Firms are advised to consider their whole supply chain to possibly spread out the costs more efficiently.

4.2.2.3 Test of the Wait-and-see Strategy

In the following subsection, propositions concerning the wait-and-see strategy are analyzed utilizing the empirical data. The firms which utilized the strategy were: Freeport-McMoRan, Intel, Qualcomm, Starbucks, Tesla, and Walmart. Based on the theory showcased in the literature review, the following propositions are analyzed with the data collected from the case sample:

Proposition 3a: "The *wait-and-see strategy will be pursued by firms with a low trade war impac*t."

Proposition 3b: "*A passive wait-and-see strategy will be pursued by firms with a low commitment, regardless of commitment type*."

Proposition 3c: "*An active wait-and-see strategy will be pursued by firms with a high commitment, regardless of commitment type."*

Based on the literature and theories reviewed, the wait-and-see strategy was mainly proposed for companies with low impact, as it is implied that a highly impacted firm would proceed with a more focused and concrete strategy to reduce uncertainty. Proposition 3a was in large part confirmed by the empirical evidence, as most cases which pursued a wait-and-see strategy were in the low impact dimension. However, a significant discovery was how lowly impacted firms used the wait-and-see strategy differently.

While Starbucks experienced a low impact from the trade war, they chose to wait-and-see while increasing their tangible assets in China. Starbucks' CEO Kevin Johnson stated: "We haven't seen significant impacts from the geopolitical situation between the U.S. and China, we're not immune […] [we are] operating as an entity in China that's relevant to the consumer, to the culture, and we're playing the long game" (Appendix 10) . By "playing the long game" he mainly refers to increasing the number of stores in mainland China. From 2018 to 2019 Starbucks opened 629 stores in the country, more than in any other nation, even the US (Starbucks Corporation, 2019). This sentiment confirms proposition 3c in that a firm will take an active approach to the strategy since it has a high direct market

commitment. Starbucks' approach is in line with Figueira-de-Lemos and Hadjikhani's (2014) theory of what actions a firm in Starbucks position would take. Since Starbuck's consider their knowledge of potential impacts high and their commitment relatively moderate, they increase tangible assets by opening new stores.

PerkinElmer was in a similar situation to Starbucks and reacted in a similar fashion with their CEO, Robert Friel, presenting the company's stance on the trade war: "Longer term, we remain bullish on China and believe that a lot of these issues are short-term in nature and are mostly related to ongoing delays in export controlled product approvals, as well as the global trade war rhetoric" (Appendix 5). PerkinElmer also took an active approach and decided to acquire multiple Chinese firms to increase their presence in China. It can be argued that PerkinElmer's active approach to wait-and-see is more a question of the company keeping an eye on the conflict while they expand on their other China related strategies. They are active in the sense that they are ready to act in the case of any unexpected impacts. One could argue that both Starbucks and PerkinElmer do not pursue the wait-and-see strategy since they both increase investments, but as these investments were in most cases already planned before the trade war, the firms are for the most part maintaining their already established strategic direction. As they do not hold back on their investments, which would be a passive approach, it is argued that continuing to invest and increasing operations in China is an example of an active wait-and-see strategy.

Tesla is also an example of a firm utilizing an active wait-and-see strategy. Early in the trade war, Tesla prepared for further escalations by shipping cars from the US to China while there was a truce in the trade war (Bloomberg, 2019). As Tesla is classified as a high impact and high commitment firm, these actions differ a bit from the theoretic suggestion. However, evidence shows that the company later had many other strategic initiatives launched in response to the trade war. Tesla is an example of firm which initially adopted the active wait-and-see strategy and then acted when they had the chance, by shipping their products during the trade war truce. After this action, the firm's main focus was to finish the construction of their 'Gigafactory' in China, which would assist them in avoiding export tariffs. By switching strategies from wait-and-see to a more long-term trade war strategy, the company was able to significantly change both their impact and commitment level. Tesla, in line with the active waiting approach (Sull, 2005), kept their vision fuzzy and was able to

scout an unique opportunity in both the trade war truce and the construction of the Shanghai ‘Gigafactory’.

Intel initially chose a more supply chain focused wait-and-see strategy: “As this most recent round of tariffs kind of play out, we're doing a lot of work with our global supply chain [which] can be adjusted and adapted to deal with any tariffs. But I think it's going to be a wait-and-see as we go into 2019” (Appendix 11). This quote emphasizes that they will wait-and-see regarding future developments during 2019, while they are utilizing their supply chain flexibility strategy to mitigate existing trade war impacts. The findings highlight the diversity in which companies utilize the wait-and-see strategy to suit their specific context and then drop it when a more favorable long-term strategy becomes available. The only case company to approach the strategy from a purely passive angle is the mining firm Freeport-McMoRan. As their firm has a relatively stable demand and the Chinese market and trade is not one of high commitment to the firm, they chose to mainly wait-and-see without any specific focus. The CEO Richard Adkerson notes that they are waiting to see whether they will be impacted: “If [the trade war] has an impact on copper demand in China, then we're going to wait-and-see how that sorts out” (Appendix 12). As the firm is in an industry with a reasonably stable demand, they can to a certain degree safely pursue a passive wait-and-see strategy.

All cases that utilized the wait-and-see strategy did so with a fair level of success. The firms that were the most successful where the ones that deliberately chose to wait-and-see, to then later act when the trade war conditions suited them better. The frameworks’ assumption that the wait-and-see strategy was a low impact strategy was largely confirmed with only a few high impact cases utilizing the strategy. The main takeaway from this test was that the wait-and-see strategy can also be considered for high impact firms, if the strategy is pursued from an active perspective and is quickly replaced when a better strategic alternative becomes available. Furthermore, proposition 3b was also confirmed, it was however only supported with one case example, making the argument relatively weak. It must be also noted that the timeline for each wait-and-see strategy varies, meaning that the firm is not limited to using the strategy only in the initial phases of the trade war.

4.2.3 Test of Commitment Trade-off Strategies

The following subsections analyze commitment trade-off strategies by testing their related propositions. The commitment trade-off strategies entail a change in commitment to mitigate trade war impacts. These strategies are the supply chain flexibility strategy, the supply base strategies, and the market exit and or partial deinternationalization strategy.

4.2.3.1 Test of the Supply Chain Flexibility Strategy

In this subsection, proposition 4 will be analyzed using the case data at hand. Five firms from the sample have been observed to utilize a supply chain flexibility strategy in order to mitigate pricing pressure in the Chinese or US market: AMD, Intel, Nike, PerkinElmer, and Tapestry. This strategy was presented in the literature review and the following proposition was raised:

Proposition 4: "*The supply chain flexibility strategy will be pursued by firms with a high trade war impact and a high commitment, regardless of commitment type."*

In all five cases firms had flexible supply chains in place before the outbreak of the trade war, which they utilized to move their supply, manufacturing, and distribution activities in a manner that circumvents the bilateral import tariffs. For example, Nike CFO Andrew Campion said in their Q4 2019 earnings call "[…] we've got a relatively agile approach to sourcing, multiple nodes from a production and distribution perspective and so […] we're relatively well-positioned as we always have been for macro dynamics" (Appendix 7). This statement indicates a flexible supply chain configuration that allows the firm to quickly respond to macroeconomic developments. Tapestry on the other hand perceive the trade war as a reason to expand their existing flexibility strategy. In their 2019 annual report, the firm states that it "expects that the level of products manufactured in each country will change during fiscal 2020 as it continues to further diversify the brand's supply chain globally" (Tapestry Inc, 2019). This indicates that firms not only utilize their existing flexibility, but also see the trade war as a reason to invest in a more flexible supply chain to be able to better mitigate future developments.

AMD CEO Lisa Su discussed the firm's efforts to utilize their flexible supply chain to circumvent tariffs in the Q3 2018 earnings call. Regarding the presence of a flexible supply chain, she said: "we already had a supply chain that was highly multi-sourced" (Appendix

13). She was quoted as describing AMD's usage of this flexibility by stating: "[…] we're adjusting our supply chain to ensure that we have further options such that the tariffs are not a significant impact on our business" (Appendix 13). This statement marks AMD as a prime example of the supply chain flexibility strategy, as they had established the necessary foundation before the trade war and utilized it to mitigate trade war impacts when it became necessary. The usage of the strategy was likely part of the reason why they were successful in maintaining a low trade war impact. Finally, Intel talks about supply chain flexibility supporting them in meeting their customers' needs for geographic diversification. In an interview, CEO Robert Swan said: "We've had to adapt and adjust our supply chain to have flexibility to allow some of our OEMs [Original Equipment Manufacturers] to move their assembly, so they don't have to deal with tariffs" (Appendix 11). This statement shows that the need for flexibility is not restricted to the firm level but permeates through the supply chain. It is therefore important that firms have adequate flexibility measures in place to accommodate their supply chain partners' needs.

The above cases show that supply chain flexibility is a key strategy for firms impacted by the trade war. However, the proposition predicted firms with high commitment and high trade war impact to utilize this strategy the most. Out of the firms presented in this analysis however, only one firm meets these criteria for both frameworks, while the other four firms are categorized as low impact firms with differing commitment levels across the two types. While at first glance this seems like a big weakness in the proposition, it could also indicate the strength of the supply chain flexibility strategy.

PerkinElmer COO Prahlad Singh draws a direct connection between the firm's supply chain flexibility and its ability to mitigate certain market difficulties:

[…] we have made sure that we got the right command and control in different parts of the world so in case it all goes south, we move it from A to B to C and we ready and prepare for it. So we mitigate our risk and minimize that to the best of our ability […] (Appendix 5).

On the one hand, this further establishes supply chain flexibility as an effective contingency strategy. On the other hand, it gives an indication that at least some of the firms in this sample have a low trade war impact because they have successfully implemented a flexible supply chain strategy before the trade war and might have faced more severe impacts if they had not had a flexible supply chain in place.

Further support for the contingency qualities of the strategy stem from the firms' placements in the direct trade commitment framework. All firms except for Intel are placed in the low-low quadrant of this framework, implying an effective usage of the strategy in terms of mitigating negative impacts by achieving a lowered reliance on specific trade connections. The strong concentration of the semiconductor industry in China and the US embargo on one of their main customers might be the reason for the less successful implementation of the strategy by Intel.

When observing the remaining firms in the high impact, high direct market commitment quadrant of the framework, it can be seen that some firms use even more aggressive supply chain strategies to mitigate the trade war impact. Cummins had already implemented a "China-for-China" approach before the trade war, manufacturing products for the Chinese market in China and therefore lowering their trade war impact (Appendix 6). Tesla employed a similar approach during the trade war, both as a long-term strategic decision to increase its footprint in China and a short-term strategic decision to mitigate trade war impacts (Appendix 14). Qualcomm on the other hand is so highly committed to its production sites in the US and its main customers in China, that a quick diversification of its supply chain is simply not feasible (Appendix 9). The current trade war might serve as an incentive for Qualcomm to improve its supply chain flexibility.

With regards to the other firms in the high-high quadrant of the direct trade commitment framework, similar observations are made. Qualcomm for one is discussed above, Walmart on the other hand is strongly focused on a low-cost strategy to reduce prices as much as possible and thus might not want to pursue a supply chain flexibility strategy for cost saving reasons (Appendix 8). Tesla pursued a more extreme supply chain strategy that fit their business aspirations by building a 'Gigafactory' in China to circumvent tariffs, which still leaves them vulnerable to further changes in the business environment due to their low supply chain flexibility. These three firms should consider implementing more flexible elements in their supply chains to account for future events, such as trade wars. This implementation would still be efficient even if an overfit as achieved, as it still would outperform an underfit (Luo & Yu, 2016).

Overall, these considerations have shown that while proposition 4 did not hold completely true, supply chain flexibility can still serve firms with high direct market commitment well to

mitigate trade war impacts. It was shown to be especially efficient when used as a contingency strategy. After the study of the relevant case data, it should be considered to change the proposition from focusing on high impact to low impact firms, as at the time the contingency strategy is implemented there is no trade war and therefore no impact. Consequently, in the direct market and direct trade commitment frameworks it might be advisable to change the strategy's placement to the high commitment, low impact quadrant in a contingency sense, to account for the empirical evidence found. It must however remain understood that other business goals may be in conflict with pursuing this strategy to a large extent and that in such cases alternative strategies must be employed.

4.2.3.2 Test of the Supply Base Strategies

In this subsection, proposition 5 will be analyzed using the case data at hand. Three firms from the sample have been observed to utilize a supply base strategy to optimize their supply chain cost with regards to the Sino-US trade war: Apple, PerkinElmer, and Tesla. Three propositions were raised in the literature review with regards to different supply base strategies:

Proposition 5a: "*A 'Swift Response' supply base strategy will be pursued by firms with a high direct trade commitment and high trade war impact."*

Proposition 5b: "*A 'Deliberate Response' supply base strategy will be pursued by firms with a high direct trade commitment and low trade war impact."*

Proposition 5c: "*A 'Securing Alternatives' supply base strategy will be pursued by firms with a low direct trade commitment and high trade war impact."*

Each of the three case companies have been observed to follow a different supply base strategy. Tesla for example, followed a "Swift Response" strategy in which they developed a new supply capacity in China to circumvent the tariffs associated with importing vehicles from the US to the Chinese market (Appendix 14). Since the development of such an asset takes time, tactical measures to minimize tariff impacts were utilized until it was operational. In their Q4 2018 earnings call, Tesla CEO Elon Musk stressed that: "[it's] very important to get those cars especially to China as soon as possible. We hope the trade negotiations go well, but it's not clear. But we need to get them there while there's sort of a de facto -- sort of a truce on the tariff war" (Appendix 14). This statement implies that Tesla is tactically

exporting large amounts of goods in periods with lower tariffs until their production facility is ready. The strategy is closely related to the wait-and-see strategy, which enabled the tactical timing of the shipments.

According to Tesla CFO Zachary Kirkhorn, the advantages of producing in China are clear: “Localizing the supply chain flows into inbound logistics and outbound logistics costs as well, so we're not shipping cars from California over to China. And then that has a corresponding savings on our lower import related costs” (Appendix 14). This quote is in line with the statement from Tesla’s 2019 annual report concerning the reason for the factory opening in China: “In December 2019, we commenced production […] at Gigafactory Shanghai, which we have established in order to increase the affordability of our vehicles for customers in local markets by reducing transportation and manufacturing costs and eliminating certain tariffs on vehicles imported into China from the U.S.” (Tesla Inc., 2020). This combination of strategies and tactics fits with the “Swift Response” strategy as the supply structure for the Chinese market was fundamentally changed to reduce cost. This strategy enabled them to move from a high impact and direct trade commitment to a low impact and direct trade commitment, therefore solving most of their trade-war related issues. Thus, while leading to a greatly increased direct market commitment, it arguably exemplifies a successful implementation of this strategy.

PerkinElmer on the other hand arguably followed what can be classified as a “Deliberate Response” strategy. Their CEO Robert Friel was quoted as saying: “What we're doing to deal with it is continuing to move as much manufacturing as we think makes sense over to China” (Appendix 5). Such a shift of manufacturing capacity to a different country can be considered a drastic response strategy. However, as the firm is classified as having a low impact and low direct trade commitment, no supply base strategy was directly proposed for them. Nonetheless, a “Deliberate Response” strategy was pursued by switching out suppliers where possible to adapt to the new situation. This use of strategy contradicts the direct trade commitment framework developed in the literature review and indicates a high situational dependence of these supply base strategies, as individual firm circumstances play a large role in PerkinElmer’s strategic decision.

Apple’s supply base strategy can be characterized as a “Securing Alternatives” strategy. As their most important product, the iPhone, is assembled by their supplier Hon Hai Precision Industry Co., Ltd. which has its assembly facilities mainly focused in China, it is essential for

Apple to have a strong contingency strategy for the case that the iPhone is impacted by import tariffs. For Apple, this risk is accounted for by cooperating with their supplier Hon Hai. Hon Hai's semiconductor division chief Young Liu said the following: "Twenty-five percent of our production capacity is outside of China and we can help Apple respond to its needs in the U.S. market, […] we have enough capacity to meet Apple's demand" (Helmore, 2019). This statement implies that Hon Hai is able to move it's iPhone supply base outside of China, thus helping Apple circumvent trade war tariffs. While this strategy has not been employed as the iPhone has not yet been subject to additional tariffs, mainly due to their previously mentioned lobbying efforts, it is a clear contingency strategy that can be employed as soon as the macroeconomic environment changes. As per the direct trade commitment framework, the optimal supply base strategy to pursue would have been a "Deliberate Response" strategy. However, as Apple find themselves in a position where their main supplier is geographically flexible, replacing ties is not necessary. Instead, working with their established supplier to develop a contingency strategy for the case that their lobbying efforts fail is a strategy associated with lower cost as no new ties have to be developed and the advantages from long-time cooperation with existing suppliers can be leveraged.

Overall, the analysis of the above cases provides mixed results for the validity of the theorized propositions. Tesla's case supports proposition 5a, as they successfully pursued a "Swift Response" strategy as was proposed for firm with high direct trade commitment and high trade war impact. PerkinElmer's and Apple's cases however do not support propositions 5b and 5c. PerkinElmer utilized a "Deliberate Response" strategy even though no supply base strategy was proposed for them. Apple on the other hand employed a "Securing Alternatives" strategy while a "Deliberate Response" strategy was proposed for their strategic positioning in the theoretical framework.

Given these problems with the accurate matching of supply base strategies in theory and firms in practice, it becomes clear that supply base strategies are highly situational and difficult to generalize. However, as firms were shown to follow the general supply base strategies theorized in the direct trade commitment framework, it is still advisable for firms to consider the supply base strategies from the framework, including the supply base strategies in adjacent quadrants. In the direct trade framework, this can be represented by grouping the three supply base strategies under an umbrella term and recommending firms to consider it regardless of impact and direct trade commitment level. While this is not an

optimal solution, it allows the framework to retain these strategies until further research produces conclusive results as to their optimal usage.

4.2.3.3 Test of the Market Exit or Partial Deinternationalization Strategy

This subsection discusses the empirical evidence found for deinternationalization strategies. No firms in the sample have been found to deinternationalize out of China on a significant scale. The following propositions were raised on the topic in the literature review:

Proposition 6a: "*The market exit strategy will be pursued by firms with a low direct market commitment and high trade war impact."*

Proposition 6b: "*The partial de-internationalization strategy will be pursued by firms with a high direct market commitment and high trade war impact."*

While no firms in the sample follow any of these propositions, it is important to investigate the firms in the respective quadrants of the direct market commitment framework and analyze why they did not pursue either of these strategies.

For proposition 6a, only Walmart fits the impact and commitment criteria. CEO Doug McMillon was quoted in the Q4 2019 earnings call as follows: "I think if you look at the overall relationship considering all the things are happening in China, we're in pretty good shape. So, […] I'm optimistic and recognize the tremendous opportunity that market has […]" (Appendix 8). This quote shows that despite the trade war, Walmart's business in the Chinese market is growing. Even though their China business does not constitute a large portion of Walmart's overall business, it is seen as a growth market of strategic importance, an exit from which does not seem attractive. Instead, Walmart is looking to significantly increase their commitment to the Chinese market, with their CEO saying: "[…] I'm optimistic and recognize the tremendous opportunity that [the Chinese] market has and we're constantly trying to think through our position in that market and how we might improve it" (Appendix 8). This statement indicates Walmart's desire to protect the relational capital it has built in China to take advantage of future opportunities. This high valuation of its relational capital deters Walmart from exiting the Chinese market. Furthermore, the main trade war impacts Walmart experiences are a result of the increasing price of imports into the US. A market exit from China thus would not mitigate trade war impacts, but rather create a need for a supplier switch, which could also lead to price increases if no new suppliers at

similar prices can be found elsewhere. This problem shows an unexpected dynamic, in which a firm with low direct market commitment will weather the short- to mid-term difficulties of a trade war environment to capitalize on potential long-term gains. It also might indicate a connection between the market exit strategy and direct trade commitment, as Walmart's high direct trade commitment arguably prevents them from leaving the market.

For proposition 6b, four companies fit the impact and commitment criteria: Cummins, Intel, Qualcomm, and Tesla. As higher uncertainty and abrupt changes in the institutional environment highly impacted their business in China in a negative way, an increase in foreign divestment is expected (Benito, 1997). However, none of this behavior was observed among the sampled companies. These companies all share the property that they generate a relatively high percentage of their revenue in China, between 13% and 62%. This means that even a partial market exit would substantially limit their business opportunities in the region. Especially suppliers to industrial and technological firms such as Qualcomm and Cummins could have difficulties replacing their current customers elsewhere in the world, as their demand is heavily concentrated in China, which is further indicated by their revenue shares in China of 62% and 40% respectively. Intel CEO Robert Swan said that "we play a large role in China" indicating the firm's high strategic commitment to the Chinese market (Appendix 11). Similarly, Tesla's commitment to building a 'Gigafactory' to service the Chinese market is a clear indicator of their commitment to the Chinese market.

A simple interpretation of these results would be that the proposition is completely false, as all potential candidates for the strategy in the sample pursued strategies that were close to the opposite of the proposition. However, it is important to consider that this trade war is being fought between the two largest economies in the world, with most firms in the sample having meaningful ties in both countries. Further, each of the firms on the high impact side of the sample employed other strategies to mitigate trade war impact, thus replacing the need for a deinternationalization push. For the direct market commitment framework, these observations indicate the need to de-emphasize these strategies, as their usage, while theoretically sound, could not be sufficiently empirically proven.

4.2.4 Unproposed Strategy: The Country for Country Strategy

In the analysis of the qualitative data a prominent strategy was discovered that does not match the predictions established in the propositions developed in the literature review. The

paper addresses this strategy as the “Country for Country” strategy, which was pursued by Cummins, Nike, PerkinElmer, Starbucks, and Tesla. The strategy and its benefits were described directly by PerkinElmer COO Prahlad Singh, who said in a speech: “[…] if you focus on being in country for country, you are to some level insulated if you don’t have dependencies on other markets” (Appendix 5). In a more concrete sense, Nike CEO Mark Parker stated: “We are and remain a brand of China and for China” (Appendix 7). These statements make it clear that these firms pursue a strategy of developing an independent business operation in China to insulate themselves from external effects, including those deriving from trade wars.

Starbucks CEO Kevin Johnson said in an interview: “We really have built Starbucks in China for China, it really is operating as an entity in China that’s relevant to the consumer, to the culture, and we’re playing the long game” (Appendix 10). This statement adds a different dimension to the strategy, as it also serves the purpose of being close to the market and its consumers and improve competitiveness. Nike CEO Mark Parker talks about a similar approach and stresses the importance of utilizing local talent: “[The China for China] approach […] [has] been the approach we've had in China for 2-3 decades and it ranges from the strong leadership team we have in place there with local talent that understands the consumer” (Appendix 7). This approach adds a unique detail to the strategy, as the utilization of local talent in leadership positions can have positive impact on the firm’s localized decision making. Tesla on the other hand find themselves at the beginning of their country for country strategy with their establishment of a large production facility (Appendix 14). This strategic decision concerns the market supply side of their China business, but could support a marketing strategy in the long run as the literature has shown that domestically produced products are generally viewed more favorably by consumers (Al-Sulaiti & Baker, 1998). Similarly, Cummins pursued a China-for-China strategy for practical reasons, as their CEO Tom Linebarger said the following: “Almost everything we manufacture in China we sell in China. […] And the main reason for that is engines are expensive to ship around the world […]” (Appendix 6). This goes to show that the country for country strategy can be a requirement for a competitive market position in certain industries.

Altogether the country for country strategy is commonly used by high direct market commitment firms from this sample, as all firms that employed it fall in that category. This

categorization seems intuitively reasonable, as firms with high direct market commitment have a greater opportunity and lower associated cost with pursuing a marketing strategy that requires a high commitment level. However, as the strategy requires the resource- and time-consuming development of local structures, it is not an optimal response strategy in a trade war scenario. It can be perceived more as a general internationalization strategy that has contingency qualities for a trade war scenario. This perception can be observed from the data, where PerkinElmer, Nike, Cummins, and Starbucks all had a China-for-China strategy in place before the trade war started, helping them mitigate impacts and stay at a low overall impact level. Tesla has moved quickly with their plans to open their factory in China, but only cites tariffs as one of the reasons for the increased commitment of manufacturing capacity to China: " […] we commenced production […] at 'Gigafactory' Shanghai, which we have established in order to increase […] affordability […] by reducing transportation and manufacturing costs and eliminating certain tariffs on vehicles imported into China from the U.S." (Tesla Inc., 2020). Further, it is important to note that all these firms were classified as low impact and low direct trade commitment firms after employing this strategy. It can therefore be argued that the country for country strategy is highly effective as a trade war contingency and, to a lesser extent, response strategy. However, the strategy is also connected to a substantial commitment to the foreign market and requires the foreign market to be of a sufficient size to make the strategy viable from a general strategic perspective.

The findings concerning the strategy are supported by Porter (1986), who argues that such a country-centric strategy is appropriate in multi-domestic industries but not in global industries. This means that firms should only pursue such a strategy if competition in their industry in "each country is independent of competition in other countries" (Porter, 1986). This statement holds true for the above firms, as the competitive landscapes on the US and the Chinese market are largely independent of one another. Another link of the strategy to international business literature is Ghemawat's (2005) study, which found that many internationalizing firms pursue a regional hub strategy that involves the development of an independent organization within a region. This regional hub has the advantage of serving its local markets more effectively, but reduces opportunities for cost sharing and standardization across the larger organization (Ghemawat, 2005). Many of the observed firms have cited this greater proximity to the market as a main motivation for pursuing the

strategy. Further, Rugman, Li, and Oh (2009) found that regionalized supply chains outperform globalized supply chains. While this may be an additional factor for firms to pursue this strategy, these advantages were not mentioned by the sample firms. This small collection of literature shows that the strategy is well-studied, however its usage in a trade war context is less explored, allowing for further research to be conducted.

The strategic incentives laid out in the above literature are likely general factors that drive firms to pursue a country for country strategy. As the strategy leads to a drastic increase in direct market commitment and decrease in direct trade commitment, it can be considered a commitment trade-off strategy. It is however an important observation that this strategy is most frequently employed as a contingency strategy in a trade war context. As there is little to no literature available on the contingency qualities of a country for country strategy in a trade war context, future research of this strategy is warranted. When placing this strategy in the strategic frameworks in accordance with the analyzed data, it is associated with a high direct market and a low direct trade commitment as all firms utilizing this strategy fall into these categories. As the low direct trade commitment is likely a result of pursuing this strategy, as exemplified by the Tesla case, it can be considered an attractive contingency strategy for firms with a currently high direct trade commitment. The only firm that employed the strategy as a response strategy was Tesla, based on this case it can be classified as a strategy for firms with high impact. This classification is intuitive, as the costliness of its implementation would only be economical for highly impacted firms.

4.3 Firm Positioning and Strategy Mix Patterns

While the previous subchapter concerned the testing of propositions, this subchapter analyses the gathered qualitative data on a broader holistic level, presenting noteworthy trends and patterns that were found while conducting the testing of the propositions developed in the literature review. These trends and patterns concern observations beyond the scope of the propositions, namely the patterns in the positioning of firms in the strategic frameworks and the sample firms' strategy mixes. Increased knowledge concerning the positioning of firms enables a more accurate answer to the main research question, as their positioning indicates performance trends of firms in trade war scenarios given certain commitment levels. The positioning of firms can further serve as indicative evidence towards the theorized connection between impact and commitment, as theoretically, highly

committed firms are more likely to have a high trade war impact, and lowly committed firms are more likely to have a low impact. Examining firm strategy mixes is important in order to establish an understanding of which strategies can be effectively combined, which is useful for firms trying to navigate a trade war environment.

4.3.1 General Positioning of Firms

In this section, the general pattern of firm positioning along the dimensions that serve as a basis for the strategic frameworks are analyzed. First, with regards to impact, four out of the twelve firms in the qualitative sample have shown a high trade war impact, while the remaining eight showed a low impact. This observation might be a coincidence or induced by a selection bias in the methodology of case selection. As the case selection was designed to produce a heterogenous sample of firms which to some degree was impacted by the trade war, the firm groupings listed above can be regarded as indicative of a greater trend. Possible reasons for this trend of firms more commonly having a low impact could be that they have contingency strategies in place which allow them to deal with the impacts caused by a trade war, such as flexible supply chains and country for country strategies. Further, it could be caused by firms successfully fending off impacts through response strategies such as lobbying, preventing impacts before they can arise. Alternatively, this could indicate that trade war impacts are not a large concern for large US firms in general, although this is unlikely due to the amount of resources firms invest in mitigation strategies. Overall, this spread likely points towards the effectiveness of mitigation strategies, while also indicating that some firms do not have the mitigation opportunities that others have.

With regards to direct market commitment, ten firms were categorized as having a high commitment, while two firms where categorized as low. These results are surprising, as the literature and event study results indicated a positive correlation between direct market commitment and trade war impacts, while the firms in this sample are heavily concentrated on the high direct market commitment side, with no clear trend towards the high-high and low-low quadrants. The results are a strong indicator that China is an important market for most large US firms, due to both its size and growth potential (Melatos et al., 2007). This finding further leads to the conclusion that this trade war's generalization potential is overshadowed by its scale, as the trade war is being fought between the two largest economies in the world, with their underlying firms being deeply integrated into both

economy's markets. This paper's generalization potential is further limited, as the high general level of direct market commitment can be expected to vary substantially given the context of any given trade war. However, due to the scale and uniqueness of this conflict, the measures and methods employed in this trade war might serve as a blueprint for similar trade conflicts in the future.

In terms of direct trade commitment, four firms were observed to have a high commitment, while eight firms showed a low commitment. This tendency towards a low direct trade commitment is intuitively surprising, as it is expected that large US firms rely heavily on the trade with the US' biggest trade partner, China (Melatos et al., 2007). This observation might be explained by chance or by the existence of regionalized supply chains in Southeast Asia, as is the case with firms that pursue a country for country strategy. Alternatively, it could also be caused by the existence of flexible global supply networks that can circumvent certain trade routes if necessary.

It is further important to note that ten out of the twelve cases are clustered in the high-high and low-low quadrants of the direct trade commitment framework. This indicates a positive correlation between direct trade commitment and trade war impact, as firms which have a high direct trade commitment tend to have a high impact and firms with a low commitment tend to have a low impact. While this confirms the assumptions made in the literature review, this indicated correlation could be studied quantitatively as more data becomes available to strengthen these findings. As it would be expected that firms which rely heavily on US-China trade would be affected more negatively by the trade war than those that do not, these findings are intuitively reasonable. However, more research must be done to confirm or reject this hypothesis. Further research would however be limited by the number of firms and trade wars it can analyze and would have to establish a quantitative measure of direct trade commitment to claim general validity.

In summation, the general positioning of firms in the frameworks provides arguments for and against the theorized linear relationship between the proposed trade war dimensions, impact and commitment. The positioning in the direct market commitment framework does not follow the linearity prediction, while the direct trade commitment framework follows it closely. These observations thus increase confidence in the theorized correlation, while simultaneously cautioning against its generalization for all trade war contexts.

4.3.2 Firm Strategy Mix

This section discusses the observations made from the strategy mix and commonalities among the strategies firms pursue.

It is observed that lobbying and some degree of price passthrough were strategies which were often combined, with six firms utilizing both strategies. This combination could be explained by lobbying being a strategy that does not consume large amounts of resources when the necessary political capabilities are established. Furthermore, price passthrough is perceived as a “last resort” strategy that is reluctantly employed when a firm’s cost structure is impacted by the trade war and it decides to keep constant margins on their products. These observations imply that these strategies are often observed together because firms cannot or are not willing to employ other strategies. Furthermore, both of these strategies are observed to be utilized in combination with other strategic approaches, hence cementing their status as easily utilizable and flexible strategies. Another popular strategy that is employed by five different firms and combined with a variety of other strategies is the wait-and-see strategy. From the in-depth analysis of the twelve sample companies, it becomes clear that it expectedly is a rather passive strategy. Even though firms might employ an active waiting approach, this strategy will be discarded as soon as effective mitigation avenues open up. The wait-and-see strategy is thus limited on a temporal scale, as few firms are able or willing to rely on this strategy for a lengthy trade war.

The lobbying, price pass-through, and wait-and-see strategies may be frequently combined with other strategies because they are all commitment neutral strategies that generally do not require much action or resource commitment by the firm and do not lead to a change in commitment. However, some firms may pursue high intensity lobbying strategies which require a higher level of action and resource commitment. Another important observation is the number of different types of strategies pursued. Only three firms pursue more than one strategy that is not commitment neutral. PerkinElmer is the only firm that pursues three different commitment trade-off strategies, while Tesla and Nike each pursue two. This split implies that many firms will stick to a small number of mitigation strategies that come associated with a significant cost and possible commitment changes. The companies might be following this direction to ensure efficient resource allocation or to keep a strategic focus. It might also be caused by contextual practicalities that do not allow firms to pursue certain

strategies, or due to a firm's confidence that the strategies employed will be sufficient to curtail trade war impacts.

This trend towards employing commitment neutral strategies is rather intuitive, as they usually are less costly and easier to employ than commitment trade-off strategies. It is also easy to explain the firms' reluctance to pursue a greater number of trade-off strategies, as they require a larger amount of resources. Altogether, more research is necessary to better understand the reasons behind these commonalities. However, they are important observations that should be considered by MNCs decision makers confronted with trade wars threats in the future.

4.4 Strategy Classification and Evaluation

This subchapter concerns the classification and evaluation of the proposed strategies based on the qualitative analyses in the subchapters 4.2 and 4.3. First, a general classification of the proposed strategies according to their usage in the observed sample of firms is developed. Then, each strategy is evaluated with regards to its ability to mitigate trade war impacts.

4.4.1 Strategy Classification

The observed strategies can be separated into three general categories with regards to their temporal outlook and specificity to the trade war: contingency strategies, passive response strategies, and active response strategies. These classifications are based on the usage of the strategies as it was observed in the sample.

Contingency strategies often allow firms to mitigate trade war impacts, but were enabled by the general market, non-market, and supply chain strategies that were developed for separate reasons. In this sample, many firms utilized their flexible supply chains or their established country for country strategy to mitigate trade war impacts. Additionally, firms utilized their established political capabilities to pursue a lobbying strategy in a trade war context. The key takeaway from this classification is that for some firms certain strategies exist that can serve as contingency strategies against trade war risk while originally serving other purposes. This further extends the usefulness of these strategies and lowers the need for employing extensive active or passive response strategies.

Passive response strategies are characterized by their simplicity, abundance, and low resource investment. From this sample, wait-and-see and price pass-through strategies fit this description. The wait-and-see strategy is mostly employed effectively for shorter periods of time, in which the employment of other strategies is decided and prepared. The strategy therefore does not constitute an active response strategy, but rather the active search for and preparation of such a strategy, especially when pursued from an active waiting approach. The price pass-through strategy has the most passive characteristics, as firms unable to mitigate trade war impacts must decide to what degree they internalize them into their margins and how much they pass them on to their customers through their prices. This notion means that firms which struggle to mitigate trade war impacts are often forced into employing this strategy, as described in the literature review and seen in the empirical evidence.

Active response strategies require some amount of resource and time investment to be effectively utilized and cannot be implemented preemptively. The first and most prominent active response strategy observed in the sample is lobbying. While it represents an active response to a trade war situation, the establishment of political capabilities beforehand is necessary to effectively pursue this strategy, giving it properties of both an active response and a contingency strategy. The lobbying strategy is used with different levels of intensity, its prominence in the sample points towards a high mitigation effectiveness given a low level of cost. Further, the lobbying strategy mostly does not require the firm to make changes to its business procedures.

The second set of active response strategies found in the sample is the set of supply base strategies. These response strategies allow a firm to mitigate trade war impacts by making changes to its supply base, which is associated with switching cost and increased supply chain complexity. It is thus highly active, as resources are expended and the firm's business procedures are changed. The country for country strategy was also observed as an active response strategy, as Tesla used it to actively mitigate trade war impacts, even though it is more commonly used as a contingency strategy.

Overall, this classification of strategies can help firms better conceptualize their options in any particular phase of the trade war. Before a trade war, the potential to utilize contingency strategies can be assessed, as can the ability to utilize different response strategies. When a trade war materializes, a firm must be aware of the potential active and passive response

strategies and their advantages and disadvantages. This awareness also includes the potential for utilizing certain strategy combinations as discussed earlier. Separating the strategic frameworks into a contingency framework and a response framework to account for these temporal differences could thus prove helpful in providing a more tailored strategic recommendation. This improved recommendation would be achieved by presenting firms with strategic recommendations that fit their temporal relationship to a trade war, as the contingency framework would support strategic decision making before a trade war starts, while the response framework concerns efficient strategies once it has begun.

4.4.2 Strategy Evaluation

In this section, the six main strategies and the newly established country for country strategy are aggregately analyzed before they are evaluated with regards to their ability to mitigate trade war impacts. The basis for this evaluation is the examination of the strategies' ability to allow firms to move from a high to a low impact level, or to remain at a low impact level as the trade war gains momentum. Furthermore, the reasons why some strategies fail are analyzed to provide a deeper understanding of their practical usability.

The lobbying strategy was widely utilized by firms across the impact and commitment spectrum. It was utilized successfully by some MNCs as a contingency strategy to prevent tariffs from being placed on their products. Firms also utilized it as a response strategy to gain tariff exemptions after tariffs had been placed on their products. Failures at using this strategy can be attributed to firms pursuing the wrong type of lobbying, or not pursuing the strategy with a high enough effort. For example, Walmart may have been able to achieve better results from their lobbying strategy with a more individual, direct approach as opposed to their collective lobbying strategy. Another reason for poor strategy performance is that some firms operate in politically relevant industries and thus struggle to effectively conduct lobbying efforts. An example of this would be the semi-conductor and machinery industries, which were specifically targeted by the US government for political reasons and caused firms such as Intel, Cummins, and Qualcomm to be unable to mitigate trade war impacts trough lobbying (Swanson & McCabe, 2020).

The price pass-through strategy is complex to evaluate due to its highly passive and usually reactionary nature. It can however be stated that in order to maximize the effectiveness of this strategy when it needs to be employed, firms must consider their market position

carefully. Depending on price elasticities of the firm's products, there will be different opportunities for a firm to pass through prices to customers without losing them. Customer and supplier switching costs must be considered when considering the pass-through to either of them. Lastly, a firm must consider its brand and market position when deciding to pass through prices, and might be better advised to internalize the tariff cost until other avenues to mitigate trade war impacts become available. This direction is however mostly only possible if the firm controls sufficient resources. The only case example of internalizing costs from the sample is Apple, which decided not to raise prices and instead pursued an aggressive lobbying strategy to lift tariffs on its affected products.

The wait-and-see strategy proved to work well as a strategy for firms with high impact which needed to be selective about the timing of their mitigation strategies. Further, firms with low impact that were comfortable in their current situations effectively used this strategy to monitor strategic options. The strategy did not perform well when firms with high impact did not find feasible strategic options and continued to have their business impacted for a prolonged period of time, as was the case for Qualcomm and Walmart.

Supply chain flexibility strategies have allowed several firms in the sample to maintain a low trade war impact throughout the trade war. A flexible supply chain has many benefits besides its usefulness as a trade war contingency strategy, however only this aspect of the strategy is discussed in this paper. Four out of the five firms from the sample that employed this strategy were classified as having a low trade war impact, with many citing their flexible supply chains as the main reason. Only Intel saw high trade war impacts, mainly due to its politically relevant industry membership. Altogether, flexible supply chains are a highly effective contingency strategy for trade wars, as they allow the quick redistribution of business functions to avoid new tariff barriers.

The supply base strategies are important active response strategies, as a shift in the supply base can have significant impact on trade war impact. From the sample Tesla stands out, as their shift in supply base reduced both their impact and their direct trade commitment significantly. However, as the sample size for these strategies is quite small within the analyzed sample, more research is necessary to provide a more nuanced evaluation.

The market exit and partial deinternationalization strategies are complex to evaluate, as no observations of them were made among the sample firms. While this results in no

statements being made regarding the strategies' effectiveness, it also prevents the paper from evaluating whether they are ineffective. As such, more research into firms pursuing these strategies is necessary to gain further insights and arrive at a valid evaluation.

Lastly, the country for country strategy was shown to mitigate trade war impacts substantially. It was successfully utilized as a contingency strategy, but surprisingly also as a response strategy by Tesla. However, as this strategy requires a large direct market commitment increase and resource commitment in the foreign market in question, it may not always be in the best interest of a firm to pursue it during a given trade war. It is thus most potent when it aligns with the firm's general business strategy and should otherwise be avoided as an exclusive trade war strategy.

4.5 Overall Evaluation of Frameworks

This subchapter concerns the evaluation of the two strategic frameworks developed from the literature review based on the collected empirical data. It will discuss the evidence found for and against the existence of a correlation between impact and commitment. It will further provide an overview of how the strategic propositions made earlier were confirmed and rejected by the empirical data. Finally, the overall practical usefulness of the frameworks is assessed.

The relationship between trade war impacts and commitment that was developed through theoretical and empirical sources was largely confirmed by the empirical data utilized for this paper. An event study was conducted that indicates the existence of a correlation between high direct market commitment and negative trade war effects on a firm's stock price, which is in line with existing literature (Egger & Zhu, 2019; Huang et al., 2018). Further, the clustering of firms in the direct trade commitment framework indicates the existence of a similar correlation for direct trade commitment. Both of these findings are however limited by the rather wide definitions of impact and commitment that were the basis for this paper. A firm could thus have difficulty in assessing their commitment and impact levels. Finally, it can be said that there is relatively strong indicative evidence of a correlation between impact and commitment. Other variables might however also play a role, such as uncertainty (Chae et al., 2019), or knowledge (Figueira-de-Lemos & Hadjikhani, 2014; Johanson & Vahlne, 1977), as these factors have been found in similar frameworks in uncertainty literature.

The strategy propositions developed in the literature review were largely supported by the case data analyzed. As few propositions showed significant deviations in the sample data, and other propositions did not surface in the data at all, the complex strategic environment this paper aims to generalize is further highlighted. Table 6 summarizes the findings for the propositions analyzed. The left column shows the strategy, while the right column displays a variable measuring framework fit. It measures what the average error for the placement of the strategy is by comparing the theorized placement of a firm pursuing the strategy with its actual placement based on the empirical data. If a firm is exactly in the position in the respective framework where it was theorized to be, the variable's value is zero. If it is situated in a directly neighboring quadrant, it is considered one step removed, and the variable thus takes the value one. If it is one the exact opposite side of the framework, the value is two. The averages thus represent the framework's accuracy in predicting firm positioning.

Strategy	**Average Steps Removed**
Price Pass-Through	0.14
Lobbying	0.67
Wait and Prepare	0.75
Supply Base Strategies	1
SC Flexibility	1.2

Table 6: Framework Fit Indicators

This table expectedly shows a better framework fit for strategies that encompass more framework quadrants, as deviations are less likely to be large, and in some cases cannot be larger than one. It is however notable how well the frameworks fit with the gathered data for the price pass-through strategy, which indicates high applicability of the underlying theory. The other strategies display higher deviations from the predicted frameworks, which are indicative of improvement potential.

Significant findings with regards to firm positioning, strategy combinations, and temporal usefulness of strategies were found that may enable firms to better understand the trade war from a firm perspective and utilize the strategic frameworks to their full potential.

In summation, sub-research question 3 raised the question of how well the proposed frameworks performed, this paper finds that the two presented frameworks can serve as useful tools for firms to conceptualize their options with regards to trade war strategy. They

generally performed well with regards to explaining the gathered empirical data, although some strategies were not utilized as expected. Due to these asymmetries between theory and empirical data, it is clear that the frameworks need to be adjusted in order to more accurately assist in answering the main research question. In terms of overall strategy performance, the lobbying, supply chain flexibility, and country for country strategies were identified as the most effective strategies in the sample. Most of these strategies prevented the firms which utilized them from experiencing a high trade war impact. The strength of these strategies highlights the importance of investing in contingency strategies with regards to the trade wars.

4.6 Revised Strategic Frameworks

From the above analysis, it becomes apparent that while the strategic frameworks developed in the literature review holds certain merits, some revisions are to be made based on the empirical data gathered. This subchapter explains the changes made to the frameworks as a consequence of the analysis and presents the revised frameworks.

First of all, it was discovered that the importance of separating response and contingency strategies in the frameworks was underestimated. Some strategies are utilized as both response and contingency strategies, while others are clearly identifiable as one or the other. It is therefore necessary to separate the frameworks into these two temporal dimensions to give a clear overview of the underlying use cases. The developed contingency framework is thereby only one-dimensional, as at the point in time contingency strategies are employed, there simply is no trade war and thus no impact. As the resulting contingency frameworks are identical for both commitment types, they are summarized in the same visualization at the end of this subchapter.

Due to the frequent usage of the lobbying strategy across the impact spectrum, it becomes clear that firms with a low trade war impact are also expending lobbying efforts to either mitigate the low impacts they are experiencing, or to prevent possible future trade war measures from impacting them to a higher degree. It is placed in both the response and contingency frameworks, as the strategy requires the development of political capabilities in advance. Backed by the analyzed data, it is further theorized that firms with a high direct trade commitment will lobby more in their domestic country, while firms with a high direct market commitment will do so predominantly in the foreign market. This trend is restricted

to the case in which one of the trade war forces is the focal firm's domestic country. These additions to the lobbying strategy in the framework allow for a more detailed approach towards lobbying in a trade war situation and encourage firms to pursue a fitting variation of this strategy depending on their commitment levels.

The proposed market exit and partial deinternationalization strategies are de-emphasized in the revised framework. This decision is a consequence of both strategies' absence from all firms in the qualitative sample gathered for this paper. The strategies were however not removed completely, as they may prove useful in a future trade war between less prominent economic forces. Further, it is likely that they are utilized by some firms that were not part of the sample and therefore could still be relevant for future research on the topic.
In a similar vein, due to sparse and inconclusive results, the supply base strategies in the direct trade framework are combined under an umbrella term and placed at the center of the framework. This change is made to account for how situationally dependent these strategies are, which makes it difficult for this paper to uphold the initial separation in terms of impact and commitment. The change is however not done to de-emphasize these strategies, but rather to emphasize the need for further research into their individual usage. Until more clear data is collected on these strategies, they remain in the framework as a singular unit to maintain their relevance while removing the controversial separations.

Another change is the movement of the supply chain flexibility strategy as part of its migration to the newly established contingency frameworks. Due to its overwhelming usage as a contingency strategy against trade war effects, it moves from being a high-impact to a low-impact strategy regardless of commitment type, as there are no trade war impacts present at the time of implementation.

Lastly, the country for country strategy as discussed above is added to the revised frameworks. In accordance with the firms in which it was observed, it falls into the category of a high commitment strategy in the contingency framework. Exemplified in its usage by Tesla, it is also added to the direct market commitment response framework as a high impact, high direct market commitment strategy. As this implementation is based on the findings from only one case, it must be viewed with caution.

The figure below displays the revised contingency frameworks. They concern strategies that can be utilized before the outbreak of a trade war to prevent the firm from experiencing trade

war impacts. As the frameworks are identical for direct market and direct trade commitment, they are visualized together in Figure 5. Firms with different levels of commitment across the two types will thus have to refer to the quadrant that is in line with the type of commitment they would like to affect. Changes are marked using dotted outlines and italic font for changed strategies.

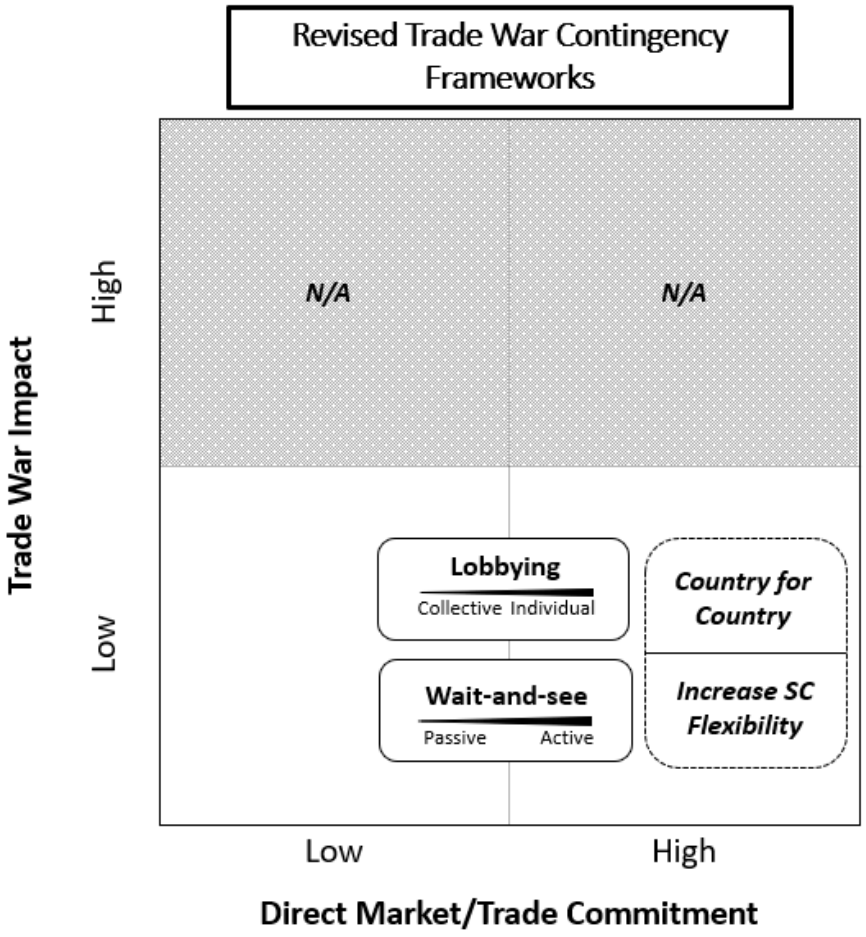

Figure 5: Revised Trade War Contingency Frameworks

The revised contingency frameworks enhance the originally proposed frameworks by adding a further level of complexity concerning the temporally diverse usage of trade war strategies. The changes reflect the observations outlined earlier in this chapter.

The below frameworks depict the revised response frameworks. They are visualized separately, with Figure 6 showing the revised direct market commitment response framework, and Figure 7 showing the revised direct trade commitment response framework. The visualized frameworks incorporate the changes described above. As in the above frameworks, changes are marked using dotted outlines and italic font for changed strategies. De-emphasized strategies are greyed out, while active and passive response strategies are differentiated using (A) and (P) indicators.

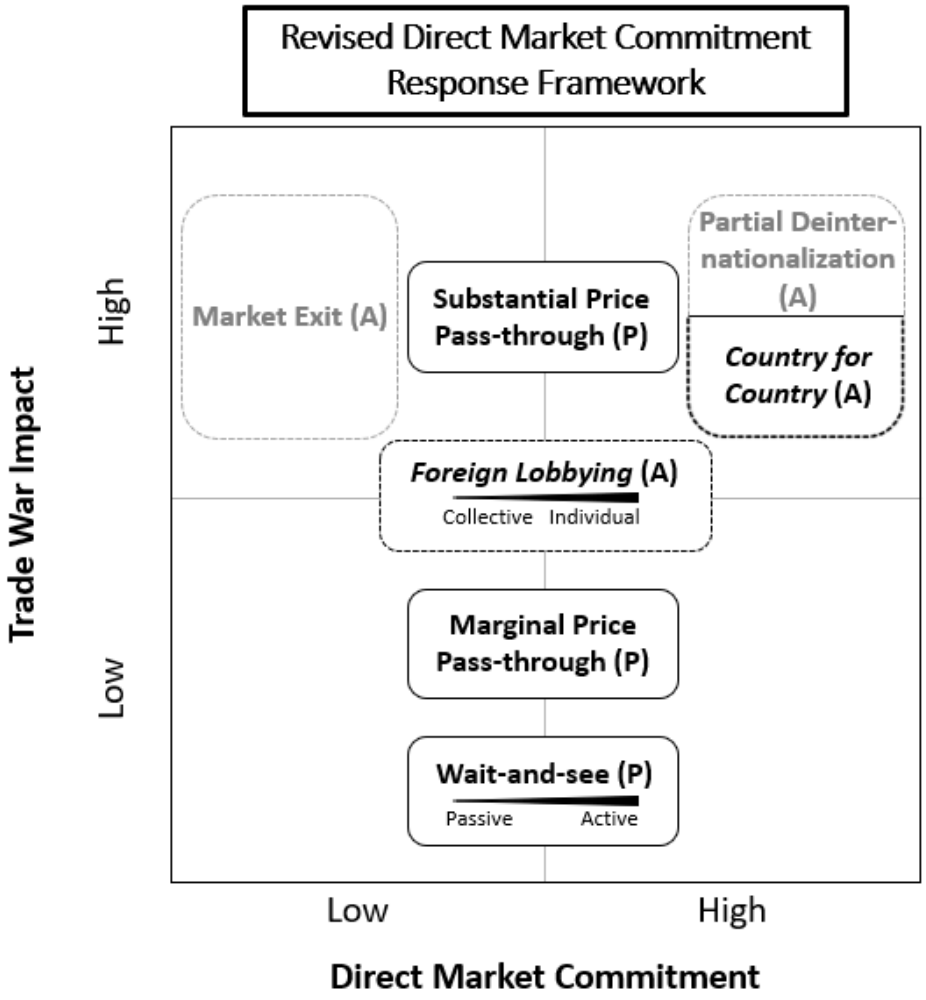

Figure 6: Revised Direct Market Commitment Response Framework

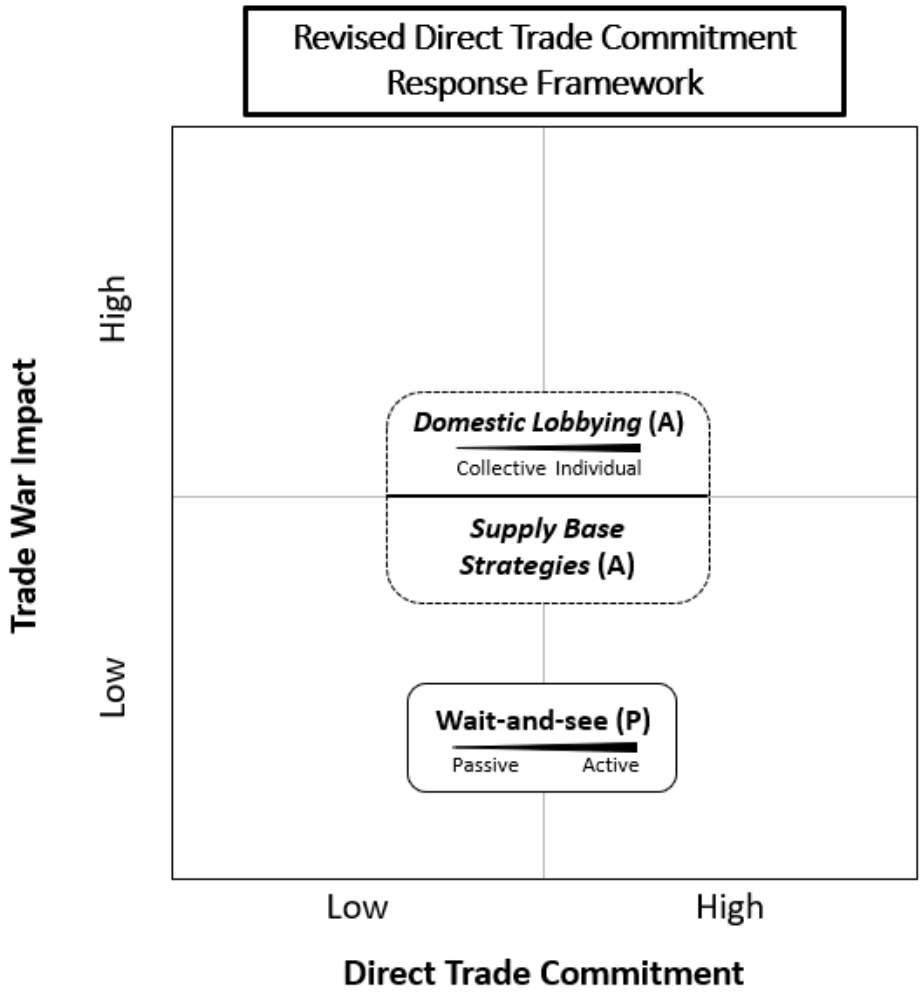

Figure 7: Revised Direct Trade Commitment Response Framework

The revised response frameworks enhance the originally proposed frameworks by reflecting business reality more accurately and clarifying the temporal context these strategies are utilized in. The revised direct market commitment response framework gives clear recommendations regarding optimal strategic firm behavior. It enables firms to fairly easily determine strategies that are applicable for their commitment and impact level which are backed by a relatively strong theoretical foundation and empirical evidence.

However, it must be noted that due to the strong overlap of strategies across the impact and commitment spectrums, the practical usability of the revised direct trade response framework is quite limited. An MNC would have difficulties to discern a concrete strategy to pursue from the framework, as the strategies are more ambiguously placed post-analysis. This ambiguity is grounded in the unclear results which the gathered data presented, as no strong evidence for the raised propositions was found, but also no clear trend towards a

different correlation with the trade war dimensions was found. Because the supply base strategies and the lobbying strategy were nonetheless grounded in valid theory and utilized by many firms, removing them from the framework does not offer opportunities for improvement. Further research is necessary to lead to more precise knowledge about the optimal usage of these strategies, but until then the direct trade commitment response framework presented above remains as a directional tool displaying strategic options for MNCs, without providing a clear recommendation.

The revised frameworks' fit with the case data is shown in Table 7 below. As the previously displayed Table 6, the measure used to assess framework fit is an average of the steps a firm is removed from its theoretical position in the frameworks. For strategies that are present in multiple frameworks, averages were utilized. The third column shows the reduction in distance from the originally proposed frameworks, which represents the improvements made by the revised frameworks. The supply base strategies were disregarded as the performance measure could not be calculated for them because they are non-distinct in the revised direct trade response framework. While it can be argued that the revised frameworks is an example of overfitting, the paper legitimizes the changes to the frameworks by its exploratory nature and practical focus.

Strategy	**Average Steps Removed**	**Reduction from Proposed**
Price Pass-Through	0.14	0
Lobbying	0.33	-0.33
Country for Country	0.5	N/A
SC Flexibility	0.6	-0.6
Wait-and-see	0.67	-0.08

Table 7: Revised Framework Fit Indicators

This table shows significant improvements made by the revision of the frameworks with regards to framework fit of the studied data. While overfitting may be a concern, the changes made are made to account for possible interpretation errors and applicability issues of the presented literature. As overall distinctness of strategy recommendation declined in the revised frameworks and an additional complexity layer was added with regards to response and contingency strategies, a decline in the framework fit measure was to be expected. The

better fit of the framework is thus a product of the theoretical improvements made to the framework, rather than on overfitting to the data at hand.

4.7 Analysis Sub-conclusion

This analysis chapter was centered around confirming the relationship between commitment and impact, and testing the trade war strategy propositions in the shape of two frameworks. This paper's initial event study supports the established interpretation of impact-commitment relationships. The empirical testing of the proposed strategies was largely confirmed as well with only a few deviations. Generally, the strategies which were most effective were those which were fitted to the context of firm. Also, well planned contingency strategies proved very effective at reducing and avoiding impact. Furthermore, trends with regards to the general positioning of firms and strategy mixes were presented. Additionally, strategy classifications and evaluations were presented to provide a direct answer to sub-research 3. These findings were included in new revised frameworks, which fit the empirical data to a higher degree. All these findings add up to an answer of the main research question, which will be addressed in more detail in the conclusion below.

5. Conclusion

This paper has aimed to answer the research question of how MNCs can strategically navigate future trade wars. The question was raised based on the problem statement that trade wars and disputes arguably will become increasingly frequent in the future, which is an issue for most MNCs as they are ill-equipped to face the strategic challenges these circumstances entail. The paper examined twelve US MNCs' strategic trade war behavior with regards to the ongoing Sino-US trade war. To answer the main research question, three sub-research questions were raised, each centered around the trade war environment and international business strategy. This conclusion summarizes the paper's process and findings, both from a business and a theoretical standpoint. For this purpose, it is separated into two subchapters, which each conclude the paper's findings from a business perspective and a theoretical angle, respectively.

5.1 Business Conclusion

As the relationship between MNCs and trade wars has had little to no theoretical exploration, the paper initially attempted to establish trade war 'impact' and 'commitment' as the two dimensions of a given MNC's strategic trade war position. To establish this connection, the paper raised the first sub-research question of how impact and commitment determine an MNCs' relationship to a trade war. The paper finds that in the literature, strong indicators exist for a positive correlation between high firm commitment and high trade war impact. Furthermore, this paper conducted an event study of significant Sino-US tariff announcements to empirically confirm this correlation. While the event study produced mixed findings, the paper still finds relatively strong empirical evidence for a correlation between impact and commitment through its case and event study. A firm's relationship to a trade war is thus indicated to be determined by the impact the trade war has on the firm, which is generally determined by the firm's direct market and direct trade commitment.

Having established both theoretical and empirical evidence for the relationship between impact and commitment, the paper raised the second sub-research question regarding how MNCs can utilize international business strategy in a trade war context. The question builds on the first sub-research question in that the optimal strategies are dependent on what levels of commitment and impact a given MNC possesses. To theoretically answer this question,

the paper examined international business literature to find relevant strategies which are applicable in a trade war context. The paper finds that these strategies were lobbying, price pass-through, wait-and-see, supply chain flexibility, supply base, and market exit. Based on the reviewed literature, propositions were raised for each strategy concerning how they relate to different degrees of impact and commitment. All propositions were consolidated and visualized in two strategic trade war frameworks. The answer to sub-research question 2 is thus that MNCs can utilize international business strategy in a trade war context by assessing their impact and commitment levels and pursuing appropriate strategies as laid out in the developed frameworks.

The third and final sub-research question dealt with the empirical performance of the developed strategic frameworks. The proposed strategies and frameworks were largely in line with the empirical evidence, as there were only a few strategies and positionings which empirically deviated from expectations. In terms of strategy performance, the paper finds that significant differences exist between firms which already had contingency strategies in place and firms which solely pursued trade war response strategies. Firms which had strong contingency strategies in place usually were more flexible and performed better with regards to trade war threats and uncertainty. These contingency strategies can mitigate trade war risk while originally serving other purposes. This further extends the usefulness of these strategies and lowers the need for employing extensive active or passive response strategies. The best response strategies were those which enabled firms to utilize their influence and adapt to their environment optimally, while observing the situation and taking advantage of opportunities.

Based on the findings from the sub-research questions, the paper revised its frameworks to better reflect the empirical findings. The answer to the main research question is thus that based on the case Sino-US trade war, MNCs can strategically navigate future trade wars by utilizing the revised frameworks as a tools to analyze their trade war position and optimal strategies. The paper mainly advises firms to pursue contingency strategies, as the analysis has shown these to be the most effective in avoiding and reducing trade war impacts. The paper further proposes response strategies as short-term mitigation options for trade war impacts. The revised frameworks are thus navigational tools for MNCs confronted with trade war impacts, which can be utilized to develop an individual trade war strategy. They encourage firms to consider their strategic options in terms of contingency and response

strategies given certain levels of commitment and trade war impact. They thus provide a useful addition to MNC strategy tools on the business side.

5.2 Theoretical Conclusion

From a theoretical perspective, the paper contributes by providing a new angle on trade war strategy by combining trade war and international business strategy literature. The theoretical findings that led to the construction of the original strategic frameworks were utilized as a tool which serves as the backbone of the analysis. As an analysis tool, the developed frameworks proved strong as most observed strategies were accounted for and most proposed strategies were observed in the sample. However, small revisions to the frameworks were necessary to better reflect the business reality encountered in the sample, thus calling into question some of the theoretical claims made in the literature review which provides an opportunity for further research and new theoretical explorations.

Event study methodology was utilized to allow for event impact approximations before more detailed data becomes available. The method's results were largely inconclusive, which is likely due to the relatively small sample size caused by poor data availability. In future studies, event study methodology can be utilized again, but researchers must ensure a sufficient sample size and data quality by including more data points and accounting for a greater number of independent variables.

Case study methodology was employed to gain in-depth insights into the strategic decisions made by large US MNCs. The case selection was geared towards creating a heterogenous sample, representing different industries and firm sizes. Generally, the method performed well, allowing the paper to draw significant conclusions from multiple data points concerning most strategies. Only few of the proposed strategies were not found among the sample firms and thus weaken the proposed usage of these strategies in a trade war context. The paper is thus supported by a strong methodological base, although improvements in the data quality and quantity could lend improved precision to the results. Certain limitations to the research exist, which are discussed in the following discussion chapter. The largely exploratory nature of the paper causes its theoretical implications to be directional rather than absolute, which can encourage further research in this underexplored field. Simultaneously, it allows for an open development of frameworks that leads to applicable

business recommendations that closely resemble the gathered data and thus provides strong practical implications.

Overall, this paper makes meaningful contributions on a theoretical and a business level. It combines relevant academic concepts to develop a theory of trade war strategy for large MNCs. The paper encourages further research in the field of trade war business strategy, which potentially has significant future importance. The study also serves as a touchstone for future analyses, as much more research can be conducted in the field. On a practical level, it introduces a valuable framework for MNCs to utilize as the starting point of their trade war strategy planning.

6. Discussion

Following the conclusion, the study will initially discuss the future outlook regarding MNC and trade war relationships. Furthermore, theoretical and managerial implications will be outlined to achieve a more practical and nuanced perspective on the paper's findings. Finally, avenues for further research will be outlined and discussed.

6.1 The Future of MNC and Trade War Relationships

While this paper has presented applicable strategic tools for MNCs to utilize in a trade war context, the relevance of these tools comes into question if the future global outlook does not indicate further trade wars happening in the future. The following subchapter discusses this outlook and what it can mean for the future relationship between MNCs and trade wars.

A sound argument exists that the world is increasingly getting more stable and is continuously improving, both socially and economically. Socially, global life expectancy is steadily increasing, and child mortality continues to fall. Economically, GDP per capita has accelerated, especially in developing countries, resulting in global income inequality decreasing. Through the advent of new technologies, people and companies are experiencing more opportunities than ever before (Denning, 2017; Ip, 2019). Throughout history, the world has been fragmented by a great number of conflicts. However, for approximately three generations' time, there has been no war or conflict in Western Europe. International institutions such as the EU and the UN have arguably led to a more stable world. Despite all these developments, there still exists a reasonable ground for concerns about the global outlook, especially from an economic and political perspective (Denning, 2017; Ip, 2019).

As previously mentioned, the clash of globalization and protectionism is creating a highly uncertain and unpredictable global political environment. Besides the Sino-US trade war, there are brewing tensions between the US and EU (Barnes, 2020). These frictions started at the beginning of Sino-US trade war, involving multiple complex disputes such as steel and aluminum tariffs, a longstanding dispute over GMO crops, and protection of aircraft industries (Barnes, 2020). The 2019–2020 Japan–South Korea trade dispute, like the Sino-US trade war, also involves high-tech industries. This trade dispute, which ran parallel to the

Sino-US trade war, started over the alleged lack of control of dangerous substances by South Korea, which allegedly shipped them to untrusted countries. As a result, Japan and South Korea both removed each other from their whitelists of most favored trade partners, which has massive trade implications for the underlying firms in both nations (Bremmer, 2019). Inside Europe, there are also other trade conflicts besides Brexit. Sweden is rallying trade ministers from "like-minded" liberal countries to counterbalance French protectionist proposals (Vela, 2020). All these events indicate an increase in trade disputes both on a small and large scale globally. As countries increasingly are electing leaders which campaign on protectionism, it is likely that similar events such as those listed above will see an increase, both in occurrences and complexity.

In summation, while many arguments exist concerning the world's improvements and stability, there are an equal, if not higher, amount of arguments indicating increasing uncertainty. As more and more trade disputes begin to surface, the relationship between trade wars and MNCs will become more relevant, hence firms will need increase their knowledge about the components of a trade war. This paper's presented frameworks act as a potential solution to this issue, there can however be several implications that managers need to consider.

6.2 Managerial Implications

The following subchapter will reflect practically on the theoretical findings and discuss the managerial implications of utilizing the proposed frameworks in an actual business context. Furthermore, this subchapter will discuss the benefits and disadvantages of utilizing the tools presented by the paper.

This paper finds that the optimal response and contingency strategies for an MNC exposed to a trade war context depend on the level of impact and commitment. For managers it might be considered difficult to measure these, as they are not directly measurable by any single unit. While the paper points to multiple indicators, which can be utilized to determine impact and commitment levels, it must ultimately be evaluated by the firm itself whether it considers itself high or low in either dimension. It is absolutely necessary that firms allocate a significant amount of resources to this evaluation phase, otherwise they might risk employing strategies which do not fit their current context and trade war conditions. If a firm has established which quadrants of the frameworks they perceive themselves to fit in,

managers also need to conduct a careful examination of the strategies available. It is not guaranteed that employing all strategies in the respective quadrants will yield positive results. Optimal outcomes derive from considering each strategy meticulously and evaluating how they can fit into the specific context of the firm.

As mentioned previously, a large portion of MNCs had no contingency strategies planned with regards to the Sino-US trade war. This decision holds some merit, as establishing contingency and response plans requires a lot of effort and resources from the firm. Therefore, the main disadvantages from utilizing the frameworks does not solely derive from the frameworks themselves but also from the underlying actions they recommend.

It requires a significant commitment of resources to construct and implement new plans. Moreover, if not executed properly, the change management component of strategic changes can risk disrupting the organizational structure of a firm. Consequently, the aspect of time needs to be considered as well, as it is difficult to evaluate the duration and severity of a trade war. Moreover, even if a contingency plan is formed, it is uncertain whether it will be useful should another trade war arise, as conditions might change. Furthermore, it might also be a that another trade will not occur for decades to come, rendering the resources and effort put in by the company relatively useless.

However, the benefits from investing in trade war strategies are also significant. First and foremost, a significant number of firms were severely impacted by the Sino-US trade war. Had they prepared specific trade war contingency and response strategies, they most likely would have been more equipped to mitigate the impacts and gain a competitive advantage. As the international business environment grows increasingly more uncertain, having plans to mitigate uncertainty in general is considered beneficial. Furthermore, as discussed in the previous subchapter, it is plausible for more trade disputes and wars to occur in the near future. All factors considered, it is up to managers of the firm to evaluate whether the effort and allocation of resources are necessary to implement a direct trade war response or contingency strategies. The most important step for MNCs is to simply recognize the current uncertain business environment and consider whether their firm is equipped to deal with the environment’s changing circumstances.

6.3 Limitations

The findings of this paper should be considered in light of the limitations related to the proposed frameworks and research methods. In this subchapter, the paper addresses these limitations and how they affect the study's validity.

As previously mentioned, trade wars are highly contextual and historically rare. Depending on the definition, in this last millennium there have only been a handful of trade wars. Each has for the most part involved different actors and revolved around different agendas (Chong & Li, 2019). It is therefore difficult to predict future trade wars and their context. The case of the Sino-US trade war is also arguably the most prominent trade war example in recent history, as the two main global economic powers are directly contending with each other. This limitation affects the paper's findings in that firms will be reluctant to leave the markets, as both nations are strategically crucial for most large MNCs. Moreover, it is recognized that trade wars can involve more than two countries, which further complicates the utility of the frameworks. Additionally, firms whose domestic nation are not directly involved in a trade war can also experience impacts from trade wars, which might change the dynamic of the frameworks. These scenarios illustrate the versatility of trade wars, which is why the topic is regarded as highly complex.

The paper's sample is limited to firms listed on major US stock exchanges, due to scoping and data availability purposes. This decision gives the findings a bias for exceptionally large firms and only covers the US firms' perspective. Furthermore, the paper's analysis also relies strongly on direct quotes from firms' quarterly earnings calls. These earnings calls are mainly directed at the companies' investors to inform them of adjustments to financial expectations and other relevant information. As firms are likely to want to keep their investors pleased, a positivity bias from the firms are expected. This bias implies that it can be difficult to estimate a firm's actual trade war impact, as the company might downplay the severity to the investors to preserve a feeling of security so their stock price will not decrease. Moreover, a firm could also publicly state that it is pursuing specific strategies while internally doing something entirely different. While both these scenarios are likely, the paper is limited to work with the available data at hand.

Due to conditions surrounding the 2019 COVID outbreak, the data availability for this study has been further limited. Because of the almost complete global lockdown, MNC activity has

greatly halted, thus also limiting their resource availability to work with research institutions. Thus, gathering primary data directly in collaboration with the MNCs has not been a possibility in relation to this study.

As the paper presents an array of different trade war response strategies, it is recognized that firms will only proceed with a limited number of strategies to rely on. The paper acknowledges that many of the strategies firms employ in the case sample are not always a pure response to the trade war, but rather part of a larger general strategic narrative. As firms also have impacts from other factors in the business environment, it can be difficult to clearly separate a trade war impact from a general impact such as economic downturns and weakening demand. While the paper has attempted to cover all trade war response and contingency strategies, it is recognized that strategies which are not covered in the paper may exist. There are thus opportunities for further research in the field of trade war response and contingency strategies, these will be addressed in the subsection below.

6.4 Further research

The findings of this paper provide several avenues for future research. As the Sino-US trade war is considered a recent event at the time of writing, the data availability is considerably low. Due to this availability limitation, the paper's analysis relies largely on publicly available qualitative data. Considering the nature of the proposed frameworks, further analysis based on quantitative data could add a more precise and detailed element to the frameworks. This type of analysis would require long-term MNC trade and foreign operations data, which will not be available for multiple months or even years. With this data, the frameworks could be able to position firms more precisely by utilizing quantitative methods. Thus, decreasing the frameworks' current theoretical and binary nature, making it more practical for managerial use. Improved data availability in the future will likely lead to new research possibilities that enable the study of the correlations between trade war impacts and each of the studied commitment types respectively. As more precise quantitative measures for each of these variables become available and sample sizes increase, it will likely be possible to study their theorized linkages in more detail, which could have significant implications for the understanding of firm relationships with trade wars. A firm analysis utilizing the revised frameworks on new, out of sample data is encouraged to test for an overfitting bias in the adjustments made to the original frameworks. Future research could, given a larger sample

of firms, also split the proposed strategies into more precise sub-strategies to acquire more in-depth knowledge on the nuances of the strategies. Beyond this step, the method could be made more effective by establishing research partnerships with the firms, which would allow for more precise data on strategic firm orientation.

Further research could be also conducted to study whether the frameworks' effect would be the same from other perspectives involved in trade wars. Observing whether small and medium-sized enterprises' strategies would differ from the large MNCs could provide new and different findings. Furthermore, observing companies in other nations than the US could also provide different results. It could also be noteworthy to use another trade war, such as the 2019 Japan-Korea trade war, as a case to see if this paper's results could be replicated. Additionally, it could be interesting to observe how MNCs utilize trade war strategies competitively, for instance how firms use the trade war strategies to compete for unaffected suppliers. This type of study could also highlight how the trade war strategies affect their market and competitive position.

Overall, the subject area of MNC trade war response and contingency strategies is not exhaustively studied. It is one of the paper's aims to encourage further research in the area of relationships between MNCs and trade wars. This paper acts as an initial study, which can hopefully lead to more research in the future, as the world heads into highly uncertain territory.

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8. Appendices

Appendix List:

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Appendix 1 – Timeline of the Sino-US trade war

This timeline was assembled based on government statements and news reports sourced from the following outlets:
BBC (bbc.co.uk), Bloomberg (bloomberg.com), CNBC (cnbc.com), CNN (cnn.com), Financial Times (ft.com), Ministry of Finance of the People's Republic of China (mof.gov.cn), The New York Times (nytimes.com), Office of the United States Trade Representative (ustr.gov), Peterson Institute for International Economics (piie.com), Reuters (reuters.com), The State Council of the People's Republic of China (english.www.gov.cn), U.S. Customs and Border Protection (cbp.gov), and U.S. Federal Register (federalregister.gov).

Early Phase

23.01.2018	US announces global import tariffs on solar panels (30%) and washing machines (20%).
07.02.2018	US tariffs announced on 23.01.2018 take effect.
01.03.2018	US announces global import tariffs on steel (25%) and aluminum (10%).
23.03.2018	US tariffs announced on 01.03.2018 take effect.
	China announces import tariffs on 128 US products worth $3BN/year, including aluminum, airplanes, cars, pork, and soybeans (25%) and fruits, nuts, and steel piping (15%).

02.04.2018	Chinese tariffs announced on 23.03.2018 take effect.
03.04.2018	US announces import tariffs on $50BN/year on 1300 Chinese products, including flat screen TV, medical devices, medicine, aircraft parts, batteries, machinery, and high-tech components (25%).
04.04.2018	China announces import tariffs on $50BN/year on 106 US products, including aircraft, whiskey, automobiles, soybeans, tobacco, beef, and certain chemicals (25%).
17.04.2018	China announces 178.6% anti-dumping duties on around $960MM/year of US sorghum.
18.05.2018	China lifts duties from 17.04.2018 as part of trade negotiations.
15.06.2018	US announces revised list of $34BN as part of the $50BN announced on 03.04.2018, to take effect 06.07.2018. The remaining $16BN to take effect at a later point.
16.06.2018	China announces revised list of $34BN as part of the $50BN announced on 04.04.2018, to take effect 06.07.2018.

Main Phase

06.07.2018	US and Chinese tariffs go into effect as announced on 15.06.2018 and 16.06.2018.

10.07.2018	US announces import tariffs on $200BN/year of Chinese products, including consumer electronics, furniture, lamps, computer parts, and steel products (10%).
02.08.2018	US threatens to raise the announced tariffs from 10.07.2018 to 25%.
03.08.2018	China announces import tariffs on $60BN/year of US products, including electrical equipment, chemicals, wood, pulp, paper, physical and chemical equipment, and medical supplies (layered in tiers of 5, 10, 20, and 25%).
07.08.2018	US and China announce revised list of $16BN as part of the $50BN announced on 03.04.2018 and 04.04.2018, to take effect 23.08.2018.
23.08.2018	US and Chinese tariffs go into effect as announced on 07.08.2018.
17.09.2018	US announces that the tariffs announced on 10.07.2018 will go into effect on 24.09.2018 and threatens further tariffs of $267BN.
18.09.2018	China announces that the tariffs announced on 03.08.2018 will go into effect on 24.09.2018, but only in two tiers of 5 and 10%.

24.09.2018	US implements tariffs as announced on 10.07.2018 at 10%, scheduled to increase to 25% by 01.01.2019.
	Chinese tariffs go into effect as announced on 18.09.2018.
02.12.2018	Temporary truce in the trade war is reached during which a trade deal is to be discussed. US tariff increase on 01.01.2019 will not go into effect, US tariffs threatened on 17.09.2018 will not go into effect, China promises to purchase sizable amounts of US agricultural and industrial goods.
	The truce is to be in place for 3 months, after which US tariffs are to increase to 25% should no trade deal be reached.
14.12.2018	China reduces import tariffs on automobiles for 90 days.
	China buys US soy.
24.12.2019	US extends the truce from 02.12.2018 indefinitely.
31.03.2018	China extends reduced automobile tariffs from 14.12.2018 indefinitely.

01.04.2018	China bans all types of Fentanyl production as a concession to the US.
05.05.2019	US announces that the tariffs implemented on 24.09.2018 will increase to 25% on 10.05.2019. Further tariffs of 25% on $325BN[2] are threatened by the US.
10.05.2019	US tariffs increase as announced on 05.05.2019.
13.05.2019	China announces that the tariffs implemented on 24.09.2018 will increase to tiers of 20 and 25%.
01.06.2019	China increases its tariffs as announced on 13.05.2019.
26.06.2019	Temporary truce reached, tariffs threatened on 05.05.2019 are halted.
09.07.2019	110 Chinese products exempted from US tariffs implemented 06.07.2018.
16.07.2019	US threaten import tariffs on $325BN of Chinese goods.

[2] This number represents the rest of the annual import volume from China by the US. Due to differing estimates of that figure through time, it is sometimes also quoted at $300BN.

01.08.2019	US announce the tariffs threatened on 16.07.2019 to take effect on 01.09.2019.
13.08.2019	US tariffs announced on 01.08.2019 are suspended until 15.12.2019 for certain consumer products.
23.08.2019	China announces import tariffs on $75BN of US goods including agricultural and industrial products, ore, and chemicals.
	China reinstates tariffs on automobiles that were lifted on 14.12.2018.
	US announce to increase the tariffs announced on 01.08.2019 to 30% by 01.10.2018.
01.09.2019	US tariffs announced on 01.08.2019 partially go into effect, affecting $125BN of Chinese imports.
	Chinese tariffs announced on 23.08.2019 partially go into effect.

De-escalation Phase

11.09.2019	China exempts certain US imports from tariffs.

	US delay the tariff increase announced on 23.08.2019 is delayed to 15.10.2019.
13.09.2019	China exempts some agricultural products from the tariffs announced on 23.08.2019.
11.10.2019	US announces that the tariff increases announced on 23.08.2019 will not go into effect.
	China commits to purchasing large amounts of US agricultural products and promises to update its IP laws and currency management guidelines.
	This settlement is called the first step towards a “phase one deal”.
13.12.2019	“Phase one Deal” is reached.
	Tariffs scheduled to go into effect on either side on 15.12.2019 are canceled.
	US tariffs implemented on 01.09.2019 are reduced from 15% to 7.5%.

15.01.2020	Phase one deal is officially signed, China agrees to buying certain quotas of US goods and services. Both parties agree on tariff reductions in the future.
14.02.2020	Tariffs are reduced by both sides as per the phase one deal.
17.02.2020	China announces that 696 commodities will be exempted from Chinese additional tariffs as per the “Phase One Deal” including a lot of agricultural products, steel products, and medical equipment.
21.02.2020	China unveils lists of commodities that will be exempted from additional tariffs, including timber, industry parts, and medical equipment.

Appendix 2 – Dataset

For this appendix please refer to the file “Foundational and Event Study Data”.

Appendix 3 – Main Indicators for Commitment and Impact Levels

Case Company	Trade War Impact	Direct Market Commitment	Direct Trade Commitment
AMD	**Level:** Low **Main indicators**: - Multi-sourced supply chain (Appendix 13) - Firm directly addresses impacts as "Small" (Appendix 13) - Does not own their own factories (AMD, 2020)	**Level:** High **Main indicators:** - 32,5% revenue share in China (Appendix 2) - Strategically important market (AMD, 2020)	**Level:** Low **Main indicators**: - Diversified suppliers (AMD, 2020) - Flexible Supply Chain (Appendix 13)
Apple	**Level:** Low **Main indicators**: - Avoided iPhone Tax (Appendix 4) - Not specifically targeted (Appendix 4)	**Level:** High **Main indicators:** - 19,6% revenue share in China (Appendix 2) - Strong market growth in China (Appendix 4)	**Level:** High **Main indicators:** - Large amounts of products shipped from CN to US (Apple, 2019) - Assembly of iPhone located mainly in China (Appendix 4)
Cummins	**Level:** High **Main indicators:** - 150 million USD tariff hit (WFYI, 2019) - Member of especially targeted auto industry (WFYI, 2019)	**Level:** High **Main indicators:** - 40 % revenue share in China (Appendix 6) - 91 mentions of China in annual report (Appendix 2) - CEO states it as very important market (Appendix 6)	**Level:** Low **Main Indicators:** - Everything produced in China is sold in China (Appendix 6) - High amount of subsidiaries in China reduces need for trade with US (Inc., 2020)
Freeport-McMoRan	**Level:** Low **Main indicators:** - Stable demand (Appendix 12) - Secured industry (Appendix 12) - So far no major tariff hits (Appendix 12)	**Level:** Low **Main indicators:** - 7% revenue share in China (Appendix 2) - Focused on US market (Appendix 12)	**Level:** Low **Main indicators:** - Not heavily reliant on trade between China and US (Appendix 12) - Mainly Sources in other countries

			(Freeport McMoRan, 2020)
Intel	**Level:** High **Main indicators:** - Lower demand and therefore revenues from China (Appendix 11) - Lower margins in China (Appendix 11) - Trade war anticipation leads to pull-ins (Appendix 11)	**Level:** High **Main indicators:** - 23,5 % revenue share in China (Appendix 2) - CEO: “China is an important market” (Appendix 11)	**Level:** High **Main indicators:** - Large manufacturing base (Appendix 11) - CEO states need to restructure SC to deal with tariffs (Appendix 11)
Nike	**Level:** Low **Main indicators:** - No dramatic impacts (Appendix 7) - Multi-sourced supply chain lets them avoid tariffs (Appendix 7)	**Level:** High **Main indicators:** - 46 mentions of China in annual report (Appendix 2) - 11% revenue share in China (Appendix 2) - Strong growth in Chinese market (Appendix 7)	**Level:** Low **Main indicators:** - Flexible supply chain (Appendix 7) - Focused on serving China for China (Appendix 7)
PerkinElmer	**Level:** Low **Main indicators:** - Secured sector (Appendix 5) - Not hit hard by tariffs (Appendix 5)	**Level:** High **Main indicators:** - 17,5% revenue share in China (Appendix 2) - Sees China as key strategic market (Appendix 5) - Increasing investments (Appendix 5)	**Level:** Low **Main indicators:** - Flexible supply chain (Appendix 5) - Focused on serving China for China (Appendix 5)
Qualcomm	**Level:** High **Main indicators:** - Involved in tariffs targeted at 5G tech (Appendix 9) - Image hit in relation to Huawei case (Appendix 9)	**Level:** High **Main indicators:** - 44 mentions of China in annual report (Appendix 2) - 61,5% revenue share in China (Appendix 2)	**Level:** High **Main indicators:** - High amounts of shipping products between China and the US (annual report) - Technologically dependent on the two nations

	- High profile case in trade war (Appendix 9)		
Starbucks	**Level:** Low **Main indicators:** - Not in targeted industry (Appendix 10) - Very low tariff impacts (Starbucks Corporation, 2019)	**Level:** High **Main indicators:** - 72 mentions of China in annual report (Appendix 2) - 13 % revenue share in China (Appendix 2) - Opening more stores in China than another country in 2019 (Starbucks Corporation, 2019)	**Level:** Low **Main indicators:** - Sources from other countries than the US and China (Appendix 10) - Sales not driven through trade (Starbucks Corporation, 2019)
Tapestry Inc	**Level:** Low **Main indicators:** - Multi sourced supply chain (Appendix 15) - Low percent of their handbag production is in China (Appendix 15)	**Level:** High **Main indicators:** - 46 mentions of China in annual report (Appendix 2) - 15% revenue share in China (Appendix 2) - CEO states that China is more attractive as market than sourcing (Appendix 15)	**Level:** Low **Main indicators:** - Flexible supply chain (Appendix 15) - Has multiple brands which can diversify dependence on trade (Appendix 15)
Tesla	**Level:** High **Main indicators:** - Hit hard by tariffs, lead to price increase (Appendix 14) - Tight balance sheet makes impacts more significant (Annual report)	**Level:** High **Main indicators:** - 67,5 mentions of China in annual report (Appendix 2) - 14% revenue share in China (Appendix 2) - Commits to build mega factory (Appendix 14)	**Level:** High **Main indicators:** - Ships cars from US to sell in China (Appendix 14)

Walmart	**Level:** High **Main Indicators:** - Hit hard by tariffs (Meyersohn, 2019) - Resulted in price increase (Appendix 8)	**Level:** Low **Main Indicators:** - 20 mentions of China in annual report (Appendix 2) - 2% revenue share in China (Appendix 2)	**Level:** High **Main Indicators:** - Imports 26% of merchandise from China (Meyersohn, 2019)

Appendix 4 – Apple Transcripts

Please find the attached file “Appendix 4-15” for appendix 4.

Appendix 5 – PerkinElmer Inc. Transcripts

Please find the attached file “Appendix 4-15” for appendix 5.

Appendix 6 – Cummins Inc. Transcripts

Please find the attached file “Appendix 4-15” for appendix 6.

Appendix 7 – Nike Transcripts

Please find the attached file “Appendix 4-15” for appendix 7.

Appendix 8 – Walmart Transcripts

Please find the attached file “Appendix 4-15” for appendix 8.

Appendix 9 – Qualcomm Inc. Transcripts

Please find the attached file “Appendix 4-15” for appendix 9.

Appendix 10 – Starbucks Corp. Transcripts

Please find the attached file “Appendix 4-15” for appendix 10.

Appendix 11 – Intel Corp. Transcripts

Please find the attached file “Appendix 4-15” for appendix 11.

Appendix 12 – Freeport McMoRan Transcripts

Please find the attached file “Appendix 4-15” for appendix 12.

Appendix 13 – AMD Transcripts

Please find the attached file “Appendix 4-15” for appendix 13.

Appendix 14 – Tesla Inc. Transcripts

Please find the attached file “Appendix 4-15” for appendix 14.

Appendix 15 – Tapestry Inc. Transcripts

Please find the attached file “Appendix 4-15” for appendix 15.