

In Trade and War

An analysis of interdependence theory and Russo-German gas relations

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Abstract

The European security order has for an extended period of time time rested on the assumption that interstate trade, and other economic ties, will lower the incentives for conflict initiation and thereby result in peace. This assumption was called into question on February 24, 2022, by the Russian re-invasion of Ukraine. Germany, as one of Europe's primary proponents of interdependence, especially in its trade relationship to Russia defined by the pipeline natural gas, spirals into an energy crisis. How did it come to this? This thesis is an exploration of the concept of interdependence and its theoretical framework. Using congruence method, this thesis maps the internal processes of the concept, through two pieces of seminal research on interdependence theory – Robert O. Keohane & Joseph S. Nye's *Power and Interdependence* and Dale C. Copeland's *Economic Interdependence and War* – and their respective ability to comprehend the case of Russo-German gas relations. The results show that the two theoretical interpretations can, although not with equal strength, to a certain degree predict the outcome of the Russo-German case. In spite of this, the theories struggle to capture the existence of regional conflict, and the slight contradiction that the Russo-German relationship continued to deepen after the Russian annexation of Crimea in 2014.

Key words: interdependence theory, trade expectations, trade, conflict, natural gas, Germany, Russia, congruence method

1. Introduction

The Western security order has a long-term marriage to interdependence. Globalization and state-wise economic collaboration has generally been assumed to contribute to the mitigation of conflict, due to the economic entanglement of costs and benefits between two parties. The European Coal and Steel Community was founded as an insurer of lasting peace in the war-torn Europe of 1951 (European Union), and when parties of the Cold War aimed to loosen the high tensions with the eastern bloc, trade was one of the Wests' tools (Krickovic 2015: 4). It has defined and continues to define a range of bilateral relationships – friends and foes alike.

Although debated, interdependence remained more or less of a constant in the Western security order – up until February 24th, 2022. The Russian re-invasion of Ukraine has profoundly challenged the way international collaboration, trade, and security are perceived. The current war suggests that economic relationships and trade do not necessarily equal the absence of conflict – given Russia's invasion of European land despite extensive trade bonds. Hence, the war has sparked major theoretical discussions regarding the power of interdependence as an insurer of peace.

Western countries are not alien to trade with Russia. Russia and Ukraine have had a prominent interdependent relationship with gas trade up until 2012, before the initiation of the Nord Stream project and the Russian annexation of Crimea (Umland 2022). The European Union and its member countries have also been important trading partners with Russia. Nonetheless, Germany distinguishes itself as one of the utmost prominent trading partners. Since 1970s and throughout the fall of the Soviet Union, the German Ostpolitik with its features of *Wandel durch Handel* (change through trade) and *Annäherung durch Verflechtung* (rapprochement through interdependence) (Szabo 2022) has emerged as a prime example of interdependence in Europe. The Russo-German relationship has predominantly been defined by the trade of energy, primarily natural gas. The gas relationship has been subject to large-scale changes since February 24th, and since August the gas flow is completely terminated – and Germany is facing an energy crisis.

The international and Western security order has relied on interdependence for its pacifying effect, therefore it is no exaggeration to say that the theory now is bound to be questioned. Albeit it may be soon to deem it completely irrelevant, it is nonetheless necessary to stress the need for further debate about the theoretical background of Western conflict management and security politics.

1.1. Research Problem

With the Russian annexation of Crimea and the war in eastern Ukraine, followed by Western sanctions and Russian counter-sanctions, German decision-makers had to learn that economic and energy interdependence not only creates win-win situations but also means vulnerability. The reaction was a shift from the dominance of the economy in German policy on Russia to a securitisation and politicisation of relations with Moscow. The support for Nord Stream 2 proves that German elites have only partly learned their lessons, and still believe in positive economic interdependence and the mantra of Ostpolitik, that peace and stability in Europe is only possible with, but not against, Russia. (Meister 2016: 25).

When discussing puzzles as a justification for conducting research, George & Bennett state that the researcher can start “acknowledg[ing] contradictory theories, and [note] inadequacies in the evidence for existing theories” (George & Bennett 2005: 74). The puzzle that this thesis aims to research is the theory of interdependence, given the challenges that the current security situation presents towards it. The alleged pacifying effects of trade has through extensive research been put into question with focus on the internal processes, foundational assumptions, and the matter of under what circumstances this result applies – the theory’s *scope conditions*. A range of intervening variables has been identified, such as regime type (Gelpi & Grieco 2008), and great power’s ties with revisionist powers (Papayoanou 1997) and hence no unanimous perception of the actual effects of interdependence theory can be presented. McMillan (1997), Gartzke & Li (2003), Mansfield & Pollins (2001) stress the need for a better understanding of interdependence and its process and effect on real-world conditions.

This theoretical debate further highlights the difficulties that the Russo-German gas relationship is facing. As specifically portrayed by the current Russo-German situation, the consequences of being increasingly dependent on another state, and formulating such trade relationships in terms of security have become problematic. Germany is an influential power in Europe, especially the EU, and has an impact on the latter's security order and regional stability. In addition, Germany has held great influence over EU energy policy in general, and the initiation of the Nord Stream project has affected the makeup of the continent's energy trade and energy security all over Europe (Westphal 2008: 117-118). The way in which Germany conducts its energy policy in relation to Russia is thus important in a broader way – given the duality of interdependent relationships, where risks and benefits work in tandem. The problem with the Russo-German interdependency, as captured by the initial quote, becomes even more apparent currently, when Germany is facing an energy crisis due to the loss of Russian gas because of the war in Ukraine.

These two approaches taken together – the issues with the definition of interdependence in relation to conflict, and Germany's current energy crisis – frame the puzzle of this thesis. Therefore, it is crucial to research the concept of interdependence, especially due to Germany's adaption of such logic in its Ostpolitik, to analyze whether interdependence a durable way of building relationships with other states under the premise that is holding pacifying effects, or if it is in need of re-evaluation. What are the scope conditions and how are the set conditions challenged by the current event? When are they valid? The lack of a unanimous definition and comprehension of interdependence and what factors are crucial to consider when analyzing the outcome of interdependent relationships, especially when integrated into policy as the German Ostpolitik, given its real-life consequences.

1.2. Aim & Research Questions

This essay aims to explore the interdependence theory through the case of Russo-German relations and use this context to illustrate challenges facing the theory. In greater detail, the aim is twofold. The first part focuses on the theory. The aim is to contribute to the academic debate on interdependence theory. How great are the theory's analytical power and validity? It has been argued that no further Russian invasion of Ukraine would occur after 2014, due to the interconnectedness of the contemporary, globalized – hence interdependent – world (Meister

2016). Given that there is a war occurring in Europe despite such a deep and long-standing economic collaboration between two powerful states, the reliability of the interdependence theory is questioned. The aim is thereby to engage with the theory in a theory-critical manner to explore its internal mechanisms. The second part focuses on the case. The aim is to contribute to the understanding of the Russo-German trade relationship, its development, and its fluctuation concerning Russia's re-invasion of Ukraine. Interdependent relationships can come to an end, but what is interesting here is how the relationship was initiated on Germany's behalf, continued despite critique, and built on premises that later resulted in its overturn. This focus is further interconnected with the German lose-lose position with the interdependence with Russia. On one hand, Germany could not afford to break off the gas relationship, risking entering a severe energy crisis. On the other hand, not sanctioning or taking a definitive stance towards Russian atrocities risk throughout the years would risk undermining their normative and political power position in Europe. Sanctioning Russia also risks that Russia most possibly will turn off the gas and, *again*, put Germany in a position of energy crisis.

Given how Russia's re-invasion of Ukraine has shaken the grounds of the European security order, the validity of the interdependence theory holds theoretical importance for future studies and understanding of conflict prevention and security. From a broader perspective, an analysis of gas relations is of major importance regarding how energy security and trade with raw materials and other strategic products in Europe will be accounted for in the time to come, specifically regarding trade with authoritarian states. Thus, the aim is to, through this influential case, deepen the understanding of interdependence and the premises it rests on. With this framework in mind, the essay aims to answer the following research questions:

- How has the Russo-German gas relationship been affected by the Russian invasion of Ukraine?
- How can the Russo-German relationship be comprehended through the interdependence theory and the academic debate, and how do the theory's scope conditions relate to the case?
- Taking the Russo-German experience into account, to what extent can it be maintained that interdependence is a key factor for regional stability and the absence of conflict?

1.3. Limitations

A few limitations are recognized for this essay. First and foremost, there is a language barrier resulting in the partial inability to use first-hand German policy material. Second, and most prominent, the obvious limitation is due to research on an ongoing event. This results in a lack of material as well as a complete picture of events. Lastly, the restrictions on Russian websites have increased the reliance on secondary material rather than Russian primary statistics.

2. Theory

This chapter will start with a description of interdependence as a concept for understanding the relationship between trade and conflict, as understood by Keohane & Nye, treated as a core interpretation. This part is followed by a review of the existing literature on interdependence, both regarding the theoretical development with criticism and additions. The previous research consists of research using or analyzing the interdependence theory, and therefore it is logical to present it *after* the theory is self for the matter of comprehension. Primary focus is put on Copeland's research, given its rigid foundation. The chapter ends with a summary of the crucial analytical concepts and operationalization of the theory that will apply to the case and guide the essay forward.

2.1. Interdependence

In common parlance, *dependence* means a state of being determined or significantly affected by external forces. *Interdependence*, most simply defined, means *mutual* dependence. Interdependence in world politics refers to situations characterized by reciprocal effects among countries or among actors in different countries. (Keohane & Nye 2012: 7)

Although, differentiating interconnectedness from interdependence, not just portraying transactions between countries, but involving the costs of it and its asymmetry, since “Where there are reciprocal (although not necessarily symmetrical) *costly effects* of transactions, there is interdependence” (2012: 8, emphasis added). These costs and benefits can be analyzed through two perspectives: joint gains and losses, or relative gains and distributional issues – where the latter more realistically stresses that interdependence comes with costs as well (2012: 8-9).

Interdependence is focused on economic collaboration between states, and how such collaboration impacts the behavior of states concerning their trading partners. In a broader sense, interdependence theory relates to security and pacifying effects of trade between states, given the framework that it imposes on trade relationships through its interpretation of power. The theory

does not assume that conflict becomes obsolete once interdependence prevails, but rather that it will take on a different shape (Keohane & Nye 2012: 7-10).

Keohane & Nye (2012) describes interdependence theory in contrast to realism, although not neglecting it, but rather presenting interdependence as a more accurate explanation for the mechanisms shaping the security, trade bonds, and world order. Deviating from the realist worldview where the constant threat of conflict and war causes states to prioritize military security above all (security dilemma), and dependence equals weakness. According to Keohane & Nye, a new world order has prevailed, where such constant fear has been replaced by an increasingly collaborative approach. Here, both democracy and the influence of the domestic population and their aim for welfare pressure politicians to act in favor of the state's economic well-being primarily. The threat of military conflict is not necessarily eliminated, but the conflict will in this liberal order look and act differently than perceived in a realist understanding of the world order. The end of the Cold War is described as a turning point where interdependence prevailed significantly, where economic collaboration between a range of Western countries and the USSR was spurred, hence helping to loosen the stiff power struggle between the blocs. The end of the Cold War is thus perceived as a major shift from a strong focus on every state's national security to a broader focus based on the increased mutual dependence in between, as the threat decreased. In addition, Keohane & Nye stress how this concept addresses trade and economic incentives as important as security (ibid.).

In addition, it is described how military force is less probable today due to “(1) the risk of nuclear escalation; (2) resistance by people in poor and weak countries; (3) uncertain and possible negative effects on the achievement of economic goals; and (4) domestic opinion opposed to the human costs of force” (ibid: 262). Although, it is stated that the factors of the human cost of force are less applicable in authoritarian and totalitarian states (ibid.).

Despite this section's opening quote, interdependence does not necessarily mean *equal* win-win for the parties involved. Once interdependence has prevailed, what do world politics and interstate relations look like? The determinant of this is the power aspect, captured by two concepts: sensitivity and vulnerability. Both concepts refer to a state's responsiveness to change

imposed by an external actor, either in interstate or multistate relationships but differ regarding policy framework. Sensitivity interdependence assumes that a framework of policy holds a certain level of inertia, and is based on the assumption that policy change tends to occur relatively slowly, hence that no immediate policy change will occur when a state tries to adapt to the outside change. Sensitivity can be either economic or social or political. Vulnerability interdependence, on the other hand, assumes a situation where policy can be changed, hence what alternatives states have in the face of external change when able to change policy. In order to improve the outcomes for themselves, the parties can ‘manipulate’ the vulnerability to gain leverage over the other. The risk here, although, is that the other party turns to counter-actions, hence increasing the risk for conflict (ibid: 14). In other words, the level of sensitivity refers to the susceptibility to costs entailed with outside change when the policy framework remains unchanged, while the level of vulnerability refers to how severely a state is affected by the costs inherent in outside change even *after* policies are changed. “[...]can be measured only by the costliness of making effective adjustments to a changed environment over a period of time” (ibid: 10-11).

The asymmetry is a power resource among actors. All in all, these two concepts together set the frame within which international collaboration through interdependence theory plays out. The bargaining process entailed asymmetric and vulnerability interdependence that seeks to merge the liberal and realist stances by integrating the power aspect (ibid: 267). Interdependence can be analyzed through the split between symmetrical and asymmetrical interdependence to understand and explain change and the stability of the system. Asymmetrical interdependence is to be comprehended as an exercise of power, while symmetrical interdependence is an act of mutual dependence. The asymmetry highlights the bargaining process in bilateral relationships – where different levels of one-sided dependence and power can be used as a vantage point and powerful resource, and an ability for one party to have influence over the outcomes (ibid: 10). To dissect symmetrical and asymmetrical interdependence, Keohane & Nye presents the concepts of sensitivity and vulnerability.

Our perspective implies that interdependent relationships will always involve costs, since interdependence restricts autonomy; but it is impossible to specify a

priori whether the benefits of a relationship will exceed the costs. This will depend on the values of the actors as well as on the nature of the relationship. Nothing guarantees that relationships that we designate as “interdependent” will be characterized by mutual benefit. (ibid: 9-10).

Lastly, Keohane & Nye discuss the matter of state security with interdependence, and the economic and power aspect of it all on one hand, and in relation to military power on the other hand. The military vulnerability is still crucial to consider, in accordance with realist thinking “[...]military power dominates economic power in the sense that economic means alone are likely to be ineffective against the serious use of military force” (ibid: 14). Despite this, the costs and stakes of military force is higher today, so “there is no guarantee that military means will be more effective than economic ones to achieve a given purpose” (ibid.).

2.2. The Academic Debate

Interdependence, and the relationship between trade and conflict, have continued to be extensively researched and debated after Keohane & Nye’s seminal work. This academic debate is primarily focused on how to assess and comprehend interdependent relationships more accurately in their effect on conflict. The main pieces of critique are focused on the definition of interdependence, further branching out in questions of intervening variables regarding the synergy between trade and conflict. This section aims to summarize such research and further additions to the term interdependence in tandem with the relationship between trade and conflict. The main part of the chapter will be focused on Copeland’s concept of trade expectations, given its detail and extensiveness birthed from the combination of quantitative and qualitative study, while additional concepts and factors brought forward through quantitative will be addressed lastly to highlight the variation in the points of attack that the research brings forward.

2.2.1. Trade Expectations

Copeland launches the concept of trade expectations with the aim to merge the liberal and the realist conception of the relationship between trade and conflict. The liberalist comprehension of trade stands in stark contrast to the realist – liberalists perceive trade as a restrainer of the unit-level factors, such as authoritarian rule or ideology, that tend to spark conflict, while realists

perceive trade as a possible catalyst of conflict since it challenges the state's security by making it vulnerable to the influence of its trade partners. The trade expectations concept is based on the assumption that all states ultimately strive to ensure their security in relation to other states, while simultaneously realizing that trade is inevitable for the state to maintain its economic vitality. A state that does not engage in bi- or multilateral trade will fail to ensure its economic growth – a necessity in order to maintain the machinery designed to guarantee the security of the state – and is inevitably a recipe for self-defeat (Copeland 2014).

Leaders of great powers understand that to sustain a strong level of military power, a state must have a vibrant and growing economy. Most important, leaders know that if other countries are industrializing and improving their technological sophistication, then they must do so too (ibid: 24).

Without ignoring the vulnerability inherent in trade and 'dependence' on other states, states account for the expected trade in a future perspective to balance this vulnerability. This logic implies that low expectations for future access to the markets and resources needed for economic growth ultimately risk spiraling into conflict or even war, given that the state's loss of such resources will make it too vulnerable, and therefore have to act in a manner to avoid such a situation. Hence, the foundational assumption that states are rational actors set out to primarily account for their own long-term security never completely eliminates the risk of war or conflict.

Originating from the logic of the military-security dilemma, this trade-security dilemma focus on "the implications of the actions that states take to improve certainty of future access to resources", inherent in the vulnerability of the dependence entailed in trading with other states, that also aim to improve their future access to resources on their own end (2014: 10). Ultimately, this dilemma, like the military-security dilemma, centers on the lack of information about the other party's plans and goals with the trade relationship, hence affecting the first party's ability to prepare for any eventual changes and the way such changes might affect their security and future economic growth (ibid: 30). When working on minimizing such vulnerability, a state can display that it is willing and able to protect their markets and resources by projecting their military capabilities in the direction of the state whom it is dependent on. The implications of such action

are thus that it risks triggering a sense of threat within the other party, hence departing to counteractions – resulting in the trade-security dilemma spiraling. This spiraling risks triggering trade embargoes or economic sanctions if the threat is too extensive, making the first party actually lose resources, which tips off the balance of relative gains of trade and ultimately risks military counter-actions (ibid: 10-11). All in all, the expectations of future access to markets and resources are primal for keeping the trade-security balance.

In addition, Copeland identifies six external factors that can affect a state's calculation of the probability of continued prosperous trade in the future, and the risk of low expectations spiraling into conflict. The three first questions are focused on third parties:

1. The first is the degree to which third-party concerns constrain X's ability or strategic incentive to trade freely with Y into the future. [...]
2. The second exogenous condition shaping X's trade policy toward Y is the level of domestic instability in small third parties that both Y and X need for their ongoing economic viability. [...]
3. The third exogenous factor is simply the unit-level drives of a third-party great power, state Z, whose actions against small state F cause X to intervene, which then forces dependent state Y to act. [...]
4. The fourth factor driving X's trading behavior is Y's overall level of economic growth, either because of Y's sheer economic dynamism or because of the relative gains that Y can accrue through trade. [...]
5. The fifth factor involves the depletion of raw materials within X's sphere that makes X not only less able to supply Y with such vital goods but also may encourage it to compete with Y for control of third parties. [...]
6. Sixth, and finally, X's leaders may be constrained from trading freely with Y by an exogenous factor arising from within their own state. In particular, X's executive branch may keenly want to increase trade with Y, but find that the legislative branch is making this impossible. (Copeland 2014: 31-33).

2.2.2. Additional concepts and factors

The claim that trade affects decreases the likelihood of conflict is disputed. Researchers have called for more accurate definitions and assessments of measurement in order to present a more congruent picture of interdependence and its effects on conflict (McMillan 1997; Gartzke & Li 2003; Mansfield & Pollins 2001). An additional number of researchers have also found several factors that can potentially affect the interplay between conflict, both in positive and negative manners (Gelpi & Grieco 2008; Barbieri 1996; Papayoanou 1997; Copeland 2014). The selection of previous research presented in this section highlights the effects of regime type (Gelpi & Grieco 2008); great power's ties with threatening powers (Papayoanou 1997); the confounding variables of joint democracy, alliances, and relative capabilities (Barbieri 1996); the type of goods traded (Dorussen 2006); and trade expectations (Copeland 2014). Zheng researched to what extent interdependent relationships are durable, or what could challenge their very existence and rather reverse them (Zheng 2021).

Through a review of a range of studies on interdependence, McMillan (1997) concludes that there is a significant gap between the theoretical and empirical interpretation and definition of interdependence. There is no uniform definition of what interdependence entails and its effects on conflict or peace, with the effect that "[...]the different conceptions of what it means for a relationship to be interdependent have a critical impact on research outcomes" (McMillan 1997: 53). Mansfield & Pollins (2001) arrive at a similar conclusion, also stressing the need for more detailed determination of causal mechanisms, definitions of both interdependence and conflict, as well an increased focus on the long-term stability of interdependent relationships. Moreover, Gartzke & Li (2003) highlights some of the potential issues with quantitative research of interdependence, because of how different variable constructions give different results, although they consist of the same core. In reviewing Barbieri (1996), claims that trade increases the probability of conflict, and Oneal & Russett (1997) among other researchers state that trade reduces the probability of conflict. Gartzke & Li dissect the different variables and presents a conclusion suggesting that operationalizations and variable constructions matter greatly, given that the outcomes can be different due to variable construction, although the variables "represent the same logic" (2003: 569).

The factors brought forward to insert greater detail into the relationship between trade and conflict is of different levels, hence able to affect in different ways. Gelpi & Grieco (2001) suggests that a regime-type factor can be one of interest when determining the probability of conflict in interdependent trade relationships. The authors find that the political institutions implicit in a democratic state restrict leaders in democratic states to initiate conflict when engaging with other states through trade. In addition, their study shows that more than trade and dependence, it is the fact that a state is democratic that restricts it from initiating conflict. Regarding autocratic states, the results then suggest that they do not inherit the same restrictions to engage in conflict, because they are not democratic – but that individual leaders might prioritize the economic growth of the state, hence trade can have a pacifying effect (Gelpi & Grieco 2001). Relating to the different state types in international relations, Papayoanou (1997) analyzes the effects of trade ties between the status quo and threatening ‘revisionist’ states. With regards to issuing balancing policies to stabilize the order of great power politics, it is concluded that relatively few interdependent trade ties with threatening revisionist power have a positive effect on the balancing policies, compared to increasing trade ties with threatening power might weaken the balancing act and risk conflictual behavior from the revisionist states.

2.3. Theoretical framework and operationalizations

A wide range of different variables of interdependence have been identified by previous research, but due to Copeland’s rigidity of theoretical insights, usage of both qualitative and quantitative research to support the theoretical developments and insights, as well as the detailed assessment of a combiner liberal and realist perspective, his theory of trade expectation will be the theory from which Keohane & Nye’s interdependence perception is analyzed. Since the aim of this thesis is to examine the interdependence theory itself in a critical manner, it is necessary to get as close as possible to the original concept as possible. Operationalization is necessary to ensure that the research focuses on the concepts that it was set out to analyze (Esaiasson et. al. 2012: 55).

Keohane & Nye’s conception of interdependence focus on the measurement of sensitivity, vulnerability, symmetry, asymmetry, and power. As stated above, sensitivity refers to the costs entailed when a state is exposed to an externally imposed change in the trade relationship. The

costs can be of both economic, social, and political nature. Given the scope of the thesis, the focus will be put on economic costs, since the inclusion of both potential social or political debates around the Russo-German relationship would make the material too extensive. Vulnerability focuses on the costs together with the alternatives that states have when adapting to external change. Here, *alternatives* are understood as the signing of new energy contracts or a change of energy usage to another source. Symmetry and asymmetry hold more complexity, but are ultimately calculated in sensitivity and vulnerability – thus, if a party has higher costs or fewer alternatives in comparison to the other party, asymmetry can be assumed to prevail. Lastly, the power aspect is a combination of all prior concepts, and will not be calculated any further. Turning to Copeland, the central concepts of the *trade expectations* theory are relative gains and economic benefits and vulnerability – where the first will be captured through economic gains and influence, and the latter through how states' security is affected by the trade. Lastly, these two concepts together capture the main focus of trade expectations, which is focused on actions from the other trade party in relation to the trade relationship that might have a negative effect on the other party's security in the future.

3. Method and Material

This chapter focuses on the course of action and on how theory, material, and case are woven together. First, the research design is presented along with case selection and a brief discussion of the methodological considerations. This is followed by a description of the congruence method. The chapter ends with a presentation of material and material selection.

3.1. Research Design and Case Selection

A case study can be defined as “[...]an empirical inquiry that investigates a contemporary phenomenon (the “case”) in depth and within its real-world context” (Yin 2014: 16). This design is suitable for this thesis given its allowance for detailed exploration of the interaction between the interdependence theory and the case of Russo-German trade relations, and a dissection of the interdependence theory 1.0 and 2.0. The analysis of the concepts inherent to interdependence is strengthened by the case study design and the design’s grant for high conceptual validity and low risk for conceptual stretching, adhering to the theory-critical approach (George & Bennett 2005: 19). The majority of previous research on interdependence theory has been conducted through large N-studies. Although it indeed is fruitful to statistically determine the correlation between the different variables of interdependence and its effect on conflict, this is not necessarily the approach fitted to the aim of this study, since the recent research flag for improved conceptual clarity and improved definition of interdependence. Previous studies have also stated that quantitative studies can capture the correlation, while qualitative case studies consider the historical context, in-depth causal movements, and alternative variables (Copeland 2014: 49-51; McMillan 1997: 55).

Further, case studies rarely hold a generalizing ability, but instead have the aim to expand on theories (George & Bennett: 31). With this said, the aim is not to use the Russo-German case as a representative case for other interdependent relationships. The aim is not to generalize across populations, but it is rather restricted to raising and exploring important questions along the test of time that contemporary events are posing to the theory. Additionally, there is no aim to test or fully undermine this extensive theory, but rather to ask important questions for potential further development. Although a study using multiple cases could explore the greater pattern of

interdependence, it risks diminishing the deeper characteristics and nuances of interdependence in this very relationship. The case is not meant to be representative of a larger population of cases, although Germany's special position in the European security order is not to be reduced. The aim is to refer back to the theory at large, rather than to a greater population, which is one of the primary strengths of a case study (Yin 2009: 15).

The Russo-German case is selected as an illustration of the challenges now directed towards the theory, and thereby used for the purpose of theory-critique. Russia's and Germany's collaboration was shaped by the cooperative approach that followed after the Cold War (Wallander 2018: 6-7), and Germany has since been considered a determinant of the European security order through its relation to Russia, regarding both its policy and trade relationship (Forsberg 2016: 21; Wallander 2018: 1-2). Germany's integration of the interdependence logic into their Ostpolitik also strengthens the case selection along the thesis aim and problem. The selection of the Russo-German case opens up for analysis of the theory's scope conditions given the contemporary security situation, thus under what conditions the theory is valid. With the theory-critiquing approach, the case study design allows for the exploration of causal mechanisms and the inclusion of a large number of *intervening* variables (George & Bennett 2005: 21). There is a risk of selection bias, and choosing a case that aligns with a specific outcome to support the eventual hypothesis at hand (ibid: 24). The Russo-German case is used to challenge the interdependence theory is selected based on highlighting potential validity issues in the theory and hence not as the most favorable case to confirm a certain outcome.

3.2. Congruence Method

“[T]he essential characteristic of the congruence method is that the investigator begins with a theory and then attempts to assess its ability to explain or predict the outcome in a particular case” (George & Bennett 2005: 181). The ‘test of congruity’ established in the method refers to “similarities in the relative strength and duration of hypothesized causes and observed effects” (ibid: 183) – i.e. to test the congruence between the chain of events set out by the theory, the logic entailed, and the outcome of the case at hand. Although the congruence method can be used to analyze independent and dependent variables to explain or predict the outcome of the chosen case, it does not necessarily concern itself with causal processes and tests of the theory. Instead,

it is formed to fit the researcher's aim, hence being used to refine theories to simplify future theory development. Are the 'variables' congruent with the theory, and do they "vary along the expected directions" (ibid: 182)? The method lends itself to the cause of being used in a theory-criticizing manner since its process is not strong enough to engage in the falsification of theories (ibid: 185).

Given this methodological framework, the thesis is structured in a manner where the original interdependence theory's causal process is brought into question and the factors that shape an interdependent relationship are explored. This process is then compared and contrasted to the concepts and mechanisms suggested by the recent research, as presented in section 2.3. The method and structure of the study are deemed suitable to engage with the interdependence theory in a theory-criticizing manner, based on new research and an important case. Can the theory help to comprehend the outcome of the case, or is the theory lacking something that prevents it from assessing the outcome? As stated above, the aim is not to go as far as *testing* the interdependence theory, but rather to use the congruence method to examine the theory's scope conditions through the light of the recent research and the contemporary security situation. In addition, the interest is not necessarily to go as far as mapping the causal process or causal mechanisms, but rather to explore alternative factors affecting interdependent relationships and thereby gain a deeper understanding of the theory in relation to the case where the Russo-German trade relationship now is in a special situation.

In addition, a few considerations are needed to ensure good research practice. When working with relations between different theoretical concepts and their effect on the outcome, questions about spuriousness; necessity, and sufficiency; as well as causal depth and priority need to be considered in the analysis (George & Bennett: 185-187). This will be seriously considered when engaging with the potential intervening variables suggested by the recent research.

Lastly, the congruence method holds a deductive approach to scientific reasoning, where the *specific* can be referred from the *general*. The framework through which the case can be understood is thereby determined by the theory, hence strongly affecting the way in which the research arrives at its conclusion (Schwartz-Shea & Yanow 2012: 27-28). The deductive logic of

inquiry affects the study in a way where the case specifics not are tested against the theory, but rather testing the theoretical concepts against the case, hence losing some of the important contexts that provide when exploring a theory in a critical manner. For this thesis, the deductive approach nonetheless is preferred, since it allows for the different conceptions of interdependence to be explored in relation to Russo-German trade relation.

3.3. Material & Material Selection

The material for this essay consists of two parts. The first part is research on interdependence theory. Keohane & Nye's book *Power and Interdependence* (2012) is the foundation, combined with the research aiming to further explore and develop the theory that followed. This combination aims to frame the academic debate since, and therefore serves as a point of departure for the thesis exploration of interdependence theory in the current context. The second part includes material describing the relationship between Germany and Russia, with a special focus on the trade relationship. This collection of secondary material consists of research on the policy shifts of the four latest German chancellors and their respective responses towards Russia and with regards to Ostpolitik, but also statistics on the trade and gas flows, scientific reports, and newspaper articles.

Keohane & Nye's book was first released in 1977, and the 2012 (latest) edition is used. Copeland's book *Economic Interdependence and War* (2014) is then used as a counterpoint to the more 'original' theory, to capture the more recent work and progress made regarding interdependence theory. The selection process involved searching for material with the keywords such as *interdependence*, *trade*, *international relations*, *conflict*, and *war*. The initial selection of material thereby also included a number of research articles on the topic, that aimed to capture researchers with both realist and liberal, qualitative and quantitative foundations. Due to constraints of the scope of this thesis, the final selection include only Copeland's book. As mentioned before, given that the field of research on interdependence has been conducted in both qualitative and quantitative manner, therefore the consideration of different scientific foundations is arguably important to ensure that a full depiction of the interdependence theory is presented, in order to say something about the theory at large, rather than a one-sided interpretation of it. Copeland captures the large supply of both qualitative and quantitative research, as well as realist

and liberalist foundations, and is therefore deemed suitable for this thesis. Although the material is carefully picked, it is crucial to acknowledge that the selection presented does not in any sense represent the complete body of research on interdependence theory. The selection process is inevitably also affected by me as the author of this thesis. However, books do aim to provide an accurate reflection of the theoretical debate and an indication of how the theory is comprehended, studied, and used. In addition, the time frame is important to acknowledge. By selecting the newer book written on interdependence, the aim is to capture the most recent developments that are written related to the contemporary challenges and developments of the security order. In combination with slightly older material, the motivation is to capture the full spectrum – which furthermore is crucial in order to ensure that the interpretation of the interdependence theory is too heavily influenced by the security situation at the time.

The collection of secondary material on Russo-German trade relations aims to present a brief but accurate portrait of the Russo-German trade relationship from the German reunification up until today, in order to uncover a longer historical pattern to aid the analysis of the current state of relations together with the theory. The research on Russo-German relations aims to provide a scientific perspective on Ostpolitik as a complementary perspective. This material was selected through a search for articles based on words such as *Germany*, *Russia*, *Ostpolitik*, *trade*, and *gas*. The decision to focus on the four latest German chancellors is because it is during this time that gas became a crucial part of the trade relationship.

Given that this thesis has a contemporary focus, a range of news articles are used in order to describe the course of events, it is crucial to engage with such sources in a critical manner. Esaiasson et. al. also the considerations to be made about the choice of material, where authenticity, independence, tendency as well as whether the material is contemporary are important to consider (2012: 279). Hence, the news articles have picked from credible news sources and their content confirmed by several other sources.

4. Russo-German Relations

This section reviews the gas relations between Russia and Germany between 1982 and November 2022, temporally sectioned after the chancellor at the time. The aim is to present the historical context in order to more accurately understand how the relationship has evolved and its current state. Focus is put on the policy, gas statistics, and reactions with regard to certain crucial historical events.

4.1.1 Kohl 1982-1998

Chancellor Helmut Kohl's incumbency covered the fall of the Soviet Union, the end of the Cold War, and German reunification – a range of essential historical events that came to determine the future of the German course of action. The extensive Russian gas and oil reserves were discovered in the 1960s (Deutsche Welle 2022 1A). The framework wherein Kohl's approach to Russia rested was set by former West German chancellor Willy Brandt (1969-1974) who primarily defined the policy towards the east, the *Ostpolitik*, in terms of economic collaboration and trade, essentially the pipes-for-gas deal of the 1970s. Germany delivered the pipes in exchange for the Russian gas (SWP 2017: 12). The Ostpolitik was introduced in terms of “change through rapprochement” (Wandel durch Annäherung) (SWP 2017: 5; Szabo 2022: 631).

The cooperative spirit remained under Kohl's incumbency, with a strong focus on economic collaboration. During the period, “[t]he priority was to securely anchor Russia in Europe with a follow-on to the concept of Ostpolitik which saw engagement at all levels as leading to the transformation of Russia into a stable democracy” (Szabo 2022: 627), along with an aim to establish stability in Europe (Wallander 2018: 45). This aligned with the Russian strive for a revitalization of Russia's economy under Gorbachev (Szabo 2022: 627). As for the gas relationship, the Soviet Union provided for approximately 33 % of West Germany's gas (Deutsche Welle 2022 1A).

Yearly German reliance on import of Russian natural gas (the ratio of Russian imports to domestic fuel consumption, the importance of imports from Russia) (IEA 2022 1A)

Year	Percent (%)
------	-------------

1990	38
1991	33
1992	32
1993	34
1994	38
1995	38
1996	35
1997	34
1998	36

4.1.2 Schröder 1998-2005

Gerhard Schröder’s incumbency was marked by further economic collaboration, and the increase of German trade with Russia trade increased by 32 % between 1999 and 2005 (Szabo 2022: 629). Regarding the Ostpolitik, it was framed through the concepts of *Wandel durch Handel* (change through trade). The concept ultimately aimed to influence Russia through economic ties and promote democracy, norms, and rule of law in accordance with Western standards (SWP 2017: 5).

The initiation of the Nord Stream I project was a key factor for the further increase in economic collaboration. The planning and sweeps started in 2005 (Nord Stream 1D), and Schröder signed the agreement at the end of his term (Szabo 2022: 630; SWP 2017: 6). The pipeline project involves five companies, where Russian Gazprom and German Wintershall Dea AG were two of the prominent ones (Nord Stream 1C), and runs through the economic zones of Russia, Finland, Sweden, Denmark, and Germany, and Russian, Danish, and German waters (Nord Stream 1B).

Yearly German reliance on import of Russian natural gas (the ratio of Russian imports to domestic fuel consumption, the importance of imports from Russia) (IEA 2022 1A)

Year	Percent (%)
------	-------------

1998	36
1999	39
2000	39
2001	35
2002	36
2003	37
2004	41
2005	41

4.1.3. Merkel 2005-2021

The German policy approach during Angela Merkel's incumbency was fostered by *Annäherung durch Verflechtung* (rapprochement through entanglement or interdependence) through the foreign minister and Schröder's former protégé Steinmeier established the concept of (Szabo 2022: 631). Although Merkel aimed to develop a more critical approach towards Russia, compared to Schröder's, by expressing concerns about e.g. human rights atrocities, the period still inherited the Brandtian Ostpolitik focus on economic collaboration (ibid.).

In 2009, Germany, amongst many other European states, experienced the effects of at the times Russo-Ukrainian conflicts, where a 13-day gas disruption made southern Germany lose 60 % of gas flow and 10 % in total (European Commission 2009).

Major developments occurred in relation to the Nord Stream project during Merkel's term. After Schröder signed the contract for Nord Stream I in 2005, as mentioned above, the planning continued and the construction began in 2010. The final pipeline was presented soon after (Nord Stream 1D), and gas started to flow in November 2011 (Nord Stream 1B). Regarding Nord Stream II, Germany signed the contract in early 2018 and finished in 2021 (Deutsche Welle 2021).

In 2014, The Russo-German relationship also took a turn when Russia invaded Ukraine and annexed the Ukrainian Crimean peninsula in early 2014. Germany shouldered a diplomatic role, along with issuing sanctions against the Russian leadership, although more restrictive than other EU countries. The annexation of Crimea led Germany to question the Russian approach to the West and the norms that Germany aimed to implement through the Ostpolitik (Szabo 2022: 633).

Another factor indirectly related to the energy relationship, was the Energiewende, a result of the “German Energy Concept” of 2011, “composed of deploying renewable energy, phasing out nuclear energy, and increasing energy efficiency” (SWP 2017: 25), a long-term policy for the decrease of reliance fossil fuels.

Yearly German reliance on import of Russian natural gas (the ratio of Russian imports to domestic fuel consumption, the importance of imports from Russia) (IEA 2022 1A)

Year	Percent (%)
2005	41
2006	40
2007	41
2008	42
2009	34
2010	38
2011	40
2012	39
2013	46
2014	49
2015	56
2016	70
2017	69
2018	49

2019	51
2020	59
2021	60

**Natural gas exports through Nord Stream (Russia to Germany, every six months)
(IEA 2022 1B)**

Date	Entity (million cubic meters)
Nov 2011	255
May 2012	1069.458
Nov 2012	933.798
May 2013	1991.254
Nov 2013	2827.114
May 2014	3145.149
Nov 2014	2805.827
May 2015	3788.416
Nov 2015	1695.164
May 2016	3763
Nov 2016	4960
May 2017	3788
Nov 2017	4861
May 2018	5016.9
Nov 2018	4796
May 2019	5021
Nov 2019	4840.474
May 2020	5026.49
Nov 2020	4864.07

May 2021	5025.218
Nov 2021	4863.909
May 2022	5005.802
(Aug 2022)	(952.843)
(Oct 2022, last date)	(0)

4.1.4. Scholz 2021-present

The prior vice chancellor and finance minister Olaf Scholz was elected office in early December 2021. Just over two months later, on February 21, 2022, Russia recognized the Ukrainian cities of Donetsk and Luhansk as Russian entities. On February 22, Scholz halted the agreement on Nord Stream II, as a result of the Russian recognition (Reuters 2022 1F). Two days later, Russia invaded Ukraine. On February 27, Scholz presented a policy statement, called *Zeitenwende* (i.e., turning point) where he condemned the Russian invasion and issued a package together with the EU including e.g., sanctions towards Russian banks and oligarchs and exclusion from Swift and export prevention. It also included extended support to the neighboring NATO countries through e.g., additional troops in Lithuania and contribution to a new NATO unit in Slovakia. In addition, Scholz stated the 2 % defense investment guideline (Bundesregierung 2022 1B). Moreover, Germany issued military support to Ukraine, which broke a longstanding practice of not sending weapons to conflict zones (Bundesregierung 2022 1A; The Guardian 2022 1A). Scholtz furthermore stressed the matter of energy security:

And we will change course in order to eliminate our dependence on imports from individual energy suppliers. After all, the events of recent days and weeks have shown us that responsible, forward-looking energy policy is not just crucial for our economy and our climate. It is also crucial for our security. This means that the faster we make progress with the development of renewable energies, the better. And we are on the right track. We are an industrialised country aiming to become carbon-neutral by 2045! With this goal on the horizon, we will have to take major decisions. For example, on building up a reserve of coal and gas. We

have decided to increase the amount of natural gas in storage via long-term options to two billion cubic metres. Furthermore, we will acquire additional natural gas on the world markets – in consultation with the EU. And finally, we have made the decision to rapidly build two LNG terminals in Brunsbüttel and Wilhelmshaven. (Bundesregierung 2022 1B).

Regarding the gas flow through the Nord Stream pipelines, there have been several interruptions due to the state of war. As a result, Germany issued a warning system displaying the stability of gas supplies, containing three levels (Early Warning, Alert, and Emergency) and being based on an EU initiative (BMWK 2022). In June deliveries were cut through Nord Stream I by 75%, from a daily 170m cubic meters to 40 (BBC 2022 1A). Hence, the alert level of the warning system has been active since June 23 (Bundesnetzagentur 2022). In July, Russia halted the gas flow for 10 days due to claimed maintenance, and after reopening reduced it to 20 million cubic meters. By the end of August, the gas flow was completely halted, due to alleged missing parts, which Russia claimed to be a result of Western sanctions (BBC 2022 1A). The flow has not been resumed since (Bundesnetzagentur 2022). Since August, Germany has been subject to finding additional gas suppliers to cover the loss of Russian gas. Gas imports have been increased from e.g. Norway and the Netherlands. Despite the fact that gas imports were reduced by 25 % due to these challenges, the effect was a gas bill that increased by 164 % between February and September compared to 2021 (Reuters 2022 1G; BMWK 2022 1B).

In addition, in late September, reports showed a pressure drop in both Nord Stream 1 and 2 pipes, followed by a leak, presumed to be caused by some form of attack connected to the war in Ukraine (The Guardian 2022 1C). A major debate was sparked on who is behind the attack. The latest reports show major craters around the pipe (Reuters 2022 1D). In mid-October Putin expressed that the gas to Nord Stream 2 is ready to flow, but since Germany canceled the contract in February due to Russia's threat to invade Ukraine, no change is to be expected (Reuters 2022 1B).

The recurring gas disruptions sparked a movement of diversifying supply chains and broadened supply bases, where the suggestion of construction of LNG terminals grew strong. The first

terminal was finished in late November (BBC 2022 1C). Another result was a further movement for renewable energy.

To put the gas relationship in context, a brief consideration of some general numbers will be made for both Germany and Russia. Germany was, before the war, Europe’s largest importer of Russian gas (IEA 2022 1C). Since the war started, Germany became the second largest importer after China (CREA 2022). Considering the overall energy mix in Germany, it is 27 % that is natural gas (The Guardian 2022 1B). In 2020, German households consumed 46 % of the natural gas, and the industry around 36 % (FOI 2022). For Russia, gas and oil revenues made up 45 % (IEA 2022 1C) in 2021, and 36 % (OECD 2022) of the budget in 2016. As Germany has increased their gas imports from Norway and the Netherlands, Russia has turned to China for new markets. In February 2022, a 30-year contract was signed for a new pipeline to add to the ‘Power of Siberia’-pipeline between Russia and China, build in 2019 (Deutsche Welle 2022 1B).

Natural gas exports through Nord Stream (Russia to Germany, every six months)

(IEA 2022 1B)

Date	Entity (million cubic meters)
Nov 2021	4863.909
May 2022	5005.802
(Aug 2022)	(952.843)
(Oct 2022, last date)	(0)

5. Analysis

In this section, the analysis of the interdependence theory and its different theoretical branches, illustrated through the Russo-German case, is presented. The chapter is divided into two where the Russo-German gas relations are analyzed through Keohane & Nye’s theoretical framework on one hand, and through Copeland’s theoretical framework on the other. Subheadings targeting the special core concepts of sensitivity, vulnerability, asymmetry, trade expectations, exogenous

factors, and trade-security dilemma provide a deeper examination of the respective frameworks. The section ends with a discussion comparing the main themes brought forward by the application of the theory to the case and referred back to the focus on the theory and the aim of the theory critique. A discussion around the results and answers to the research questions ends the chapter.

5.1. Keohane & Nye: sensitivity and vulnerability interdependence

In terms of the cost of dependence, sensitivity means liability to costly effects imposed from the outside before policies are altered to try to change the situation. Vulnerability can be defined as an actor's liability to suffer costs imposed by external events even after policies have been altered. Since it is usually difficult to change policies quickly, immediate effects of external changes generally reflect sensitivity dependence, vulnerability dependence can be measured only by the costliness of making effective adjustments to a changed environment over a period of time (2012: 11).

The core of Keohane & Nye's (2012) conception of interdependence is centered around the bargaining process entailed in bilateral trade relations. This bargaining process sets the framework for how parties act in relation to one another concerning their respective sensitivity and vulnerability levels, hence how asymmetry in relationships can be used as a power tool and the effect that trade has on conflict. According to Keohane & Nye's logic, this is how economic relations can be just as powerful as military power in influencing other parties and achieving one's goals (2012: 14). As described in section 2.1. the core concepts are sensitivity and vulnerability – what the strengths and weaknesses of the different parties are. The interpretation of interdependent trade relationships that Keohane & Nye develops is centered around the power aspect that frames the relationship and the spectrum on which the parties can range within that framework. What will be discussed in this section, in accordance with the congruence method, is to assess how congruent this framework is in relation to, or how well it can assess the outcome of Russo-German relations.

5.1.1. Sensitivity

To reiterate the concepts presented in chapter 2.1., sensitivity concerns the immediate costs of the external change before a change of policy, hence the responsiveness of a state. Sensitivity can be of economic, or social and political nature, where the effects of outside change provoke some form of action. The major changes in the Russo-German gas relationship arose when Russia recognized Donetsk and Luhansk as Russian on February 21, resulting in Germany halting the Nord Stream II agreement, followed by a series of gas disruptions, culminating in a complete halt of gas flow. Analyzing this from a sensitivity perspective means asking the question of what are the immediate costs from the ceased gas flow, without a change of policy.

As presented earlier, Germany heavily depends on the imports of Russian gas. Russian gas made up roughly 55 % of the total gas consumption, whereof German households depend on around 50 % and the industry roughly 40 %, before the war. Hence, the loss of Russian gas would have vast effects on German society, not only for the population but for the industry and consequently the German economy as a whole. This sensitivity to changes is also portrayed by the launch of the alert system described in section 4.1.4., where the level *alert level* was triggered by the Russian decision to decrease the gas flow by 75 %, where the awareness of the sensitivity can be found. In a situation where policy remains unchanged, the immediate result of an energy crisis shows how sensitive Germany is in relation to Russia. On the social and political side of sensitivity, the declining and eventually ceased gas flow provoked a major debate about the dependence on Russian gas, as seen in the policy statement from chancellor Scholtz on February 27th:

And we will change course in order to eliminate our dependence on imports from individual energy suppliers. After all, the events of recent days and weeks have shown us that responsible, forward-looking energy policy is not just crucial for our economy and our climate. It is also crucial for our security. This means that the faster we make progress with the development of renewable energies, the better. (Bundesregierung 2022 1B)

The Russian sensitivity interdependence can be comprehended in the same manner. An outside change to the gas relationship has high costs for Russia. The Russian federal budget relies

extensively on income from gas (and oil) exports – 36 % in 2016 and 45 % in 2021 (OECD 2022). Given that Germany was the biggest importer of Russian natural gas in Europe, along with Italy and Turkey, before the war (IEA 2022 1C), and since the war the second largest importer in the world, after China (CREA 2022), the loss of the German can be considered severe. Thus, Russia can be considered very sensitive to the loss of the German market.

5.1.2. Vulnerability

The effects of this dependence become even more visible when turning to an analysis of the vulnerability interdependence, referring to the actual costs entailed in policy change provoked by outside change. What other options does Germany have in order to make up for the loss of Russian gas, and what does that cost to maintain business as usual? As seen in the wake of the gas disruptions, the costs were extensive. Compared to 2021, the costs for natural gas imports increased by 164 % despite the reduction of imports by 25 % after the invasion (Reuters 2022 1G; BMWK 2022 1B). This was mainly the result of having to increase gas imports from other states such as Norway and the Netherlands, where the gas prices are higher (Reuters 2022 1G). Although Germany has gas storage and is able to account for minor disruptions in the supply, longer disruptions still have a serious effect. Given that the dependence on gas in the German energy mix was extensive, and the sensitivity therefore fairly high, the costs for adapting to the Russian termination of the gas flow by finding other markets to import from make the vulnerability just as high. Although German made action to adapt to the change fairly quickly, showing that alternatives existed, the adaptations to this change came at a high cost.

In addition, it is crucial to address the fact that Germany already has policies working to shift the dependence on Russian pipeline gas in general, and pipeline gas as a part of the energy mix in particular, in a long-term perspective. An example is the LNG (liquified natural gas) terminals that have been planned for some time but were made a reality due to the move to decrease dependence on Russia after the war started. Moreover, a movement for energy transition and lessened dependence on fossil fuels, embodied by the 2011 *Energiewende*, has slowly changed the game plan. Hence, Germany already had policies in place that potentially could make up for the loss of Russian gas, but it will take time to readjust the energy supply system to account for the changes. In addition, Germany is not suffering costs in the meantime.

Comparing this to the Russian vulnerability interdependence, Russia and China signed another 30-year gas deal in February (Deutsche Welle 2022 1B), exemplifying the fact that Russia has the alternative of turning to states that have not issued sanctions. The fact that Russia's pipeline exports are more effective than its LNG technique, makes the diversification of exports to other markets more difficult. Pipeline systems require a lot of time and research to build, and this results in some inflexibility in finding new markets.

5.1.3. Symmetry and power

A summary of the sensitivity and vulnerability of both parties in this trade relationship suggests that the interdependence is subject to extensive costs for both Germany and Russia. Germany has lost one of its main energy suppliers and an important component of its energy mix. Although Germany has somewhat managed to import gas elsewhere, it suffers extensive costs from the diversification of suppliers. The loss of Russian gas also requires a large-scale rearrangement of the energy mix to manage further. Despite the expansion of another pipeline to China, and the possibility to find other trade partners to cover the loss of export, Russia has lost a crucial market and a crucial income for the federal budget. Russia is also less flexible due to being limited to pipeline gas rather than LNG, given that the construction of pipelines requires a heavier workload and planning than shipping LNG by e.g. boat.

Looking at the comprehension of the situation through Keohane & Nye's framework, it can be argued that Germany is slightly more dependent on Russia than Russia is on Germany. Thus, there is some asymmetry in the relationship. The Russian decision to terminate the gas flow inherits extensive costs, both regarding Germany's economy and overall stability. In order to improve the outcomes for themselves, the parties can 'manipulate' the vulnerability to gain leverage over the other. The risk here, although, is that the other party turns to counter-actions, hence increasing the risk for conflict. The interpretation here is a manipulation of the alternative resources available to make up for the increased costs of an outside change. This has not been done, portraying the relative stability and minor asymmetry in the relationship.

Due to the Russian war in Ukraine in 2022, Germany now has entered an energy crisis. Keohane & Nye's assessment of interdependence theory suggests that this is a result of the asymmetry entailed in the Russo-German relationship, where Germany is slightly more dependent on Russia than vice versa. This asymmetry grants Russia power, and the ability to set the game plan for the future of the gas relations, and holds the power to destabilize Germany internally. This logic pinpoints some of the main threats integrated into the relationship. A comparison to Germany's initial reason for initiating trade with Russia, through the Ostpolitik's logic of change through interdependence and stabilization of Europe, shows that Germany did not succeed with this mission. Keohane & Nye's understanding of interdependence suggests that the risk of military conflict will decrease although never fully cease because economic power will bring about increased leverage and domination over trade partners due to the interdependence that has prevailed. The Russo-German trade relationship has not turned into a military conflict as of now, which aligns with the theory's prediction. Although, Russia invaded Ukraine in 2014, and in 2022. From this perspective, interdependence did not prevent military conflict.

5.2. Copeland: trade expectations

Copeland's development of the interdependence theory is focused on the split between the vulnerability inherent to dependence on another state, and the relative gains that strengthen a state's security through economic growth. The trade expectations concept comprehends interdependence as both a weakness and a strength. As mentioned earlier, the state prioritizes its own security first. In this perspective, trade with and dependence on other states tend to be perceived as a potential threat and something that can spark conflict. Simultaneously, states recognize that their economy needs growth in order to maintain their military security, thus opening up to trade despite the possible risks – with some reservations. These factors set the framework for how states engage with each other in trade relationships, determine how they act and react, and what the possible outcome of a trade relationship can be.

5.2.1. Trade Expectations

In order to analyze the German and Russian trade expectations, the balancing act between vulnerability and relative gains needs further examination to understand the logic behind the parties' actions. As stated before, Germany heavily relies on gas imports from Russia, and a

ceased supply would not only affect the German industries (using 36 % of the gas), but also the German households (that stand for 46 % of the gas usage). According to Copeland's logic, this heavy dependence has made Germany increasingly exposed in the event of any eventual external change. The gains from the gas imports are worth considering too. Russia is selling cheaper gas, which provides German industry with almost a fourth of its total fuel. In return, this strengthens the economic growth and vitality of the country. Further, the fact that Germany was the second largest importer for the first 7 months of 2022 (CREA 2022) of gas gives Germany leverage and can create an ability to influence Russia by contributing to the Russian revenues and federal budget. On the other hand, this also makes Russia vulnerable. The gains from the export make up a considerable part of the Russian economy (referring to the fact that gas and oil revenues made up 45 % (IEA 2022 1C) in 2021, and 36 % (OECD 2022) of the budget in 2016). A loss of the German export market would have severe effects on the Russian economic vitality and growth of the country, which can be considered a possible risk. However, this also gives Russia leverage power towards Germany, by being one of the main gas providers and consequently being an insurer of the energy security of the state and economic growth. Consequently, the trade between both states plays a considerable part in their respective economies, but both states are also highly dependent, and thus vulnerable. This, therefore, makes both states increasingly sensitive to the slightest change, and the trade expectations would play a big role in assessing threats to both states – and the calculation of trade expectations would be important.

On the other hand, the German *Energiewende* and work towards energy diversification and limitation of fossil fuel imports and use can be interpreted as a threat to the future of the Russian gas market and exports. The gas and oil exports made up 45 % of the Russian economy in 2021, and with Germany being the largest European exporter (IEA 2022 1C) hence a loss of the German market would have extensive effects on the economic vitality of the country. Not only would it result in a loss of revenue, but also in a loss of a sphere of influence in Europe.

5.2.2. Exogenous factors

Copeland's theory also includes the assessment of how external factors might affect states' decision-making regarding the involvement in interdependent relationships and the calculation of relative gains, costs, and outcomes. The first question:

The first is the degree to which third-party concerns constrain X's ability or strategic incentive to trade freely with Y into the future. The first is the degree to which third-party concerns constrain X's ability or strategic incentive to trade freely with Y into the future. If state Y is posing a threat to state Z, and X's leaders are determined to help Z survive, then X may reduce its trade with Y in support of Z. (Copeland 2014: 31).

This question can be related to Russo-Ukrainian relations. As mentioned earlier, the Russo-Ukrainian war started in 2014 with the annexation of Crimea, which according to the trade expectations logic possibly could have affected the German expectations of future trade with Russia, given the threat towards the European security order that it triggered. The invasion led to German sanctions on Russia and diplomatic support to Ukraine. Since it can be presumed that it is in Germany's immediate interest to restore European stability and security order triggered a negative spiral for trade expectations.

5.2.3. The Trade-Security Dilemma and Spiraling

The trade expectation theory is interconnected to the trade-security dilemma, given that a lack of information and fear of possible threats of the future trigger parties to act in a manner of stabilizing the situation and gaining the upper hand. The less dependent states have to convince the other state that it will be a reliable partner in the future to avoid spiraling, and manage to protect its security, sovereignty, and growth. Russia did eventually act in a manner that affect the German economic growth – which also entails the risk of Russia being affected economically – but the cost-benefit analysis of relative gains and threats made it the best decision.

Trade remains peaceful when parties manage to balance the trade-security dilemma as described by Copeland. If this fails, the relationship is likely to spiral into conflict. With this assumption in mind, the Russo-German suggests that interdependence does not guarantee peace just by trading with each other, but rather that it needs balancing between the gains from the trade, the dependence on the other party as well as assuring for both states' security and have faith in the other partner that trade will remain in the future. The analysis of the Russo-German case through

Copeland's theoretical framework suggests that the expectations for continued gas trade in the future can have been low for both parties. For Russia, the German *Energiewende*, remodeling of the energy mix, and policy towards diversification of the energy supplies – the ultimate aim to decrease the reliance on fossil fuel – can be interpreted as a potential lost market, which has serious implications for the Russian economy. Given how the economic growth and vitality of a country relate to the resources available for security matters in a country, the loss of the German market ultimately can be interpreted as a security threat. For Germany, the expectation of the gas trade continuing in the future also can be interpreted as low. First and foremost, the Russo-Ukrainian gas dispute of 2009 triggered disruptions of the gas supplies, in combination with Russia's annexation of the Crimean peninsula in 2014 suggesting that Russia embodied a potential threat to Europe. Although the gas disruptions did not affect Germany to any greater extent, they might still have raised awareness regarding the effects of third-party relations, and the negative effects they might have further down the line.

All in all, Copeland's theory of trade expectations expects a trade relationship with high expectations to remain peaceful, and one with low expectations to result in conflict. According to the brief selection of suggested expectations suggested above, the theory's predictions aligned with the outcome of the case. The reasons why the parties did not react to the threats that were identified through trade expectations, again, show the calculation of weighting relative gains against security, and if the relative gains are strong and the threat towards the security is not too apparent, the trade will continue.

5.3. Results and Discussion

The Russo-German gas relationship reversed rapidly already after the recognition of Donetsk and Luhansk as Russian entities on February 21, 2022. This caused the termination of the Nord Stream II contract; a significant decrease in the gas flow; extensive economic sanctions and counter-sanctions; an increase in German defense spending; German military support to Ukraine; finally leading up to a complete termination of gas flow in August 2022. Germany has been bound to increase gas imports from e.g., Norway and the Netherlands, resulting in increased costs. Due to these lines of events, Germany has entered an energy crisis – and entered a phase of reconsidering and reconstructing the energy supplies, routes, and suppliers. Russia has increased

exports to Asia through a new 30-year pipeline contract with China. To answer the first research question, the Russo-German gas relationship has been severely affected.

The extensive effects that the war in Ukraine has had on the Russo-German relationship suggests that a broader perspective including third parties not only highlights the extensive net of interdependence in the contemporary system but also how it ties states together indirectly and makes them vulnerable to events outside their direct sphere of influence. This concern raises a discussion regarding the second research question, of how the case can be comprehended through the interdependence theory. Copeland has included this perspective in the trade expectations theory and stresses how this is, or should be, a part of trade partners' calculus when weighing the gains and risks entailed in an interstate trade relationship against each other. The trade expectations concept more accurately manages to predict the outcome of the Russo-German case. This is due to the inclusion of a third-party perspective and the effects that it might have on a trade relationship and its chance to remain in the future; the inclusion of the future perspective in itself. A more dynamic approach to the spectrum of collaboration and trade, including their reversibility, and the dynamic approach to security and economic growth and their intertwinement fits within this theoretical framework. Copeland's theory predicts that if the expected trade in the future is low, the conflict will prevail. Given the current state of Russo-German relations, and the analysis presented above, it can be argued that this is the case. Keohane & Nye, on the other end, does not bring in the third-party factor, nor the future perspective, which decreases states' incentives, gains, and future expectations of a continued trade relationship. Instead, their theoretical framework highlights the costs, as well as the possible alternatives available for states in interdependent relationships. This introduces the power aspect in those relationships, and how states can increase their gains by using their relative strengths to affect the other party in the preferred direction. When considering the Russo-German relationship from this perspective, it is clear that the two states are relatively equally sensitive to changes in the other states' behavior. The costs are high for both parties. On the other end, it is suggested that Germany is slightly less vulnerable because they can be argued to have more options for Russian gas (although costly) than Russia has for the German market – at least from a short-time perspective. Germany is already making progress in finding alternatives to Russian natural gas. Russia has signed a gas contract with China, and it is too early if that will be an

equal market. What Keohane & Nye's conception of interdependence struggles to capture is a framework wherein one can understand *why* the interdependent relationship broke and turned into an economic conflict and energy crisis.

Moreover, the war in Ukraine has highlighted how dependent Germany, and Russia, were on each other, and how high the costs of a change of action were. Keohane & Nye's address of sensitivity and vulnerability provides a tool through which the level of dependence can be comprehended. Keohane & Nye suggests a calculus of the costs and the alternatives, how responsive a state is to outside change, and how available other solutions to make up for those costs are. If one party is less vulnerable, the other party is deemed more dependent, which thereby is determined by the power that one party has over the other. The measurement of the level of dependence looks different for Copeland. Rather than focusing on the costs and the alternatives specifically, the trade expectations theory emphasizes a calculus based on relative gains and security threats. If dependence ultimately means the level of power or influence that one party holds over the other and potentially can use to coerce the other party in its preferred direction – the leverage power – then the dependence is included in this act of balancing. Copeland's logic presumes that all states prioritize their own security overall, not too different from Keohane & Nye.

Some major differences between Keohane & Nye's and Copeland's interdependence conception can be presented from the analysis. First, the threat from the anarchic international order and security dilemma is more apparent in Copeland's theory. Second, Keohane & Nye's comprehension of interdependence focuses more on the costs than the benefits compared to Copeland, who addresses both relative gains and vulnerability, when describing the dynamics that shape actors' behavior within an interdependent relationship. Copeland includes benefits in the calculation – Keohane & Nye does too but first when asymmetry prevails, and rather focus more on the risks of dependence than the potential benefits. Third, and perhaps most interesting, is the inclusion of a future perspective. In what way does this newer concept better explain or help with comprehension of the Russo-German trade relationship, its formation, and current (end) state? Keohane & Nye's understanding of interdependence uncovers its integrated power dimension and grasps the *responsiveness* that ultimately determines the reasoning needed when

entering a trade relationship. By adding the future perspective – why the relationship crippled the way it did is best understood through Copeland’s conception. Both of the states can be argued to some extent have accounted for a changed relationship, by making policies of respectively LNG and a pipe to China in order to eventually save for a lost market on both ends. These actions can be seen as accounting for the future as trade expectations assume, but this also can be connected to the vulnerability and sensitivity in Keohane and Nye’s perspective where the costs and the alternative available to account for those losses can be seen.

Keohane & Nye’s concept of interdependence does not necessarily concern itself with a broader interpretation of trade relations apart from that of the bilateral trade relationship. Copeland, on the other hand, includes the exogenous factor of the relationship between a third party and their trade partner and addresses the way in which it affects the first partner’s calculation regarding the continuation of the trade relationship. Given how third-party connections after all holds a crucial role in influencing interdependent relationships, as displayed by this case, the discussion now turns to the last research question. To what extent is interdependence a key factor for regional stability and the absence of conflict? This is interesting to analyze in light of Russo-German relations after 2014. The theories captured the potential risk that the Russian annexation of Crimea could pose to Germany in its threat to the European security order. Rather, what none of the theories manage to capture in any greater detail is why Germany continued to trade with Russia after 2014. Given the logic of the theory, this could be perceived as enough of a threat to decrease the expected trade significantly. Perhaps, due to the heavy dependence and the entailed risk of reacting in any stronger manner than they did, Germany might have considered a more long-term perspective. This highlights the importance of understanding the broader cost-benefit calculation of states in interdependent relationships.

Finally, connecting to the interdependence logic within the German Ostpolitik that Germany aimed to integrate. The goal was to influence and push Russia in the ‘right direction’ with a priority on democracy and human rights – seen in the politics of *change through trade* and *change through interdependence*. The creation of such a sphere of influence is partially addressed by the power aspect in the bargaining factors as described by Keohane & Nye, but it can be claimed that more thorough tools for assessing how the process of influencing occurs, for

states to engage interdependent relationships with adversaries. What is clear, however, is that this logic seems to have been fairly ineffective, given the political development in Russia for the last decade. The German initiative to establish a trade relationship with Russia under chancellor Kohl in the 1980s, and continuing it throughout Schöeder and Merkel, was founded on the aspiration to create stability and promote change in the Soviet and later Russian system. The Ostpolitik was guided by concepts such as *change through trade* and *rapprochement through interdependence*. Although, according to Keohane & Nye's conception of interdependence, change can be successful when asymmetry prevails and opens for bargaining. The bargaining and power feature of interdependence is also a state's ability to influence another state in a certain preferred direction.

When using the congruence method, the researcher has to be cautious about eventual intervening variables and spurious relationships. There is no doubt that there are other factors in the Russo-German relationship that also highlight crucial aspects of the relationship, as presented in the previous research, factors such as the nature of the product and regime type can offer insights into the state of affairs. This thesis aims to explore the scope conditions of interdependence theory, through Keohane & Nye's and Copeland's theories the factors they deem crucial, and analyze to what extent they are able to comprehend the current Russo-German situation, to further say something about the validness of interdependence in the current security situation. The results are not in any way set out to *explain why* the Russo-German relationship ended and the consequences thereof, but, do raise certain factors, fully aware of other possibilities, in order to refine the theory in a critical manner where both strengths and weaknesses are included.

6. Conclusion

Both Keohane & Nye's and Copeland's theories provide useful frameworks wherein the Russo-German case with its internal dynamics, costs, benefits, and balances can be comprehended. They highlight potential factors important for the calculation of entering an interdependent relationship in the first place.

What distinguishes the Russo-German gas relationship, up until February 22, 2022, is its relatively stable development. Despite some minor decreases in gas flow in 2009, and throughout Russia's first invasion of Ukraine in 2014. Even though Germany issued sanctions against Russia, the gas flow kept on increasing and the reliance kept continued to extend (insert numbers). Despite Germany's launch of the *Energiewende* in 2011, that ultimately could be interpreted as a threat to the Russian exports of natural gas to Germany, and had a negative effect on the Russian economy, the gas kept flowing. The two theoretical perspectives, although in slightly different manners, helped to identify the potential threat's to the states in an interdependent trade relationship, through the balancing act where states have to ensure both their economic growth and access to markets and their security or vulnerability of being coerced in a less beneficial direction. What can be concluded about the two theoretical perspectives presented in this thesis, is that they both show that interdependence ultimately is a bargaining and balancing act when assessing whether it is worth engaging in trade with other states, friends and foes alike, or if the threats towards the own state are too high, causing the risk of a spiral of conflict, that ultimately can lead to war.

War or military conflict between Russia and Germany has not occurred as of yet. Although, this does not exclude the fact that it currently is occurring in another part of Europe – in Ukraine. The first conclusion of this thesis, thereby, is that interdependence might ensure the lack of military conflict bilaterally, but not regionally. The second conclusion refers to timing. The two theories helped to highlight the events and actions that potentially could be considered threatening to one or the other of the parties, and suggested that there were instances where the relationship could have taken a less cooperative turn. What it did not highlight, or only highlighted to some extent, was why the trade relationship kept evolving, with increased gas flow and increased reliance, up until February 22, and throughout the following 7 months of 2022. Again, the balancing act can be emphasized when discussing whether the 'threats' were overwhelming, or whether the threats were secondary to the benefits and relative gains. Here, it can be argued that those threats might not overwhelm the benefits of the gas trade, given that the trade continued. So Russia's re-invasion of Ukraine on February 24, 2022, became the tipping point of the relationship, because it posed a threat to the number one priority of all states, to refer to Copeland: the state's own security.

6.1. Suggestions For Further Research

Given the German integration of the interdependence logic in its Ostpolitik, it could be fruitful to conduct a policy analysis of such documents through the interdependence theory, to delve deeper into the German approach towards Russia. Such a study could potentially provide even more insight into the underlying mechanisms and assumptions for how the relationship was shaped. In addition, the previous research highlighted a range of variables that could contribute to a richer analysis of the Russo-German gas relationship, if combined with qualitative insights.

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