Germany's dependence debate:
A systematic analysis of the impact of Russian natural gas import dependence

by

Christina Marilla Stoelzel Chadwick

B.A., Franklin College Switzerland, 2002
M.A., The Hebrew University of Jerusalem, 2005

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submitted in partial fulfillment of the requirements for the degree

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Abstract

This dissertation analyzes the impact of increasing natural gas import dependence on the foreign policy behavior of Western European countries, and specifically Germany, utilizing both quantitative and qualitative methods. I argue that the influence of an "energy weapon" should be assessed in the context of the conditions for its effective application. The question is, in other words, whether a higher level of import dependence in energy leads to the alignment of the foreign policy of the dependent state with the energy supplying state.

I propose that a greater Russian natural gas import dependence leads to a greater degree of foreign policy alignment or *Affinity* of the energy import dependent state with the exporting state. The quantitative analysis examines the impact of natural gas dependence on the foreign policy alignment of nineteen natural gas importers from 1995 to 2013 and, more specifically, Germany, with the Soviet Union and, subsequently, the Russian Federation from 1979 to 2012. The data from the time-series cross-sectional analysis and the time-series analysis of Germany corroborates that a higher level of Russian natural gas import dependence leads to a greater foreign policy alignment of the import dependent state with the Russian Federation. The qualitative analysis uses four case studies to examine the position of German chancellors toward the Soviet Union and the Russian Federation as well as Russian natural gas imports and how it changed as imports increased. The case studies include the NATO pipeline embargo of November 1962, the first natural gas agreement, the construction of the Urengoy-Uzghorod pipeline in the early 1980s and U.S. sanctions against it, and the agreement to build Nord Stream in 2005.

I conclude that the "energy weapon" has a systemic impact on the foreign policy of the import dependent state by inducing foreign policy alignment and deterring foreign policy

decisions that might alienate the Russian Federation. The “energy weapon” not only affects the foreign policy of states directly affected by a supply disruption or threat thereof but has an impact on the foreign policy position of natural gas import dependent states toward the Russian Federation in general.

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List of Abbreviations

BPS	Baltic Pipeline System
BTC	Baku-Tbilisi-Ceyhan (oil pipeline)
BTE	Baku-Tbilisi-Erzurum (gas pipeline)
CBSS	Council of the Baltic Sea States
CCGT	combined cycle gas turbine
CDU	Christlich-Demokratische Union Deutschlands (Christian Democratic Union)
CEE	Central and Eastern European
CIS	Commonwealth of Independent States
CMEA	*see* COMECON
CoCom	Coordinating Committee for Multilateral Export Controls
COMECON	Council for Mutual Economic Cooperation
Comintern	Communist International
CSCE	Conference of Security and Cooperation in Europe
CSU	Christlich-Soziale Union (Christian Social Union)
EAEU	Eurasian Economic Union
EC	European Community
ENI	Ente Nazionale Idrocarburi (National Hydrocarbon Corporation, Italy)
EU	European Union
FDP	Freie Demokratische Partei (Free Democratic Party)
FRG	Federal Republic of Germany or West Germany
FSU	Former Soviet Union
Gdf	Gaz de France
GDP	Gross Domestic Product
GDR	German Democratic Republic or Eastern Germany
IGU	International Gas Union
IEA	International Energy Agency
LNG	Liquefied natural gas
MBRF	Mutual balanced force reduction
Mingazprom	Ministry of the Gas Industry
NEGP	North European Gas Pipeline
NGO	Non-governmental organization
NTG	North Transgas Oy
OAPEC	Organization of Arab Petroleum Exporting Countries
OECD	Organization for Economic Cooperation and Development
OPEC	Organization of Petroleum Exporting Countries
RF	Russia, the Russian Federation
SALT	Strategic Arms Limitation Talks
SPD	Sozialdemokratische Partei Deutschlands (Social Democratic Party)
TEN	Trans-European Network
TEN-E	Trans-European Energy Networks (or TEN-E)
U.K.	United Kingdom
U.N.	United Nations
U.S.	United States
USSR	Union of Soviet Socialist Republics, Soviet Union

VNG	Verbundnetz Gas AG (East German Gas Transmission Company)
WIEE	Wintershall Erdgas Handelshaus Zug AG
WIEH	Wintershall Erdgas Handelshaus GmbH
WTO	World Trade Organization

List of Measurements

b/d	barrels per day
Bcf	billion cubic feet
Bcm	billion cubic meters
Btu	British thermal unit
Btu/cm	British thermal unit/cubic meter
Cbm	cubic meter
GW	gigawatt
Dwt	deadweight metric tons
kJ/cm	kilojoules/cubic meter
KWh	kilowatt hours
Mb	million barrels
MBOE	million barrels of oil equivalent
Mbtu	one million Btu
Mcal	megacalorie
MMBtu	million British thermal units
Mcf	thousand cubic feet
Mcm	thousand cubic meters
MMcf	million cubic feet
MMcm	million cubic meters
Mt	million metric tons per year
Mtoe	million tons of oil equivalent
Mtpa	million tons per annum
MW	megawatt
Tce	tons of coal equivalent
Tcm	trillion cubic meters
TJ	terajoules

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there for me as a friend ever since. I will always fondly remember our visits with Claudia Deuerling and Martina Böhm, who very kindly welcomed us to their homes and gave me the opportunity to recharge. I am also indebted to everyone who made my mind rest at ease and gave me the necessary time to focus on my studies while I knew that my two daughters were well taken care of.

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Dedication

To

Elizabeth, Katharina,

and

Joe

Preface

In 2008, I found myself back in Switzerland, where I had grown up, taking courses to become a wealth manager while searching for a position in a Middle East desk in private banking. It was then, that I received a call form a recruiting company informing me that they had a position at a company, which although neither in banking nor with a focus on the Middle East, was surely surrounded by political debates and might be interesting for me due to my political science background. A few months later, I started to work in the Permitting Department of Nord Stream AG, the company responsible for obtaining the necessary construction and operation permits, building and subsequently operating the Nord Stream pipeline. The next five years, I spent working for an exciting project of unprecedented dimensions with regard to permitting, engineering, and logistics, for which everyone partaking felt pride upon its completion, myself included.

At the same time, however, it was also a highly political project, criticized by its opponents from its very initial stages. Nord Stream was opposed by both, the George W. Bush and Barak Obama administration, which feared that it would be used as a geopolitical weapon by the Russian Federation. While politics was certainly involved by the sheer nature of the project, however, Nord Stream was at heart a commercial project – starting from the feasibility study to the financing and commercial agreements – and kept itself out of engaging in political debates.

My time at Nord Stream came to an end when life-altering decisions brought me via Alabama to Manhattan, KS, where the return to academia offered me the unique opportunity to address the question whether the Russian Federation benefits politically from its natural gas trade, which, if anything, is even more current than before, from a political science perspective.

Chapter 1 - Introduction

> The more dependent a state is on others, and the less its leverage over them, the more it must focus on how its decisions affect its access to supplies and markets on which its welfare or survival may depend. (Waltz 1979, 153)

Waltz here highlights that less economically powerful states might do something they would otherwise not do based on their dependence on trade with an economically more powerful state. As demonstrated during the mercantilism of the nineteenth century, scholars of political science as well as political actors have long been aware of the linkage between national security and economic activities (see for example Keohane and Nye 1977, 274). Despite this recognition, efforts to demonstrate the effect of economic dependence and the extent of its influence on foreign policy decision-making of the dependent state have proven elusive. First, other factors influence foreign policy decision-making, including international as well as domestic security needs and considerations. Second, existing studies rely on anecdotal evidence using historical examples of the use of trade as a political tool by the economically powerful state, focus on reactions of dependent states to international transgressions of the economically more powerful state, use limited quantitative data, and/or analyze predominantly the effect of overall trade dependence. There is, in sum, a lack of robust empirical evidence about how economic vulnerability shapes foreign policy, especially, when, as Waltz recognizes, it comes to the import dependence on an economically critical good. The purpose of this dissertation is to evaluate the extent of the impact of dependence on the arguably most important good for a modern industrialized economy – energy or, more specifically, natural gas – on its foreign policy.

What has been referred to as the energy or gas weapon is generally assumed to be the energy supplier's use of its control over the delivery of energy resources as a strategic foreign

policy tool to obtain political or economic objectives by punishing or coercing (or both) its energy customers.[1] Since the 1990s increased concerns over European dependence on Russian energy have triggered a renewed interest in the energy weapon, or the use of natural gas as a foreign policy tool not only for maximizing economic benefits but also for enhancing political and strategic objectives.

One of the most striking features of the energy security literature investigating the impact of import dependence on Russian natural gas is the variety of different directions of research. Some scholars analyze the trade relationship between the recipient countries and the Russian Federation (RF) and find it either to be one of economic interdependence (mutual dependence) or dependence (asymmetric interdependence). Research analyzes the energy trade relationship between the RF and the European Union as a whole, new and old European Union members, the "near abroad" – Eastern Europe and countries of the Commonwealth of Independent States (CIS) – individual countries or between more specific sub-state actors[2] in the energy trade. Some scholars focus on the RF's goals and policies in using its natural gas reserves as a foreign policy tool, yet others differentiate between the individual actors' trade with the RF using bargaining models and game-theoretic perspectives. Finally, while one strand of research debates the

[1] According to Kropatcheva (2011), for example, *energy (or gas) geopolitics* is about the access, supply and transit of energy resources, technology of production, state of logistical supply lines, processing facilities and transit infrastructures. Relatedly but emphasizing their use, Stulberg (2012) defines *pipeline politics* as the unilateral and arbitrary disruption or renegotiation of terms of supply, transit, off-take and/or delivery. Similarly, Smith Stegen (2011) defines the energy weapon as the energy supplier's use of its resources as a political tool for either punishing or coercing (or both) its customers. Moraski and Giurcanu (2013), on the other hand, use the term *pipeline politics* to describe the degree to which the Russian Federation's status as main supplier has dampened criticism of its foreign policy by the recipient states. More recently, Farrell and Newman (2019, 45) argue that "[a]symmetric network structures create the potential for 'weaponized interdependence,' in which some states are able to leverage interdependent relations to coerce others." States with political authority over central nodes that have appropriate domestic institutions, "can weaponize networks to gather information or choke off economic and information flows, discover and exploit vulnerabilities, compel, policy change, and deter unwanted actions" (Farrell and Newman 2019, 45).

[2] More specific actors include, for example, energy companies (exporters and importers) as well as pipeline operators.

existence of the energy weapon based economic data and the special character of the natural gas market, a second strand inconclusively analyzes whether and how often it has been wielded successfully – implicitly or explicitly – to influence a target state's behavior using historical examples. Qualitative analyses remain confined to prominent historical cases of supply disruptions and are inherently difficult to evaluate.

This dissertation takes are more systematic approach and argues that the energy weapon, should be assessed in the context of the influence of the existence of the conditions for its effective application. The question is, in other words, whether a higher level of import dependence is more likely to lead to the alignment of the foreign policy of the dependent state with the energy supplying state. The dissertation will contribute to the existing security literature by analyzing the impact of increasing natural gas import dependence on the foreign policy behavior of Western European countries and Germany individually utilizing both quantitative and qualitative methods. The quantitative analysis will examine the impact of natural gas dependence on the foreign policy alignment of Western European states and, more specifically, Germany, with the Soviet Union and, subsequently, the RF. The qualitative analysis will use case studies to trace the awareness and position of German decision-makers towards increasing Germany's natural gas dependence on the Soviet Union and the RF and its implication for foreign policy independence of Germany. It will specifically analyze the role and importance given to economic and security aspects.

If the research demonstrates that the mere existence of the conditions allowing for the use of the energy weapon leads to the foreign policy alignment of the import dependent state with the supplying state, attempts to diversify sources of supply should not only be seen as an act of fear of becoming a target of disruptions in the future but rather as a way to become more independent

in the foreign policy realm. Second, the research will contrast quantitative results of the analysis of the impact of Germany's energy import dependence on its foreign policy with the qualitative study of German decision-makers position towards increasing Germany's Russian natural gas imports. A quantitative confirmation of an impact of import dependence on the foreign policy of Germany would demonstrate that warnings regarding increasing Germany's natural gas import dependence should be heeded, despite of political support for increasing natural gas imports. Finally, analyzing whether the supplying state benefits politically even without the direct application of the energy weapon will allow for a broader understanding of the impact and the effectiveness of the energy weapon for both scholars and policymakers alike.

This dissertation is divided into several chapters. This introduction is followed by two historical background chapters. Chapter two gives an overview of the advent of oil and Western European energy import dependence, discusses the early use of oil as a foreign policy tool, and concludes with a discussion of Middle Eastern and Russian oil supply disruptions. Chapter three then shifts to Soviet and Russian natural gas imports, the development of the corresponding natural gas export infrastructure, Russian natural gas supply disruptions and a discussion of the natural gas market. Chapter four provides an initial summary the existing research on the trade relationship between Germany and the RF, the use of natural gas as a foreign policy tool, and the application of the energy weapon. Subsequently, the emphasis of the literature review shifts more broadly to the concept of economic power and anticipated foreign policy behavior allowing for the development of the theoretical and causal relationship between energy import dependence and the foreign policy behavior of states dependent on Russian natural gas. Chapter five contains both a time-series cross-sectional analysis of 19 European countries from 1995 to 2013 as well as a time-series analysis for Germany from 1979 to 2012. Chapter six includes four qualitative case

studies on Germany, including the enforcement of the NATO pipeline embargo of October 1962, the first natural gas agreement of 1970, the construction of the Siberian Natural Gas Pipeline (Urengoy-Uzghorod) in the early 1980s, and Nord Stream.

Chapter 2 - The Advent of Oil and the Emergence of Western European Energy Import Dependence

In the first half of the twentieth century, securing oil supplies became an important war enabling factor leading to expansionist policies of countries lacking their own oil sources. The increasing mechanization of warfare during World War I had demonstrated the importance of secure oil supply to political and military leaders. Subsequently, states lacking domestic energy sources sought to secure them in the context of war (for example, Japan's expansion into Southeast Asia, the German drive towards the Southern Caucasus during World War II). After World War II, oil played a major role in economic development and industrialization, as highlighted by the energy crises in the 1970s. Even more fundamentally, a secure oil supply became a question of the basic welfare for societies, in which the population relied on oil for consumption (heating), transportation and other economic activity.

Before analyzing the impact of energy dependence on the foreign policy of an importing state, I will present a more thorough review of the historical evidence on the connection between energy supplies and international relations. In this chapter, I provide a historical background on the development of energy supplies and trade as well as a brief overview of how oil was used as a tool of foreign policy.

From Coal to Oil

The conversion of the great battleships from coal to oil for turbine propulsion at the beginning of the twentieth century heralded the advent of oil. Winston Churchill, the First Lord of the Admiralty at the time, noted in 1911, for example, that "[t]he liquid (oil) fuel problem has to be solved" (quoted in Massie 2003, 289). Coal was the fuel of the first steam ships and still had several advantages: it was widely available, especially in Great Britain, and a global network

of coaling stations existed; it was well understood by marine engineers; and it was inert (in lump form) and could therefore be used as part of a warship's protective shield (E. Dahl 2000; Friedman 1978). Coal, however, also had many disadvantages (E. Dahl 2000, 51–56; Friedman 1978; 1985; Massie 2003). First, coaling was exhausting and required extensive manpower: coal had to be loaded from the port onto the ship and once on board it had to be delivered to the furnaces and as the bunkers surrounding the boiler area emptied part of the crew had to abandon its stations to work in the bunkers fore and aft. Second, coal burns to form an ash: gunnery equipment such as telescopes had to be covered to avoid damage during coaling, boiler grates would become clogged and require cleaning, and space was required for the stokers as well as the removal of the ashes. Additionally, the visibility of the thick black smoke threatened to give away the position of the fleet. Finally, it was virtually impossible to refuel at sea and about a quarter of the fleet might require coaling and thus call at port at one given time.

Oil, on the other hand, offered many advantages (E. Dahl 2000; Friedman 1978; 1985; Massie 2003; Thursfield 1913). Oil has double the thermal content of coal; boilers could be smaller, and ships could travel farther and faster. Oil could be stored in tanks anywhere and pumped to the furnace through pipes thus reducing reliance on stokers and coalers, traditionally the worst source of discipline. Having fewer stokers as well as the elimination of the coal handling space around the boilers saved space and weight. Oil burned without forming an ash and much less smoke thus allowing for sustained full speed and reducing the likelihood of the fleet revealing itself. Finally, refueling was much easier and feasible at sea.[3] In sum, oil was cleaner, safer and more efficient than coal.

[3] According to Friedman (1978) little was done to realize fueling at sea prior to World War II.

Soon navies began to look into converting ships, especially their large battleships from coal to oil (E. Dahl 2000; Friedman 1985; Kemp 1969; Massie 1991). The Italian navy started experimenting with oil in 1890. By the early 1890s, it was routine to spray oil on coal to increase its combustion. In the United States, a liquid fuel board recommended using only oil in 1904 and the destroyer *USS Paulding* commissioned in 1910 and the two *Nevada* class battleships ordered in 1911 were designed to use solely oil. Coal was still the primary source for British naval vessels when Churchill became the First Lord of the Admiralty in 1911 but in 1912 it was decided to use oil for the *Queen Elizabeth* class battleships.[4] Germany first used the mixed method of coal-and-oil in a large vessel in 1909 and continued to do so until after the end of World War I.

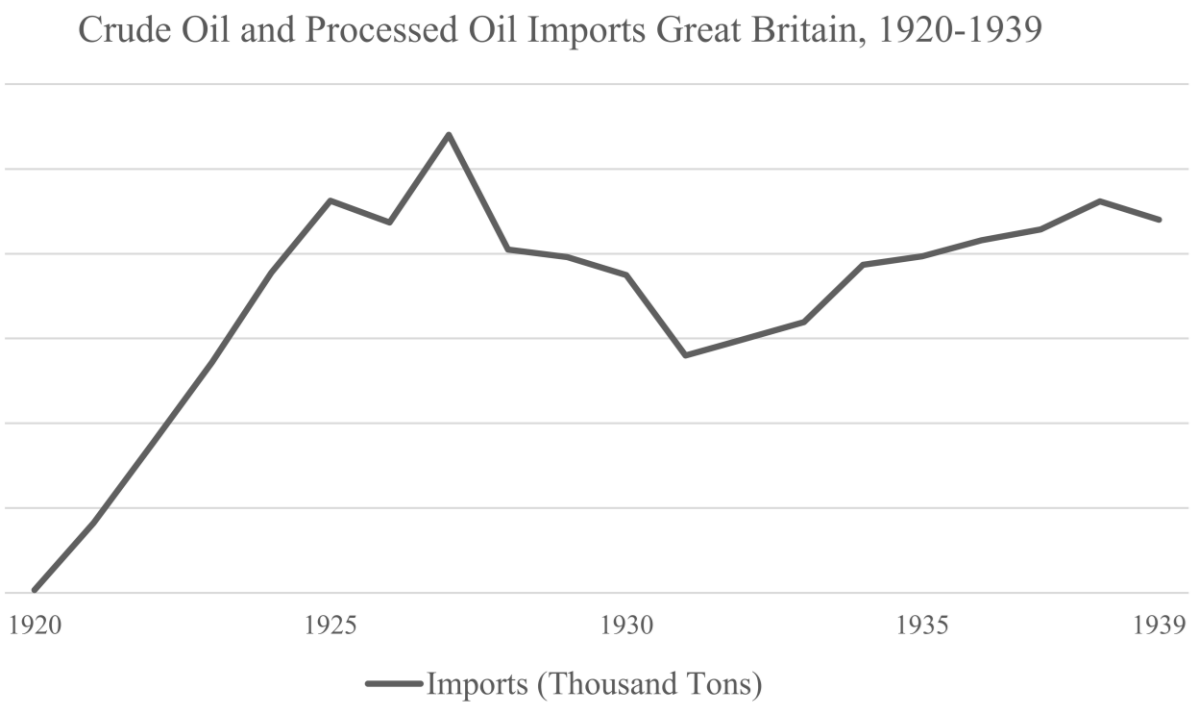
While oil promised greater speed without the need to sacrifice armor (E. Dahl 2000; Massie 1991), there was one cardinal disadvantage and inherent risk in converting to oil: it was not readily available within the national territory of most great powers. Apart from the United States and the Russian Empire, every major navy would have to locate a dependable source for the supply of oil, rely on vulnerable fleets of tankers for its transport and store sufficient quantities to ensure the fighting capability of its fleet for months. A royal commission on fuel and engines established by Churchill in July 1912 confirmed the benefits of oil, recommended maintaining a four-year reserve of oil and sent a delegation to the Persian Gulf ("List of Commissions and Officials: 1910-1919 (Nos. 146-174)" 1995). Subsequently, the British Parliament authorized additional expenditures to build storage tanks and acquire 51 percent of the Anglo-Persian Oil Company (E. Dahl 2000; Massie 1991).[5] The advent of oil thus increased

[4] The Queen Elizabeth class battleships were commissioned before the American *Nevada* class battleships due to shorter construction times.
[5] According to Dahl (2000, 52), the government also placed two directors on the board of the Anglo-Persian Oil Company and negotiated a secret contract to provide a 20 year supply of oil under attractive terms.

Great Britain's strategic interest in the Persian Gulf as well as the Eastern Mediterranean – the Suez Canal – (Black 2017) regions where it was already deeply involved.[6]

By the eve of World War II, oil had become an essential input not only for naval but also mechanized military operations as well as for industrialized economies in general (see Figure 2.1 below). Great Britain, for example, had gone from importing 17 thousand tons of crude oil in 1920 to importing 2,201 thousand tons by 1939. While similarly experiencing a decline of demand during the Great Depression, Germany went within ten years from importing 1,167 thousand tons in 1925 to 3,767 tons in 1935. Secure oil supplies became a matter of national security and a useful foreign policy tool.

[6] In 1917, oil shortages forced British ships to stay in harbor, held destroyers to a speed of 20 knots, and, for a considerable time after the United States entered World War I, its modern battleships (oil-burners) could not be assigned to British waters (E. Dahl 2000; Friedman 1978; 1985; Parkes 1970). Friedman (1978, 94) argues that for similar reasons the German Empire refrained from using fuel oil in World War I.



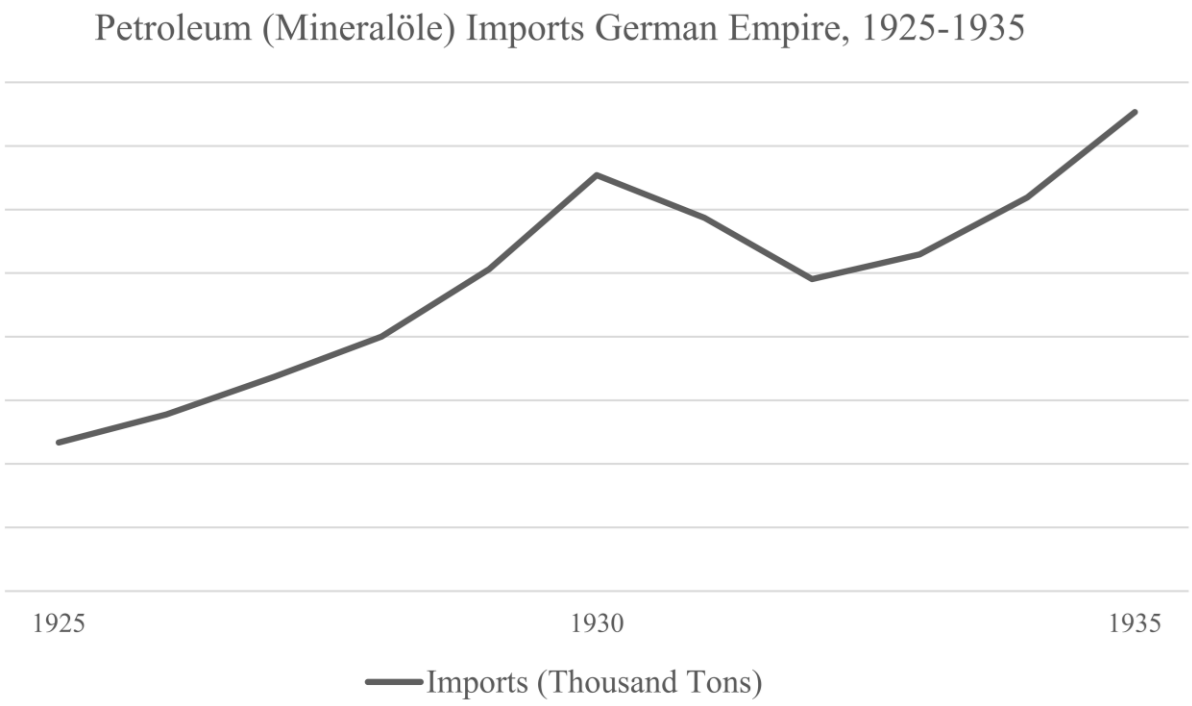


Figure 2.1. Crude Oil Imports Great Britain and the German Empire in the 1920s and 1930s
Source: UK Department for Business, Energy & Industrial Strategy (2013) and Statistisches Jahrbuch (Statistisches Bundesamt/Federal Statistical Office n.d.), several issues.

Oil as a Foreign Policy Tool

The League of Nations proposal for an oil embargo against Italy after its invasion of Ethiopia in 1935, Germany's drive to the oil sources of Ukraine, Japan's expansion into Southeast Asia during World War II, and the 1941 United States oil embargo targeting Japan all attest to the growing importance of oil. With its increasing importance not only for the warfighting capabilities of armed forces but economies as a whole, oil became increasingly recognized and used as a foreign policy instrument.

Table 2.1 summarizes the oil embargoes and supply disruptions from the 1930s to the 2000s discussed in the following subchapters. The first three prominent cases of oil being used as a foreign policy include the proposed League of Nations' oil export embargo in the aftermath of the Italian invasion of Ethiopia, the U.S. oil export embargo against the expansionist policies of the Japanese Empire, and Western oil companies' oil import embargo in response to the Iranian nationalization of its oil industry. During the Suez Crisis in 1956, the Six Days War in 1967, and the Yom Kippur War in 1973, the focus shifted to the Middle East when Arab oil exporters used oil export embargoes to target Western states in response to and/or as an attempt to alter their foreign policies. The Arab oil embargoes of 1967 and 1973 following the outbreak of the Six Day War and Yom Kippur War, respectively, have become the most frequently cited examples of an (Arab) oil weapon. The first decade of the twenty-first century, however, saw not only an increase in but also a more veiled use of oil as a foreign policy tool by the RF as Russian oil supply disruptions occurred July 8, 2008, in Latvia in 2002, Belarus in January 2007, Estonia in April 2007, Lithuania in July 2007, and the Czech Republic in July 2008. In the next section of this chapter, I describe oil embargoes and supply disruptions to trace the emergence of energy as a foreign policy tool.

Table 2.1. Oil Embargoes and Supply Disruptions[7]

Timeframe	Context	Type	Initiator	Importer
1935-6	Italian invasion of Ethiopia	Oil embargo (never implemented)	The League of Nations	Italian Empire
Aug 1941	Japanese expansion into Indonesia	Full embargo on oil	United States	Japanese Empire
Mar 1951	Nationalization of Iranian oil industry	Oil import embargo	Western oil Companies	Iran
Oct 1956	Suez Canal Crisis	Nationalization of the Suez Canal	Egypt	British and French interests
		Oil export embargo	Saudi Arabia	Great Britain, France (Israel already boycotted)
Jun 1967	Six Day War	Oil export embargo	Algeria, Kuwait, Libya, Iraq, Saudi Arabia, and the Gulf sheikhdoms	Originally a general ban, later specifically targeting the United States, Great Britain, and the Federal Republic of Germany
Oct 1973	Yom Kippur War	Oil export embargo	OAPEC (minus Iraq)	Canada, Japan, the Netherlands, and the United Kingdom
2002	Construction of Primorsk terminal near St. Petersburg	Reduction and eventual halt of oil exports via Latvia	Russian Federation	Latvia
Jan 2007	Dispute over tariffs and transit fees	Oil supply disruption (Druzhba pipeline)	Russian Federation	Belarus

[7] The financial and trade sanctions imposed in 1990 against Iraq shortly after its invasion of Kuwait and in force until 2003 and the 1996 Oil for Food Program are not included. These actions should be analyzed in the context of economic sanctions more broadly because oil was not by itself the only commodity being embargoed.

Apr 2007	Bronze Soldier of Tallinn Controversy	Oil supply disruption (rail)	Russian Federation	Estonia
Jun 2007	Sale of Yukos's stake in refinery to Polish PKN Orlen by Lithuania	Oil supply disruption (allegedly) for technical reasons and environmental risks (Druzhba pipeline), never reopened/repaired	Russian Federation	Lithuania
Jul 2008	Agreement on deployment of radar for antiballistic missile shield	Oil supply disruption (Druzhba pipeline), (allegedly) for technical reasons	Russian Federation	Czech Republic

The Early Use of Oil as a Foreign Policy Tool: the 1930s and 1940s

Oil was first considered as part of sanction regimes by the League of Nations against the Italian Kingdom in 1935 and first used by the United States against the Japanese Empire in 1941.

The Italian Invasion of Ethiopia 1935. In response to Italy's invasion of the Ethiopian Empire on October 3, 1935, the League of Nations imposed several sanctions in November 1935: 1) a ban on arms trade to both kingdoms, 2) a ban on financial transactions between members of the League of Nations and the Kingdom of Italy, 3) a ban on imports by members of all goods other than gold or silver bullion and coin from the Kingdom of Italy or its possessions, 4) a ban of the export of articles considered necessary for the prosecution of the war by members to the Kingdom of Italy (Ristuccia 2000). A proposal to add coal, oil, pig iron, and steel to the embargoed goods was discussed in November 1935 but abandoned in January.[8] A new proposal for an oil embargo was put forward in March 1936 but the timetable for sanctions was overtaken by events. On the continent, Adolf Hitler denounced the Treaty of Locarno and German troops occupied the Rhineland in March 1936 while in East Africa, the Italian forces defeated the Ethiopian armies and occupied Addis Ababa in May 1936, incorporating Ethiopia into the Italian Empire. The proposed embargo on oil was never implemented and the remaining League of Nations sanctions were lifted in June 1936.[9] Proponents within the British and French governments had considered oil a strategic good required to win a modern mechanized war and the Italian Kingdom lacked direct access to oil. Based on the relatively short duration of the military operations and existing Italian stockpiles, however, Ristuccia (2000, 86 and 107)

[8] According to Article X of the Covenant of the League of Nations both countries had committed themselves to respect and preserve each other's territorial integrity and political independence.
[9] According to Ristuccia (2000) the proposal was opposed within the British and French cabinets while Baer (1973) argues that both the British and French governments independently decided to postpone the decision on the oil embargo in order to seek a conciliatory solution.

dismisses the military efficacy of an oil embargo and argues, that an oil embargo would have had serious consequences for the Italian road transport system and indirectly on Italian industrial production.[10] In addition, the sanctions did not include the United States and the lack of American support would have undermined their chances of success.

The 1941 United States Oil Embargo against Japan. Security of an oil supply played an important role in Japanese military objectives. The Japanese Empire converted its naval fleet to oil after World War I and imported roughly 80 percent of its fuel supplies from the United States.[11] The Japanese invasion of China and Southeast Asia in 1940, the signing of the Tripartite Pact in September 1940, and the vision of a Great East Asia Co-Prosperity Sphere set Japan on an increasingly confrontational course with the United States, which sought to deter the Southward expansion of Japan using both economic and military pressure as well as ill-fated diplomatic negotiations.

In response to the Japanese presence in French Indochina, the U.S. Congress passed the Export Control Act in July 1940, banning the export of aircraft parts, minerals and chemicals without license. Three weeks later export restrictions were placed on scrap metal and gasoline of 87 octane or higher. In October and November 1940, Japan dramatically increased its orders of oil and bought tanks for storing over one million barrels of oil compared to the purchase of tankage for 40,000 barrels the entire previous year. Barnhart (1987, 216) argues that it became essential to the United States to prevent the build-up of Japanese war reserves in order to deter it "by weakening the forces it could muster." On July 26, 1941, President Franklin D. Roosevelt (1941) by Executive Order No. 8832 froze all Japanese financial assets and required licenses for

[10] Dependent on a pledge of the United States to maintain exports at pre-sanction levels.
[11] The search for alternative sources including synthetic fuel programs and other oil producers proved futile (Sagan 1988).

their use, including for purchases of oil. On July 28, 1941, Japan invaded southern French Indochina and by August 1941 a complete embargo on oil and gasoline shipments was in place. The United States was, moreover, able to get most major oil exporters including the United Kingdom through its empire and the Netherlands through the East Indies to join the embargo.

According to Sagan (1988, 907 and 911), the U.S. oil embargo changed the calculus and added an immense time pressure on Tokyo. Japan had no secure source of oil for its Imperial fleet and its limited oil reserves were being depleted each day that passed.[12] Barnhart (1987, 236 and 239) concludes that the asset freeze led to what the United States had hoped to avoid, the Japanese decision to advance Southward as well as the failure of the Hull-Nomura negotiations as Japan could neither accept a solution leaving it dependent on American benevolence nor American demands to withdraw from China. Japan attacked Pearl Harbor on December 7, 1941.[13]

The Emergence of Middle Eastern Oil in the 1950s

The decade after World War II saw the reconstruction of the war-torn countries of Central Europe as well as the beginning of their post-war economic expansion or *Wirtschaftswunder* leading to a corresponding increase in demand for energy. The 1950s also saw the first use of oil as a policy instrument by itself. The nationalization of energy assets as well as transport infrastructure prompted a boycott by European oil companies of Iranian oil in 1951. In addition, Saudi Arabia implemented an embargo on oil for select Western European

[12] Japan consumed an estimated 12,000 tons of oil each month.
[13] In June 1941, moreover, Germany launched operation Barbarossa and as part of the drive into Russia advanced deep into Ukraine in order to capture Caspian oil fields and cut off Soviet access (Crane et al. 2009). Both Japanese and German attempts to secure oil resources were not unfounded as both countries suffered from shortages of diesel, gasoline and aviation gasoline.

countries after the Egyptian nationalization of the Suez Canal triggered a military operation by Great Britain, France, and Israel in 1956.

The Nationalization of the Iranian Oil Industry 1951. Daoudi and Dajani (1985) argue, that the first and major use of the oil weapon took place in March 1951 when Iranian Prime Minister Mohammad Mosaddegh nationalized the Iranian oil industry, including taking possession of the fifty-year old concession to British Petroleum (BP). Major Western oil companies reacted strongly and boycotted Iranian oil, which led to a severe deterioration of the already faltering Iranian economy and contributed to the outcome of the coup initiated by the U.S. and British intelligence services that restored Sha Mohammad Reza Pahlavi in 1953.

The Suez Canal Crisis 1956. In July 1956, Egyptian President Gamal Abdel Nasser nationalized the Suez Canal Company, owned by French private shareholders as well as the British and Egyptian governments, triggering the British-French-Israeli military intervention of October 1956 to regain control of the Suez Canal. In response, the Suez Canal and the Iraq Petroleum Company Pipeline in Syria carrying Iraqi and Saudi Arabian oil to the Mediterranean were blocked (Daoudi and Dajani 1985; Maull 1975). Saudi Arabia, which already refused to sell oil to Israel, responded with an oil embargo on France and Great Britain. While two-thirds of exports of oil from the Middle East were cut-off, this only led to a moderate increase in price for a short period of time as substitutes were found and some of the oil rerouted (Daoudi and Dajani 1985; Maull 1975). The economic and political pressure exerted by the United States, including delaying oil deliveries, as well as domestic political divisions and objections by European countries played a much greater role in bringing about an end to the fighting and the decision to withdraw by Great Britain and France in December 1956 and Israel in March 1957 (Daoudi and Dajani 1985).

These two early cases are a great example of how economic and political considerations and implications play out when energy is used as a foreign policy tool and furthermore demonstrate the impact that a supply or rather export disruption can have on a producer as well as the role of substitutes and alternate routing in diminishing the effect of a supply disruption on selected countries. The Arab oil embargoes of 1967 and 1973/4, however, left a much more lasting impression.

The Arab Oil Embargoes of 1967 and 1973/4

The Arab oil embargoes of 1967 and 1973/4 are examples of the emergence of collective action and independence by Middle Eastern oil producers using oil as an energy weapon with the explicit aim of achieving foreign policy aims as well as its limited success in altering the foreign policies of the targeted states.

The Six Day War. On June 6, 1967, one day after the Six Day War began, the oil ministers of Algeria, Kuwait, Libya, Iraq, Saudi Arabia and the Gulf sheikhdoms banned all exports of oil to the West. By the end of June, the general ban was replaced by selective embargoes against United States, Great Britain, and the Federal Republic of Germany, which provided political and/or military support to Israel (Daoudi and Dajani 1985; Matthews 1976; Maull 1975). Several reasons have been given for the lack of success of the Arab oil embargo of 1967, which ended on September 1, 1967. The West, especially, the United States had substantial oil reserves and the three embargoed countries were able import oil from Venezuela, Canada, and Iran. In addition, Western countries were in general not (yet) dependent enough on Middle Eastern oil while the embargo caused a significant revenue loss to the Arab countries (Matthews 1976). Daoudi and Dajani (1985, 3) argue, that the conservative oil-producing

regimes of Saudi Arabia, Kuwait, Libya and the Gulf Sheikhdoms made no serious attempt to enforce the embargo because of their economic, military and political ties to the West. Furthermore, enforcing the embargo in practical terms was difficult because multinational oil corporations were in control of all phases of the Arab oil industry: exploration, production, transportation, refining, and marketing.

The Arab oil embargo of 1967 did, however, set a precedent for collective action by the Arab producers (Crane et al. 2009, 6). The Organization of Arab Petroleum Exporting Countries (OAPEC) was established in 1968 with the intent to initiate the closest possible cooperation between its members and the principal objective of promoting of economic cooperation between its members in the petroleum industry,[14] including joint commercial ventures, such as a tanker fleet, a dry dock, and an oil exploration and services company (Mikdashi 1974, 20; Maachou 1983, 10). While OAPEC has served to coordinate the energy policies of its member countries, Matthews (1976, 19) argues, that OAPEC was established for the explicit purpose of using Arab oil as a political weapon in the Arab-Israeli conflict.

The Yom Kippur War. After an Arab coalition led by Egypt attacked Israel on Yom Kippur October 6, 1973,[15] OAPEC implemented an embargo against countries supporting Israel in the war. On October 17, 1973 an OAPEC conference in Kuwait decided to reduce production by a minimum of 5 percent of the previous month's levels to be followed by additional 5 percent

[14] Clause two of the treaty text establishing OAPEC establishes as "principle objective," the "co-operation of the members in various forms of economic activity in the petroleum industry, the realisation of the closest ties among them in this field, the determination of ways and means of safeguarding the legitimate interest of its members in this industry, individually and collectively, the unification of efforts to ensure the flow of petroleum to its consumption markets on equitable and reasonable terms" (Maull 1975).

[15] The main belligerents being Egypt and Syria joined by expeditionary forces from Algeria, Iraq, Jordan, Libya, Morocco, Saudi Arabia, and Tunisia as well as Cuba.

cuts every month (Maull 1975).[16] Saudi Arabia and Qatar immediately reduced production by 10 percent and Libya by 5 percent, which together with Abu Dhabi embargoed oil exports to the United States. Following President Richard Nixon's request to Congress to approve a 2.2 billion dollar military aid program to Israel, Saudi Arabia placed an embargo on all exports to the United States, which was subsequently applied by all other Arab producers and extended to Canada, Japan, the Netherlands and the United Kingdom.[17] According to Maull (1975, 6), the embargo of the Netherlands included the port of Rotterdam and was thus aimed at the heart of the European oil distribution system.[18] On November 4, 1973, the Arab oil ministers standardized the oil production at 75 percent and then on December 24 increased it to 85 percent of the September production levels. The production cuts caused the world price of oil to nearly quadruple from about 3 dollars a barrel to almost 12 dollars by January 1974.[19]

The oil embargo's goal was to use economic pressure to persuade the "international community [to] compel Israel to relinquish our occupied territories" as stated in the declaration of 17 October 1973 (quoted in Licklider 1988; Maull 1975). It has been argued that the oil embargo was not effective (Licklider 1988; Maull 1975). Economically, some Arab oil made it through the oil embargo. International oil companies, furthermore, managed to disperse the impact relatively evenly among the OECD countries by diverting Arab oil away from and providing non-Arab oil to the embargoed countries.[20] Politically, the embargo neither led to an immediate policy reversal by Canada, Great Britain, Japan, the Netherlands and the United States

[16] Iraq pursued its own policies at the time and in general did not partake in the decisions described here as the ones of the Arab oil ministers.
[17] Later also extended to Portugal, Rhodesia and South Africa.
[18] Egypt, Syria and Tunisia did not announce any cuts. Iraq embargoed supplies to the United States and the Netherlands but otherwise followed its own policy nationalizing American and Dutch oil interests (Maull 1975).
[19] The OAPEC embargo against the United States was lifted on March 18, 1974 the embargo against the Netherlands only on July 10, 1974.
[20] This is a noteworthy difference in comparison with the natural gas market discussed below.

(Licklider 1988; Maull 1975) that could have compelled Israel to withdraw from the occupied territories.[21] Maull (1975, 10) concludes that "[t]he fact that the oil weapon was sheathed again before any of the Arab states objectives had been achieved underlines that its success was not unqualified." It has, however, also been noted that the diplomatic involvement of the United States increased significantly during the oil crisis (Licklider 1988)[22] and that, in the long run, the net effect was "a significant rhetorical shift toward the Arab position" by all five countries (Licklider 1988, 274).[23] In response to the oil embargo, moreover, the United States, other Western countries and Japan implemented measures, including the establishment of the International Energy Agency (IEA) in 1974,[24] to reduce Western vulnerability to future oil supply disruptions (Crane et al. 2009).

In sum, neither of the Arab oil embargoes was directly instrumental in bringing about a fundamental foreign policy shift in the targeted states, in part due to the availability of substitutes, the management by multinational oil corporations of the oil crises (and as such the international the oil market) and their control of the oil industry, and the porousness of the oil embargoes themselves. Starting in the 1990s, however, the Russian Federation became a new source of oil supply disruptions.

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[21] Apart from the refusal of European countries, with the exception of Portugal, which allowed the United States to use its bases on the Azores, to allow the United States to use airbases and airspace to supply Israel with arms.
[22] Secretary of State Henry Kissinger's shuttle diplomacy was instrumental in bringing about the first and second disengagement agreements between Israel and Egypt in January 1974 and September 1975 as well as the disengagement agreement between Israel and Syria in May 1974.
[23] Policy Statements by the European Community as well as votes in the United Nations became more sympathetic towards the Arab position. The United States spoke more favorably of the Palestinians' rights and their inclusion in peace negotiations and was more willing to exert pressure on Israel in the search for a settlement.
[24] The original members were Austria, Belgium, Canada, Denmark, Germany, Ireland, Italy, Japan, Luxembourg, The Netherlands, Norway (under a special Agreement), Spain, Sweden, Switzerland, Turkey, United Kingdom, and the United States; later joined by Greece (1976), New Zealand (1977), Australia (1979), Portugal (1981), Finland (1992), France (1992), Hungary (1997), Czech Republic (2001), Republic of Korea (2002), Slovak Republic (2007), Poland (2008), Estonia (2014), and Mexico (2018).

Russian Oil and the Supply Disruptions of the 2000s

World War I and the Russian Revolution left the Soviet Union's oil production facilities from Tsarist times largely destroyed and once oil exports resumed in the late 1920s, they were soon dampened by the outbreak of the Great Depression (Epstein 1986). As part of the German-Soviet Commercial Agreement of February 1940, the Soviet Union subsequently supplied Nazi Germany with oil in exchange for war material, machinery, technology and raw material until Germany invaded the Soviet Union in June 1941. Soviet oil production facilities were again largely destroyed during the World War II and it was not until the late 1950s that Soviet oil production began to grow more rapidly.[25] Previously, oil exports had been hampered by the fact that none of the major companies handled Soviet crude oil as part of an informal but effective boycott. However, in 1960 ENI (Ente Nazionale Idrocarburi, National Hydrocarbons Authority), the Italian state-owned oil and gas company, challenged the monopoly of the major companies as suppliers of crude oil and signed an agreement for Soviet oil imports (Stern 1987, 27). The completion of the Druzhba pipeline, described in detail below, in 1964 facilitated the growth of oil exports and the closure of the Suez Canal in 1967 led to a further increase in Western interest in the import of Russian oil in the late 1960s (Goldman 1972). Fields in the Urals and Siberia were developed in the 1960s and by 1973 the Soviet Union had become the world's largest producer of oil. Moreover, the Soviet Union profited from a number of oil shocks: the Arab oil embargo of 1973/4, the outbreak of the Iranian revolution in 1977 when riots against the Shah first closed down the Iranian oil fields, and Iraq's invasion of Iran in 1980 that again triggered stockpiling of oil (Epstein 1986).

[25] McDivitt (1961) mentions that the Soviet Union started to export oil in 1950 but, according to Joesten (1958), 1957 was the first postwar year in which the Soviet Union had a surplus of oil available for export.

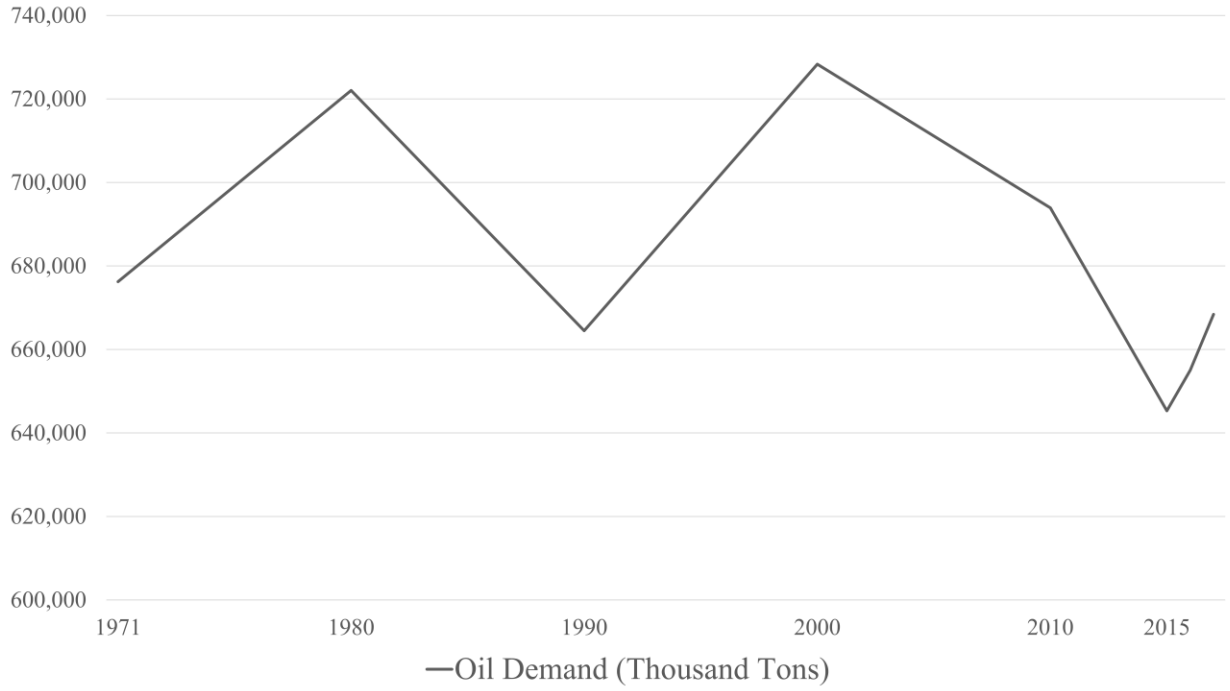


Figure 2.2. European Oil Demand, 1971-2017
Source: International Energy Agency (2018b), Oil Information. All rights reserved.

In 2016, oil remained the most used fuel in the world and its share in the energy mix increased to 31.9% in 2016 (International Energy Agency 2018b). In 2016, Europe's demand for oil increased by 1.5% and preliminary data indicate a growth of 2.0% for 2017. Notably, Poland (11.6%), Germany (2.5%) and France (3.4%) showed strong increases in demand in 2017. Figure 2.3 shows the development of the long-term demand in Europe as well as the increasing growth from 1971-2017.

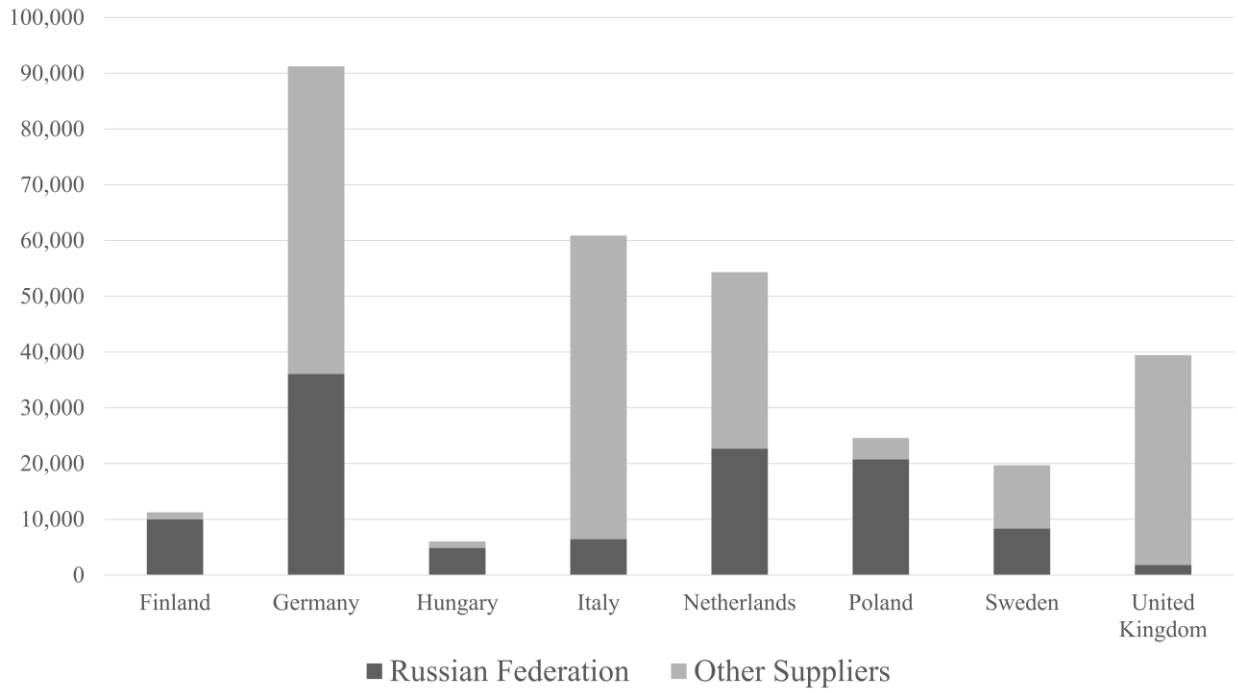
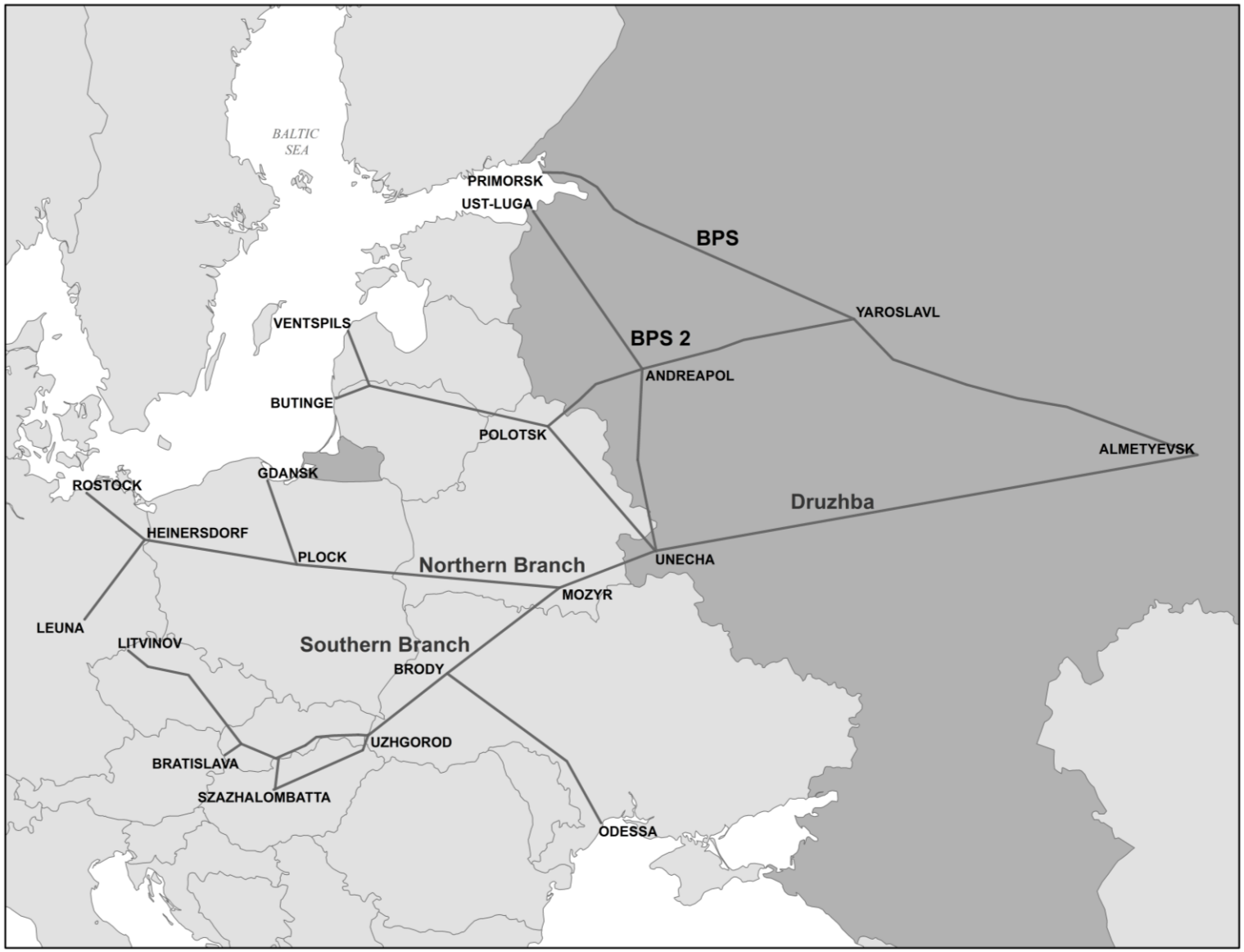


Figure 2.3. OECD European Countries Imports of Crude Oil, 2016 (Thousand Tons)
Source: International Energy Agency (2018b), Oil Information. All rights reserved.

In 2016, Russian crude oil made up about 28% of Europe's total crude oil imports. European countries continue to rely on Russian crude oil imports. As Figure 2.3 demonstrates, especially, countries in close proximity to the RF such as Finland, Poland, and Hungary continue to rely to a large extent on Russian crude oil imports.

Today, Russian crude oil is mainly delivered through the Druzhba pipeline, built in the early 1960s, as well as the recent Baltic Pipeline System (BPS and BPS 2) (shown in Map 2.1 below), both of which encountered Western criticism and opposition.

Map 2.1. Major Oil Export Pipelines to Western Europe: Druzhba and BPS



The Druzhba Pipeline.[26] In December 1959, agreements were signed in Moscow to construct a cross-country crude oil transmission pipeline (or trunk line) (*Annual Register of World Events: A Review of the Year 1959.* 1959, 174). The pipeline would start in Almetyevsk in Tartarstan collecting oil from Western Siberia, the Urals and, to a smaller extent, the Caspian Sea, and run to Unecha from where a branch would go to Ventspils while the main pipe continued westward to Mozyr in Belarus. In Belarus it would divide into two branches: the northern branch to Poland and the German Democratic Republic and the southern branch through Ukraine to Czechoslovakia and Hungary ("History," n.d.). The Druzhba pipeline was officially commissioned in October 1964[27] and by 1974, Druzhba-2 was constructed, more than doubling the export capacities of the Soviet Union. With about 4,000 kilometers, the Druzhba pipeline remains one of the longest oil pipelines and pipeline networks in the world.

The Baltic Pipeline System. The BPS was completed in 2001 and opened a direct export route for oil from the Timano-Pechersk region, Western Siberia and Ural-Povolzhye through the port of Primorsk. In June 2006, the construction of the Baltic Pipeline System-2 (BPS 2) began and in March 2012 the first oil delivered through the BPS 2 departed the new oil port at Ust-Luga ("History," n.d.).

Despite an early apprehension about the Soviet Union waging the Cold War by economic means (see for example McDivitt 1961; Joesten 1958), the Soviet Union was a reliable supplier

[26] Also referred to as the Friendship or COMECON Pipeline and COMECON being the Council for Mutual Economic Assistance (COMECON), an economic organization of Eastern Bloc and other communist states under the leadership of the Soviet Union established in 1949.
[27] The first section of the pipeline from Brody in Ukraine to Bratislava in Czechoslovakia was opened in December 1961. Hungary opened its section in September 1962, East Germany and Poland their sections in December 1963 (*New York Times* 1962; *New York Times* 1963a; *New York Times* 1963b).

throughout the Cold War.[28] After the end of the Cold War and the turmoil following it, however, both the Druzhba pipeline and BPS became the center of Russian oil supply disruptions and transit and fees disputes raised the specter of oil being used as a foreign policy instrument.

Latvia. In April 2002, Transneft, the Russian state-owned oil transport pipeline company, reduced oil deliveries to the Latvian port of Ventspils and after becoming a trickle by November, deliveries ceased completely in mid-December. In parallel, Transneft started redirecting oil to the newly built BPS (*Oxford Analytica Daily Brief Service* 2003a). Scholars attribute the decision to reroute oil shipments through Russian controlled or owned facilities to a desire by Russian leaders to gain more control over the supply of energy to Latvia (Pirog 2007). While Ventspils was handling 76,000 barrels per day (b/d) compared to 296,000 b/d the previous year, the president of Transneft Semyon Vainshtok reportedly told Vedomosti, a Russian business paper, that Transneft was interested in acquiring shares of Ventspils Nafta and would increase deliveries once it had become a stakeholder. Crane et al. (2009, 29) argue that once the new terminals had been built, commercial interests led to the cessation of shipments through Ventspils. Transneft began to direct oil to ports that are more costly (the port of Primorsk freezes in winter leading to higher shipping costs) or less modern and less efficient than Ventspils in order to capture the fees within Russia or Russian-owned firms (*Oxford Analytica Daily Brief Service* 2003a).[29]

Belarus. On January 8, 2007 Transneft ceased oil deliveries through the Druzhba oil pipeline. The shutdown of the pipeline followed a last-minute agreement reached between Russia

[28] With the exception of cancelled oil deliveries to Israel by Soviet oil trading company Sojuz Neftexport in 1956 during the Suez Canal Crisis (Joesten 1958, 5).
[29] The complete cessation of oil shipments through Latvia not only had a profound impact on the port terminals in Ventspils but also on Latvian state revenues, having accounted for up to 25% of GDP according to some reports (*Oxford Analytica Daily Brief Service* 2003a).

and Belarus regarding the supply of natural gas to Belarus (see Chapter 3 -). While the negotiations were ongoing, Russia also imposed a duty of $180 per ton on oil sold to Belarus as it abandoned its 16-year-old policy of subsidizing oil export sales to Belarus by not charging Russian export taxes. Belarus responded with a $45 per ton transit fee on Russian oil shipped through the Druzhba pipeline and siphoned off[30] oil. Oil shipments resumed on January 11 after Belarus lifted the tariff and Russia agreed to start negotiations.

The shutdown of the pipeline triggered a wave of political protest. German Chancellor Angela Merkel called Russia's shutdown of the pipeline "unacceptable" and maintained that Russia risked its credibility as a reliable energy partner (*The Guardian* 2007). Although the dispute was resolved within a few days and Russia succeeded in increasing the price of oil sold to Belarus, the shutdown of the Druzhba pipeline "damaged Russia's reputation as a reliable supplier of energy to the European Union" (Crane et al. 2009). Although the refineries held enough reserves to continue operating, limiting the impact of the oil supply disruption to other countries, the shutdown did affect oil deliveries to Germany, Poland, and the Ukraine.

Czech Republic. On July 8, 2008, the United States and the Czech Republic signed an agreement to allow the United States the deployment of its antiballistic missile shield in the Czech Republic despite strong Russian objections and threats of a military response.[31] While American and Czech officials maintained that the radar component would defend NATO members against long-range weapons from the Middle East, particularly Iran, Russian President Dmitri Medvedev as well as Russian Prime Minister Vladimir Putin both maintained that the missile shield posed a threat to Russian security (Dempsey and Bilefsky 2008). Three days later,

[30] To siphon off means here to take gradually from the Druzhba pipeline.
[31] A second agreement to address the legal status of American personnel to be deployed at the radar base still had to be negotiated and both treaties still required the ratification by the Czech legislation.

Czech officials reported that the flow of Russian oil via the Druzhba pipeline was declining suspecting a connection with the signing of the agreement only a few days earlier (A. E. Kramer 2008). The disruptions, which the RF claimed were of a technical nature, lasted until December.

Estonia. Estonia's relocation of a Soviet World War II monument, a bronze soldier, away from the center of Tallinn on April 26, 2007 led to riots by ethnic Russian youth in which one man was killed and hundreds were detained and sparked a political row between the Russian Federation and Estonia. Only a few days later, Russia announced on May 2, 2007 repairs to the railways to Estonia (Parker and Wagstyl 2007). The Russian rail monopoly maintained supplies were disrupted because of planned maintenance on the rail link to Estonia and denied any political motives.[32] However, traders argued that it was linked to the political dispute surmising that "[i]t was bound to happen, given the recent political dispute" (Zhdannikov 2007). The dispute also triggered demonstrations by Kremlin-loyal protesters in Moscow.[33] The oil cutoff revived Western fears that the Russian Federation was using its energy as a political weapon against the former-Soviet neighbors ("Factbox: Russian Oil and Gas as Political Weapon?" 2007; Parker and Wagstyl 2007; Zhdannikov 2007).

Lithuania. When the Russian government broke up Yukos International, the Lithuanian government auctioned off Yukos's stake in the Mazeikiai Nafta oil refinery and processing plant, which was primarily supplied with oil via the northern branch of the Druzhba pipeline. In June 2007, the Polish oil refiner and petrol retailer PKN Orlen and not one of the other bidders, including the two Russian companies Lukoil and TNK-BP (acquired by Rosneft in 2013), won

[32] Exports of steam coal through Estonia were also halted for the month based on a shortage of railway wagons. Cyberattacks on Estonian organizations including its parliament, banks, ministries, newspapers also coincided with row about the Bronze Soldier of Tallinn relocation (see for example Herzog 2011).
[33] Demonstrators stormed a newspaper office shortly before the Estonian ambassador arrived and the car of the Swedish ambassador was mobbed after visiting the Estonian ambassador.

the bid. The next month, Transneft closed down the Druzhba pipeline stopping oil deliveries to Mazeikiai Nafta for technical reasons and the environmental risks of a leak (A. E. Kramer 2006d). The Lithuanian government suspected that the shutdown was politically motivated and a response to the sale of Yukos' stake to PKN Orlen. Although the shutdown was not used to achieve a specific political goal, it seems to have been meant to be "a message concerning the potential costs of thwarting Russian interests" (Crane et al. 2009, 29). The pipeline was not reopened.[34]

In sum, although some oil disruptions may have commercial interests at their source, the (geo)-political dimensions of the Russian Federation using oil as a foreign policy tool to influence both commercial and political decisions in the former Soviet republics are difficult to dismiss. Originally based on transport by pipeline, train, and barge, the international transport of oil now mostly occurs via tankers. Tanker transport, which is flexible and allows for frequent changes in port destinations, in turn has led to the emergence of a global oil market (Shaffer 2009). Energy pipelines in contrast

> link suppliers and consumers in a long-term relationship, require long-term investment, are highly vulnerable to security threats, and are directly affected by the political relations between the linked states. (Shaffer 2009, 47)

Since natural gas transport predominantly relies on transport via pipelines, natural gas offers another foreign policy tool to energy suppliers and has received increasing scrutiny in the past decades.

[34] Shortly prior to the shutdown, Mazeikiai Nafta had started receiving tanker oil allowing it to continue production albeit at a higher cost and consequently loss of revenue.

Chapter 3 - Soviet and Russian Natural Gas for Western Europe

Unlike oil, natural gas is not (yet) easily and economically transported by tankers (Crane et al. 2009; Ericson 2009; Goldthau 2008; Goetz 2007; 2014; Shaffer 2013; Stulberg 2012). This reality shapes how natural gas is used as a foreign policy tool. Instead, the cheapest method to transport natural gas to consumers is in compressed, gaseous form via long-distance, large-diameter pipelines. Natural gas trade thus depends upon extremely high up-front cost in relation-specific assets (Yarbrough and Yarbrough 1992) that are both difficult and uneconomical to duplicate and therefore lead to a "natural monopoly" (Ericson 2009). Additionally, gas storage is expensive, technically difficult, and limited (Ericson 2009; Goetz 2014) and while the existing gas storage facilities can provide natural gas reserves for two to three months in case of a complete disruption, they are designed to ensure supplies during the winter and require replenishment during the warmer season (Goetz 2014). Second, the natural gas market has a bilateral character and relies on long-term commitments (usually 25 years) between a small number of involved contractual parties (Crane et al. 2009; Ericson 2009; Goldthau 2008; Goetz 2007; Shaffer 2013). Additionally, separate regional markets exist rather than an international spot market comparable to the one for oil (Crane et al. 2009; Saivetz 2012). As a consequence, governments are often involved in negotiations, regulating the market, and controlling exports through state-owned companies (Shaffer 2013). Finally, and rather a trend, is the diminishing European production with a simultaneously increasing demand in Europe (Goldthau 2008; Shaffer 2013).

In sum, gas markets are highly inflexible and political compared to the oil market and may give suppliers critical leverage increasing the political dependence of buyers (Ericson 2009). It is therefore not surprising that the construction of natural gas pipelines and Russian

natural gas import dependence by Western European countries has received increasingly greater scrutiny. Before investigating the impact of Western European natural gas import dependence, it is important to understand the historical development of the East-West natural gas trade, the construction of Soviet/Russian export pipelines and previous Russian natural gas supply disruptions that have raised the specter of a natural gas weapon. An appreciation of the historical emergence of Western European Russian natural gas import dependence will, in conjunction with the current and forecasted Western European natural gas statistics, provide the necessary understanding for the later analysis of the impact of Soviet natural gas import dependence.

Soviet Natural Gas for Western Europe

Between the end of World War II and the early 1960s, the Soviet Union developed into a natural gas producer and constructed a domestic pipeline network.[35] In the aftermath of the construction of the Berlin Wall in August 1961 as well as the Cuban Missile Crisis of October 1962, however, few would have thought that Western countries would within a few years start negotiations with the Soviet Union to import natural gas. In early 1964, the Soviet Union and Czechoslovakia agreed in principle on the construction of the Bratstvo (or Brotherhood) natural gas pipeline, essentially a follow-up on the Druzhba oil pipeline system.[36] The agreement demonstrated the Soviet Union's willingness to export its natural gas as well as the westward expansion of its natural gas pipeline system as far as Bratislava (Hoegselius 2013, 35–37).[37] Western European gas companies in the midst of tough negotiations with the Netherlands,

[35] The inability to produce quality large-diameter natural gas pipelines required the import of Western steel pipelines predominantly from Germany and Italy.
[36] The construction of the pipeline was completed by 1967.
[37] In June 1966, moreover, the Urengoy gas field was discovered in northwestern Siberia. The Urengoy gas field only started production in 1978 and natural gas was exported via Ukraine to Western Europe through the Urengoy-(Pomary)-Uzghorod pipeline as of January 1984.

Algeria, and/or Libya for large-scale gas imports at the time, came to regard the Soviet Union as an alternative or complementary trade partner for natural gas. This was in particular true for Austria, on the border of Czechoslovakia, and Italy, where ENI already imported Soviet oil. Indeed, existing oil contracts and reliable deliveries facilitated the initiation of natural gas contracts negotiations (Hoegselius 2013). Natural gas trade once initiated in the late 1960s became a success story and continued to expand thereafter despite and sometimes because of political events and upheavals.

In June 1966, official negotiations with ENI for the construction of a pipeline, the sale of Soviet natural gas through a long-term credit, as well as pipes and equipment for the Soviet natural gas industry started. OMV,[38] the Austrian state-owned oil and gas company, as well as VOEST,[39] the Austrian state-owned steel company, were also greatly interested (Hoegselius 2013, 51–52).[40] The announcement that VOEST would participate in the Soviet-Italian pipeline project and that Austria would become an importer as well as transit country was made during a visit of Nikolai Podgorny, the Chairman of the presidium of the Supreme Soviet (head of state of the Soviet Union) at VOEST's factories in Austria in November 1966. Both, Italy and Gaz de France, the state-owned gas company of France, confirmed its interest in importing Soviet natural gas and the Soviet Union announced the signing of a protocol with Czechoslovakia.

[38] Österreichische Mineralölverwaltung, Austrian Mineral Oil Administration
[39] Vereinigte Österreichische Eisen und Stahlwerke, United Austrian Iron and Steel Works. In the 1970s, it was merged with Österreichisch-Alpine Montangesellschaft and other companies to form VOEST-Alpine AG.
[40] Subsequent to the NATO embargo on exports of large-diameter steel pipe to communist countries of 1962, VOEST had formed an alliance with the German steel companies Mannesmann and Thyssen to re-export German steel pipes from Austria to communist countries in return for the use of Austrian sheet metal in the production of the pipes (See Chapter 6 -).

In June 1967, the Soviet Union used the World Gas Congress, a major triannual event organized by the International Gas Union (IGU)[41] that coincided with the outbreak of the Six Day War, to present itself as important and reliable natural gas supplier. Soviet representatives used their reputation as a reliable partner on the international oil market to buttressed their arguments (Hoegselius 2013, 57). One year later, on June 1, 1968, the Soviet Union and Austria signed a natural gas contract, which provided for the first delivery of natural gas in 1968 utilizing a 5 km interconnection to be built between the Bratstvo system and OMV's existing national grid and allowed for the later inclusion of France and Italy (*New York Times* 1968; Hoegselius 2013).[42] On September 1, 1968 Austria and the Soviet Union officially inaugurated Soviet natural gas deliveries to Austria – despite the invasion of Czechoslovakia on August 21, 1968 by the Soviet Union and other Warsaw Pact countries. Soon, however, another country, an originally unlikely partner, would become a driving force in the negotiations to import Soviet natural gas to Western Europe: the Federal Republic of Germany (FRG).

The FRG was initially an unlikely trade partner. In the mid-1960s, the political relations between the Soviet Union and the FRG remained strained. In addition, natural gas played only a minor role in Germany's energy mix, the first major agreement for the import of Dutch natural gas not located far from the main industrial center the Ruhr was signed in in 1963 and domestic natural gas was discovered in Northern Germany. Bavaria became the first *Land* to be interested in Soviet natural gas. Bavaria was eager to transform from an agricultural-mercantile to a modern industrial society without relying on north German energy (Hoegselius 2013, 70). The discovery of promising natural gas deposits gave an impetus to the development of a regional

[41] While not related to natural gas, Evangelista's *Unarmed Forces* (1999) studies the role of transnational actors, that is, prominent American and Soviet scientists and physicians, in influencing especially Soviet nuclear policies during the Cold War.
[42] For the details of the contract see Hoegselius (2013, 63ff).

pipeline network but the rapidly growing demand for natural gas, made it by the mid-1960s evident that the local resources would not suffice. Finally, the announcement that Austria would become an importer of Soviet natural gas while negotiations with Algeria stalled opened up the opportunity of importing Soviet natural gas to Bavaria (Hoegselius 2013, 74).

Two developments helped to further Bavaria's vision. The new German grand coalition government with Kurt Georg Kiesinger of the Christian Democratic Union (Christlich-Demokratische Union Deutschlands, CDU)[43] as Chancellor and Willy Brandt of the Social Democratic Party (Sozialdemokratische Partei Deutschlands, SPD) as vice chancellor and foreign minister replaced Ludwig Erhard's anti-Soviet, center-right coalition government in December 1966. The new government's concept of *Wandel durch Annäherung* (change through rapprochement) promised an improvement of German-Soviet relations. In addition, the NATO Council annulled the 1962 pipeline embargo in November 1966 (*New York Times* 1966; Hoegselius 2013, 74–75). However, when the Soviet Union made the "unconditional recognition of the GDR" a precondition for further negotiations on concrete projects in October 1967, German Soviet relations deteriorated again and neither the FRG nor the Soviet Union took official initiatives (Hoegselius 2013, 87).

Meanwhile the natural gas trade between Austria and the Soviet Union became perceived as a success story – little was known in the West about the fact that the Soviet Union curtailed supplies to the Ukraine, Belarus and the Baltics as the Galician gas field's production began to decline in order to fulfill its obligations and that contractual flows only normalized in 1971. By then, the situation in the FRG had also changed, natural gas had become much more popular, natural gas demand was growing, and Soviet natural gas was increasingly recognized as a

[43] Together with its sister party the Christian Social Union (Christlich-Soziale Union, CSU)

potential source of diversification from Dutch (and potentially British) natural gas. In addition, Brandt, as opposed to Erhard, concluded that in the aftermath of the invasion of Czechoslovakia in 1968, the Soviet Union would be keen to improve relations with the FRG and directed his efforts toward concrete opportunities of cooperation in the economic field. Combining the import of Soviet natural gas with the export of German steel pipes offered a unique opportunity (Hoegselius 2013, 106–7).

At this point, the Soviet Union took a more proactive stance again as well. At IGU meetings in Copenhagen in the summer of 1968 and in Leningrad in March 1969, the Soviet delegates again expressed their interest in Soviet-German natural gas trade and encouraged the West German business representatives to approach their government. In early April 1969, after high-level meetings had already been held in Cologne, Foreign Minister Brandt suggested to Soviet Ambassador Semyon Tsarapkin that the construction of a natural gas pipeline from the Soviet Union to Germany could revive Soviet-German trade relations and invited Soviet Minister of Foreign Trade Nikolai Patolichev to attend the German Industrial Trade Fair held in Hannover in April 1969 (Hoegselius 2013, 108). At the meeting there between Soviet and German delegates, both governments confirmed their interest in the construction of a natural gas pipeline from the Soviet Union to the FRG not only to deliver natural gas to Bavaria but northern Germany as well. In June 1969 official negotiations for the natural gas contract started.

After the federal elections on September 20, 1969, Brandt formed a social-liberal coalition with the Free Democratic Party (Freie Demokratische Partei, FDP) with Walter Scheel, the Chairman of the FDP, as the vice-chancellor and foreign minister. Subsequently, FRG shifted from focusing on mainly economic and technical cooperation to encompass political aspects as well. In this context, a successful outcome of the natural gas negotiations was considered to be of

great importance for German-Soviet relations (*Der Spiegel* 1969c; Hoegselius 2013). The Soviet-German natural gas contract,[44] providing for gas deliveries to start on October 1, 1973 and an annual volume of 3 billion cubic meters (bcm) to be reached within a six-year buildup phase, was officially signed on February 1, 1970 in Essen, headquarter to Ruhrgas AG (*Der Spiegel* 1970; *New York Times* 1970), which would become the largest natural gas import and distribution company in Germany.

In parallel, the Soviet Union had also been negotiating with France and Italy. The Soviet Ministry of the Gas Industry (or Mingazprom) was interested in economies of scale since building a pipeline from Siberia to Western Europe with less than 10-12 bcm per year would not be economically viable (Hoegselius 2013). The negotiations between France and the Soviet Union only began in earnest in September 1969 but an agreement-in-principle was soon reached according to which natural gas deliveries to France through Czechoslovakia and Germany would begin in 1977 reaching an annual volume of 2.5 bcm by 1980 (Hoegselius 2013; Lewis, Flora 1974).[45] On October 15, 1969 ENI also agreed to import 6 bcm per year (Doty, Robert C. 1969; Hoegselius 2013),[46] which together with the already contracted 1.5 bcm per year by Austria and the 3 bcm negotiated by Germany added up to 13 bcm per year – a volume large enough for a pipeline from Siberia to Western Europe to have an economic rationale. These initial contracts set the foundation for the future expansion of East-West natural gas trade.

[44] For details of the contract see *Der Spiegel* (1970).
[45] France declared in October that it would agree to start importing natural gas already in 1975.
[46] The Italian contract was formally signed on December 10, 1969 in Rome with natural gas deliveries starting in 1973 reaching an annual volume of 6 bcm by 1976.

The Extension Contracts of the 1970s

After the initial contracts, interest in Soviet natural gas only increased. Negotiations for a preliminary second agreement with Germany were concluded in April 1971 with deliveries starting in 1973 and an annual volume of 4 bcm to be reached by 1980 (Hoegselius 2013, 131).[47] A third agreement modeled on the previous two agreements was signed in 1974 providing up to 2.5 bcm per year (Stent 1981). Having started negotiations already in 1966, France signed a contract in August 1972 providing for the delivery of 2.5 bcm starting in 1976 and an annual volume of 4 bcm by 1980.[48] Austrian ÖMV also soon signed an agreement-in-principle to almost double its imports. Soon thereafter Finland signed an agreement for deliveries to start in January 1974 and reach 1.4 bcm per year by 1979 with 3 bcm per year as a long-term target. Soviet natural gas would reach Finland through the Finland Connector pipeline, an extension of the domestic Soviet natural gas pipeline system already supplying Leningrad (Hoegselius 2013; Heinrich, Andreas 2014).[49] Switzerland signed a contract in July 1980, negotiations with Belgium were reported as of Spring 1971, and Spain initiated talks after the conclusion of the first contracts with Germany and Italy (Hoegselius 2013, 132). Together with exports to be initiated or expanded to Eastern Europe total Soviet deliveries were set to grow from less than 5 bcm in the early 1970s to 24.7 bcm by 1975.

Central and Eastern European countries similarly rapidly increased the import of Soviet natural gas (Hoegselius 2013, 171). In 1973, Poland, Czechoslovakia and East Germany were already major Soviet natural gas importers. Bulgaria started importing Soviet natural gas in

[47] The contract was only signed on July 6, 1972 due to issues related to the credit arrangement for the countertrade in pipes and equipment (Lumpe 1972).
[48] For the first four years, however, ENI imported the Soviet natural gas of the French contract and France would import Dutch gas on which ENI had an option. Soviet gas would only be imported starting in 1980.
[49] It was expanded to an annual capacity of 20 bcm in 1999.

August 1974 and when Hungary was connected to the Bratstvo system through a branch pipeline from Uzghorod in 1975, Romania remained the only Soviet satellite not importing Soviet natural gas. In February 1976, moreover, ÖMV and ENI agreed to transit 1.5 bcm per year to Slovenia and Croatia and through a second contract Yugoslavia was to receive 1.65 bcm of Soviet natural gas per year through Hungary.

By the early 1970s, natural gas had become an attractive alternative to oil and its environmental properties were increasingly highlighted. There was "hardly any European country that did not take an interest in the possibility of gas imports from the East" (Hoegselius 2013, 167). Then came the first oil shock in 1973/4 and Soviet natural gas became part of the solution.

From Iranian to Siberian Natural Gas

In November 1975, a consortium of Western European energy companies agreed with the Soviet Union and Iran to increase natural gas imports over the next decade. Iran would start exporting Iranian natural gas in January 1981 (reaching an annual volume of 13 bcm by 1983) through a new pipeline to the Soviet Union and the Soviet Union would, in turn, export Soviet natural gas to Western Europe. Western Europe's interest in Iranian gas thus led to a de facto increase of its dependence on Soviet natural gas (*Der Spiegel* 1975; Hoegselius 2013, 172ff; Pace, Eric 1975).

By the late 1970s natural gas had become an important source of hard-currency earnings as well as domestic energy supply for the Soviet Union (Hoegselius 2013, 179). Siberian natural gas reached Western Europe in 1977. Natural gas from the giant Siberian Medvezhye gas field was transported west through the Northern Lights system, the supergiant Urengoy field was

scheduled to come on stream in 1978, and additional fields of similar size had been discovered substantially increasing the Soviet Union's natural gas reserves. Moreover, access to modern compressors was no longer an issue. Starting in 1978, the Soviet Union therefore expressed its interest in new export agreements with Western Europe (Heinrich, Andreas 2014; Hoegselius 2013). While negotiations were still ongoing, the Islamic revolution broke out in Iran and by July 1979 Iran cancelled the construction of the export pipeline (Whitney, Craig R. 1979; *New York Times* 1979). Western importers were now keen to import natural gas through the new pipeline as soon as possible (Hoegselius 2013, 180–83).

In fall 1979, the Soviet Union formally invited the major Western gas companies for negotiations in Moscow and, the Soviet invasion of Afghanistan notwithstanding, negotiations initiated in Spring 1980 as neither gas companies nor governments were "prepared to let political and ideological considerations jeopardize a technically and economically sound project" (Hoegselius 2013, 184). While the Reagan administration's opposition to the Yamal pipeline was criticized by Western European governments, declining overall demand following the economic recession eventually led to the conclusion of smaller contracts than initially envisaged. Ruhrgas was the first to sign a contract for an annual import of 10.5 bcm in November 1981. Then, the declaration of martial law in Poland by General Jaruzelski on December 13, 1981 threatened the project. Once again, however, geopolitical events did again not prevent the conclusion of Soviet natural gas import contracts. In January 1982, France signed a contract for an import of up to 8 bcm per year (deliveries beginning in 1984) (*UPI International* 1982), Austria for 1.5 bcm in June 1982 (deliveries beginning in 1984) (*UPI Archive: Financial* 1982), Italy for 6 bcm in 1983 (Hoegselius 2013, 188). Switzerland agreed to receive Soviet natural gas through German

networks. Turkey signed an agreement in February 1986 for 5-6 bcm per year, and Greece signed an agreement in October 1987 for 2.4 bcm (Hoegselius 2013, 199–200).

With the original partners increasing the import of Soviet natural gas according to their existing contracts, Soviet natural gas had by the mid-1980s become much more than a supplementary source of supply (Hoegselius 2013, 132). Moreover, European gas demand started growing again toward the end of the decade due to several trends (Hoegselius 2013, 201–2). First, natural gas, which emits half as much carbon dioxide as oil became more attractive when the debate on global warming took off in the late 1980 leading to the introduction of new carbon taxes and other policies. Second, subsequent to the Chernobyl disaster in April 1986, which cooled attitudes toward nuclear power (Lewiss 1987), large gas-fired power plants were seen as a viable alternative to existing nuclear power plants as well as the ones, which would no longer be built. Third, the neoliberal shift in politics led to the deregulation of energy sectors and new actors were eager to exploit the opportunities offered by combined-cycle gas turbine (CCGT) technology.[50] With an agreement for Norwegian natural gas supply reached in 1986 as well as increasing imports of Algerian gas through the Trans-Mediterranean pipeline supply was considered diversified enough in Western Europe justifying a further increase in imports of natural gas from the Soviet Union (Hoegselius 2013). Then, yet again, geopolitical events would raise questions about the robustness of the East-West trade of natural gas as the decade came to a close.

[50] Combined-cycle power plants use both a gas and a steam turbine to produce more electricity.

Russian Natural Gas

In June 1989 Hungary opened its borders initiating a process that would lead to the fall of the Berlin wall by November 1989 and the breakup of the Soviet Union into 15 independent countries in December 1991. Western Europe had imported Soviet natural gas since the first deliveries to Austria in 1968 without large contractual deviations. The breakup of the Soviet Union removed the existing structures as some countries ceased to exist and new ones emerged. Mingazprom was divided into several national bodies in the Russian Federation becoming the state-owned RAO Gazprom (renamed to OAO Gazprom in 1998). The All-Union Foreign Trade Organization (V/O) Soyuzgazexport, established in 1973, was first incorporated into Gazprom and in December 1991 became the state-owned trade entity (GVP) Gazexport before being privatized in 1993 as a Gazprom subsidiary and eventually renamed to Gazprom export LLC in 2006 (Gazprom Export n.d.). In addition, new agreements were required for the sale as well as transit of natural gas. The economic collapse in the former Soviet countries put in question the required maintenance and investment in the existing infrastructure as well as the ability of transit countries to pay for their natural gas imports from the RF. The latter would become especially critical as the RF aimed at increasing formerly subsidized Soviet natural gas prices to the world market level.

According to Hoegselius (2013, 210–11), Western European gas companies were, however, not pessimistic about the long-term prospects, believing that: 1) the end of the Cold War and the transition to market economies offered opportunities for Western technology to improve the existing grid as well as foreign investment; 2) pricing disputes and payment issues would be solved within a few years; 3) refurbishment of existing pipelines and a new contractual framework would increase technical reliability of supply; 4) Gazprom would transform into a

normal gas company abiding by market principles and business logics; and 5) the RF would take the place of the Soviet Union in guaranteeing export security. In other words, mutually beneficial cooperation was believed to solve existing problems.

With European natural gas demand forecasts adjusted upward, Dutch natural gas production reaching its peak and the future of Norwegian offshore fields uncertain, Russian gas became again very attractive for Western European countries leading to the conclusion of further contracts or the extension of existing ones (Hoegselius 2013, 212) . In 1994-5, for example, Gazprom signed an agreement of cooperation with Gaz de France[51] as well as an agreement on gas supply for 20 years with the Finnish company Neste (Gazprom Export n.d.). On October 15, 1998, a long-term contract was concluded with Transgas[52] for the supply of Russian natural gas to the Czech Republic until 2035 (Gazprom Export n.d.). In September 2000, a 20-year contract was also signed with Gasunie[53] and deliveries commenced October 1, 2001 via the Yamal-Europe pipeline (Gazprom Export n.d.).[54]

Repeated disruptions of natural gas supplies to and through Ukraine, for example in the Winter of 1999-2000 as well as in February 2004, and fluctuations in Ukrainian-Russian political relations, eventually led to an increased interest in alternative supply routes by both Western natural gas companies and the RF (Hoegselius 2013, 214). On September 8, 2005, Gazprom

[51] Now ENGIE, formed in July 2008 by the merger of Gaz de France and Suez.
[52] Now RWE Supply and Trading CZ.
[53] After the restructuring of Gasunie, GasTerra became Gazprom Export's partner.
[54] The European Union's Third Energy Package entered into force on 3 September 2009 aiming to improve the functioning of the internal market. It included give major areas: 1) the unbundling of energy suppliers from network operators; 2) the strengthening of the independence of regulators; 3) the establishment of the Agency for the Cooperation of Energy Regulators (ACER); 4) cross-border cooperation between transmission system operators and the creation of European Networks for Transmission System Operators, and 5) increasing the transparency in retail markets in order to benefit consumers (European Commission a). The ownership unbundling advocated by the EU led to the restructuring of the Western European natural gas and energy companies.

(51%), Wintershall (a subsidiary of BASF, now 15.5%) and E.ON Ruhrgas[55] (later to become PEGI, an E.ON subsidiary, now 15.5%) signed an agreement to construct a new pipeline through the Baltic Sea with a total capacity of 55 bcm per year. Gasunie (9%), and ENGIE (also 9%) would subsequently also acquire stakes. In 2006 Gazprom signed further agreements and extensions of existing contracts with European partners. The first contract with Denmark was, for example, signed between Gazprom and Dong Naturgas A/S company (gas is now supplied to Ørsted Salg & Service A/S) in 2006 for the supply of Russian natural gas for 20 years via the Nord Stream pipeline (Gazprom Export n.d.). In 2009 both companies agreed to double the quantity to 2 bcm from 2012 for a period of 18 years (*Nordic Business Report* 2009).

In June 2015, moreover, Gazprom, ENGIE, ÖMV, Royal Dutch Shell, and E.ON[56] agreed to build Nord Stream 2, with the aim of doubling the capacity of Nord Stream.[57] At the same time, Gazprom continued to extent existing contracts, in December 2015, for example, the contract signed March 12, 1994 with the Finnish gas transport company Gasum was extended until December 31, 2031 (Gazprom Export n.d.) and on June 5, 2018 the existing contract with ÖMV (ÖMV Gas Marketing & Trading GmbH) was extended from 2028 to 2040 (Gazprom Export n.d.).

[55] Ruhrgas was acquired by E.ON in March 2003 and renamed to E.ON Ruhrgas. Based on the Third Energy Package of the European Union, the gas transportation and storage operations of E.ON Ruhrgas were transferred to E.ON Gastransport and renamed to Open Grid Europe (OGE) in September 2010. In May 2013, E.ON Ruhrgas was merged with E.ON Global Commodities SE (now Uniper Global Commodities SE).
[56] Now Uniper.
[57] Since Poland blocked the creation of a joint venture, Nord Stream 2 AG was established in April 2017 as a subsidiary of Gazprom and ENGIE, ÖMV, Royal Dutch Shell, and Uniper signed financing agreements with Nord Stream 2 AG.

Soviet and Russian Natural Gas Export Infrastructure to Europe

With the political stakes attached to the successful beginning of East-West natural gas trade, the Soviet Union began an extraordinary expansion of export infrastructure in the 1960s. Contracts were expanded, and new ones made leading to the expansion of the existing pipeline network. Increasing natural gas demand in Western Europe warranted the high investments in the expansion of the Soviet and later Russian natural gas export infrastructure. A brief overview of the major pipelines built since the 1960s illustrates the emergence as well as the dimension of today's pipeline network to Western Europe.[58]

The Bratstvo Pipeline. In 1964, the Soviet Union and Czechoslovakia agreed on the construction of the Bratstvo (or Brotherhood) export pipeline. Its first section from Ukraine to Czechoslovakia and Austria opened in 1967 and 1968, respectively, while a separate line delivered gas to Poland. To enable further exports, the construction of a double pipeline parallel to the existing Bratstvo pipeline from Shebelinka to Uzghorod, begun in in 1971, was completed in 1974. The pipeline was thus extended to the GDR and FRG in 1973,[59] Italy in 1974, Bulgaria in 1974, Hungary in 1976, Yugoslavia in 1979 and Romania in 1980 (Heinrich, Andreas 2014). With a capacity of up to 100 bcm per year the Bratstvo transits through Ukraine to Slovakia where it splits into a branch to the Czech Republic and from there in the direction of Waidhaus and Hora Svate Kateriny and a second branch to Austria from where Russian natural gas is delivered to Italy, Hungary, Slovenia and Croatia (Gazprom Export n.d.).

[58] Not included are the South Stream, which was cancelled in 2014 and replaced by Turk Stream, Blue Stream, which transports natural gas from Russia to Turkey through the Black Sea, and the Power of Siberia pipeline from the RF to China.
[59] Due to delays in the construction, natural gas was originally supplied to the FRG through the original Bratstvo pipeline leaving Ukraine and Belarus undersupplied.

The Northern Lights Pipeline. In the 1960s, the Brotherhood pipeline and the natural gas from Galicia's fields proved to be insufficient for the prospected exports of Soviet natural gas (Hoegselius 2013). The development of the Vyktyl field discovered in 1964 near Ukhta and the start of its production in 1968 prompted the construction of another major gas transmission: Northern Lights (Siyanie Severa) (Heinrich, Andreas 2014). The construction of the first section of the Northern Lights system started already in 1967 – thus before the signing of the major natural gas export contracts and the section from Ukhta to Thorzok was completed in late 1969, initially tabbing natural gas from the Vuktylskoe field and only later from Siberia. Russian natural gas from the Komi region was to reach Western Europe through two routes: a Northern route supplying European Russia, the Baltics, Belarus, Western Ukraine and Western Europe and a southern route to supply the Urals and other regions (Hoegselius 2013).

The Soyuz Pipeline. In June 1974, Bulgaria, Czechoslovakia, East Germany, Hungary, Poland and the Soviet Union[60] agreed on the construction of a 2,750 km long pipeline from the Orenburg gas field to Uzhgorod. Each country was to build a section of the pipeline and receive 2.8 bcm per year in return. The Soyuz (Union) pipeline (or Orenburg or Orenburg-Uzghorod Pipeline) was completed in 1978 and reached its full capacity by 1980. It is part of the Bratstvo system.

The Urgengoy-Uzghorod Pipeline. In the mid-1960s a series of new gas fields were discovered in Siberia[61] heralding the beginning of the "Siberian period" (Heinrich, Andreas 2014). In 1978, the Soviet Union proposed the construction of the Yamal export pipeline, comparable to the Soyuz pipeline but dedicated to the export of Soviet natural gas from the large

[60] Romania, having originally opposed the project, joined later.
[61] Gubkinsky and Zapolyarny in 1965, Komsomolsk and Urengoy in 1966, Medvezhye in 1967 and Yamburg in 1969.

Yamburg field solely to Western Europe. 1,850 km long, it was completed in 1983 and started delivering natural gas to Europe in 1984. Since the Yamburg gas field could not be brought online in time, its origin changed to the Urengoy gas field, hence the name Urengoy-Uzghorod Pipeline (Heinrich, Andreas 2014; Hoegselius 2013).

The Progress Pipeline. In 1985, Eastern European countries signed a multilateral agreement to construct the Progress Pipeline from the Yamburg gas field to Uzghorod parallel to the Urengoy-Uzghorod pipeline. For their part financial and technical part in the construction, the countries would receive natural gas starting 1989 for ten years (Heinrich, Andreas 2014).

Yamal-Europe Pipeline. In August 1993 the RF, Belarus, and Poland signed an intergovernmental agreement to construct a natural gas pipeline system for deliveries of natural gas from Torzhok via Belarus to Poland and Germany reaching eventually 67 bcm per year. In 1994, the pipeline was included in the European Union's Trans-European Networks for Energy (TEN-E) program and identified as a project of common interest.[62] The construction of the pipeline in Poland began in 1994. Constructed stepwise from west to east, the pipeline became operational in 2000 and reached its annual capacity of 33 bcm in 2006 after all compressor stations had been installed (Gazprom n.d.; Heinrich, Andreas 2014). Plans to construct a second leg of the pipeline were abandoned in the mid-2000s (Heinrich, Andreas 2014).

The Nord Stream and Nord Stream 2 Pipelines. Already discussed during Soviet times, a route through the Baltic Sea became a viable option after the collapse of the Soviet Union and gained momentum after the 2004 gas dispute between the RF and Belarus and the political revolution in Ukraine (Hoegselius 2013). Subsequent to the technical success of the

[62] Projects of common interests (PCI) are transnational infrastructure projects linking the energy systems of EU member states (European Commission b).

Blue Stream Pipeline that runs through the Black Sea (Heinrich, Andreas 2014), a basic agreement was reached in September 2005 to establish the North European Gas Pipeline company (NEGP, renamed to Nord Stream in 2006) to construct an offshore pipeline through the Baltic Sea from Portovaya Bay (near Vyborg) in the RF to Lubmin, near Greifswald in Germany through the Baltic Sea. The Nord Stream pipeline was included as a project of common interest in the TEN-E program already in 2000 and its status re-confirmed in 2006. The construction of the twin pipelines began in April 2010. The first string was inaugurated in November 2011 followed by the second string in October 2012, reaching total capacity of 55 bcm per year. Based on the success of the Nord Stream pipeline and expected stable European gas demand but declining domestic production, Nord Stream 2 was established in July 2015. Although not all construction permits had been received, construction of the pipelines from Narva Bay to Lubmin with an annual capacity of 55 bcm began in September 2018 and is scheduled to be completed by 2021. The major natural gas export pipelines to Western Europe are summarized in Table 3.1 below and shown in Map 3.1, including some connecting and planned pipelines for illustration.

Table 3.1. Natural Gas Export Pipelines to Western Europe

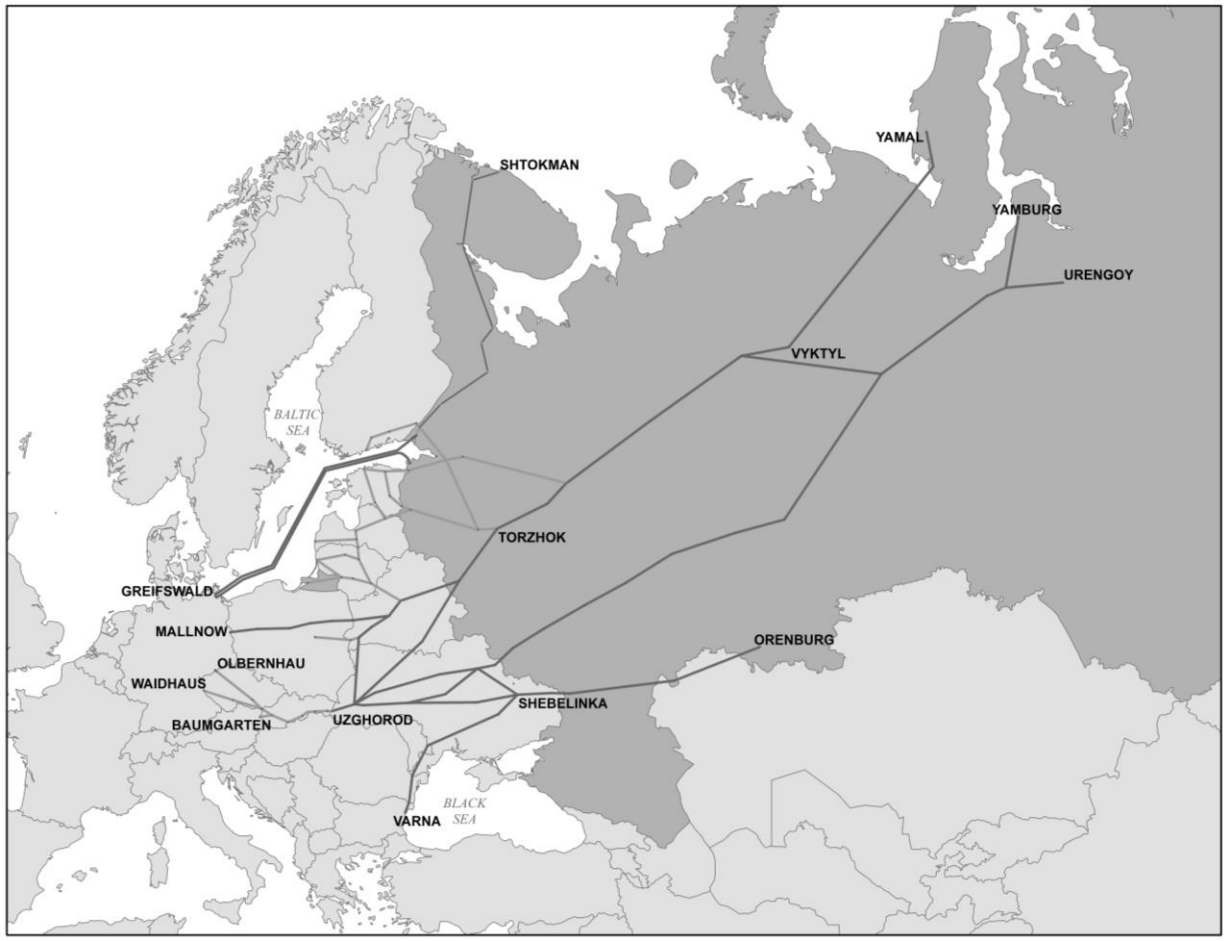
Pipeline	**Route**	**Year Commissioned**	**Capacity (bcm)**
Bratstvo (including Soyuz)	North: Shebelinka-Uzghorod-Slovakia	1967	100
	South: From Shebelinka to Moldova, Romania, and Bulgaria	1966, 1974-78	28
Northern Lights	Yamal-Vyktyl-Ukhta-Torzhok-Smolensk-Minsk-Uzghorod	1969	55
Finland Connector	St. Petersburg-Helsinki	1974	20
Urengoy-Uzghorod	Urengoy-Pomary-Uzghorod (UPU)	1983	40
Progress	Yamburg-Uzghorod	1989	30

Yamal-Europe	Torzhok-Minsk-Wlocawek-Mallnow	2000	33
Nord Stream	Vyborg-Lubmin/Greifswald	2011 and 2012	55
Nord Stream 2	Narva Bay-Lubmin/Greifswald	2021 (expected)	55

Source: Heinrich (2014, 37).

Although the construction and initial operation of the first Soviet natural gas export pipelines was plagued by technical difficulties and delays, Soviet natural gas deliveries became known and appreciated in Western Europe as reliable and a viable source of diversification for the supply of natural gas. This, however, would change in the two decades after the end of the Cold War as several supply disruptions occurred.

Map 3.1. Major Natural Gas Export Pipelines to Western Europe



Sources: See text and Gazprom (Gazprom n.d.), East European Gas Analysis ("Major Gas Pipelines of the Former Soviet Union and Capacity of Export Pipelines" n.d.), Ericson (2009), European Network of Transmission System Operators (European Network of Transmission System Operators for Gas (ENTSOG), n.d.), Heinrich (2014), Pirani (2009a; 2009b).[63]

[63] The Shtokman/Teriberka-Volkhov Pipeline is still being planned and designed.

Russian Natural Gas Supply Disruptions

While the Soviet Union never intentionally disrupted natural gas deliveries, natural gas supply disruptions to several former Soviet republics have repeatedly raised the specter of the Russian energy weapon.[64] Table 3.2 gives an overview of Soviet and Russian natural gas disruptions described below.

Table 3.2. Soviet and Russian Natural Gas Disruptions

Timeframe	Context	Type	Importer
March 1990	Declaration of Independence	80% supply reduction	Lithuania
June 1990	Declaration of Sovereignty, Transnistrian War	Supply disruption to western Moldova	Moldova
October 1992	Pricing and volume disputes	Supply disruption	Ukraine
June 1993	Law on Aliens, debt dispute	Supply disruption	Estonia
June 1993	Accumulated debt	Supply disruption	Lithuania
February 2004	Pricing and sale of Beltransgaz shares to Gazprom dispute	Supply disruption	Belarus
January 2006	Rose Revolution of 2004, infrastructure	Pipeline explosion/ supply disruption	Georgia
	Pricing dispute	Supply disruption	Moldova
	Orange Revolution of 2005, pricing dispute	Supply disruption	Ukraine
August 2008	Georgian-Russian War	Supply disruption	Georgia
January 2009	Debt, pricing, and transit fee dispute	Supply disruption	Ukraine
June 2014	Accumulated debt and pricing dispute, Russo-Ukrainian War	Supply disruption	Ukraine
November 2015	Payment, Russo-Ukrainian War	Supply Stop	Ukraine

[64] Excluded from the list are the disruptions caused by the conflict between Armenia and Azerbaijan.

The Baltic States. In the early 1990s, Estonia, Latvia and Lithuania faced strong opposition from Moscow to their declarations of independence as well as their approach to their Russian speaking civilian minorities and remaining Russian military personnel. They also relied heavily on energy imports from the Soviet Union and confronted tough negotiations over natural gas prices and existing debts with Gazprom. A number of natural gas supply disruptions or the threat thereof coincided with the worsening of political relations.

Lithuania's declaration of independence in March 1990[65] was met with protests from Moscow and the demand to revoke it less Lithuania face economic sanctions. When Lithuania did not withdraw its declaration, natural gas supplies were reduced by 80 percent and both Estonia and Latvia, at the time still union republics, were advised not to assist Lithuania (Gumbel 1990; Hoegselius 2013).[66]

When Estonia adopted a new Law on Aliens in June 1993[67] the RF strongly criticized the law as discriminatory. Russian premier Andrei Kozyrev, moreover, explicitly threatened economic boycotts emphasizing that natural gas would be the main instrument. Only a few days later, Lentransgaz, a subsidiary of Gazprom (now Gazprom Transgaz Saint Petersburg) disrupted natural gas supplies to Estonia. According to Hoegselius (2013, 208), however, the main motive for Gazprom was economic and related to the failure of the new Estonian gas company Eesti Gaas to pay an accumulated debt of $8 million.[68] Natural gas supplies were resumed four days later when an agreement had been reached with regard to the payment of the outstanding debt. In

[65] The Lithuanian Soviet Socialist Republic had already declared its sovereignty on May 18, 1989 but remained part of the Soviet Union. The Soviet Union recognized Lithuania's independence only on September 6, 1991.
[66] The Latvian declaration of independence of May 4, 1990 was similarly regarded as illegal by Moscow. The Estonian declaration of independence of August 20, 1991 occurred during the turbulent coup d'état attempt August 19-22, 1991 in Moscow.
[67] The Law on Aliens would require all non-citizens (including a large Russian-speaking minority living in Estonia) to reapply for residency permits within 2 years without any guarantee of acceptance (Iwaskiw 1995) .
[68] According to Iwaskiw (1995), the accumulated debt was $10 million and the disruption lasted only one day.

1993, the Estonian gas distribution was privatized into the joint venture Eesti Gaas, owned by the Estonian government (70%) and Lentransgaz (30%). According to Drezner (1999, 227), this Estonian concession eliminated the gas debt dispute and resulted in lower gas prices compared to Latvia, which did not cede any equity shares to Gazprom until late 1996.[69] Only two days after the disruption of natural gas supplies to Estonia, supplies to Lithuania were similarly disrupted based on its accumulated debt for prior deliveries, which has been estimated as five time as large as Estonia's at the time (Hoegselius 2013, 208).

Despite the energy price negotiations and threats or actual gas supply cutoffs in the early 1990s, Smith-Stegen (2011) emphasizes that the Baltic States insisted on identifying ethnic Russians as foreigners as well as on the withdrawal of Russian military personnel from their territories (Russian troops withdrew first from Lithuania in August 1993 and from both Estonia[70] and Latvia[71] in August 1994). According to Smith-Stegen (2011, 6509), a political read of the price increases and disruptions is compelling as the Russian Duma (Parliament) passed a resolution threatening sanctions against Estonia in response to its treatment of ethnic Russians in Estonia in July 1992 (Bohlen 1992; also cited in Smith-Stegen 2011) and RIA Novosti, the Russian state-owned news agency, in a review of the RF's gas conflicts in 2005 linked the June 1993 gas supply disruption to Estonia with its decision to define Russian speakers as foreigners. Hoegselius (2013, 208) on the other hand, concludes that in the case of Estonia, for example, the overall impression was that Gazprom managed to use the political crisis to accelerate the solution of the debt issue.

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[69] The Estonian government in 1994 sold an additional 14.69% to Ruhrgas and another 15% to private Estonian investors in order to prevent an increase of Russian leverage. Today Eesti Gaas is owned by the Estonian investment company Infortar.
[70] The last nuclear base was decommissioned in 1995.
[71] With one exception, Latvia agreed in April 1994 to allow Russia to maintain the Skrunda-1 radar station four additional years.

Given the Soviet occupation of the Baltic States and the international recognition of the Baltic States' declarations of independence, it is difficult to imagine a circumstance under which the Baltic States would have been willing to agree to the continuing stationing of Russian troops on their soil. Similarly, given the history of the Soviet occupation and deportations of Baltic natives and, subsequently, the involvement of the international community (OSCE, the Finnish Helsinki Committee, the European Court of Human Rights) with regard to Russian allegations of human rights violations against Russian minorities, the Baltic States were unlikely going to be willing to automatically grant citizenship to their Russian minorities.

Belarus. In 1993, the RF threatened Belarus with natural gas supply disruption based on its accumulated debt (Hoegselius 2013). In 2004, Gazprom halted sales of natural gas to Belarus based on a pricing dispute and the refusal of Belarus to sell a controlling stake of Beltransgaz to Gazprom previously agreed upon (Raff 2004). Previously, Gazprom had agreed to sell natural gas at domestic prices to Belarus in exchange for a majority share in Beltransgaz. When the agreement was not met, Gazprom demanded higher natural gas prices to which Belarus responded by refusing to transit natural gas in 2004 to Poland and Germany as well as Lithuania and Kaliningrad. In 2006, Gazprom threatened another disruption of natural gas supplies unless Belarus agreed to pay over $200 per 1,000 cubic meter in 2007, up from $46 in 2006 ("Factbox: Russian Oil and Gas as Political Weapon?" 2007). A last-minute agreement included a gradual increase in natural gas prices to the European market price by 2011 (at the time $265). Belarus increased transit fees for Russian natural and Gazprom increased the price of natural gas from $46 to $100 per thousand cubic meters as of January 1, 2007. The dispute over natural gas tariffs and fees between Belarus and Russia raised the specter of disruptions of natural gas across

Europe comparable to the one following the conflict between Ukraine and Russia early 2006 (Myers 2007) (see below).

The price dispute has also been interpreted as a lever for Gazprom to pressure Belarus into giving up control over its profitable pipeline network ("Factbox: Russian Oil and Gas as Political Weapon?" 2007). Compared to some its neighbors, Belarus between 2007 and 2010 sold a majority stake of Beltransgaz (renamed to Gazprom Transgaz Belarus in 2013), the state-owned gas company operating the main transit pipelines Northern Lights and Yamal Europe, to Gazprom and the remaining 50 percent in November 2011(Gazprom 2013a; 2013b). According to Crane et al. (2009), Gazprom compensated Belarus by slowing the rate of price increases with the aim to nevertheless reach western European prices by 2011.

Georgia. In late 2005, Gazprom announced a sharp increase in natural gas prices sold to Georgia. Georgian-Russian political relations had recently soured after the Rose Revolution in 2004 that led to the resignation of President Eduard Shevardnadze and Mikheil Saakashvili, a pro-Western and pro-NATO assuming the presidency. In Georgia as well as the West, the price increases were perceived as a punishment for the new government's foreign policy position (Crane et al. 2009).

On January 22, 2006, pipeline explosions in North Ossetia severed the Mozdok-Tbilisi natural gas pipelines to Georgia. While Gazprom claimed the explosions were acts of sabotage, the Georgian President Saakashvili assumed the disruption was deliberate and said that the supply disruptions seemed intended to put political and economic pressure on Georgia and followed Russian pressure, including veiled threats, on Georgia to sell its natural gas pipeline (Chivers 2006; Crane et al. 2009). The cutoff, it has been pointed out, did not change Saakashvili's position and left Georgia less dependent on Russian natural gas as it expanded

network links with Azerbaijan thereafter (Crane et al. 2009; Smith-Stegen 2011). Natural gas supply was then again disrupted during the Georgian-Russian War in 2008.

East Germany. In 1990 Ruhrgas acquired a 35% stake in Verbundnetz Gas AG (VNG), the GDR's transmission operator which held a monopoly position at that time. In 1991, Gazprom and Wintershall, cooperating through their joint venture Wingas, announced a sharp increase of prices to VNG. When VNG refused to accept the price increase and continued to pay the pre-1991 price Gazprom threatened to cut off natural gas supplies starting January 1992 and announced that Wingas would be willing to supply VNG's customers. The dispute ended and a supply disruption was avoided when a one-year agreement was reached. One year later, pipelines linking eastern Germany with the western part of the country had been built thus denying Gazprom the leverage it had held the previous year (*Der Spiegel* 1992; *Wall Street Journal* 1992; Hoegselius 2013, 206).

Moldova. Shortly after Moldova, which included sizeable Russian and Ukrainian minorities, declared its sovereignty in June 1990, Transnistria proclaimed its independence leading to the Transnistrian war between pro-Transnistrian forces supported by the Russian Army and pro-Moldovan forces. Russian natural gas deliveries through Ukraine were disrupted to the western part of Moldova, where most ethnic Moldovans lived (Hoegselius 2013, 205).

As of January 2006, Gazprom doubled natural gas prices to Moldova and when the Moldovan government refused to pay the increased price, Gazprom disrupted natural gas supplies. Deliveries were resumed after an agreement on a smaller price increase was reached and the Moldovan government agreed to sell an additional share of MoldovaGaz, the national gas company, to Gazprom, already the majority shareholder, in order to cover the increased costs (*US Fed News Service, Including US State News* 2006; Crane et al. 2009)

Ukraine. Since the early 1990s Ukrainian-Russian relations have been mired in a number of conflicts. The first major Russian natural gas supply disruption occurred in October 1992, halving supplies to major European markets, including Germany and France. Although the reasons for the disruption were initially unclear, it soon transpired that supplies were disrupted due to pricing and volume disputes and more broadly due to the continued political and economic instability in the former Soviet Union (Bahree, Bhushan and Rubinfien, Elisabeth 1992; Bahree, Bhushan 1992; Hoegselius 2013).

After the Orange Revolution brought pro-Western Viktor Yushchenko to the presidency in January 2005, Russo-Ukrainian relations deteriorated sharply. In 2005 Gazprom accused Ukraine of not engaging in serious price negotiations and complained about 7.8 bcm of natural gas disappearing from Ukrainian storage (worth about $1.5 billion at current prices) (Pirani 2007, 24). No solution was found by end of 2005 and natural gas supply was disrupted January 1, 2006 (A. E. Kramer 2006a). On January 4, a compromise was reached, which included the sale of both cheaper central Asian gas and more expensive Russian gas at a price substantially below European prices as well as an increase in transit fees paid by the RF (Crane et al. 2009; A. E. Kramer 2006c). In the West and in the Ukraine, the price increase was like in the case of Georgia, perceived as a punishment for Yushchenko's pro-Western policy (Hoegselius 2013).

In March 2008, Gazprom threatened to disrupt natural gas supplies based on disagreements over payments for previous natural gas deliveries. When no agreement was reached on the price for gas and its transit as well as the debt payment by the end of the year (Q&A: Russia-Ukraine gas row, 2009a),[72] natural gas supply was disrupted on January 1, 2009.

[72] Gazprom initially asked for $418 per 1,000 cubic meters of gas, then $250 but reverted pack to $418 when Ukraine rejected the $250 offer offering $235 instead. Gazprom also demanded the payment of about $2 billion by Naftogas ($1.6 billion of debt and $450 of fines for late payment).

On January 5, Gazprom argued that 65.3 million cubic meters (MMcm) had been stolen since the beginning of the year. The Ukraine having made good on its warning to siphon off gas intended for Western Europe to compensate for shortcomings (Crane et al. 2009)[73] argued that it was entitled to take the technical fuel gas based on the transit contract and supply shortage. Subsequently, deliveries to Europe were significantly reduced and then on January 7 completely cut off. The dispute was resolved on January 19, when a ten year supply and transit contract was signed between the RF and Ukraine and natural gas deliveries resumed one day later (Pirani, Stern, and Yafimava 2009).[74] Pirani et al. (2009) argue that disruptions may have been motivated to bring Western Europe into the dispute over the Ukrainian transit network and aimed at changing future transit agreements.[75] Smith-Stegen (2011), moreover, suggests that the disruptions caused Western states to embrace the first Nord Stream project. One year later, the Ukraine and the RF reached an agreement to extend the presence of the Russian Black Sea Fleet in Sevastopol from 2017 to 2047 in return for a discount on gas (Levy 2010; Smith-Stegen 2011).[76]

The Euromaidan protests that ousted Ukrainian President Viktor Yanukovich and unrest in southern and eastern Ukraine in February 2014 led to a protracted conflict between Ukraine and the RF after the latter's annexation of Crimea. In April 2014, the Ukrainian national join-stock company Naftogaz Ukrainy sued the RF over the damage and loss of assets in Crimea

[73] Ukraine conceded syphoning off natural gas in 2006 as well arguing that it had a contractual right to do so under an agreement with Turkmenistan (A. E. Kramer 2006b).
[74] In October 2011, then-Ukrainian Prime Minister Yulia Tymoshenko, who signed the contract, was sentenced to seven years in prison for abuse of office for signing the contract.
[75] See CHAPTER 1 - Chapter 1 -Appendix A - Impact of the Russian-Ukrainian Gas Dispute 2009for the impact of the disruption for European countries documented by the European Commission.
[76] A sale of assets was in the Ukrainian case not possible since the Ukrainian government already in 2008 passed a law forbidding the sale of transmission and distribution network assets to Russia based on concerns about the potential economic leverage the RF could gain by the purchase of the Ukrainian assets (Crane et al. 2009).

(*Interfax: Ukraine General Newswire* 2016). In the same month, Gazprom nearly doubled its price of natural gas to Ukraine from $268.60 to $485 per thousand cubic meters after which Ukraine ceased all payments. After talks mediated by the EU failed and amid rising political hostilities between the two countries, Gazprom cut gas supplies in June 2014 after the deadline it had imposed on Ukraine for the payment of almost $2 billion for past gas deliveries had expired (Farchy and Hille 2014; Kanter 2014; MacFarquhar 2014; White and Mock 2014). While Ukraine maintained it had sufficient gas storage until December, Gazprom announced that it would require Ukraine to prepay future gas purchases "due to chronic non-payment of its gas bills." Naftogaz filed a claim against Gazprom in a Stockholm arbitration tribunal seeking $6 billion reimbursement for overpriced natural gas since 2010 and "a fair and market price" for future supplies (Farchy and Hille 2014). After months of trilateral talks between the European Union, Ukraine and Gazprom, an accord was reached at the end of October 2014 (Kanter 2014). Ukraine would pay $3.1 billion by the end of the year to pay its debts based on a price of $268.50 per thousand cubic meters of natural gas, buy natural gas for $378 per thousand cubic meters until the end of 2014, and then pay $365 per thousand cubic meters in the first quarter of 2015 while the gas dispute itself would be settled by international arbitration. A little bit more than a year later and amidst tensions over Crimea, Gazprom halted all natural gas deliveries to Ukraine on November 25, 2015 until prepayments for further deliveries had been received (Roth 2015). The Ukrainian government, in return, announced that Naftogaz had been directed to purchase European natural gas. Ukraine and Gazprom announced on December 20, 2019 that they had agreed on a five-year contract mediated by the European Union (Peker 2019). Gazprom agreed to deliver 65 bcm of Russian natural gas to Ukraine in 2020 and 40 bcm per year from 2021 until 2024 with an option to extend the agreement to ten years. The contract also settled the

legal dispute between Naftogaz and Gazprom over supply and transit disputes as Gazprom would pay $3 billion in fines and Naftogaz would drop its claim against Gazprom.

The gas price conflicts and natural gas supply disruptions since the end of the Cold War have been interpreted as of political or economic nature or both. The governments of the affected as well as many Western European countries concluded that the sharp increases in the prices and supply disruptions in conjunction with the strained relations between the RF and the former Soviet republics were a punishment for the new governments' pro-Western foreign policies.

Another interpretation while recognizing the influence of political considerations in the timing of the price increases maintains that economic considerations played a key role. Pirani (2007, 24), for example, concludes that the 2006 crisis between the RF and the Ukraine can be interpreted "as a step toward the wider application of market principles and pricing mechanisms in intra-CIS gas trade" and Crane et al. (2009, 33) similarly surmise that the price increases in general have had a "heavy flavor of 'business is business' as Gazprom hunts for more revenues and profits." Pirani et al. (2009), moreover, argue that the long-term considerations of the RF were economic, that is, to end the energy subsidies to the former Soviet republics given by low gas prices, while in the short-term, political factors dominated including concerns over political revolutions and pro-Western policies of the new governments. Finally, they consider the decision to disrupt supply in January 2009 "an unnecessarily risky and commercially irrational action" and conclude that it may have reflected Prime Minister Putin's anger and frustration, aimed at punishing Ukraine for its threats to disrupt transit and been personalized to President Yushchenko.

In sum, difficulties to reach agreement on gas prices and transit fees for Russian natural gas as well as disputes with regard to their actual payment led to recurring conflicts and supply disruptions throughout the former Soviet Union starting in the early 1990s and increasing again after the color revolutions in 2006. According to Hoegselius (2013, 207), these problems were exacerbated by political tensions making it difficult to discern whether the supply disruptions were of economic or political nature. With the impact felt in Western Europe, the apprehension about the increasing reliance on Russian natural gas grew, the source of which can be found in the historical development of the European natural gas market.

The Natural Gas Market

In OECD Europe, natural gas demand increased steadily from the 1970s until 2005, when it stabilized between 540 bcm and 580 bcm until 2008. It peaked with 573 bcm in 2010 in the post-crisis rebound and then fell to 460 bcm in 2014. Despite the growth in demand for natural gas thereafter, demand is still below the levels previous to the economic crisis in 2009. This slower demand growth has not only been attributed to economic drivers but also improvements in energy efficiency (International Energy Agency 2018a). In 2017, natural gas demand in OECD Europe increased by +4.6% with the main increases occurring in the largest consumers of the region: Germany (+5.4 bcm), Italy (+4.2 bcm) and Turkey (+7.2 bcm). Overall, as Figure 3.1 demonstrates, natural gas consumption as percentage of the total primary energy consumption increased from about 10% in 1973 to about 25% by 2017.

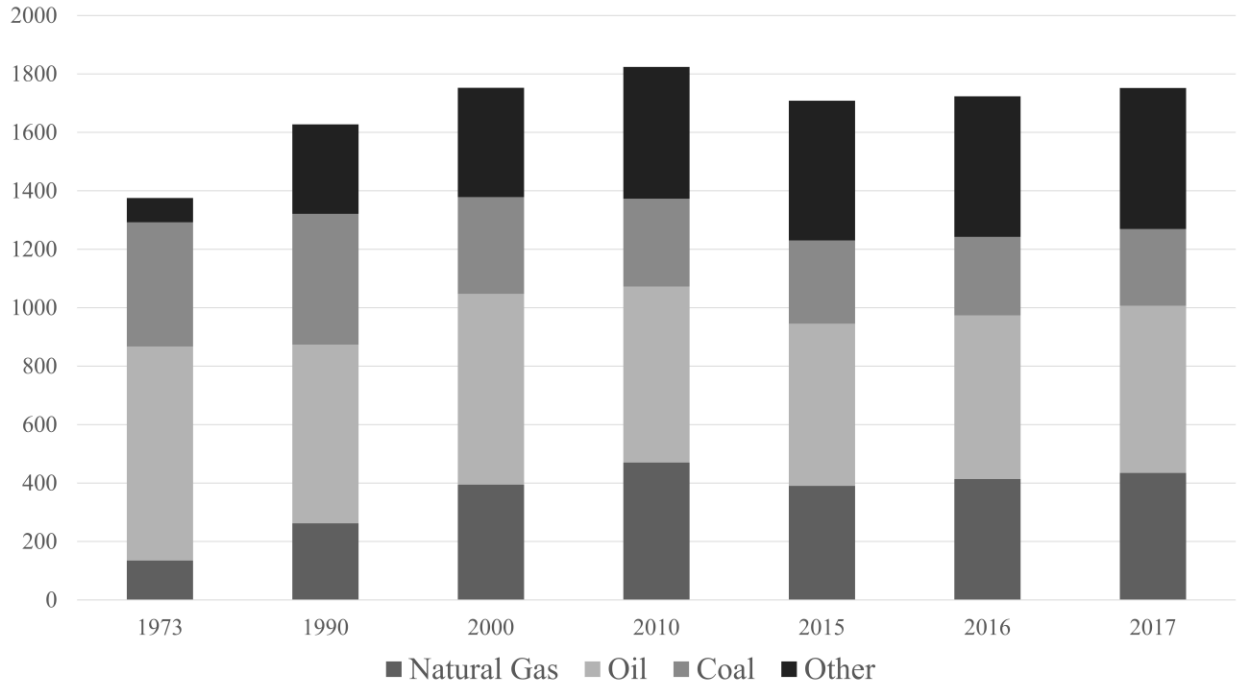

Figure 3.1. Total Primary Energy Consumption (Mtoe) by Fuel in OECD Europe, 1973-2017
Source: International Energy Agency (2018a), Natural Gas Information (2018 edition). All rights reserved. Oil includes peat and oil shale, other includes nuclear, hydro, geothermal, solar, wind, wave, tide, biofuels and waste, electricity and heat. Th data for 2017 is provisional.

Already visible above, Figure 3.2 illustrates the increase of imports of natural gas for Europe from 1998 until 2017 and Figure 3.3 for a number of European countries.

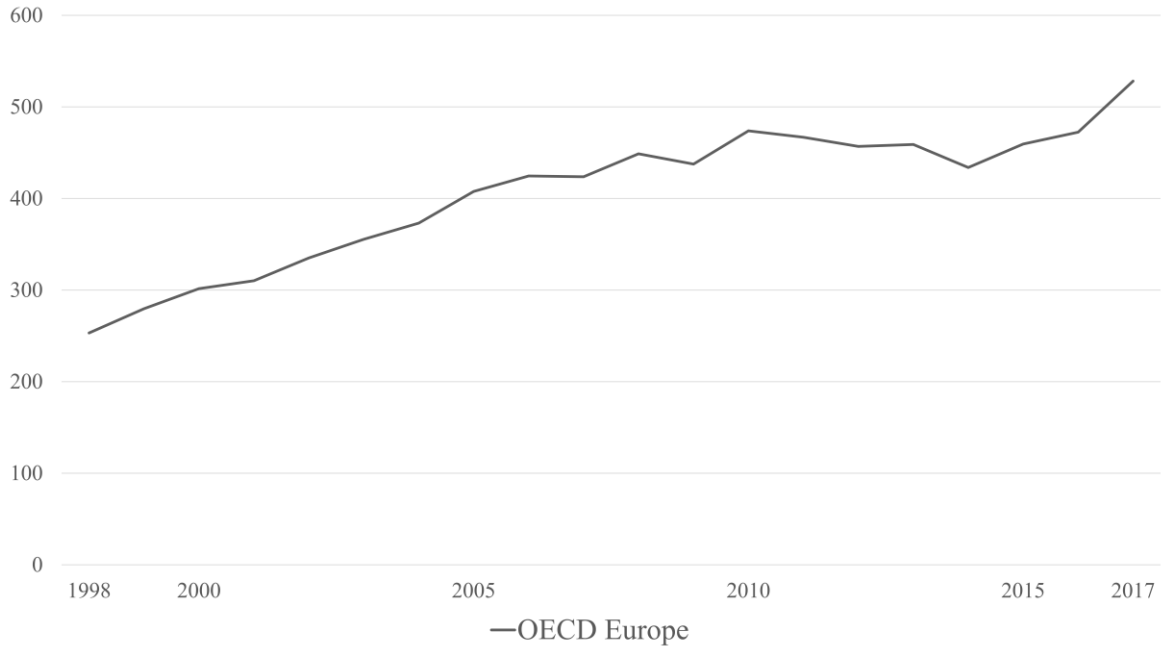

Figure 3.2. European Imports of Natural Gas (bcm), 1998-2017
Source: International Energy Agency (2018a). Natural Gas Information (2018 edition). All rights reserved. The data for 2017 is provisional.

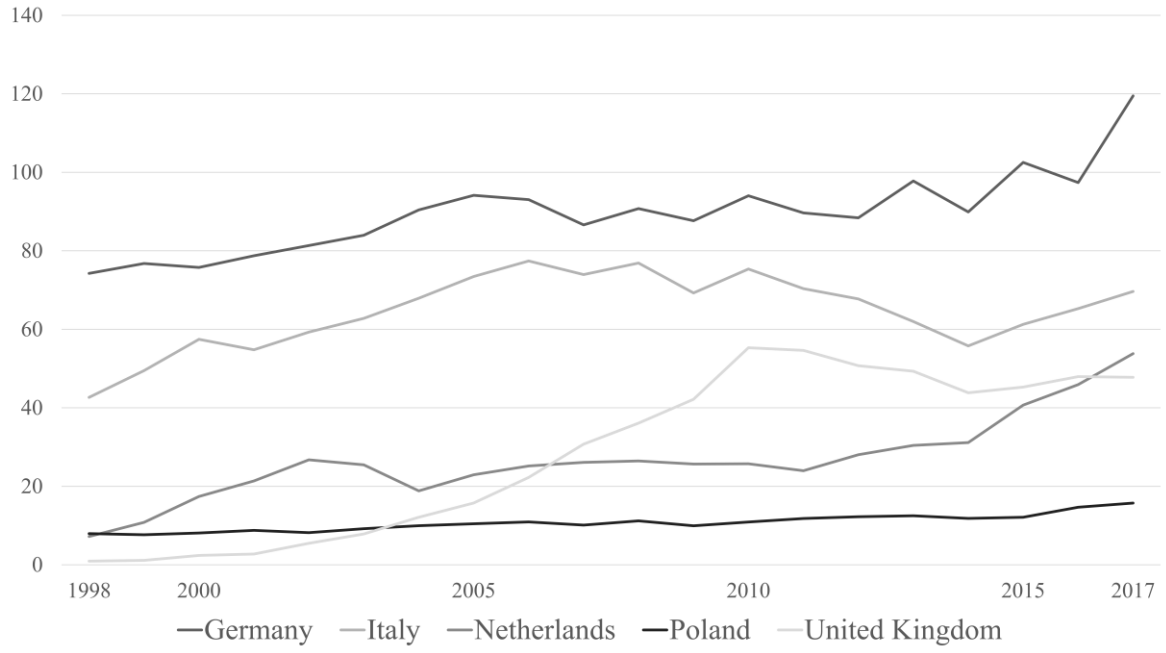

Figure 3.3. European Countries Imports of Natural Gas (bcm), 1998-2017
Source: International Energy Agency (2018a), Natural Gas Information (2018 edition). All rights reserved. The data for 2017 is provisional.

Furthermore, pipeline imports of natural gas to OECD Europe rose by 46.1 bcm in 2017, making OECD Europe with 58.1% of worldwide pipeline trade the world's largest importer. This growth was mainly due to increases in imports in Germany (+22.7%), the largest consumer in the region, the Netherlands (+18.1%), mainly due to decreased production, and Turkey (+14.5%) to meet growing demand (International Energy Agency 2018a).

With growth in consumption but production declining or remaining stable in most European countries, dependence on imports from countries outside the OECD increased and imports from the RF exceeded 1/3 of the total in 2017. As Figure 3.4 demonstrates, countries in close proximity to the RF such as the Czech Republic, Finland, Poland, and Hungary rely to a large extent on Russian crude oil imports and the share of Russian natural gas imports is also considerable in Germany and Italy.

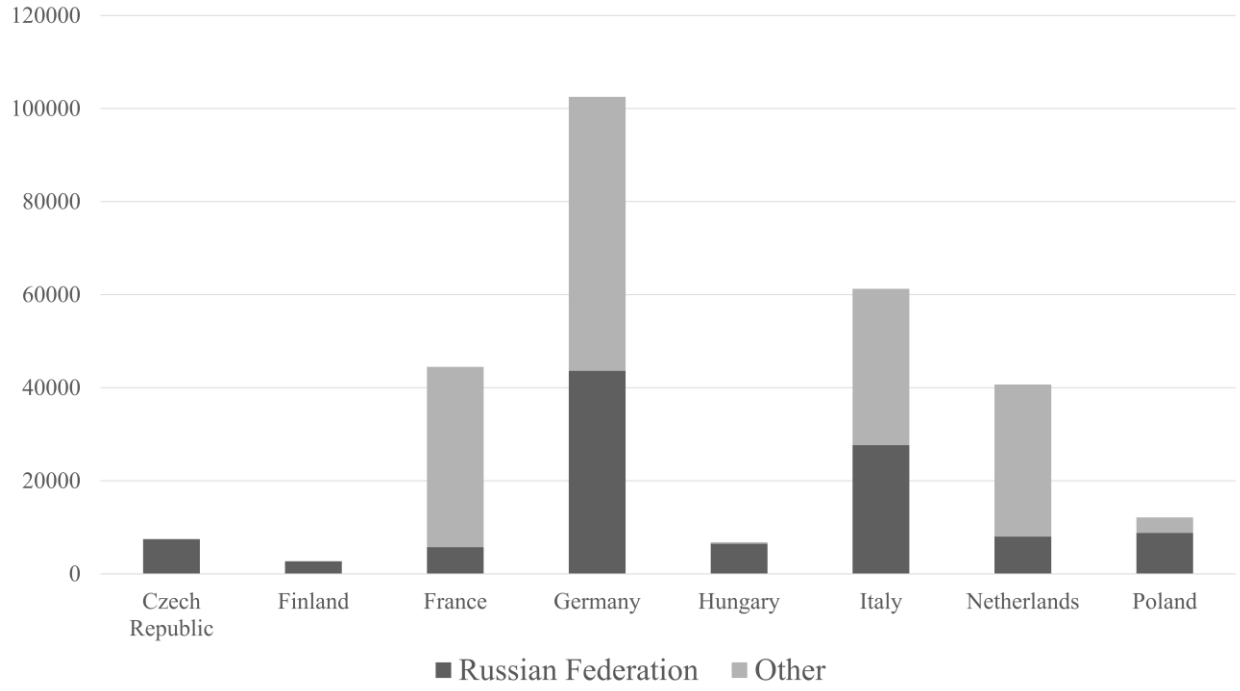

Figure 3.4. European Countries Imports of Russian and Other Natural Gas (MMcm), 2015
Source: International Energy Agency (2018a), Natural Gas Information (2018 edition). All rights reserved.

In 2017, moreover, the proven reserves of natural gas of the RF constituted about 24% percent of the world's total reserves of natural gas (see Figure 3.5), making the RF the largest supplier for the foreseeable future.

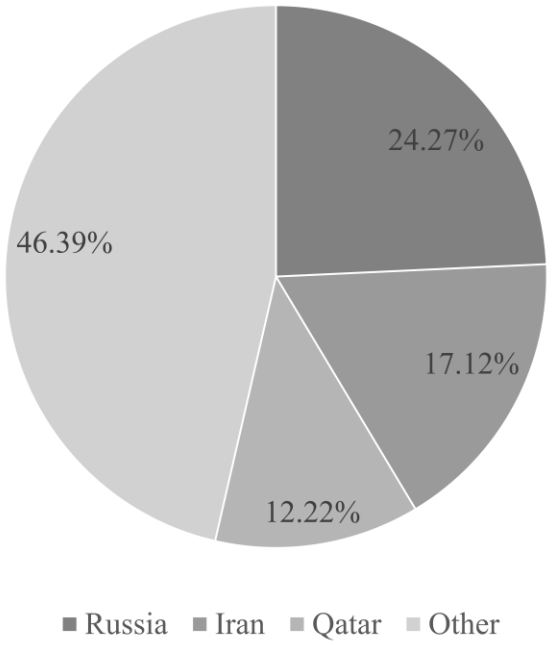

Figure 3.5. World Reserves of Natural Gas (bcm), 2017
Source: International Energy Agency (2018a), Natural Gas Information (2018 edition). All rights reserved.

In sum, Western European imports of Soviet and later Russian natural gas and the construction of new natural gas infrastructure have shown an impressive amount of resiliency to geopolitical events. Based on the success story of the first Soviet natural gas deliveries to Austria in 1968 Western Soviet natural gas imports steadily increased as the Soviet Union proved to be a reliable supplier throughout the Cold War.[77] Moreover, even despite of the frequency of supply disruptions (or perhaps because of) starting in the 1990s, the Nord Stream project was completed in 2011 and 2012, respectively, and its successful completion spurred the initiation of Nord

[77] This excludes supply interruptions due to technical issues.

Stream 2, which further increase the import dependence on Russian natural gas in Western Europe. Given the recent trends in and the particularity of the natural gas market concerns have been raised as to the political impact of the import dependence on Russian natural gas. In the next chapter, I will review the existing literature on the nature of the European-Russian trade relationship and the use of natural gas as a foreign policy tool as well as more broadly the sources of economic power.

Chapter 4 - Literature Review and Hypotheses

> To trace the effects that follow from inequalities, one has to unpack the word 'interdependent' and identify the varying mixtures of relative dependence for some nations and of relative independence of others. (Waltz 1979, 153)

This chapter initially reviews the more recent literature on the trade relationship between natural gas importing states and the RF, the use and effectiveness of natural gas as a foreign policy tool, and subsequently broadens the discussion to include the existing theory and evidence on the impact of import dependence on the foreign policy behavior of the importing state. It concludes with the development of the theoretical framework and hypotheses of this dissertation.

The European-Russian Natural Gas Trade Relationship

The literature on the nature and effect of the natural gas trade relationship between the RF and recipient states can be divided into two main directions of research, one addressing the question of whether the energy weapon even exists and the second one analyzing its effectiveness. Here, I focus on the trade relationship between natural gas recipients and the RF, with specific attention to where disagreements exist and whether the trade relationship is one of dependence or interdependence.

First, dependence on natural gas is contingent upon: the proportion of a state's natural gas supplied by any individual supplier, the proportion of natural gas in the state's overall energy consumption, the availability of alternative supply, and the ability for energy generation and industry to switch to other energy sources when supply is disrupted (Shaffer 2013). Overall, it is helpful if the supplying state has a larger economy than the target and a lower percentage of its total trade with the target state than vice versa (Newnham 2011). Despite the common

recognition of dependence as well as the particularity and inflexibility of the natural gas market, different conclusions have been reached with regard to the character of the trade relationship between European natural gas recipients and the RF.

Adherents to the dependence thesis emphasize the dependence of individual states on Russian natural gas and argue that natural gas is a potent foreign policy tool for the RF. First, because natural gas is an important energy carrier.[78] A natural gas supply disruption to import dependent countries would limit their industrial production, impact commercial users, and lead to a decline of living standards by having an impact on the basic needs of society like heating and cooking, especially in winter (Ericson 2009; Goetz 2007; Harsem and Claes 2013). Second, the pipeline dominated natural gas market precludes European states from easily shifting to alternate gas (LNG) or by-pass pipelines. Existing coal-fired power plants could not fully compensate for the shortage of natural gas supplies (Goetz 2014) and, even if they could, machinery operating on natural gas cannot function with a different type of energy.[79] Finally, and based on the particularity of the natural gas market, the dependence of the recipient states is amplified when the supplier of the physically necessary input has substantial "market power"– here, Gazprom and the RF (Ericson 2009, 40).[80] Or as Newnham (2011, 135) has summarized, Russian "petro-power" rests on its larger economy and its dominant position in the region's overall trade and is strengthened by the fact that oil and gas remain rare, valuable, and almost impossible to substitute.

[78] Energy carriers are transmitters of energy and include electricity, heat, as well as solid, liquid and gaseous fuels.
[79] Thus, aspects of both "sensitivity interdependence" and "vulnerability interdependence" are – if not explicitly – recognized in the natural gas recipient states' trade relationship with the RF. Both terms are discussed below.
[80] Although Ericson (2009) thus identifies the same costs as Goetz (2014), an adherent of the interdependence thesis, he reaches the opposite conclusion.

The position of the RF is portrayed as far less precarious. According to Ericson (2009), the immediate costs to the gas industry of cutting back natural gas production and the storage or diversion of natural gas would be only minor compared to those incurred by the recipient states. The financial opportunity cost of an interruption would be the lost income that is expected and committed to necessary expenditures including government activities, social objectives and incomes, investment in gas and other sectors, and incomes of a perhaps significant portion of the workforce (if not in numbers, politically). Ericson (2009) concludes that these mostly long-term costs would not immediately affect the overall economic activity of the RF.[81] Additionally, the costs could be compensated for using fiscal and monetary policies to finance the truly immediately necessary expenditures.[82]

Adherents of the economic interdependence thesis maintain that a disruption of natural gas trade between Europe and the RF would have similarly severe economic and financial consequences for the RF[83] (Goldthau 2008; Goetz 2014; Pirani, Stern, and Yafimava 2009; Rutland 2008).[84] While Europe imports about 50 percent of its gas consumption from the RF, the RF also exports about the same amount of its gas to Europe (Harsem and Claes 2013).[85] Gazprom, the majority state-owned Russian company with exclusive rights to export natural gas to Europe, would lose a third of its revenue that cannot be replaced with its subsidized, loss-generating domestic market. Gazprom would not only have to reduce its natural gas production and shut down many gas production installations but also reduce or suspend investment projects.

[81] They could, however, become more critical if they occurred in the context of a broader financial-economic crisis.
[82] Though this would have the respective consequences including inflation, increase in debt etc.
[83] The RF meaning both Gazprom and the Russian state.
[84] See Monaghan (2005) for interdependence with regard to oil. Compared to natural gas, Goetz (2014) sees the RF as more reliant on oil trade than Europe. Rutland (2008) focuses on both oil and gas as energy weapon.
[85] Goetz (2007) put this number even higher at 90 percent and, according to Goetz (2014, 281–82), the natural gas exports of the RF to the EU were an estimated 47 billion USD in 2013, which is equal to 9 percent of its export revenue.

As a consequence of the substantial financial losses to Gazprom and lost government revenue, government transfers, investments, and imports of the RF would be disrupted (Ericson 2009; Harsem and Claes 2013).[86] Moreover, Gazprom would breach its long-term contracts with European gas companies, damage its reputation as reliable supplier, and face claims in international arbitration courts. As a consequence, Europe would in the long-term most likely substitute gas with alternative sources of energy generation and seek alternative supply sources.[87] Finally, Newnham (2011) points out that the importance of gas revenue for the RF can give the importing state bargaining power especially when gas prices are low and the RF needs to sell.

The two schools of thought reach different conclusions about the short-term effects of a supply disruption but agree about its long-term effect. According to the dependence thesis, the physical loss of natural gas supply would from the outset have severe consequences for natural gas dependent states (Larsson 2006). Proponents of the interdependence thesis, however, maintain that both the gas customers and the RF could endure a gas war for several weeks (Goetz 2014). With regard to the impact of a long-term supply interruption on the RF, adherents to both theses conclude that long-term costs could become devastating (Ericson 2009; Larsson 2006). Russian loss of substantial income from gas exports could exhaust financial reserves, decrease the willingness of international markets to provide credit, and possibly trigger serious inflation if there were no adequate substitute for natural gas revenue and the Russian government printed money instead. Furthermore, Goetz (2007; 2014), argues that although the damage of a long-term interruption of the gas trade would be considerable for Europe, it would not be critical enough to guarantee the achievability of the political goals of the RF.[88]

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[86] Goetz (2007) argues, that Gazprom would neither risk its export revenues for short-term benefits nor subordinate them to a Russian foreign energy policy. Goetz thus treats Gazprom and its interest as separate from the RF.
[87] As EU initiatives demonstrate, this is already the case.
[88] Goetz (2014) identifies a much more potent weapon in oil.

The claims of the adherents of both theses have rested on the analysis of different actors and trade relationships. Proponents of the interdependence thesis tend to consider the European natural gas market as a whole (for example Goldthau 2008) and highlight the role of the European Union as the RF's overall trade partner (for example Harsem and Claes 2013).[89] Opponents have pointed out that individual trade relationships vary and thus lead to an uneven distribution of the costs of a conflict with the RF, making some gas recipients more vulnerable to political pressure and increasing their benefit of complying with Russian political demands (Ericson 2009; Harsem and Claes 2013). Newnham (2011), for example, concludes that the RF could easily impose an embargo on any individual country it decides to target. Yet, some also recognize that recipient states might collectively be able to impose costs on the supplier in the long-term (Ericson 2009). If only one state is affected, relatively small volumes could be supplied through deliveries from neighboring states (Goetz 2007). Shaffer (2013, 119), who argues that most natural gas trade relationships do not entail interdependence,[90] concludes that an interdependent gas supply relationship exists only between the RF and Germany, since a "loss of the gas supply from Moscow would be costly and destabilizing to Germany and the loss of German payments would be a crucial blow to Russia."[91]

In other words, neoliberals emphasize the costs of disruption of mutual gains from trade to both sides and thus economic interdependence while realists identify pipelines as conflict-prone and symptomatic of relative "positionalism" in power politics. Neo-mercantilists emphasize the added value of pipelines for exploiting the dependency of importing states for

[89] With regard to total trade volume, one would then consider EU trade sanctions against the RF and the literature related thereto.
[90] Shaffer (2013) does so with regard to understanding the failure of "peace pipeline" policies.
[91] Both schools of thought identify a threat to European supply from the lack of upstream investments, inefficient use of natural gas in Russia and growing domestic demand. These concerns cast serious doubts on whether or not Gazprom will be able to meet its export commitments (Ericson 2009; Goldthau 2008).

strategic purposes (Stulberg 2012, 811). The latter two argue that the RF can and has used natural gas as an energy weapon if expedient to do so to achieve economic as well as political and strategic goals. Striking within this literature is the fact that the fluidity of the concepts of dependence or interdependence allows both sides to refer to trade statistics and yet reach different conclusions as to the European-Russian trade relationship.

The Use and Effectiveness of Natural Gas as a Foreign Policy Tool

Adherents to the energy weapon thesis generally focus on the ability and use of natural gas as a foreign policy tool by the RF not only for maximizing its economic benefit but also for enhancing its political objectives from the perspective of the different actors involved: the energy suppling, the importing state, or both.[92]

The RF[93] is often portrayed as seeking to increase its power and influence in the near abroad, including the Baltic States, Belarus, Poland, Ukraine and the Caspian states, or on a global level (Gidadhubli 2006; Newnham 2011; Nygren 2008; Saivetz 2012; Wood 2007).[94] The RF not only adopted policies to gain from rising global energy prices in the mid-1990s but also to enhance the effectiveness of its natural gas reserves as a foreign policy tool (Gidadhubli 2006; Saivetz 2012; Wood 2007). First, the RF increased its level of production and exports of natural

[92] Transit states are also analyzed but intentionally not mentioned here because the emphasis is on the relationship between the supplier and the recipient state.

[93] Scholars focusing on the RF as the energy supplier frequently consider Russian policies as being pursued jointly by the RF and Gazprom or identify Gazprom outright as part of the Russian government (Kropatcheva 2011; Newnham 2011; Orttung and Overland 2011; Smith-Stegen 2011; Wood 2007). While taking this position, Orttung and Overland (2011), emphasize that they do not mean this to be taken that they believe the RF to be a coherent unitary actor.

[94] In addition to being used for political leverage, energy sources as such are also considered as a means of enriching and endearing favored elites (Wood 2007). Others have pointed out that Russian decision-makers sometimes pursue strategies that maximize their probability to stay in office (Jones Luong and Weinthal 2001). Furthermore, Rutland (2008) argues that the concept of an "energy superpower" is somewhat contradictory and combines to distinct logics: that of the energy market and that of military superpowers.

gas and attempted to bring energy firms under direct or indirect control of the state. The Russian government directly or indirectly controls 50.23% of the capital of Gazprom and Gazprom directors are generally considered loyal to the Kremlin.[95] Highlighting the monopoly status of Gazprom, Krutikhin (2021, 189) concludes that Putin, after bestowing a geopolitical role on Gazprom, assumed full control over the company overriding even the ministry of economic development and the ministry of energy.

Second, since the breakup of the Soviet Union, the government of the RF has solidified its control over energy sources and infrastructure domestically and abroad (Gidadhubli 2006). The RF owns a 48% share of the Polish section of the Yamal- Europe pipeline as well as the company Gazprom Transgaz Belarus, which operates the Northern Lights and Yamal-Europe pipelines, the main transit pipelines through Belorussia. Furthermore, the RF has attempted to exert influence through large investments in the oil and gas sectors of Azerbaijan, Kazakhstan, Turkmenistan, and Uzbekistan. The RF has also built new bypass pipelines to secure future gas markets in Germany, the United Kingdom, China, Japan, and Korea. Additionally, the RF has pursued its interests in China and India through cooperation in the energy sector, including nuclear power, and has cooperated with and supported Iran in its pursuit of nuclear power technology. Third, the RF uses differential pricing, charging countries different prices based on its economic and political interests and their complacency and cooperation (Gidadhubli 2006). The natural gas price increase for Ukraine in early 2006, for example, has been interpreted as a punishment of Ukraine after the Orange Revolution (Gidadhubli 2006; Hoegselius 2013). In contrast, Belarus, which remained closely aligned with the RF, continued to pay less than $47

[95] A frequently cited example is the former Prime Minister of the RF, Dmitry Medvedev, who was appointed the Chairman of Gazprom's board of directors by President Putin in 2000 and served in its board until his ascension to the Russian Presidency in 2008.

per thousand cubic meters. Additionally, the RF has offered low prices for energy supplies in return for the acquisition of energy assets abroad.

Another strand within the existing energy security literature identifies a more complex geopolitical energy game in which trade interdependence and institutional factors influence the strategic bargaining position of both supplying and importing states. Kropatcheva (2011, 555), for example, argues that geopolitical energy games[96] consist of

> the interplay of policies in relation to energy at the international level, which are based on a complex mixture of cost-benefit calculations, where opposing sides pursue policies directed at improving their relative power positions, which are detrimental or perceived as detrimental to the interests of the other side.

Kropatcheva (2011, 554) concludes that the "regional competition played out between the RF and the West, only reflects a global competition for power capabilities." Kropatcheva, however, points out mutual vulnerabilities and decreased economic profits as a consequence of the geopolitical energy games. In other words, mutual interdependencies constrain the practical ability of the RF to use its energy weapon. This debate about relative and absolute gains reflects the debate between neo-realists (structural realism) and neoliberals (neoliberal institutionalism) of the 1980s,[97] which has since been superseded by scholarship on international bargaining showing that gains or interests are only one part of strategic decision-making.

More consistent with the IR scholarship of the past twenty-five years, Stulberg (2012, 811) conceptualizes pipeline politics as a strategic bargaining problem in which all involved actors – the energy suppliers, transit states and importers – face commitment problems in making

[96] This is not based on game theory.
[97] Powell (1991) argues that neoliberal institutionalism and structural realism, which emphasize absolute and relative gains, respectively, can be combined within a single analytic framework. According to Powell, relative losses cannot be turned against a state if the use of force is not at issue, but states will be concerned about relative gains when the use of force is at issue. The former is in keeping neoliberal institutionalism with while the latter is in keeping with structural realism.

and maintaining mutually beneficial transit agreements. The ability of each actor to assure the other actors that it will respect its supply commitments, allow for transit, or purchase the delivered quantities is the key to avoiding arbitrary disruptions or renegotiation of terms. This ability is shaped by two conditions, the salience of returns on investments and institutional constraints within the energy sector.[98] According to Stulberg (2012, 810), varying degrees of intensity of pipeline politics are caused by different combinations of "economic fundamentals of pipelines that shape the propensity for risk taking" and "national regulatory institutions that affect the transparency of interest and signaling in cross-border energy transit relations." Arbitrary disruptions are more likely when primary stakeholders have incentives to gamble on new terms of agreements because they no longer need to focus on recouping their returns on investment and when bargaining between governments occurs within opaque national regulatory settings. Vice versa, commitments to uphold transit agreements are more credible when returns on investment matter and clear regulatory settings prevail. Within this framework, the unilateral Russian interruptions of gas supply to Ukraine in 2006 and 2009 are, for example, interpreted as the product of multidimensional strategic interactions between the RF and the Ukraine.

Finally, drawing on Farrell and Newman's (2019) notion of weaponized interdependence based on government control over central nodes, Krutikhin (2021, 186) argues that Putin has prevented the liberalization and privatization of Gazprom in order to continue exploiting Gazprom's natural gas transportation infrastructure for "power mongering in former Soviet republics" and beyond. However, concerted efforts to decrease dependence and the introduction

[98] When the actors are not worried about returns of investment and do not operate within transparent national regulatory institutions, they have an incentive to gamble on new terms, which, makes arbitrary disruptions more likely. Correspondingly, if primary actors focus on recouping returns on investment and national regulatory institutions are transparent, credible commitments uphold cross-border transit agreements. Under mixed circumstances, in which the actors either do not focus on return on investments or deal with opaque regulatory institutions, significant but manageable commitment problems will prevail.

of stricter norms and regulations to discipline the challenger, Krutikhin (2021, 187) argues, can help resist, weaken, or neutralize attempts to weaponize interdependence. Gazprom's acquisition of stakes in Armenia's gas transmission and distribution network following its inability to pay Gazprom as well as heavy investments in Serbia's energy sector led to more Russian friendly positions of the two countries. In contrast, Bulgaria opted to diversify its natural gas supply despite of pressure from the local pro-Russian lobby, and Turkmenistan opted to cooperate with China. Furthermore, Krutikhin (2021, 192) argues that despite apparent political leanings in Germany and Austria, Russian attempts to use natural gas to gain political influence in Poland and Lithuania has failed while the European Commission has adopted a series of regulations to liberalize the European natural gas market and constrain Gazprom's "predatory behavior on the gas market."

Only a small number of scholars analyze the response of the importing state to the use of the energy weapon.[99] Smith-Stegen (2011, 6506–7), who develops a model of the energy weapon and ascertains whether and to what extent the RF has been successful in wielding the energy weapon by analyzing the responses of targeted states, argues that several conditions must be satisfied to wield energy supply as a weapon:

> First, the state must consolidate the country's energy resources. Second, the state must acquire control of transit routes. Third, the state must use the energy resources in an attempt to further its own political objectives by – either implicitly or explicitly – threatening, punishing, or rewarding a targeted client state.

In contrast to most studies on energy, Smith-Stegen also emphasizes the importance of adding a fourth stage, "the *reaction* of the dependent government to the threats, price hikes or cut-offs" because "it is not the threat itself *per se*, but potential policy change in reaction" (2011,

[99] The concept of the influence effect is discussed below.

6507 original emphasis) that raises concerns. Analyzing the fourth step, Smith-Stegen (2011) points out that: 1) despite the energy price hikes in the early 1990s, the Baltic States of Estonia, Lithuania and Latvia insisted on the departure of Russian troops, which subsequently occurred in 1994 in the former two and earlier in 1993 in the latter; 2) Georgia moved closer to the West after the pipeline explosions in 2006 as the Georgian president Mikheil Saakashvili continued to adhere to his pro-NATO and pro-West position; and, 3) cutting off the oil pipeline to Lithuania did not cause it to renege on the sale of a refinery to Poland. On the other hand, the RF has used gas pricing as a reward mechanism, which strengthens the perception that the RF has used its energy resources for political purposes as when Ukraine and the RF reached an agreement in 2010 to extend the presence of the Russian Black Sea Fleet in Sevastopol from 2017 to 2047 in return for an about thirty percent discount on gas (Levy 2010).

Beyond using the energy weapon as a direct incentive or sanction, it has also been argued that the RF has benefited politically from the effects of its economic impact. Newnham (2013), for example, argues that the RF used Ukraine's natural gas import dependence to impose classic economic sanctions. The energy sanctions imposed by the RF, Newnham (2013) finds, undermined the Ukrainian economy to such an extent that they destroyed President Victor Yushchenko's prospect for reelection and caused the electoral victory of the pro-Russian Victor Yanukovych in the 2010 Ukrainian Presidential elections. In addition, the January 2009 disruptions that caused a strong reaction in Western European countries are also said to have caused the Western embracement of the first Nord Stream project (Smith-Stegen 2011). However, Newnham also points out that the RF's attempts to use economic incentives to support President Leonid Kuchma's Russian friendly government to ensure Yanukovych's succession as President in the 2004 election failed leading to the election of Yushchenko. In sum, while the RF

seems to have implemented the first three stages, "the evidence for the consistently successful implementation of the energy weapon by the RF is less than overwhelming" (Smith-Stegen 2011, 6511).

A recent analysis by Moraski and Giurcanu (2013) of how a state's dependence on Russian gas influenced its politicians' response to the Georgian-Russian war in 2008 is one of the few specific studies on how energy dependence has influenced the reaction of various states. Moraski and Giurcanu (2013, 453) use the voting behavior of representatives in the Parliamentary Assembly of the Council of Europe (PACE) to analyze the variance of the behavior of European states based on different energy dependence levels. They find support for their expectation that bigger consumers of Russian energy that have a greater market share of total Russian energy exports are more critical of the RF than significantly smaller consumers. Their assertion that very vulnerable countries, which rely heavily on Russian energy supply and import a relatively small share of the Russian market, are fearful of becoming the next target of the RF is also empirically supported. Countries importing a smaller share of the Russian natural gas market, Moraski and Giurcanu (2013, 453) reason, have everything to lose if no action is taken and are likely to support PACE resolutions and recommendations critical of the RF in 2008.[100] Independently from energy dynamics, however, the RF was ultimately shown to be able to use its political leverage within political groupings of PACE in order to dampen support for resolutions and recommendations critical of the RF. Moraski and Giurcanu (2013) conclude that

[100] However, when Moraski and Giurcanu (2013) took a 5-year average the effect diminished. They offer a number of alternative explanations for the difference including: the domestic economic situation of the consumer, international political groupings within PACE, and whether the state in question shares a history or geographic proximity with the RF. Countries with weak economies were less likely to support PACE documents critical of the RF and countries from East and Central Europe were found to be significantly more likely to criticize the RF than former Soviet states.

while the RF is constrained by interdependence in the natural gas market, its political arsenal is varied and not limited to pipeline politics.

Interestingly, scholars that focus on the effectiveness of the energy weapon and the dynamic between the actors tend to relativize its efficacy. First, some scholars point out individual, structural characteristics and geographic differences of energy dependent states that influence the effectiveness of the energy weapon (Ericson 2009; Goldthau 2008; Larsson 2006; Moraski and Giurcanu 2013; Nygren 2008). The energy weapon has, for example, been found to be more effective in the near abroad, where import dependence on Russian natural gas is higher and fewer alternative sources of supply are available, and in countries with unreformed energy markets that are riddled with cronyism (for example, Ukraine) that allows Russian meddling.[101] Second, strategic considerations are believed to influence the RF's decision making. The RF would not risk its position as a reliable energy partner for its European markets in the long-term and therefore not use its energy weapon too frequently or openly to avoid triggering countermeasures (Ericson 2009). Relatedly, Rutland (2008) refers to the sanctions literature, according to which sanctions are only effective about half the time and only when they are multilateral, and highlights that the RF's efforts to use energy as a political lever are unilateral. Finally, the difficulties of the RF in converting its resources into an effective instrument of foreign policy have also been explained using a wider political context or more holistic perspective including: the current political situation (Orttung and Overland 2011), the Russian-Western geopolitical competition (Kropatcheva 2011), a wider political arsenal beyond pipeline

[101] In a similar vein, Smith-Stegen (2011) while pointing out that the RF seems to have used its energy weapon successfully only in some cases, concludes that the RF would have lost control over the symbolically significant Black Sea Fleet without control over natural gas and important energy transit routes.

politics (Moraski and Giurcanu 2013) including, for example, military capacity and diplomatic bargaining (Rutland 2008).

The empirical evidence used, moreover, also reflects the direction of research. Adherents of both the dependence and interdependence thesis most frequently rely on trade statistics. Harsem and Claes (2013) analyze 25 different state dyads with the RF as the supplier state and different EU member states as the recipients in order to evaluate the dependence of the recipient states or potential coercive power capability of the RF. Similarly, Goetz (2014) relies on general trade statistics to support his argument of interdependence. Studies on the use of the energy weapon likewise analyze supply relations but usually augment them with individual case studies or references to individual conflicts. Thus, Orttung and Overland (2011) use 30 conflicts between the RF and recipients states between 2000 and 2010 in order to analyze how successful the RF has used its leverage. Shaffer (2013) uses 35 international supply relations and analyzes the cases of the disruption of Egypt's gas export to Israel and Jordan (2008-2011) and disruptions and challenges of supply from Russia and Azerbaijan to markets in the region and in Southern Europe.[102] Individual conflicts and disputes involving the RF frequently referred to include: the natural gas price negotiations with the Baltic States and the Ukraine starting in the 1990s; the negotiations with the Ukraine regarding the Black Sea fleet; disruptions of supply to the Ukraine in 2006 after the Orange Revolution and again in 2009; the pipeline explosions disrupting supplies to Georgia January 2006 and disruptions during the Georgian-Russian war in 2008 (Gidadhubli 2006; Kropatcheva 2011; Moraski and Giurcanu 2013; Smith-Stegen 2011; Stulberg 2012).[103] The only quantitative study is salience of the traded good as by Moraski and

[102] Shaffer (2013) intentionally refrained from using the RF and a CIS country or EU member as a case study.
[103] Only Stulberg (2012) specifically points out the Baku-Tbilisi-Ceyhan (BTC) pipeline and the Caspian Pipeline Consortium (or CPC project) as examples of pipelines that have not experienced conflicts or disruptions, both of which, however, transport oil.

Giurcanu (2013), which analyzes the voting behavior of representatives in the Parliamentary Assembly of the Council of Europe (PACE) in response to Russia's invasion of Georgia.

In sum, the majority of the existing literature on the dependence of natural gas importing states and the RF focuses either on the conditions in and policies implemented by the gas supplying state in order to wield its gas weapon or factors influencing the gas dependence of the customer state. Table 4.1 gives an overview of the literature discussed above. The debate on the nature of the trade relationship between the import dependent states and the RF remains unresolved, with scholars finding support in trade statistics for both dependence and interdependence.

Table 4.1. Literature Overview

Focus	**Outlook**	**Description**
The Nature of the Trade Relationship	Dependence (asymmetric Interdependence)	The dependence of individual states on Russian natural gas enables the RF to use it as a foreign policy tool (Ericson 2009; Harsem and Claes 2013; Larsson 2006).
	Interdependence	A disruption of natural gas trade would have similarly severe consequences for both the RF and the import dependent states (Goldthau 2008; Goetz 2014).
The Use of Natural gas as a Foreign Policy Tool	Carrots and Sticks	The RF uses natural gas as incentive and punishment attempting to increase its power and influence in near-abroad and/or on a global level (Gidadhubli 2006; Newnham 2011; Saivetz 2012; Wood 2007).
	Geopolitical Energy Game	Trade interdependence and institutional factors influence the strategic bargaining position of the involved actors trying to improve their relative power positions (Kropatcheva 2011).
	Strategic Bargaining Problem	All actors face commitment problems in making and maintaining mutually beneficial transit agreements that are shaped by returns on investment and institutional constraints (Stulberg 2012).

	Network Structures	Dependence based on network structures allows states controlling the network to weaponize interdependence on the level of the network itself (Drezner 2021; Farrell and Newman 2019).
	Reaction of the Dependent State	The energy weapon is analyzed based on its actual impact, the reaction of importing states to supply disruptions or threats thereof (Moraski and Giurcanu 2013; Smith-Stegen 2011).
The Effectiveness of the Energy Weapon	Individual Characteristics	Individual, structural characteristics and geographic differences influence the effectiveness of the energy weapon (Ericson 2009; Goldthau 2008; Larsson 2006; Moraski and Giurcanu 2013; Nygren 2008; Rutland 2008). - The energy weapon is more successful in the near abroad. - Strategic considerations influence the RF's decision-making. - RF actions are unilateral.
	Grand Strategy	Wider political context matters, a more holistic perspective should include: - the current political situation (Orttung and Overland 2011) - the Russian-Western geopolitical competition (Kropatcheva 2011) - the availability of an arsenal of foreign policy tools beyond energy politics (Moraski and Giurcanu 2013) - military capacity and diplomatic bargaining (Rutland 2008)

More recently, the analyses of natural gas as a foreign policy tool have been advanced by the inclusion of the concept of strategic bargaining as well as the emphasis on the behavior of the natural gas import dependent states including both qualitative and quantitative analyses. A valuable contribution was made by Smith-Stegen (2011) as well as Moraski and Giurcanu (2013), who emphasize that the effectiveness of the gas weapon must be studied by analyzing the behavior of the gas dependent states. However, scholars find that the RF has not been able to use

the energy weapon successfully and/or consistently. Finally, the inclusion of the behavior of the importing state in the analysis promises to shed light on further aspects of the effectiveness of the use of the energy weapon.

Before proceeding to the analysis of the impact of Russian natural gas dependence on the foreign policy of the importing state, it is important to augment the current literature review with a review of the fundamental concepts of power and influence and to review existing theory in order to outline how trade comes to influence the foreign policy of the import dependent state.

Economic Power

Foreign trade as an instrument of foreign policy has been analyzed in the terms of power since the 1940s, when Hirschman (1945) identified the *supply effect* of foreign trade, which allows states to increase their military capacity,[104] and the *influence effect*, which arises when state B values its trade with state A to such an extent that it is willing to grant state A certain military, political or economic advantages in order to continue trading with A. In the 1970s and 1980s, scholars similarly put trade dependence in power terms (Armstrong 1981; Baldwin 1980; Keohane and Nye 1977; Knorr 1973; 1975; 1977). Comparable to Dahl's (1957) basic definition of power, Keohane and Nye (1977), for example, surmised that power is the ability of an actor to get others to do something they would otherwise not do.

A number of scholars, notably Hirschman (1945), Waltz (1970), Knorr (1973; 1975; 1977) and Kroll (1993), as well as quantitative studies (Armstrong 1981; Kroll 1993;

[104] Recent literature on trade and power politics (Gowa and Mansfield 1993; Long and Leeds 2006; Powell 1991), including alliances, frequently refers to this as security externality, where trade produces security externalities because trade frees domestic resources or allows for their more efficient use thereby freeing economic resources to increase military strength and, possibly, threaten trade partners. Arguably one could also read Powell's (1991) discussion of relative and absolute gains in terms of the *supply effect*.

Richardson 1978; Richardson and Kegley 1980)[105] recognize that the ability to use foreign trade as an instrument of foreign policy or economic leverage in turn rests on asymmetries in dependence[106] According to Knorr (1975; 1977), the coercive power rests upon three factors: 1) a high degree of control by A over the supply of the good valued by B, 2) an intensive and insensitive need for the traded good by B (while A is not similarly dependent on B), and 3) lower costs of compliance to B than doing without its supply.[107] Understood already by Hirschman (1945), the latter emphasizes that the concept of opportunity costs is central to understanding power (Armstrong 1981). Baldwin (1980, 501) similarly connected the opportunity cost of forgoing trade to the concept of power:

> If dependency is defined in terms of the magnitude of the opportunity costs of severing the relations, then – by definition – A has the ability to inflict costs on B. If the ability to inflict costs on another actor is considered a measure of potential power, then all dependency relations are power relations in the following sense: To the extent that A can make B go without oil by severing the relation between A and B, A has potential power over B with respect to the consumption of oil. This is precisely what it means to say that B is dependent on A with respect to oil consumption.

The concept of opportunity cost, however, remained rather vague since the costs and benefits were neither clearly defined nor operationalized thus inhibiting an empirical assessment of the relationship between trade and cooperation.

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[105] Richardson (1978) empirically analyzes the foreign policy behavior (as reflected in certain votes in the United Nations General Assembly) of a number of poor countries that are economically dependent on the United States to varying degrees for the years 1950–1973.

[106] Also referred to as asymmetrical interdependence.

[107] While similarly recognizing the opportunity costs of foregoing trade as a measurement of vulnerability, Murdock (1977) stressed that the actual vulnerability of a particular state depended on the particular situation or domestic political-economic system, that it is, the varying economic capability of countries and their ability to cope or respond to external economic forces. Economic factors were also differentiated by Armstrong (1981), Richardson (1976).

More recent studies on the democratic peace that incorporate economic interdependence have contributed to a better specification of the costs and benefits associated with trade dependence.[108] According to Polachek et al. (Gasiorowski and Polachek 1982; Polachek 1992; Polachek and McDonald 1992), the costliness of disrupting trade is best represented by the lost welfare gains associated with trade indicated by trade levels and inelastic import-demand and export-supply curves.[109] Subsequently, Crescenzi (2003; 2005) defined the opportunity costs associated with switching to the next best alternative or substitute when trade is interrupted as "exit costs."

The calculation of opportunity costs and incentives of the import dependent state to cooperate are furthermore influenced by the salience of the traded good as well as of the issue at stake. Economically, the impact of the interruption of trade is greater when: 1) the mobility of resources is lower, 2) the adaptation is costlier, 3) trade is concentrated on certain goods, and 4) the traded good is highly critical for the dependent state (Armstrong 1981; Crescenzi 2003; 2005; Hirschman 1945; Knorr 1975; 1977).[110] Politically, the salience of the issue matters to both the dominant and the dependent state and influences the relationship between dependence and compliance (Armstrong 1981).[111] Armstrong (1981, 406–7) maintains, that: 1) A will not use

[108] For example, Levy's (2003) discussion of the trade-promotes-peace proposition as well as its critics.
[109] The more inelastic the import demand and export supply curves, the greater the consumer surplus and thus the gains from trade – the greater the gain, the smaller the probability of conflict. Scholars have used the trade-to-GDP ratio to create a dyadic measurement of economic interdependence, capturing the degree to which trade is economically important, or total exports-to-GDP for a general measure of openness(Oneal and Russett 1997; 1999; Oneal et al. 1996).
[110] According to Crescenzi (2003, 812), "the highest forms of interdependence exist when exit options are scarce, adaptation is costly, and the economic relationship is highly salient." This is comparable to the three fundamental conditions for dependence outlined by Armstrong (1981): magnitude of economic transactions, availability of substitutes, and intensity of the demand for the commodity.
[111] Richardson (1978) also argues that the dominant country is more likely to use its economic power on salient issues rather than on issues of less importance but does not differentiate between saliency levels between both countries. To account for issue salience quantitative studies analyzing the impact of trade dependencies on the United States or the Soviet Union on the foreign policy behavior of dependent states during the Cold War frequently distinguish between Cold War and non-Cold War issues of lesser importance (for example Richardson 1976; 1978).

economic power if the issue is of low importance to A and high importance to B, 2) A is likely to use its economic power implicitly if the issue is of high or low policy interest to the dominant state A and of low importance to the dependent state B, and 3) A is likely to use its economic power explicitly if the issue is of high importance to both states. It is important to note, however, that Knorr (1973; 1975; 1977) already previously concluded that there were few historical examples in which economic coercion had been effective because few dominant states were able to exercise sufficient control over the supply of one good, when stakes were high and a matter of high policy.

More recently, Farrell and Newman have drawn on network based explanations noting that there are significant areas of the global economy "in which a network analysis reveals winner-take-all dynamics" (Drezner 2021, 8). As opposed to dyadic patterns of asymmetric dependence, as defined by Albert Hirschman, which can be changed more easily, dependence based on network structures allows states controlling networks to weaponize interdependence on the level of the network itself (Drezner 1999, 8; Farrell and Newman 2019, 45).

Finally, power is not only a question of the relevance of the traded good(s) and issue salience, the potential ability to exercise power needs to be distinguished from the influence or political leverage actually enjoyed by the dominant state (Baldwin 1980; Caporaso 1978; Keohane and Nye 1977; Knorr 1973; 1975; 1977). Economic pressure, after all, is specifically aimed at achieving an immediate and limited political purpose (Vital 1967, 90). In other words, economic power (or the power to interrupt trade and impose costs) is linked to exert political influence in other areas (Baldwin 1980; Hirschman 1945). More specifically, asymmetric interdependence can enable linkage diplomacy (Gasiorowski and Polachek 1982). Oneal and Russet (1997, 270) similarly recognize that

> even a relatively low-cost change in trading patterns may have significant political consequences by reducing the sensitivity and responsiveness of a state to the preferences of its former trading partner, because trade and foreign investment are media for communicating on a broad range of matters beyond the specific commercial exchange taking place.[112]

Knorr (1975, 109), however, again cautioned already in the 1970s that while the use of economic leverage to obtain economic gains is unsurprising, its linkage to political benefits is uncommon and usually regarded as artificial and likely to encounter resistance by the targeted state. Similarly, Keohane and Nye (1977) point out that the dominant state has to establish and maintain a linkage between the domain of its influence and the policy area it wants to influence (Richardson and Kegley 1980, 193).[113]

In the 1970s two distinct concepts of interdependence emerged (Baldwin 1980; Keohane and Nye 1977; Richardson and Kegley 1980): "sensitivity interdependence," denoting how quickly changes in one state impact another state and at what cost before adjustments have been made and "vulnerability interdependence," referring to the costs of rupturing or foregoing trade or, alternatively, the relative availability and costliness of alternatives or the long run costs after policies have been adjusted to cope with the external changes.[114] Scholars generally find vulnerability to be more important than sensitivity (Keohane and Nye 1977; Richardson and

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[112] Long and Leeds (2006), on the other hand, find that trade among military allies who have specified economic cooperation in their alliance agreement is higher than trade among non-allied states and trade among allies who have linked economic cooperation with their military alliance. Mansfield and Pevehouse (2000), moreover, find that while trade has little impact on the likelihood of disputes between states that are not part of the same preferential trade agreement (PTA), there is a strong, inverse relationship between trade and conflict within PTAs.

[113] Crescenzi (2005), in turn, criticizes Hirschman (1945) and Keohane and Nye (1977) for suggesting that economic interdependence affects politics without elaborating or formalizing how the linkage occurs.

[114] Put differently, sensitivity has also been described as reflecting a state of contingent or conditional relationship and vulnerability as a state of subordinate or subject relationship (Duvall 1978, 61–62). Duvall furthermore argues that dependencia theory is about dependence in the first and contextual sense, that is, sensitivity, while social scientist in North America have mostly used the second concept. According to Baldwin (1980, 492) dependence refers to external reliance on other actors while "dependency" refers to the incorporation of less developed countries (LDCs) into the capitalist system and the resulting structural distortions. For a discussion of dependence and dependency, the latter being used by dependencia theorists, see Caporaso (1978).

Kegley 1980).[115] Murdock (1977, 94) stresses that different domestic political-economic systems of nations determine the nature of economic vulnerability, the types of vulnerabilities perceived as economic security issues, and the ability of a nation to cope or respond to an economic security threat making it difficult to measure overall vulnerability.[116]

More recently, the bargaining literature more successfully allocated a conflict reducing role to trade. Fearon (1995) specified three conditions that prevent a peaceful settlement: private information about relative capabilities and incentives to misrepresent such information[117] (and discount the other side's signals), commitment problems, and issue indivisibilities. Trade can serve as a costly signal, which conveys resolve and information in a political dispute (Fearon 1997), by increasing the number of available signals to indicate commitment and raising the costs of conflict (Gartzke, Li, and Boehmer 2001; Morrow 2003; Stein 2003). The general consensus in accordance with Hirschman (1945), Keohane and Nye (1977), and Knorr (1973; 1975) is that asymmetrical economic interdependence benefits the stronger state.[118] Morrow (2003), however, argues that a willingness to forego trade by the dependent state can serve as a more credible signal. Finally, Wagner (1988) concludes that asymmetric interdependence does not give the stronger actor the ability to extract a concession from the weaker without compensation. In other words, political concessions have to be economically compensated.[119]

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[115] Contrary to this general position, Kroll (1993) argues that both vulnerability and sensitivity as well as independence as a third measure need to be considered when evaluating the connection between interdependence and cooperation.

[116] In favor of this line of thinking is also the fact that most goods are not essential and available for trade on other markets. Additionally, bilateral trade between pairs of countries is for most states not critical as it is a small proportion of total domestic production and most of the time a small proportion of total trade as well, especially in the case of major powers.

[117] Morrow (1989) and Reed (2000) have similarly highlighted the role of information.

[118] Murdock (1977) pointed out that the ideal position for a state was for its trade to be relatively unimportant for its own economy while at the same time to be relatively important for its trade partners.

[119] Keohane (1967) argues that the successful exercise of influence in the U.N. General Assembly creates a corresponding political liability or political debt that has to be repaid in the future. This dissertation, however, links energy import dependence to foreign policy alignment where no future political debt is created.

Only a few quantitative studies of the late 1970s and 1980s test the relationship between economic dependence and foreign policy compliance of the dependent state (Armstrong 1981; Richardson 1976; Richardson and Kegley 1980). Analyzing the impact of U.S. trade dependence using United Nations (U.N.) General Assembly voting behavior between the 1950s and 1970s, Richardson (1976; Richardson and Kegley 1980) finds that dependent countries agreed with the United States more on Cold War votes than other countries. Using an interactive indicator of trade dependence for the 1950s and 1960s, Armstrong (1981) similarly concludes that economic dependence to a large extend explained levels of political compliance. It is important to note, however, that both Armstrong and Richardson focus on export dependence of smaller or weaker states and the United States as the stronger trading partner rather than the impact of import dependence on foreign policy behavior.[120]

Quantitative studies on the democratic peace and trade and conflict have also shed light on the possibility of reverse causation or the likelihood that more trade occurs as a result of cooperation in political/military affairs rather than trade dependence leading to the foreign policy cooperation of the dependent state.[121]Applying an economic framework to the analysis of the relationship between trade and conflict, Gasiorowski and Polachek (1982) analyze aggregate trade as well as trade of seven categories of goods between the United States and individual Warsaw Pact members and the level of cooperation during Détente using events data. They conclude that trade had a much stronger effect on moderating Soviet and Warsaw Pact behavior

[120] One may thus argue that their analyses relate more to dependencia theory.
[121] In their quantitative analysis, Long and Leeds (2006) do not find a statistically significant relationship between the similarity of two countries' foreign policies and foreign trade. Pollins (1989) found that bilateral trade tends to be lower when the trading partners are engaged in conflict than when they are cooperating politically.

than U.S. behavior confirming their thesis that the incentive to cooperate is stronger for the state that benefits more.[122]

Overall, scholarly interest in the connection between economics and security peaked several times during the last century: the 1930s and 1940s, the 1970s and 1980s and again starting in the 1990s. Over the last decade, there has been a sharp increase in the scholarly attention devoted to the question of economic dependence in Europe and, more specifically, with regard to import dependence on Russian natural gas. Several explanations have been offered for this revival. First, the end of the Cold War promised greater integration and interdependence between the two main contenders and superpowers in that conflict (Moraski and Giurcanu 2013). Second, concerns about political linkage while receding in the early 1990s as the Russia seemed to be moving towards a "market diplomacy" and President Boris Yeltsin committed to the independence of the post-Soviet states reemerged a few years later (Rutland 2008, 203). The Russian reaction to the war in Kosovo in 1999 and the ascension of President Vladimir Putin caused unease about Russian attempts to create a sphere of influence in its near abroad and the authoritarian trajectory of the Russian Presidents Putin and Medvedev exacerbated Western fears about dependency on Russian energy. While Rutland (2008) concludes that this change is of a political rather than economic origin, Goetz (2014) argues that the narrative of the gas war has not only become popular because it fits in the picture of Russian great power politics but also because of the recent securitization of the energy debate in academia.

Having discussed the basic concepts of economic power that is, how economic power comes about and can be yielded, it is important to keep in mind the reaction of the dependent

[122] Polachek et al. (Gasiorowski and Polachek 1982; Polachek 1992; Polachek and McDonald 1992) have also addressed the question of endogeneity using causality tests.

states and consider the potential for their adaptive behavior in anticipation of a potential supply disruption.

Anticipated Foreign Policy Decisions

Only a much smaller subcategory of research within the analysis of the effectiveness of the energy weapon focuses on the potential for or the actual pre-emptive adaption of the foreign policy of recipient states based on their dependence on Russian energy, which one may argue include "gas-for-silence" policies of recipient states dependent on Russian natural gas.

According to Knorr (1973; 1975), the dependent state B might modify its behavior not only in compliance with but also in mere *anticipation* of state A's demands, wishes or proposals[123] and Baldwin (1980) refers to Nagel's (1968) rule of anticipated reactions, where "A has power over B to the extent that B does something he would otherwise not do because of the existence of A and certain desires, intentions, and abilities attributed to A […] at the time that B makes his decision."[124] In economic terms, Vital (1967, 91 original emphasis) notes more specifically that economic vulnerability by itself is "a powerful influence on the *minds* of decision-makers of small states [or dependent nations], inhibiting a policy shift which might otherwise occur." In other words, the awareness of the permanent potential of economic pressure and the desire to protect the benefits of trade leads to the incentive to cooperate (Polachek 1992; Polachek and McDonald 1992).[125] While emphasizing that B is only influenced if A has

[123] Kroll (1993) referencing Kelley and Thibaut's (1978) *Interpersonal Relations: A Theory of Interdependence* refers to the accession of dependencies to the behavior of the dominant state's wishes as behavioral control or compliance on part of dependencies.
[124] During the 1960s, the Dahl's (1957) concept of power was prominently discussed by Harsanyi (1962a; 1962b) and Nagel (1968). According to Nagel (1968), Harsanyi made a valuable extension to Dahl's concept of power when he specified that A's power over B should be defined as the opportunity costs of noncompliance as perceived by B.
[125] Vital is also quoted in Armstrong (1981, 408). For the influence of domestic political institutions and social economic interests on foreign policy see Papayoanou (1996).

established the reputation to use its economic power, Knorr (1975) concludes that it is highly likely that power becomes effective more frequently through this silent mechanism than through threats and their execution. Put differently, power is a matter of perception and anticipation, and like all types of power succeeds best when it does not need to be invoked (Knorr 1975). Allowing for the possibility of anticipated reactions is therefore useful for understanding the concept of power.

The energy weapon has similarly been analyzed from the perspective of the recipient states, that is, the impact of their energy dependence on their foreign policy behavior. Harsem and Claes (2013), for example, incorporate of the concept of dynamic asymmetric interdependence to the politics of energy and trade dependency. According to Harsem and Claes (2013, 785), one consequence of asymmetric interdependence is that "[a] government's trade dependence may lead the dependent state to shift or change its national interests in favor of the state that it relies upon." Drawing on a conditional approach developed by Armstrong (1981), Harsem and Claes (2013) maintain that political influence through trade dependence is based on three factors: 1) the control of the supplier state of the dependent state's investments; 2) a lack of diversification opportunities of the dependent state; and 3) the fact that threats or disruptions are not necessary because the existence of the economic vulnerability itself influences decision-makers in dependent nations. In other words, the mere existence of asymmetric interdependence may cause policy shifts in the dependent state that might otherwise not occur. In addition, no political or economic compensation is required for political concessions if the commodity is highly important and not easily diversified because the fear of a disruption is an important factor to decision-makers in the dependent state. In the case of Russia,

> export of gas can either be a tool for coercion, or a trading commodity that enables Russian decision makers to act

> independently of criticism from recipient countries that otherwise would be inclined to publicly condemn Russian foreign policy actions. (Harsem and Claes 2013, 786)

Thus, Harsem and Claes (2013) conclude that while gas exports may not enable the RF to cause policy changes in dependent states, it can serve as a preventive tool, as a "gas-for-silence"-strategy. Along similar lines, Ericson (2009) points out that while the RF has exercised its energy leverage only against former Soviet Republics, that is, Moldova, Georgia, and Ukraine in January 2006 and Belarus in January 2007, Europe's muted response to these actions may also reflect its leverage. According to Ericson (2009, 41),

> [f]or Europe, the cost of securing sufficient energy has become acquiescence in arbitrary Russian action with respect to its neighbors, and substantial compromise with situations and positions it finds distasteful, in order to avoid jeopardizing access to substantial Russian energy supply, including currently irreplaceable natural gas.

This was, Ericson argues, evident in France, Germany, and Italy's stance and statements in response to the Russian invasion of Georgia in August 2008, which contradicts the findings of Moraski and Giurcanu (2013) with regard to voting pattern in PACE resolutions and recommendations during the Georgian-Russian war in 2008.[126] Ericson (2009, 55) concludes that the RF has to use its leverage lightly and wisely without trying to extract maximal possible gains in profit or policy influence. Additionally, the leverage can be most effectively applied where core Russian interests face peripheral European interests, which make opposition to Russian objectives "not worth the potential cost." Core Russian interests include, for example, the tying

[126] Ericson (2009) qualitatively assesses the responses within Europe as well as by the RF to a PACE motion that would reconsider the Russian delegation's credentials based on its violation of the basic principles of the Council of Europe as well as statements before and the outcome of the EU-Russia summit in November 2008 while Moraski and Giurcanu's (2013) quantitative analysis is based on the voting pattern in the PACE for Resolution 1633. It would definitely be most interesting to shed further light on this.

of Commonwealth of Independent States (CIS) members politically and economically to the RF or blocking NATO advances into its former sphere of influence, while peripheral European interests include the preservation of democracy and autonomy of Moldova, Russian democracy or expanding NATO.

While both Harsem and Claes (2013) as well as Ericson (2009) identify the potential for the adaptive behavior of the gas dependent states and the so-called gas-for-silence argument, Nagel (1968) as well as Knorr (1975) already pointed out that the cautious rejection or not even considering policies that might aggravate A does not require communication between the actors and often remains private and unrecorded. While it is inherently difficult to find empirical evidence for this hypothesis, it is a direction of research that should be taken also for the analysis of the effectiveness of the energy weapon.[127]

Theoretical Framework and Hypothesis

I assume that policymakers are likely to be influenced by their state's vulnerability to the energy weapon. The theoretical framework of my hypotheses builds on the strategic-choice approach as well as the above discussion of the impact of economic dependence and anticipated foreign policy decisions.

In the economic natural gas trade relationship, I assume that the exporting state prefers: 1) profitable and secure trade terms, or put differently, favorable prices and long-term contracts; 2) a large and/or increasing market share and increasing demand in the importing state; 3)

[127] Knorr (1973; 1975) as well as Shaffer (2013) point out that punitive measures such as the disruption of natural gas supplies, while not necessarily effective vis-à-vis the recipient state, might be aimed at and influence the future behavior of third parties. Knorr (1975) adds that punishment may also serve the emotional needs of the government and Shaffer (2013) additionally refers to political goals as related to the domestic audience.

reliable payments allowing for a steady stream of income for the recouping of investments made in long-term infrastructure projects as well as for future investments and profit margins; and 4) control and/or ownership of all or as many as possible market phases, that is, from extraction to the delivery of the natural gas to the customer. The import dependent state is meanwhile assumed to prefer reliable and diversified supply at competitive prices. Based on the preferences of the trading partners, natural gas trade promises to be a mutually beneficial economic relationship – making the construction of long-distance pipelines economically viable.

The interaction of the importing and exporting state's preferences and the possibility of issue linkage moreover creates an international strategic environment in which both states take foreign policy considerations into account. Thus, apart from using its economic leverage to obtain economic gains, the exporting state would prefer that the long-term trade relationship of an essential commodity such as natural gas also has a favorable impact on the foreign policy of the import dependent state. In other words, I argue that the exporting state seeks or at least looks favorably upon issue linkage between the trade relationship and the foreign policy decisions of the import dependent state – whether through the use of the energy weapon or its mere existence. The import dependent state, on the other hand, prefers to be free of concerns regarding threats of or actual supply disruptions for economic or political gains by the exporting state or the feeling of having to tread carefully in its foreign policy as to not to disturb the existing energy supply trade relationship with the exporting state. In addition, in the case of the basic needs or welfare of society, such as secure energy supplies, the political leaders of import dependent states are likely to be acutely aware that a failure to provide such basic needs or the costs associated with

natural gas price increases would likely lead to domestic repercussions by impacting their prospects of reelection if not their current term in office.[128]

Given what we learned about the energy weapon and more broadly speaking economic power and anticipated foreign policy decisions, the foreign policy of the natural gas import dependent state is contingent on the domestic economic and political cost of a potential supply disruption. The preferences of the importing state, and thus by extension its foreign policy, are shaped by its natural gas import dependence[129] and the beliefs of the political leaders of the dependent state judge regarding the preferences and resolve of the supplying state.

Leaders of import dependent states must be aware that the exporting state is interested in both the economic benefits and foreign policy alignment due to the importing state's natural gas import dependence. The import dependent state thus mistrusts the exporting state's commitment to secure energy supplies as stipulated by existing contracts. This mistrust while originating in the very nature of natural gas import dependence is likely to be further amplified by examples of natural gas supply disruptions and posturing by the RF. Supply disruptions, or the threat thereof, whether to itself or a third party, are likely to confirm the beliefs of the import dependent state about the preferences of the exporting state. The political leaders of import dependent states should therefore voluntarily choose to align themselves with the RF in order to maintain and guarantee the security of future natural gas supplies.[130] In other words, based on the information

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[128] Bueno de Mesquita and Siverson (1995, 843 original brackets) state, for example, that,"[e]nhancing the welfare of relevant constituents (to the extent that it is successful) removes from the opposition the most salient issues that can be used against a leader."

[129] Moon (1983, 316–17) similarly notes that foreign policy is formed in relation to the interests and perspectives import dependent states derive in part from the dependency relationship.

[130] Winzer (2012), who advocates the adoption of a unified definition, defines *energy security* as the continuation of the supply of energy commodities (or energy supply continuity) A slightly broader definition is used by the European Commission, which has defined energy security as "the uninterrupted availability of energy sources at an affordable price while respecting environmental concerns" (European Commission 2013, 11).

available to them the political leaders of import dependent states will adopt foreign policies in order to stay amicable with the natural gas supplying state.

In sum, I assume that the mere condition for the use of the energy weapon will impact bilateral relations between importer and exporter because the importer wishes to prevent conflicts of interest with the supplying state. In other words, Russian natural gas import dependence[131] will lead to a *silent* mechanism of foreign policy alignment, which leads to the following proposition regarding energy dependence and foreign policy:

Proposition 1: Energy import dependence leads to greater foreign policy alignment between the importing and the exporting nation-states.

In the evaluation of their state's energy import dependence, the policymakers of the dependent state are likely to consider their degree of Russian natural gas import dependence. Therefore, I extend the general proposition above to account for the degree of energy dependence experienced by the importer according to the following conditions: 1) the concentration of Russian natural gas in total natural gas imports, 2) the additive effect of the concentration of Russian natural gas in natural gas imports, the reliance on natural gas imports, and the share of natural gas in the energy mix, 3) the additive effect of only the concentration of Russian natural in natural gas imports and the reliance on natural gas imports. A higher import dependence, that is, the higher the share of imported natural gas of total natural gas consumption, the higher the concentration of Russian natural gas imports, and/or the less diversified the energy mix are, is likely to lead to greater foreign policy accommodation by the import dependent state.

[131] Economic dependence is defined as the vulnerability of a state to energy price shocks or energy supply disruptions (European Commission 2013, 5) and captures the susceptibility to incur damage and the resiliency to supply shocks.

I furthermore include a measure of the general importance of Russian natural gas to the economy of the import dependent state by comparing the value of Russian natural gas imports to both GDP and total goods imported. Again, a greater share of Russian natural gas in the GDP of or total goods imported by the import dependent state is likely to lead to greater foreign policy alignment with the RF. Considering the above arguments produces the following hypotheses:

1.1 Higher levels of natural gas import dependence from Russia will be positively correlated with foreign policy alignment between the import dependent state and Russia.

1.2 Higher levels of natural gas imports from Russia, as a share of the economy of the importing state, will be positively correlated with foreign policy alignment between the import dependent state and Russia.

Proposition 1 posits that the energy import dependence is conducive to a general foreign policy alignment of the dependent state with the supplying state. I thus argue that energy weapon through its *silent* mechanism has a systemic impact on the foreign policy of the import dependent state by inducing foreign policy alignment and deterring foreign policy decisions that might alienate the RF. In other words, this mechanism applies not only to parties directly affected by a supply disruption or threat thereof but every natural gas import dependent state that has made its own judgment about the supplying state's preferences and resolve.

To evaluate hypotheses 1.1. and 1.2, I use a combination of quantitative analyses consisting of a cross-national time-series set as well as a national time-series for Germany (see Chapter 5 -) and in-depth case studies on Germany (see Chapter 6 -). I expect that the quantitative analyses will support the hypotheses thus confirming a relationship between natural gas import dependence and the foreign policy alignment of the dependent state with the RF. Confirmation of the hypotheses would lend credence to the argument that increasing Russian

natural gas import dependence leads to the foreign policy alignment of the import dependence state with the RF. Qualitative analyses of the FRG are, moreover, likely to reveal complex considerations and the weighing of the tradeoff between economic and security aspects.

Chapter 5 - Quantitative Analysis

The first quantitative analysis[132] in this chapter uses time-series cross-sectional data from 19 European countries from 1995 to 2013.[133] The temporal and spatial domains are limited by the availability of data with regard to the concentration of Russian natural gas in total natural gas imports and natural gas prices. The panel data is balanced; there are the same number of observations for each country (Gujarati and Porter 2010, 593). The second quantitative analysis focuses solely on the relationship between Germany and the RF for which data is available from 1979 to 2012.

The Dependent Variable: Foreign Policy Alignment

The dependent variable will be foreign policy alignment, which refers to the voluntary positioning of the energy dependent state's foreign policy in line with the preferences and policy of the energy supplying state, the RF. Scholars use United Nations General Assembly roll call voting data for a wide range of studies including on power and war (Reed et al. 2008), the democratic peace (Gartzke 1998; 2000), and post-cold war politics (Kim and Russett 1996; Voeten 2000; 2004) as well as for the analysis of the impact of trade and/or economic interdependence (Armstrong 1981; Gartzke, Li, and Boehmer 2001; Moon 1983; Moraski and Giurcanu 2013; Richardson 1976; 1978; Richardson and Kegley 1980). Keohane (1967) notes that prestige or power, that is, economic or political power, outside the U.N. General Assembly can be translated into influence within the General Assembly with explicit threats or pressure frequently not being necessary. In addition, the regular and large number of General Assembly

[132] The statistical analysis was performed using Stata version 16.
[133] Appendix B - provides a list of countries included in the analysis.

votes over a long period of time and on heterogeneous issues across nations allow both longitudinal and cross-sectional analyses (Moon 1983; Reed et al. 2008; Richardson 1978; Voeten 2000). Reed et al. (2008), moreover, emphasize that states have incentives to vote in self-interested ways even if they are not directly affected by a particular issue. More specifically, "[s]tates have specific political goals having to do with the extent to which they agree or disagree with other states, and they can pursue those goals in votes that do not pertain specifically to them, or to their allies or enemies" (Reed et al. 2008, 1207). In sum, General Assembly votes reflect the foreign policy of a state and changes of preferences and behavior should be traceable over time. Finally, Moon (1983), while acknowledging that General Assembly votes are a less than perfect indicator of a nation's foreign policy orientation, concludes that they are strongly correlated with but probably superior to alternative measures such as events data, diplomatic representation, intergovernmental organization memberships, alliance behavior, and others. Signorino and Ritter (1999) similarly point out the weakness of inferring states' interests from alliance data and suggest supplementing alliance data with U.N. voting data to measure the similarity of foreign policy positions of states.

Foreign policy alignment or *Affinity* between an energy importing state and the RF will be measured using raw roll-call votes in the U.N. General Assembly available from 1946 to 2018 (Voeten 2013). *Affinity* is based on a dyadic affinity score using 2 category vote data (1 = "yes" or approval for an issue; 2 = "no" or disapproval of an issue. *Affinity* ranges from -1 (least similar interests or policies as far apart as possible) to one (most similar interests or identical policy positions). Values for the Affinity are coded with the "S" indicator, where "S" is calculated as 1-2*(d)/dmax, where d is the sum of metric distances between votes by dyad members in a given

year and dmax is the largest possible metric distance for those votes (Voeten, Strezhnev, and Bailey 2009, 6; Signorino and Ritter 1999, 126–27).[134]

The Independent Variable: Natural Gas Import Dependence

I will test hypotheses 1.1 and 1.2 using five different measures of energy import dependence for the independent variable, summarized in Table 5.1.

Table 5.1. Measures of Energy Import Dependence

No.	Short Description	Description	Hypothesis	Abbreviation
1	% of Russian NG of total NG imports	The concentration of Russian natural gas in total natural gas imports	1.1	Russian NG
	NG import dependence	The extent to which a country depends on natural gas imports to meet its natural gas demand	indirectly 1.1	Import
	NG dependence	The reliance on natural gas as an energy source	indirectly 1.1	NGEnergy
2	Russian NG dependence + NG import dependence + NG dependence	Additive index of 1) Russian natural gas concentration in total natural gas imports, 2) the percentage of natural gas import of total natural gas consumption, and 3) the share of natural gas in total energy consumption by the importer	1.2	Dependence1
3	Russian NG dependence + NG import dependence	Additive index of only Russian natural gas concentration in total natural gas imports and natural gas import dependence	1.2	Dependence2

[134] It would be interesting to utilize Scott's π, and Cohens κ measures of foreign policy similarity based on U.N. voting data contained in the Measures of Foreign Policy Similarity (FPSIM) dataset developed by Haege (2011). Using alternative measures of foreign policy similarity would be a means to validate the results arrived at with U.N. voting data. However, the FPSIM data are unfortunately only available for the time period from 1993 until 2004. In addition, an alternative measure, the Conflict and Peace Data Bank (COPDAB) is only available for 1948-1978. *Affinity* was alternatively also measured using ideal point data from Baily et al. (2017) (see Appendix C - and Appendix D -).

4	Russian NG imports to GDP	The value of Russian natural gas imports based on the average price of industry and household end-user prices as percentage of the GDP of the import dependent state	1.2	RFNGImport A_GDP
5	Russian NG imports to total imports of goods	The value of Russian natural gas imports as percentage of total imports of goods of the import dependent state	1.2	RFNGImport A_Import

Hypothesis 1.1 is tested using three measures capturing Russian natural gas import dependence. The first indicator of natural gas dependence is the concentration of Russian natural gas in total natural gas imports and reflects the extent to which a state relies on Russian natural gas imports. It ranges from zero (no imports from Russia) to one (complete dependence on Russia for imported natural gas imports) and is for the time-series cross-sectional analysis based on the energy statistics of Eurostat (Eurostat n.d.) and for Germany on data retrieved from Eurostat as well as the statistical yearbook of the Statistisches Bundesamt/German Federal Statistical Office (n.d.).[135]

Russian natural gas import dependence should moreover also be considered in the context of natural gas import dependence as well as the role of natural gas in the energy mix of the importer. Based on a factor analysis and alpha scores,[136] two additional measures for natural gas import dependence are included. The second measurement is an additive index of: 1) Russian natural gas concentration in total natural gas imports, 2) the percentage of natural gas imports of total natural gas consumption, and 3) the share of natural gas in total energy consumption by the

[135] The data from 1978 to 1984 derived from the Federal Statistical Office measures the percentage of natural gas imported from the European Eastern Bloc and from Eurostat data is available from 1990 onwards. The missing values were interpolated using the highly correlated share of natural gas of total natural as imports (Import).
[136] For the factor analysis and alpha scores see Appendix C - and Appendix D - .

importer. The third measurement is an additive index of only the concentration of Russian natural gas in total natural gas imports and the percentage of natural gas imports of total natural gas consumption.

Natural gas import dependence indicates the extent to which a country depends on natural gas imports to meet its natural gas demand. For the time-series cross-sectional analysis, it is measured as the import of dry natural gas as a percentage of total dry natural gas consumption, which are derived from the International Energy Statistics of the U.S. Energy Information Agency (U.S. Energy Information Agency n.d.). For the analysis of Germany, it is measured as import of natural gases as a percentage of total domestic supply of natural gases and derived from the statistical yearbook of the Statistisches Bundesamt/German Federal Statistical Office (n.d.). It ranges from zero (no dependence on gas imports and/or no consumption of gas) to one (complete dependence on gas imports for domestic gas consumption or supply). Cases in which a country imports more than it consumes that would lead to a coding greater than one are also coded one (for example, in the case of re-export trade).

The share of natural gas in the energy mix measures the reliance on natural gas as an energy source. For the time-series cross-sectional analysis, it is calculated as dry natural gas consumption as a percentage of total primary energy consumption and derived from the International Energy Statistics of the U.S. Energy Information Agency (U.S. Energy Information Agency n.d.). For the analysis of Germany, it is calculated as percentage of natural gas used for total electricity generation based on the statistical yearbook of the Statistisches Bundesamt/German Federal Statistical Office (n.d.). It ranges from zero (no consumption of dry natural gas) to one, where primary energy consumption or electricity generation is based solely on natural gas.

The second hypothesis is tested using two variables measuring the importance of natural gas imports from Russia for the economy of the importing state. The first variable captures the value of Russian natural gas imports based on the average price of industry and household end-user prices as percentage of GDP. It is calculated as the share of Russian natural gas imports based on the average price of industry and household end-use prices in the GDP. For both analyses, the average price of industry and household-end use prices as well as the quantities of imported Russian natural gas used to calculate the value of Russian natural gas imports are derived from the data service of the IEA (International Energy Agency n.d.) and the GDP from the OECD ("GDP and Spending - Gross Domestic Product (GDP)" n.d.).[137]

Finally, the fifth measurement measures the share of Russian natural gas imports in total imports of goods of the import dependent state. For the time-series cross-sectional analysis the value of imports of goods is based on OECD data (Organization for Economic Co-operation and Development (OECD) n.d.) and for the analysis of Germany on data from the IMF ("Direction of Trade Statistics (DOTS)" n.d.).

Control Variables

A number of additional factors are likely to influence the foreign policy of import dependent states. In order to evaluate the independent effect of natural gas dependence and minimize omitted variable bias, I include control variables that likely affect the foreign policy behavior of the energy dependent state.[138]

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[137] Missing price values were interpolated using both the industry and household end-use prices and where both were missing the average between the prior and the subsequent year was used. For Germany, *RussianNG* was multiplied by the total volume of natural gas imported derived from the data service of the IEA.

[138] Exogenous factors can impact the policymakers of the import dependent state. The Fukushima Daiichi nuclear disaster, for example, triggered a complete energy transition away from nuclear fuel in Germany. Relatedly, the

First, the relative importance of total trade with the Russian Federation for the import dependent state is likely to influence the decision-making process of the political leaders of the import dependent state. I assume that the more important total trade with the Russian Federation, the more likely political leaders of the import dependent state are to avoid conflict and thus vote similar to the Russian Federation. This variable is for both, the time-series cross-sectional analysis and the analysis of Germany, calculated as the total trade with the Russian Federation (Imports + Exports) divided by GDP and based on data from the IMF ("Direction of Trade Statistics (DOTS)" n.d.).

Second, geographic proximity as well as traditional respect or fear of the RF can influence the foreign policy behavior of import dependent states (Moraski and Giurcanu 2013). Import dependent states in close proximity to the RF that have experienced RF aggression and/or domination are more likely to be aware of the potential consequences of alienating the RF and are more likely to import natural gas due to shorter distances, lower prices of transportation, and availability of Russian natural gas. I assume that the farther the distance, the lower *Affinity*. This proximity is measured by the distance between the two capitals from Gleditsch (n.d.).

While the distance between the capitals is not applied to the analysis of Germany, it includes the general political orientation of the political party in power as a control variable. The political orientation of the German ruling party is defined as the party of the chancellor and captured by a dummy variable indicating whether the chancellor belonged to the Social Democratic Party (SPD), coded one for the social democratic party and zero otherwise.[139] The

updating of climate goals is likely to cause a reevaluation of the use of fossil fuels, including the use of natural gas. These developments, however, do not influence the analysis here.

[139] Moraski and Giurcanu (2013) found that states with weak economies with higher unemployment rates were less likely to support PACE documents critical of the RF. Thus, the current economic condition is likely to influence the dependent state. In addition, they furthermore found that the unemployment rate could have greater influence than a state's dependency on Russian gas on whether a state supports the position of the RF. Since it is theoretically not

expectation is that governments under SPD leadership were in general friendlier toward and sought a closer relationship with the Soviet Union/RF. In addition, and since the analysis of Germany encompasses both the Cold War and post-Cold War periods, I include a dummy variable coded 0 for the Cold War and after 1990 coded 1 for the post-Cold War period, expecting that the position of the FRG is generally more friendly towards the RF than it was towards the Soviet Union during the Cold War.

Finally, the economic, military, and/or political cloud of alliances (Harsem and Claes 2013) are likely to weigh in the foreign policy choices of import dependent states by making them feel more protected to pursue a more independent foreign policy. However, alliances by themselves indicate a foreign policy alignment of their members and can be expected to be highly correlated with *Affinity*. Moreover, crude dummy variables for alliance membership are likely to capture a lot of variation in the analysis. Therefore, this analysis does not include alliance memberships of the import dependent states.

Table 5.2 summarizes the time-series cross-sectional data of 19 European countries from 1995 to 2013,[140] which consists of observations of the dependent variable *Affinity*, the five different measures of energy import dependence for the independent variable, and the following control variables: total bilateral trade with the RF as percentage of GDP of the importing state and distance between the capitals.

clear what effect a higher or lower unemployment rate should have on foreign policy alignment and since neither unemployment nor GDP growth was statistically significant when included in separate analyses, they are not included. GDP growth and unemployment rates were considered for this analysis but similarly rejected because they were not statistically significant.

[140] Appendix B - provides a list of countries included in the analysis.

Table 5.2. Descriptive Statistics Time-Series Cross-Sectional Analysis of 19 European Countries, 1995-2013

Variable	Obs.	Mean	Std. Dev.	Min.	Max.
Affinity	323	0.647928	0.147657	0.217	1
% of Russian NG of Total NG Imports	323	0.428902	0.402939	0	1
Russian NG Dependence + NG Import Dependence + NG Dependence	323	1.371326	0.660088	0	2.3108
Russian NG Dependence + NG Import Dependence	323	1.170833	0.653197	0	2
Russian NG Imports to GDP	323	0.007294	0.009364	0	0.045343
Russian NG Imports to Total Imports of Goods	323	0.027422	0.029349	0	0.106546
Bilateral Trade as Percentage of GDP	323	0.018882	0.018805	0.001186	0.101751
Distance between the Capitals	323	1959.647	765.0295	939	3948
N	342				

Table 5.3 summarizes the time-series data of Germany from 1979 to 2012. The data consist of observations of the dependent variable *Affinity*, the five dependence measures, and the following control variables: total bilateral trade with the RF as percentage of GDP of the importing state, the ruling political party to reflect the political orientation of the government of the FRG (*SocDemParty*), and the Cold War dummy variable.

Table 5.3. Descriptive Statistics Time-Series Analysis of Germany, 1979-2012

Variable	Obs.	Mean	Std. Dev.	Min.	Max.
Affinity	34	0.470774	0.366548	-0.375	1
% of Russian NG of Total NG Imports	34	0.367209	0.086056	0.173	0.4819
Russian NG Dependence + NG Import Dependence + NG Dependence	34	1.23908	0.166893	0.925369	1.449575
Russian NG Dependence + NG Import Dependence	34	1.121423	0.172034	0.742392	1.337113
Russian NG Imports to GDP	34	0.00474	0.002392	0.001769	0.010892
Russian NG Imports to Total Imports of Goods	34	0.019215	0.00493	0.00815	0.028513
Bilateral Trade as Percentage of GDP	34	0.011624	0.006174	0.005632	0.027905
SocDemParty	34	0.323529	0.474858	0	1
Cold War	34	0.647059	0.485071	0	1
N	34				

Method

The analysis first examines a country-year panel dataset for 19 European countries from 1995 to 2013 consisting of 323 observations. Ordinary least squares (OLS) models assume that all the error processes have the same variance (homoscedasticity) and that all of the error processes are independent of each other (Beck and Katz 1995). In the case of time-series cross-sectional models, however, one can expect errors to be contemporaneously correlated and show "panel heteroscedasticity" as well as temporal dependence. Beck and Katz (1995) demonstrate that OLS parameter estimates with panel corrected standard errors (PCSE) allow for the accurate

estimation of variability in the presence of panel error structures. Breusch-Pagan tests for homoscedasticity and Wooldridge tests for serial autocorrelation for all five models revealed that there is no heteroscedasticity but serial autocorrelation.[141] I chose to use OLS parameter estimates combined with PCSE, which led to the following linear regression to explain foreign policy alignment:

$$Affinity_t = \beta_1 + \beta_2 Dependence_t + \beta_3 Bilateral\ Trade/GDP_t + \beta_4 CapDist + u_t$$

where the key independent variable (*Dependence*) in the models estimated varies between the five measures of dependence on natural gas as described above.

Second, the dissertation will use a time-series dataset for Germany from 1979 to 2012 consisting of 34 observations. While Breusch-Pagan tests of the models indicated that heteroscedasticity exists in Models 1, 4 and 5, the Durbin Watson and Breusch-Godfrey LM tests did not find serial autocorrelation.[142] I chose to apply Newey-West standard errors for the coefficients estimated by OLS regression specifying a common first-order correlation:

$$Affinity_t = \beta_1 + \beta_2 Measurement\ of\ Dependence_t + \beta_3 BilateralTrade/GDP + \beta_5 SocDemParty_t + \beta_6 ColdWar + u_t$$

Empirical Analysis and Discussion

The first three models of the analyses focus on natural gas dependence of the importing state. Model 1 thus examines the effect of the concentration of Russian natural gas in total

[141] See Appendix C - .
[142] See Appendix D - .

natural gas imports on the similarity of foreign policy positions. Model 2 uses the additive index combining: 1) the concentration of Russian natural in natural gas imports, 2) natural gas import dependence, and 3) the share of gas in the energy mix while Model 3 uses the additive index combining only 1) the concentration of Russian natural in natural gas imports and 2) natural gas import dependence. Models 4 and 5 emphasize the general importance of Russian natural gas imports to the economy of the import dependent state and use the share of Russian natural gas imports, as a proportion of GDP and total imports of goods of the import dependent state. For all models, the expectation is that the dependence measures have positive coefficients.

Time-Series Cross-Sectional Analysis

The coefficients for Models 1 through 3 are presented in Figure 2.1Figure 5.1, Figure 5.3, and Figure 5.4. The coefficients the concentration of Russian natural gas in total natural gas imports as well as the additive indexes are positive and do not overlap zero, that is, they are statistically significant. Of the control variables, the coefficient of the distance between the capitals is negative and statistically significant but visibly small while the coefficient of the importance of total trade with Russia to the import dependent state is negative, statistically significant and large.

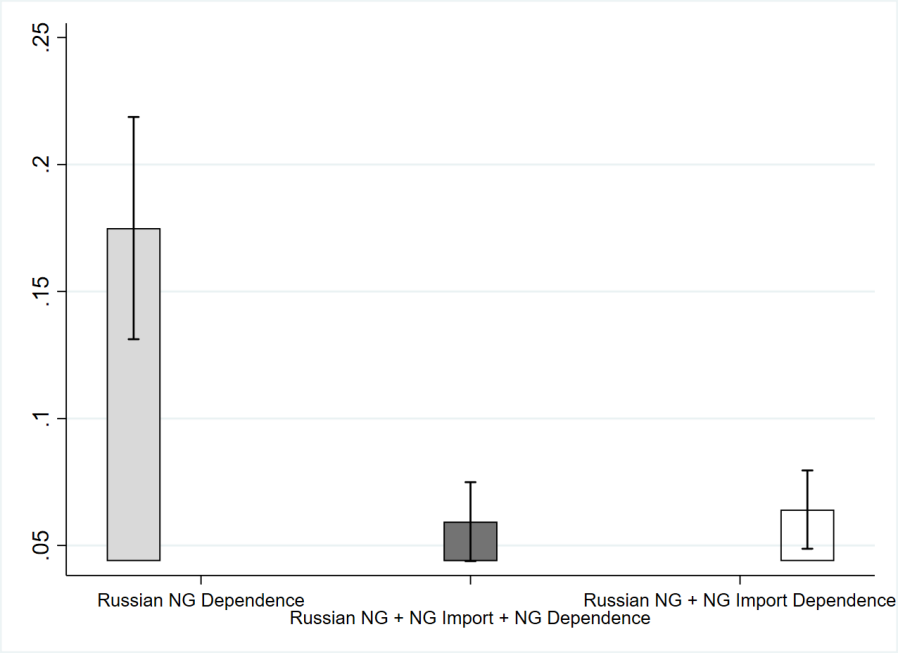

Figure 5.1. Regression Coefficients Time-Series Cross-Sectional Analysis Independent Variables Models 1-3

Figure 5.2, Figure 5.3, and Figure 5.4 present the coefficients for Models 4 and 5. The coefficients measuring the value of Russian natural gas imports compared to the GDP as well as total imports of goods of the import dependent state are both positive and, since they do not overlap with 0, statistically significant. Of the control variables, the coefficient of the distance between the capitals is positive and statistically significant but visibly small while the coefficient of the importance of total trade with Russia to the import dependent state is negative, statistically significant and large.

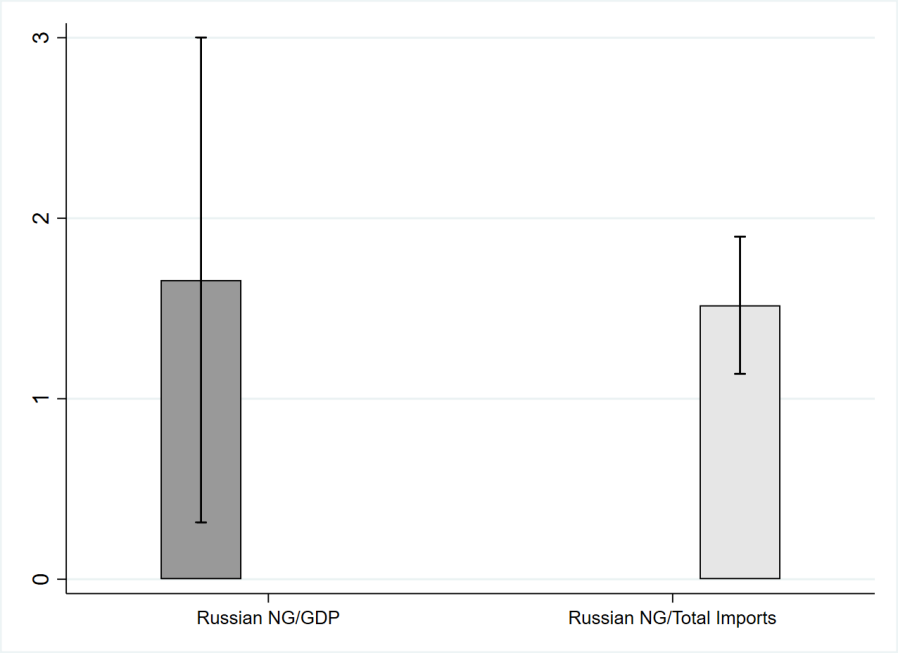

Figure 5.2. Regression Coefficients Time-Series Cross-Sectional Analysis Independent Variables Models 4-5

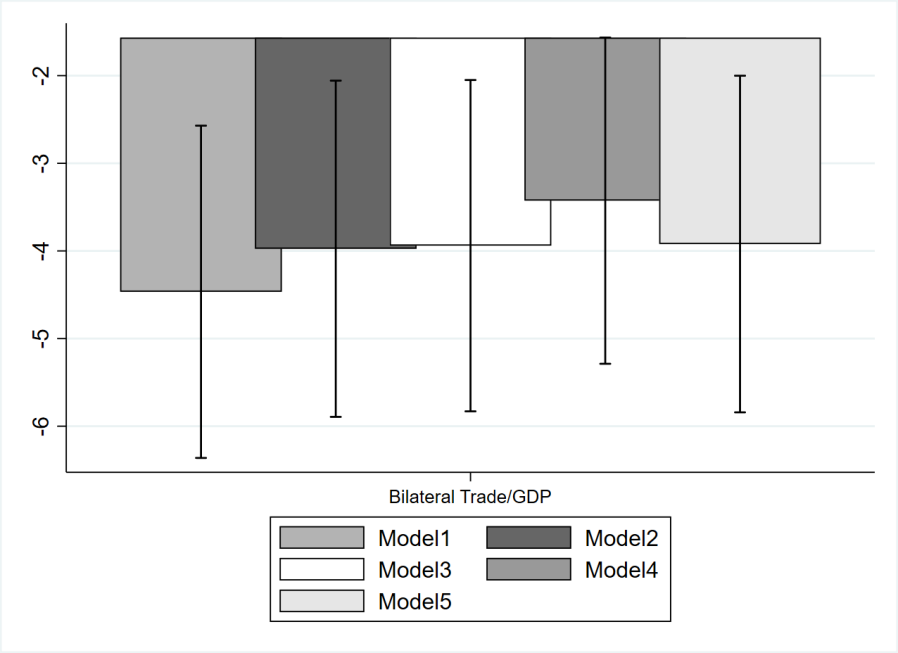

Figure 5.3. Regression Coefficients Time-Series Cross-Sectional Analysis Control Variable Bilateral Trade/GDP

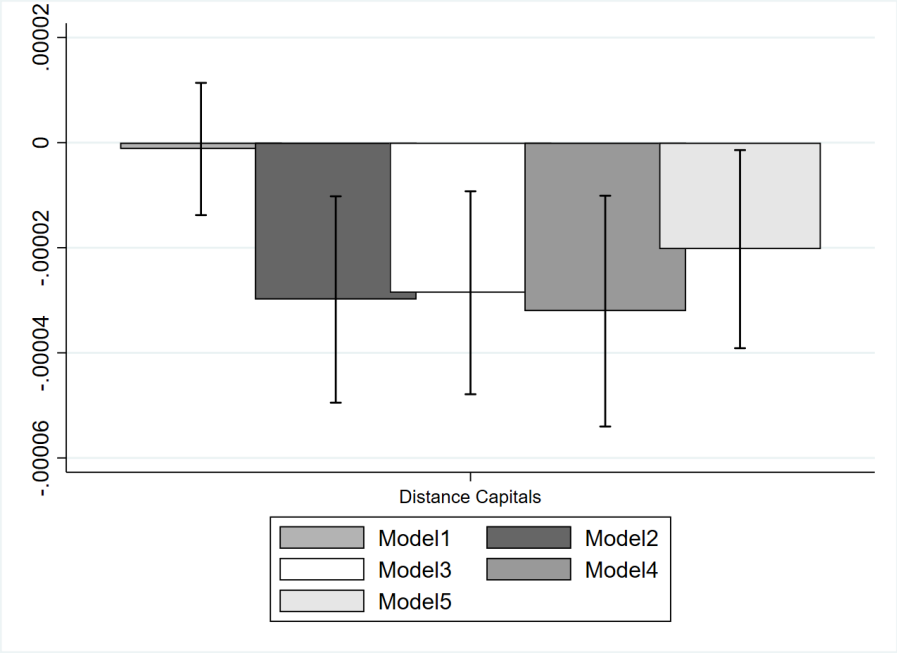

Figure 5.4. Regression Coefficients Time-Series Cross-Sectional Analysis Control Variable Bilateral Distance Capitals

Table 5.4 shows the results of a linear regression with correlated panels corrected standard errors (PCSEs) of *Affinity* on natural gas dependence and the control variables. The highly statistically significant Wald chi-square indicates that the models fit the data well. The values of R-squared, however, indicate that the regressors only predict between 11 and 24 percent of the variance in *Affinity*.

Table 5.4. Regression Analysis Results Time-Series Cross-Sectional Data

Variable	**Model 1**	**Model 2**	**Model 3**	**Model 4**	**Model 5**
	Coefficients (St. Err.)	Coefficients (St. Err.)	Coefficients (St. Err.)	Coefficients (St. Err.)	Coefficients (St. Err.)
% of Russian NG of Total NG Imports	0.17912*** (0.02501)				
Russian NG Dependence + NG Import Dependence + NG Dependence		0.06357*** (0.01052)			
Russian NG Dependence + NG Import Dependence			0.06748*** (0.01019)		
Russian NG Imports to GDP				1.65785*** (0.68538)	
Russian NG Imports to Total Imports of Goods					1.51799*** (0.19384)
Bilateral Trade as Percentage of GDP	-4.46630*** (0.96727)	-3.97510*** (0.97877)	-3.93987*** (0.96446)	-3.42623*** (0.94975)	-3.92127*** (0.97992)
Distance between the Capitals	0.00000 (0.00001)	-0.00003*** (0.00001)	-0.00003*** (0.00001)	-0.00003*** (0.00001)	-0.00002** (0.00001)
Constant	0.65782*** (0.02833)	0.69430*** (0.03540)	0.69930*** (0.03608)	0.76336*** (0.04555)	0.72006*** (0.03998)
R^2	0.2418	0.1617	0.1702	0.1092	0.1636
Wald Chi-square	86.62	37.86	48.32	17.92	77.00
Observations	323	323	323	323	323

Standard errors are in parentheses, * p < .10 ** p <.05 *** p < .01, one-tailed test

The results from Model 1 indicate that the coefficient for the variable for the share of Russian natural gas imports in total natural gas imports is positive and significant at the 1% level. Holding all other variables constant, for every 1% increase of the share of Russian natural gas imports in total natural gas imports, a 0.18 increase in *Affinity* is predicted. Of the control

variables, total trade with the Russian Federation as percentage of GDP of the import dependent state is statistically significant at the 1% level and, contrary to expectation, there is a negative relationship with *Affinity*. Holding all other variables constant, for every 1% increase in the bilateral trade as percentage of the GDP of the import dependent state, a decrease of *Affinity* of 4.47 units is predicted. The coefficient for the distance between the capitals is not statistically significant. For Models 2 and 3, the coefficients measuring natural gas import dependence using the two additive indexes behave similar and are also positive and significant at the 1% level. Holding all other variables constant, for every 1% increase in the additive index, a 0.064 and 0.067 increase in *Affinity* is predicted, respectively. Of the control variables, the coefficient of total trade with the Russian Federation as percentage of GDP of the import dependent state is for Model 2 and 3 statistically significant at the 1% level and again negative. Holding all other variables constant, for every 1% increase in the bilateral trade as percentage of the GDP of the import dependent state, a decrease of *Affinity* of 3.96 units 3.94 is predicted. For Models 2 and 3, the coefficient for the distance between the capitals is statistically significant at the 1% level but so small that its effect can be considered negligible.

For Models 4 and 5 the coefficients for the importance of Russian natural gas imports relative to the GDP and total imports of goods are both positive, statistically significant at the 1% level and the highest of all five models. Holding all other variables constant, the models predict a 1.66 and 1.52 increase in *Affinity* for every 1% increase of the share of Russian natural gas imports in GDP and total imports, respectively. The coefficient of total trade with the Russian Federation as percentage of GDP of the import dependent state are also statistically significant at the 1% level and negative. Holding all other variables constant, the coefficients indicate a 3.43 and 3.92 decrease in *Affinity* for every increase in the bilateral trade as percentage of the GDP of

the import dependent state. The coefficients for the distance between the capitals are statistically significant at the 1% level but again so small that its effect can be considered negligible.

Dropping Models 4 and 5, which require natural gas prices, I was able to enlarge the dataset to 26 countries to include Estonia, Latvia, Lithuania, Macedonia, Romania, and Slovenia. Using only Model 1 from above with the greatest coefficient from Models 1-3 for the energy dependence measure, the coefficient for the variable for the share of Russian natural gas imports in total natural gas imports remained positive and significant at the 1% level.[143] These findings corroborate the proposition that natural gas import dependence will lead to the foreign policy alignment between the import dependent state and the RF.[144]

Analysis of Germany 1979-2012

Figure 5.5 below depicts both *Affinity* and the concentration of Russian natural gas in total natural gas imports and reflects the extent to which the FRG relied on Russian natural gas imports from 1979 to 2012, which are used as the dependent and independent variable, respectively, in Model 1. From this figure, it appears that there is a relationship between Russian natural gas concentration and *Affinity*.

[143] See section Time-Series Cross-Sectional Regression Analysis: Larger Dataset in Appendix C - .
[144] Using a Prais-Winsten regression the coefficients of the dependence measures for Models 1, 3, and 5 remained statistically significant and with a Prais-Winsten regression with heteroskedastic panels corrected standard errors the coefficients for the dependence measures of Model 1 and 5 remained statistically significant. See Appendix C - .

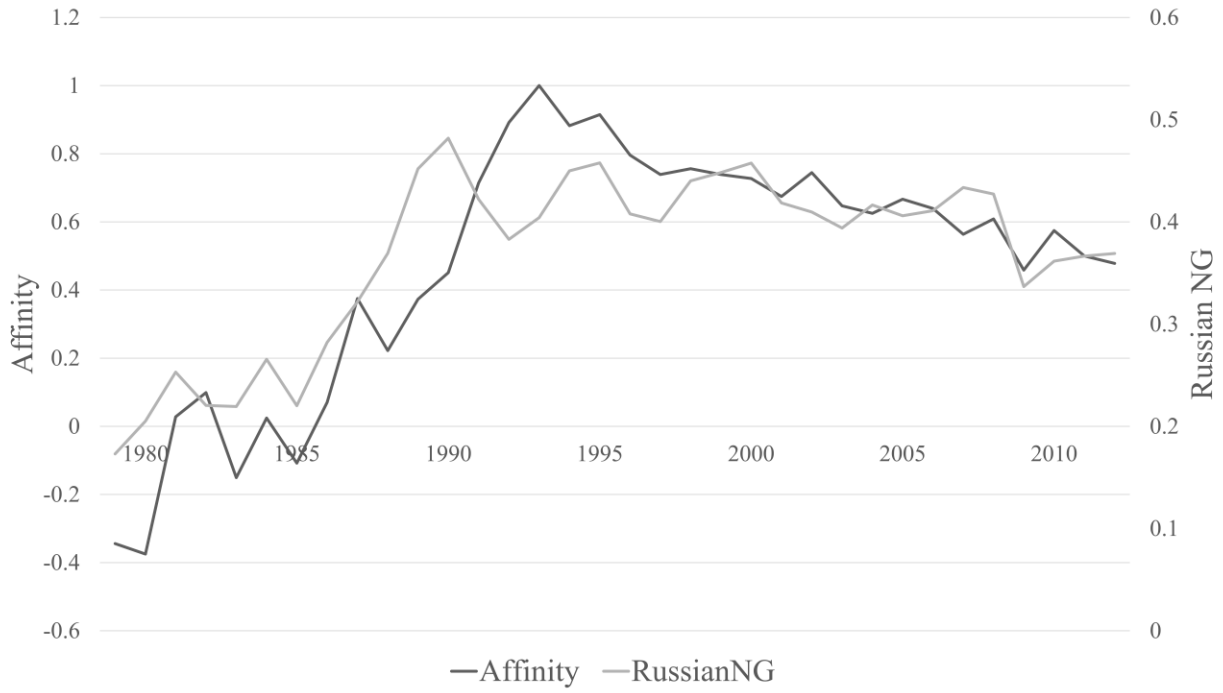

Figure 5.5. Affinity and Russian NG

The coefficients for Models 1 through 3 are presented in Figure 5.6, Figure 5.8, and Figure 5.9. The coefficients the concentration of Russian natural gas as a percentage of total domestic supply of natural gases as well as the additive indexes are positive and do not overlap zero, that is, they are statistically significant. Of the control variables, the coefficient of the bilateral trade as percentage of the GDP of the importing state is negative and statistically significant and visibly large. The coefficient for the chancellor being a social democrat is negative as opposed to expectation and statistically significant but relatively small. The coefficient for the Cold War being over is positive and statistically significant.

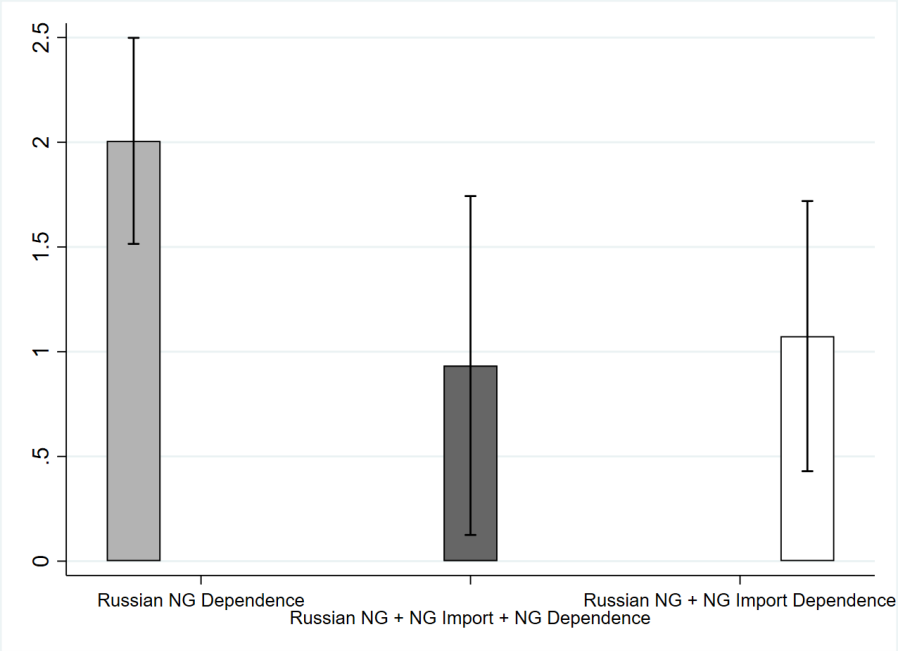

Figure 5.6. Regression Coefficients Germany Independent Variables Models 1-3

Figure 5.7, Figure 5.8, and Figure 5.9. present the coefficients for Models 4 and 5. The coefficients for both Russian natural gas imports as percentage of GDP as well as total imports are positive and statistically significant. The coefficients of the control variables behave similar as in Models 1-3. The coefficient of the bilateral trade as percentage of the GDP of the importing state is negative, the coefficient for the chancellor being a social democrat is negative the one for the Cold War being over is positive and all are statistically significant. Again, the coefficients for both party membership and the Cold War coefficients are visibly small.

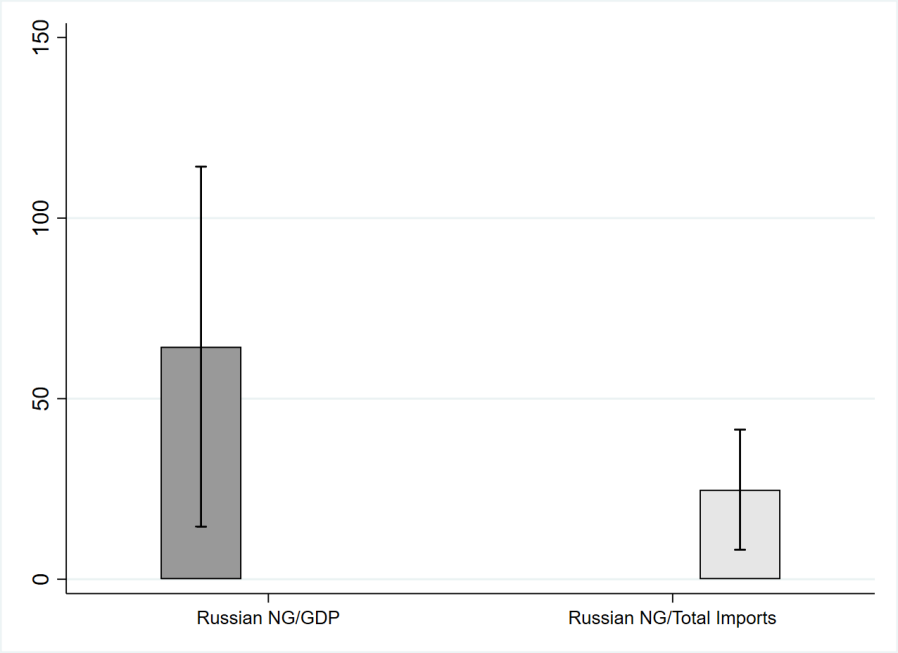

Figure 5.7. Regression Coefficients Germany Independent Variables Models 4-5

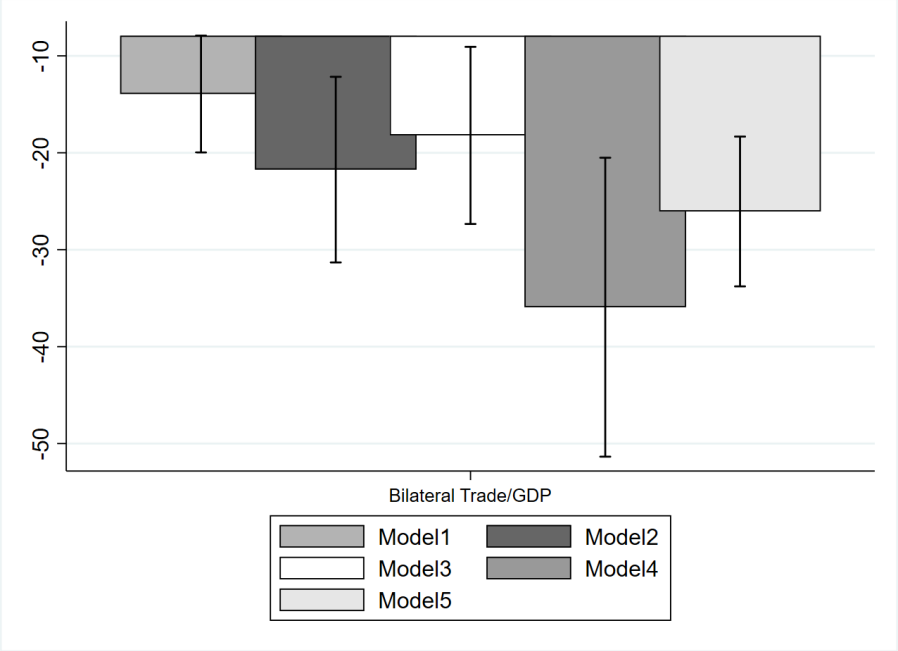

Figure 5.8. Regression Coefficients Germany Control Variable Bilateral Trade/GDP

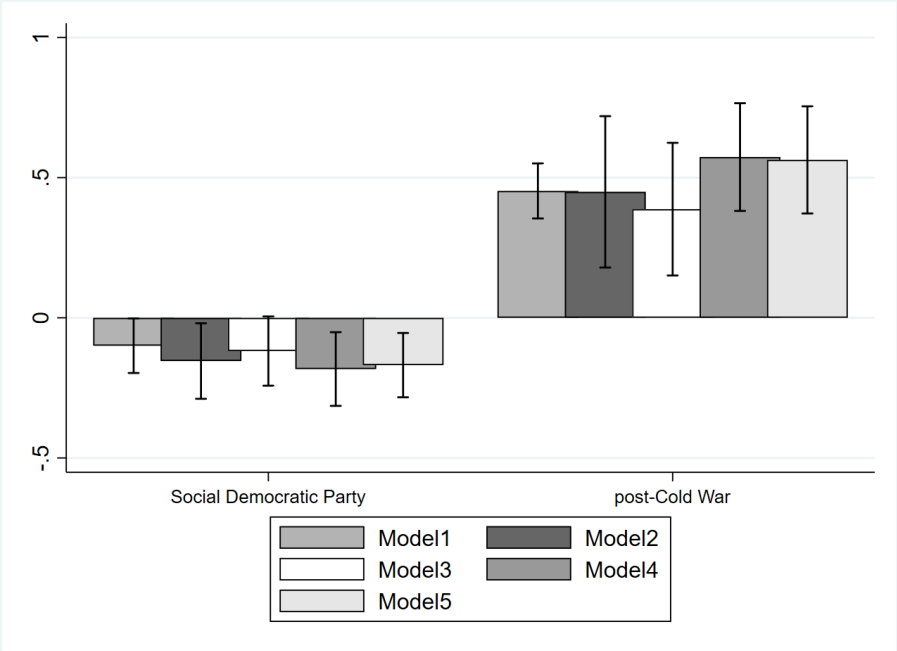

Figure 5.9. Regression Coefficients Germany Control Variables Political Party and Post-Cold War

Table 5.5 presents the results of a linear regression using Newey-West standard errors specifying a common first-order correlation of *Affinity* on the natural gas dependence measures and the control variables. The highly statistically significant p-value for the F-test indicates that the models fit the data well.

Table 5.5. Regression Results Germany

Variable	**Model 1**	**Model 2**	**Model 3**	**Model 4**	**Model 5**
	Coefficients (St. Err.)	Coefficients (St. Err.)	Coefficients (St. Err.)	Coefficients (St. Err.)	Coefficients (St. Err.)
% of Russian NG of Total NG Imports	2.007*** (0.241)				
Russian NG Dependence + NG Import Dependence + NG Dependence		0.934** (0.396)			
Russian NG Dependence + NG Import Dependence			1.074*** (0.315)		
Russian NG Imports to GDP				64.396*** (24.376)	
Russian NG Imports to Total Imports of Goods					24.800*** (8.130)
Bilateral Trade as Percentage of GDP	-13.936*** (2.947)	-21.738*** (4.683)	-18.206*** (4.468)	-35.931*** (7.539)	-26.055*** (3.778)
SocDemParty	-0.100** (0.048)	-0.154** (0.066)	-0.119** (0.060)	-0.183*** (0.064)	-0.169*** (0.056)
Post-Cold War	0.453*** (0.048)	0.450*** (0.132)	0.388*** (0.116)	0.574*** (0.094)	0.563*** (0.093)
F-test	80.55	37.89	53.69	26.78	40.68
Prob > F	0.000	0.000	0.000	0.000	0.000
N	34	34	34	34	34

Standard errors are in parentheses, * p < .10 ** p <.05 *** p < .01, one-tailed test

The results from Model 1 indicate that the coefficient for the share of Russian natural gas imports in total domestic supply of natural gases is positive and significant at the 1% level. Holding all other variables constant, for every 1% increase of the share of Russian natural gas imports in total domestic supply of natural gases, a 2.01 increase in *Affinity* is predicted. Of the

control variables, total trade with the Russian Federation as percentage of GDP of the import dependent state is statistically significant at the 1% level and, again contrary to expectation, there is a negative relationship with *Affinity*. Holding all other variables constant, for every 1% increase in the bilateral trade as percentage of the GDP of the import dependent state, a decrease of *Affinity* of 13.94 units is predicted. The coefficient for the chancellor being a social democrat is contrary to expectation negative and statistically significant at the 5% level. In other words, the chancellor being a member of the social democratic party reduces *Affinity* by -0.10. As expected, the coefficient for the post-Cold War is positive and statistically significant.

For Models 2 and 3, the coefficients measuring natural gas import dependence using the two additive indexes are also positive and significant at the 5% and 1% level, respectively. Holding all other variables constant, for every 1% increase in the additive index, a 0.93 and 1.07 increase in *Affinity* is predicted. Of the control variables, total trade with the Russian Federation as percentage of GDP of the import dependent state is statistically significant at the 1% level and, also negative. Holding all else constant, for every 1% increase in total trade with the Russian Federation as percentage of GDP, a decrease of *Affinity* of 21.75 units 18.21 is predicted. Similar to Model 1, the coefficients for the chancellor being a social democrat are negative and statistically significant at the 5% level and the coefficients for the post-Cold War are positive and statistically significant at the 1% level in Models 4 and 5.

For Models 4 and 5 the coefficients for the share of Russian natural gas imports in total domestic supply of natural gases are positive and significant at the 1% level. Holding all other variables constant, for every 1% increase of the share of Russian natural gas imports in total domestic supply of natural gases, a 64.40 and 24.80 increase in *Affinity* is predicted. Of the control variables, total trade with the Russian Federation as percentage of GDP of the import

dependent state is again statistically significant at the 1% level as well as negative. Holding all else constant, for every 1% increase in total trade with the Russian Federation as percentage of GDP, a decrease of *Affinity* of 35.93 units 26.06 is predicted, respectively. The coefficients for the chancellor being a social democrat are also negative and statistically significant at the 1% level and the coefficients for the post-Cold War are positive and statistically significant at the 1%.

With the caveat of the crudeness of the data for Germany as well as the natural gas prices used for both analyses, the findings corroborate the proposition that natural gas import dependence increases the *Affinity* between the import dependent state and the RF. Both, higher levels of natural gas import dependence (using three different measures) and a greater importance of natural gas imports to the economy of the importing state (using two different measures) lead to a greater foreign policy alignment between the import dependent state and the Soviet Union or Russian Federation.

Chapter 6 - Germany and the Natural Gas from the EAST

In the analysis of energy dependence, it is important to keep a sense of historical perspective (Rutland 2008). Russian natural gas delivered to Western Europe is, for example, still mostly drawn from the gas fields discovered in the 1960s. Furthermore, any general measure of vulnerability requires the weighing of many different measures as well as complex judgments about the political capabilities of the actors (Murdock 1977, 79). Adopting the position that evidence may come from within as well as across-case analysis (Gerring 2001), this study will apply two qualitative methods of analysis: structured, focused comparison and process-tracing. The first method, structured, focused comparison is structured because general pre-specified questions are asked for each case study and, focused, because only certain aspects of the case studies pertaining to the hypothesis are examined (George and Bennett 2005, 67). The comparative method or controlled comparison is a method for discovering empirical relationships among the variables and can be applied in the analysis of a single country diachronically, that is, the comparison of the same unit at different times (Lijphart 1971). With regard to identifying truly comparable cases, it is moreover often easier to use longitudinal designs involving a single country over time (Levy 2008). George and Bennett (George 1979; George and Bennett 2005) outline how to design and executive a structured, focused comparison from the research design to the case studies and their theoretical implications. Following this outline, I will use four case studies for Germany to analyze the proposition that energy import dependence leads to the foreign policy alignment of the importing with the exporting state.

Since the systemic impact of energy import dependence and not the response of the import dependent state to a particular instance of the use of the energy weapon is analyzed, foreign policy alignment or *Affinity*, the dependent variable, is inherently difficult to measure.

While leaders can be removed from office in case of bad foreign policy results, they also enjoy a relatively large degree of autonomy to set national policy (Morrow 1999). Their beliefs and perceptions can therefore be of significance in explaining strategies and outcomes (Frieden 1999, 76). Moreover, the public endorsement if not outright support of increases of natural gas imports by the national leader and members of their government is not without significance as imports (or increases thereof) generally require the construction or extension of relation-specific assets – pipelines and interconnectors – and the conclusion of, most commonly, long-term contracts. In addition, while agreements to construct new pipelines and the signing of supply agreements are usually highly publicized, their economic and political impact can only be anticipated. Public endorsements of them by national leaders are therefore likely to be scrutinized.

Finding themselves in this situation, democratically elected leaders are likely to express and defend their beliefs with regard to political and economic considerations and bilateral relations between their state and the supplier thus giving an impression of not only their position toward increasing natural gas imports but the Soviet Union or the RF in general. I therefore analyze the position of the government of the FRG as represented by the Chancellor and his or her government toward the Soviet Union and the Russian Federation as well as Russian natural gas imports and how it changed as natural gas imports increased. The independent variable, natural gas import dependence is more easily measured by the amount of Russian natural gas imported by the FRG. Both the domestic as well as bilateral and international political and economic context will be analyzed to the extent that they influenced the decision to import or increase imports of Russian natural gas.

The cases are intentionally chosen on the independent variable, natural gas import dependence, more specifically by significant variations or breakpoints thereof (Jason Seawright

and Gerring 2008). While the variation of natural gas import dependence can be measured by the amount of Russian gas imported, specific breakpoints can be identified by the decision to import Russian natural gas or increase natural gas imports, which given the nature of the natural gas market is closely associated with the decision and agreement to build natural gas pipelines. The first case, in which the FRG did not import Soviet natural gas, concerns the application of the NATO pipe embargo of November 1962. Despite strong support from the German steel companies as well as opposition parties for the fulfillment of contracts signed between German steel companies and the Soviet Union in October 1962, the Adenauer government decided to apply the pipe embargo retroactively. In this case, political and security considerations – proving itself as a viable member of NATO and trustworthy partner to the United States – outweighed economic aspects and the economic as well as political impact this would have on the bilateral relations between the FRG and the Soviet Union. I analyze this case because it is related to energy trade but energy import dependence on Russian natural gas was not influential in the decision-making process.

The second case, the resumption of trade of large-diameter steel pipes in conjunction with the first natural gas agreement of 1970, by contrast, demonstrates both the utilization of the prospect of natural gas trade to improve economic as well as political bilateral relations between the FRG and the Soviet Union and, at a later stage, the recognition of the potential political fallout of a failure of the natural gas negotiations.

The third case is the most extensive one as it includes both the dependence debates of the 1970s leading to the endorsement of a new natural gas contract and the Siberian Natural Gas (or Urengoy-Uzghorod) pipeline by the FRG as well the opposition of the FRG to U.S. sanctions imposed against the Soviet Union in response to the declaration of martial law in Poland in

December 1981. Despite geopolitical events, the FRG, holding on to the achievements of Détente, disagreed with the United States on the issue of its natural gas import dependence, endorsed the new natural gas agreements, and strongly opposed the U.S. sanctions against the pipeline. This case is especially interesting because it constituted a fundamental departure from the earlier support of the NATO pipe embargo by the Adenauer government and because the early dependence debates laid the foundation for the current position of the FRG on the acceptable share of Soviet natural gas imports.

The fourth and last case first traces the origin of the Nord Stream pipeline, at the time, the North European Gas Pipeline (or NEGP) and highlights how the debate changed from a diversification of supply sources to the diversification of supply routes and energy cooperation came to be seen as a tool to support the political and economic transition processes in the RF. Second, Chancellor Schroeder's support and its role in the pipeline agreement is analyzed given the prior analysis of the role of the EU as well as regional actors in this shift of thinking.

Together these cases encompass a range of variation in the independent variable allowing me to examine the position of German governments with regard to energy related trade, enlarging Russian natural gas import dependence of the FRG over time. Table 6.1 summarizes the cases and respective governments.

Table 6.1. Case Studies

Time Period	Case	Chancellor
1962-63	The NATO pipe embargo of November 1962 and the Soviet German pipe trade	Konrad Adenauer (CDU)
1969-70	First natural gas agreement of 1970	Willy Brandt (SPD)
1980-82	Negotiations for the construction of the Yamal pipeline and U.S. opposition towards it	Helmut Schmidt (SPD)
1990s to 2005	The origin of Nord Stream and the pipeline agreement signed in September 2005	Gerhardt Schroeder (SPD)

The data collection will be driven by a number of questions that initially aim at identifying the Chancellor's position and responses with regard to weighing economic and security considerations and, subsequently, at identifying variances of the behavior and positions of the German Chancellors and their government toward increasing the Russian natural gas imports as well as the Soviet Union or the Russian Federation in general. The questions are:

1. What was the political and economic context?
2. What was the government's position towards the Soviet Union/the RF and on increasing Russian natural gas supply?
3. Did the government take an active role in bringing about increases in natural gas imports?
4. Did the government encounter domestic and/or international opposition and what was the Chancellor's position and response?

The Chancellors' position and responses are analyzed using mostly protocols of cabinet meetings (available online from 1949 to 1986) supplemented by public statements, interviews and additional archival research. The analysis of the domestic and international position as demonstrated by public statements and media as well as the government's reaction to such statements and final decisions will shed further light upon the government's position. The case

studies will furthermore be supported by economic and energy statistics to highlight the current economic situation as well as increasing natural gas import dependence of the FRG.

Process-tracing, the second method, attempts to identify the intervening causal process or causal chain and causal mechanism between the independent and dependent variable (George and Bennett 2005, 206). According to Levy (2008, 11), process-tracing has "a comparative advantage in the empirical analysis of decision making at the individual level, …including the analysis of leader's perceptions, judgements, preferences, internal decision-making environment, and choices." The goal of this within case analysis is to establish whether the within case processes fit those predicted by the proposition and thus confirm the causal mechanism (Bennett 2010). The dissertation will closely examine each case in order to observe congruities or divergences in the behavior of German chancellors in order to determine whether potential increases in natural gas import dependence reflected a more positive position toward the Soviet Union/RF. The method of process-tracing emphasizes the examination of intervening factors inherently difficult to capture quantitatively.

Question of Expediency: The NATO Pipe Embargo of October 1962 and the Soviet-German Pipe Trade

In the aftermath of the construction of the Berlin Wall in August 1961 as well as the Cuban Missile Crisis of October 1962 few would have imagined the FRG to become the second signatory to a natural gas contract with the Soviet Union by 1970. However, as seen in Figure 6.1 trade between the FRG and the Soviet Union had significantly increased in the prior decade and once no longer subject to restrictions after 1958, large-diameter steel pipes became an increasingly valuable export commodity for the West German steel industry. This put the

Adenauer government in a delicate position when NATO established an export embargo of large-diameter steel pipes to the Soviet Bloc in November 1962.

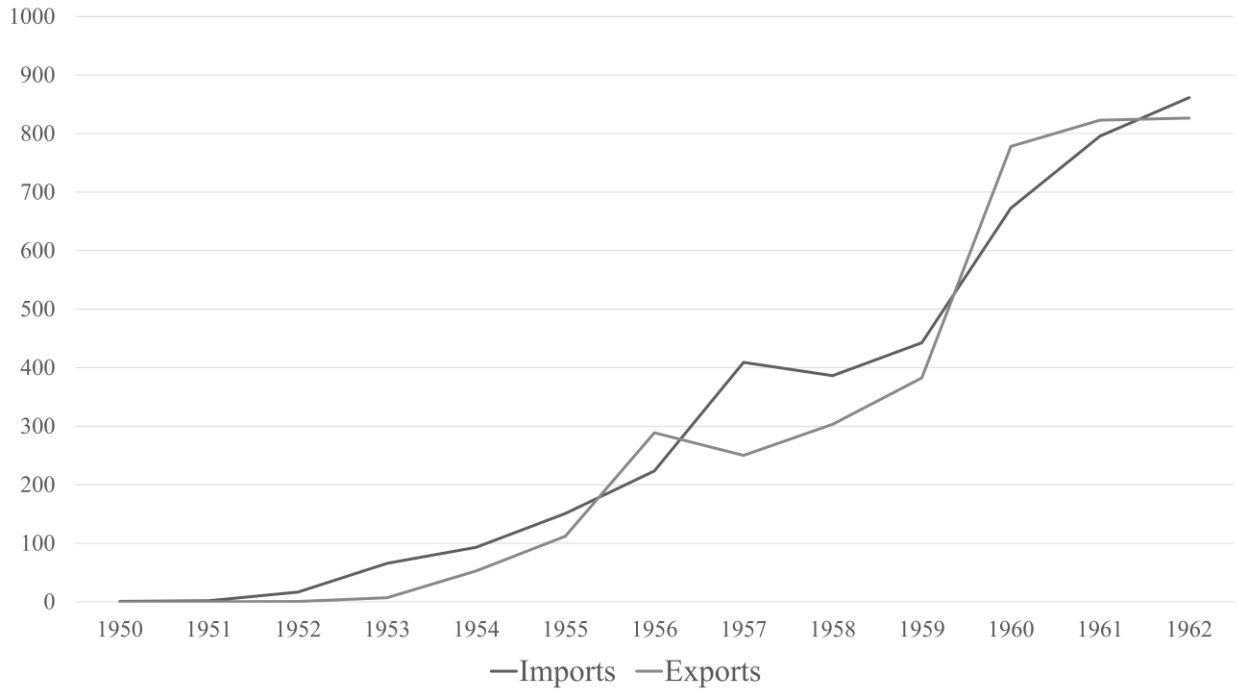

Figure 6.1. German Trade with the Soviet Union, 1950-1962 (Million DM)
Source: Statistisches Jahrbuch (Statistisches Bundesamt/Federal Statistical Office n.d.), several issues.

The Adenauer government had to decide whether to apply the NATO pipe embargo retroactively to lucrative pipeline contracts signed in October 1962. From a security perspective, the building of the Berlin Wall in August 1961 had highlighted West Germany's strategic dependence on its NATO alliance partners, most prominently the United States. Additionally, the signing of the Élysée Treaty (or Treaty of Friendship) between French President Charles de Gaulle and German Chancellor Konrad Adenauer on 22 January 1963, which had antagonized the United States, made the West German government feel obliged to demonstrate its loyalty to NATO and the United States (Stent 1981, 95). The imposition of the NATO pipe embargo on the export of large-diameter pipes to the Eastern Bloc was thus a question between foregone trade and the loss of face as a trade partner of the Soviet and a corresponding Soviet political backlash.

Neither the dependence on oil or natural gas nor even prospects of future energy imports influenced the political decision made by Adenauer (the Druzhba oil pipeline would only be completed in 1964 and the Bratstvo natural gas pipeline would not reach Germany until 1973). In 1962, the political considerations prevailed.

Economic and Political Rapprochement

The reestablishment of sovereignty (Stent 1981, 95), the right to rearm as well as the admission to NATO within a few days in May 1955 laid the groundwork for the initiation of direct talks between the FRG and the Soviet Union. Only a few months later, on September 13, 1955, the FRG and the Soviet Union agreed to resume diplomatic relations[145] and the ensuing rapprochement between the FRG and the Soviet Union had a favorable impact on the development of trade. Among the items sought by the Soviet Union were large-diameter pipes since it could not to meet its production targets.[146] In December 1958, the Council for Mutual Economic Assistance (COMECON), an economic organization of Eastern Bloc and other communist states under the leadership of the Soviet Union established in 1949, decided to build the Druzhba oil pipeline. The FRG with its expertise and capacity for the production of large-diameter steel pipes became an attractive supply market for the Soviet Union.

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[145] The communiqué issued on the negotiations for the establishment of diplomatic relations mentioned in its concluding remarks that both countries were also going to address questions related to the development of trade in the near future (United States Senate: Committee on Foreign Relations 1970, 271–72; von Münch 1971d, 69–70). An agreement on general questions of trade and shipping in which both countries granted each other most-favored-nation treatment status as well as a consular treaty were signed on 25 April 1958 (von Münch 1971a, 81–85; 1971b, 85–102; 1971c, 115–31). Yet another on cultural, technical, and economical exchange followed in May 1959 and in December 1960 the one on trade and shipping was extended to a long-term agreement on the movement of goods and payment transactions for the next three years , 1961-1963 (von Münch 1971e, 102–9; 1971c, 115–31). The latter included lists specifying quotas for goods to be exported from Soviet Union to the FRG and vice versa.

[146] According to American estimates, the Soviet Union would not be able to achieve its Seven-Year Plan for 1959-65, which targeted the production of 2,100,000 tons of 40-inch steel pipes or a total of 26,000 kilometers of pipe, 1,700,000 tons of which were earmarked for gas pipelines (“Less Pipe from NATO Countries” 1963; Stent 1981, 101). Through 1965, it was estimated, the Soviet Union would only produce 850,000 tons of 40-inch pipes, bringing the overall deficit in 40-inch pipes to approximately 703,000 tons.

The removal of large-diameter pipes from the embargo list of the Coordinating Committee for Multilateral Export Controls (CoCom),[147] created in 1949 to prevent members of COMECON from gaining access to Western technologies, enabled the rejuvenation of pipe trade between West Germany and the Soviet Union.[148] As Western Europe picked up the traditional pre-war business of trading industrial products for Soviet raw materials,[149] it soon became apparent that an international as well as bilateral framework was required (Rudolph 2004, 157). The agreement on trade and shipping of 1958 served this purpose and several barter transactions for the exchange of West German large-diameter steel pipes for the delivery of Soviet raw materials followed (Rudolph 2004, 157–58). In the same year, Phoenix-Rheinrohr concluded a contract for the delivery of over 60,000 tons of large-diameter steel pipes to the Soviet Union in exchange for manganese ore. Trade in pipes between West Germany and the Soviet Union continued to expand and, by 1959, West Germany had already delivered 159,000 tons of large-diameter pipes, in 1960 it exported 180,000 tons, in 1961 110,000 tons, and in 1962 220,000 tons of which 10,000 tons were delivered directly and 210,000 tons were part of a processing contract[150] based on prior Soviet pig iron deliveries (Deutscher Bundestag 1963, 3072).

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[147] The 17 members of CoCom were Austria, Belgium, Canada, Denmark, France, Germany, Greece, Italy, Japan, Luxembourg, the Netherlands, Norway, Portugal, Spain, Turkey, the United Kingdom, and the United States.
[148] In 1954, the large-diameter steel pipes were moved to a watch list of non-embargoed items and, in 1958, when various lists were dropped and only the embargo list remained, large-diameter steel pipes became freely tradable (*Gettysburg Times* 1963). Washington gave in to the wishes of the Europeans to remove large-diameter steel pipes from the CoCom lists because it assumed that the West European steel industry would not be able to expand its capacity fast enough to meet its own as well as Soviet demands in the near future. The U.S. Commerce Department believed that the current Rotterdam-Rhine, Nord-West, and southern European pipeline projects used much of the Swedish, West German, Italian and French producers' capacities (Jentleson 1986, 87). Rudolph (2004, 169) argues that a West European initiative based on the urging of Moscow and the industry let to the removal of large-diameter steel pipes from the CoCom list.
[149] Ferrostaal had started exporting German large-diameter steel pipes in 1956, resuming the previous trade between Nazi Germany and the Soviet Union that had flourished until Operation Barbarossa, the invasion of the Soviet Union by Nazi Germany on 22 June 1941.
[150] "Processing contract" denotes a compensation agreement according to which semi-finished products or raw materials are processed to the final product, here the processing of Soviet pig iron into large-diameter steel pipes in the FRG.

Buying eighty percent of its large-diameter steel pipes from West Germany (*Die Welt* 1963; *Der Spiegel* 1963b; Dean 1974, 128; Rudolph 2004, 158; Stent 1981, 100),[151] the Soviet Union was in 1962 the single largest purchaser of large-diameter steel pipes from West German steel companies, which had increased their production capacity to meet the increased Soviet demand (Dean 1974, 128). When the Soviet Union thus conceded to West German suppliers that the it was experiencing hard currency difficulties and would, therefore, prefer to supply the pig iron for the production of the steel pipes in the fall of 1961, it fell on open ears (*Der Spiegel* 1963a). Three German companies: Mannesmann, Hoesch, and Phoenix-Rheinrohr agreed to this arrangement in February 1962, ensuring the utilization of the capacity of their specialized factories.[152] Another agreement between three German companies: Mannesmann, Hoesch, and Phoenix-Rheinrohr and the Soviet Ministry of Foreign Trade was concluded on October 5, 1962. The three Ruhr companies agreed to supply 163,000 tons of 40-inch steel pipes, which could be used to build approximately 600 to 700 km of pipeline (Deutscher Bundestag 1963, 3073) in exchange for Soviet pig iron. While large diameter steel pipe exports to the Soviet Union utilized up to two thirds of some German steel companies' capacity (Woehrmann 1986, 32–33), steel pipes as seen in Table 6.2 made up about sixteen percent of total West German exports to the Soviet Union in 1962.

[151] See especially Stent (1981) for the German export interests.

[152] The German steel industry was at that point also starting to feel the negative impact of falling export prices in 1962 (Stent 1981, 101) and a slowing of total European consumption of steel based on an excess steel capacity (Jentleson 1986, 88). The economically weak years of the early 1960s are also mentioned in Lippert (2011, 9). Without this countertrade, Mannesmann and Hoesch would have been forced to close their jointly operated large-diameter pipe factory in Duisburg-Ehinge. The Hoesch factory in Dortmund-Barop, completed only in 1959, and the Phoenix factory in Muehlheim/Ruhr would have had to reduce their production capacity.

Table 6.2. West German Exports to the Soviet Union in 1962 (Million DM)

Exports	**1962**
Total exports	52974.7
Steel pipes	789.6
Exports to the Soviet Union	826.4
Copper	48.9
Plastics, tar dyes, paints, other chemical pre-products	54.2
Steel (rods, sheets, wire etc.)	246.2
Steel pipes	134.7
Tools and other steel hardware	167.5
Machines (no electrical machines)	167.6
Watercraft	64.8
Electro-technical products	27.2

Source: Statistisches Jahrbuch 1963 (1964, 316–17 and 330).

Table 6.2 also shows that steel pipes comprised only about 1.5 percent of total exports from the FRG. While the October 1962 agreement to process Soviet pig iron and trade in large-diameter pipes thus portended a promising and lucrative future for the German steel industry, its volume would not be great enough to overcome the political and security concerns of the Adenauer government.

Political and Security Considerations Prevail

On November 21, 1962, the NATO Council secretly adopted a resolution based on a U.S. initiative (Rudolph 2004, 159–69) forbidding the export of large-diameter steel pipes by member states to the Soviet Bloc. The resolution triggered a discussion within the West German government, which had supported the NATO decision (Bundesarchiv/Federal Archives 1962), about its application and its applicability to the lucrative contracts signed in October 1962, which underscores the intricate linkage between energy related trade and security policy issues.

Although the original text of the NATO pipe embargo remained unpublished, one version stated that "[m]ember countries, on their own responsibility, should to the extent possible: (a) stop deliveries of large-diameter pipe (over 19 inches) to the Soviet Bloc under existing contracts; and (b) prevent new contracts for such deliveries" (Dean 1974, 129; Stent 1981, 102).[153] Contemporaries as well as historians argue that this NATO resolution had the character of a recommendation and that it pertained to oil rather than gas pipes (*Der Spiegel* 1963b; Dean 1974; Stent 1981; Treverton 1988). Rudolph (2004, 169) maintains, that the use of the wording "own responsibility" and "to the extent possible" left the member states room for discretion and that the dimension and specification of the steel pipes indicated that the embargo pertained to steel pipes used for the construction of oil, not gas pipelines. The order of gas compressors and related regulators and the higher production costs for gas pipes furthermore demonstrated that the Soviet Union intended to use the recent order of large-diameter steel pipes for the construction of a North-South running gas pipeline from Bukhara to Sverdlovsk[154] of considerably less strategic concern to the Western Alliance than the Druzhba oil pipeline.

As the decision of the Economic Advisory Committee of NATO to consider oil and gas pipes exchangeable a few weeks earlier proved, the embargo was undoubtedly directed against the contracts signed by the three German companies (Deutscher Bundestag 1963; Rudolph 2004, 169). The retroactive application of the pipe embargo to the contracts of October 1962, however, was not a foregone conclusion (*Der Spiegel* 1963b; Dean 1974; Stent 1981; Treverton 1988). In the following weeks, the Adenauer government would shift from recognizing the economic and political implications of the retroactive application of the NATO embargo to the October

[153] Dean (1974) uses a slightly different version published by UPI.
[154] This was also argued by the three German firms (Stent 1981, 105) as well as by West German experts and the Soviet Union (Dean 1974, 131).

contracts as well as security considerations to stressing the need to adhere to the NATO embargo on political and security grounds.

During a cabinet meeting on December 5, 1962 cabinet members thus discussed both economic and political aspects (Bundesarchiv/Federal Archives 1962). Based on the resolution's vague formulation, the ambivalent position of Great Britain as well as the great Soviet furor a cancellation would cause, State Secretary of Economics Dr. Ludger Westrick,[155] who heralded from Muenster in the Rhein/Ruhr region and had formerly worked for the Vereinigte Stahlwerke AG, a conglomerate coal, iron and steel companies, suggested that the government of the FRG authorize the October contracts after appropriately informing the U.S. Embassy. The Minister for Economic Cooperation and Development, Walter Scheel, a career politician who had been city councilor of Solingen, a city south of the Ruhr region, and member of the state parliament of North Rhine-Westphalia (Der Bundespräsident (The Federal President) n.d.), speculated the American initiative had been guided by commercial rather than strategic considerations[156] and warned that a refusal to authorize the contracts would anger the Soviet Union. However, Scheel also underlined the impact that the fulfillment of the October contracts would have should a new crisis in Berlin develop. Taking a more political perspective, Dr. Gerhard Schroeder, the Minister of Foreign Affairs from Saarbruecken in the Saarland, emphasized that the NATO resolution constituted a model case for the embargo regulation and that the FRG, which had voted for the resolution, would lose its credibility if it allowed the contracts to go forward.

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[155] Dr. Westrick was after the establishment of Vereinigte Stahlwerke, manager in the Stahlunion-Export GmbH 1921-1933, worked after 1933 for the Vereinigte Aluminium Werke AG and was its Chairman after 1939, became a board member of the Vereinigte Industrie-Unternehmen AG and after 1947 its trustee, and was finance director of the Deutsche Kohlenberbauleitung 1948-1951 before becoming State Secretary in 1951 (Bundesarchiv/Federal Archives n.d.).

[156] Contemporary media and politicians as well as historians allege that the U.S. administration was driven by pressure from its domestic energy companies that feared the influx of Soviet oil (*Der Spiegel* 1963a; Lippert 2011, 9; Rudolph 2004, 158–59; Stent 1981, 103).

A statutory order adding steel pipes with an outer diameter greater than 19 inches to the export control list and requiring special licenses for the export of such steel pipes to the Soviet Bloc was issued on December 14, 1962, published on the 18th and submitted to the German Bundestag, the lower house of the German parliament, on the 21st (Dean 1974, 104; Deutscher Bundestag 1962).[157] While the legal implementation of the NATO pipe embargo according to West German law proceeded apace, the Adenauer government had, however, still not made a final decision with regard to the application of the NATO pipe embargo to the October contracts. In a cabinet meeting on January 9, 1963 (Bundesarchiv/Federal Archives 1963a), Dr. Westrick reported that the Soviet Union would interpret the introduction of the licensing requirement as a breach of the trade agreement signed in 1960. Additionally, he proposed that the FRG could suggest to NATO the execution of the contracts or a part thereof or make other concessions to the Soviet Union if it would in turn agree to facilitate traffic through the Berlin Wall. He thus suggested using the October contracts for political leverage. In the succeeding discussion, however, Adenauer emphasized that he hardly saw a way to allow the delivery of the pipes and, based on his recommendation as well as in the context of Khrushchev's upcoming visit to Berlin, the cabinet once more postponed a final decision.

[157] The government of the FRG relied on paragraph 2 and 7 of the Foreign Trade Law (Außenwirtschaftsgesetz or AWG) (1961, 481) of 28 April 1961. Paragraph 2 (1) of the Foreign Trade Law allowed the government to impose permit requirements or ban transactions in general or under specific conditions if the law allowed for such limitations. Paragraph 7 (1) furthermore authorized the government to restrict foreign trade transactions to guarantee the fundamental security interests of the FRG, to prevent the endangerment of the peaceful coexistence of nations, and to avoid a significant disruption of the foreign relations of the FRG (Deutscher Bundestag 1962). These two provisions served as the basis for the statutory order. Paragraph 27 (2) of the Foreign Trade Law stipulated the rules for issuing a statutory order ("Außenwirtschaftsgesetz (AWG)" 1961). A new statutory order had to be submitted promptly to the German Bundestag. Furthermore, a statutory order would have to be rescinded immediately if the German Bundestag demanded its cancellation within three months of its issuance. However, this latter clause would not apply to restrictions on commodity trade with foreign economic territories (or the lifting thereof) that were based on the rights and obligations of intergovernmental agreements for which the appropriate German legislative bodies had passed the corresponding federal laws.

By mid-January 1963, Adenauer's position on the NATO pipe embargo began to solidify. In a cabinet meeting, Adenauer referred to a letter from Dr. Overbeck, the managing director of Mannesmann, emphasizing that the steel pipes were for the construction of gas and not oil pipelines in the Soviet Union (Bundesarchiv/Federal Archives 1963b).[158] However, given the speech of Walter Ulbricht, the Chairman of the Council of State and leader of the GDR, which had shattered all indications of a rapprochement in the negotiations on the Treuhand agency for inter-zone trade (Treuhandstelle für den Interzonenhandel) between East and West Germany, Adenauer concluded that diverging from the NATO resolution was out of the question. While the cabinet members still acknowledged the interests of the German steel industry as well as the backlash from the Soviet Union to be expected for the retroactive application of the NATO embargo to the October contracts, alliance and security considerations, especially, in the context of NATO and Berlin, began to prevail. [159]

According to Rudolph (2004, 185), Adenauer made the final decision on January 17, 1963, when he approved the draft answer to Dr. Overbeck's letter.[160] However, the answer and as such the wording of the final decision of the government was not yet released. Adenauer not only shied away from the conflict with the industry but also had to take into account that the government could not be certain of a majority in the German Bundestag. As several committees and subcommittees at the cabinet and the Bundestag took up the matter and met with

[158] On the use of the large-diameter steel pipes see also *Der Spiegel* (1963a), Baade (1963), and Rudolph (2004, 159).
[159] It was, furthermore, pointed out that Swedish negotiations with the Soviet Union on the delivery of large-diameter pipes and the likelihood of Great Britain and Italy not implementing the NATO resolution threatened the effectiveness of the embargo. Dr. Westrick also informed the cabinet about the outcome of the meeting of the cabinet economic committee on January 15, 1963. The economic committee had decided to query U.S. officials on the possibility of executing the October contracts in coordination with NATO and to ask the Federal Foreign Office to inquire whether the members of the NATO Council had specifically meant to include gas pipes in the resolution.
[160] Dean (1974, 130–31), however, argues, that the final decision to apply the NATO pipe embargo retroactively and to deny the export licenses was not made until March 15, 1963.

representatives of the three German steel companies,[161] it soon became apparent that Social Democratic, Free Democratic and even some Christian Democratic members of the committees while endorsing the embargo itself opposed its retroactive application to the October contracts ("Pipe for Russia: Germany Temporises Again" 1963; Dean 1974, 130). Historians consider the involvement of several cabinet and parliamentary committees as well as the choice to conceal the final decision on retroactively applying the policy to the October contracts a delaying tactic to let the three months deadline for the recourse in the German Bundestag pass and to avoid a public debate (Dean 1974, 130; Rudolph 2004, 186; Stent 1981, 106).[162]

Between mid-February and mid-March 1963, the deadlock on the retroactive application of the NATO pipe embargo became more and more apparent and Adenauer responded by stressing the importance of the embargo on the grounds of national security (Stent 1981, 106). Having adopted the argument of the Kennedy administration, the government maintained that the delivery of large-diameter steel pipes for the construction of gas pipelines in the Soviet Union would free Soviet capacities for the construction of strategic oil pipelines and therefore threaten the security of the FRG (Rudolph 2004, 187–88). The Adenauer government furthermore argued that the change of the export control list did not interfere with the concluded contracts because it applied to processing contracts that were not included in the trade agreement between the FRG and the Soviet Union and could thus be denied export licenses based on international obligations

[161] The cabinet asked, for example, the cabinet economic committee (Kabinettsausschuß für Wirtschaft) to study the information submitted by the three steel companies. The three German steel companies in turn used this opportunity to lobby the members of the committee and convince them to support the fulfillment of the October contracts (Rudolph 2004, 184–85). They furthermore tried to influence the Bundestag foreign trade (Außenhandelsausschuss) and foreign affairs (Ausschuss für auswärtige Angelegenheiten) committees of the German Bundestag, which had similarly been tasked with evaluating the NATO pipe embargo ("Pipe for Russia: Germany Temporises Again" 1963; Dean 1974, 130; Stent 1981, 106).

[162] In what has been described by Rudolph (2004, 186) as a completely senseless undertaking and another attempt to play for time, the Foreign Office furthermore began to advocate an exception for the German pipe industry in the NATO committees in Paris.

at any time. Additionally, the three companies could not argue that they had entered the agreements *bona fide* because they had been informed about a possible embargo in March 1962 and should have reckoned with the possibility that they might not be able to fulfill the October contracts.

In a cabinet meeting mid-March (Bundesarchiv/Federal Archives 1963c), Dr. Schroeder, the Minister of Foreign Affairs, argued that the impact of the October contracts would become apparent if one considered that the sheer quantity of pipes traded would suffice to construct 600 km of pipeline. Additionally, the pipes acquired a special significance because the Soviet Union intended to use them to construct the Druzhba oil pipeline to Schwedt that would serve to supply East Germany and the Soviet troops stationed there with energy. According to Dr. Schroeder, political aspects had to subsume economic ones. Rescinding of the statutory order would unsettle Germany's NATO partners, especially the United States, and have an unforeseeable impact on the force and amount of protection they would be willing to give the FRG, especially regarding Berlin. Niederalt of the CSU similarly concluded that there was no room for any further negotiations, the FRG had to adhere to the NATO resolution because the FRG could not expect support from its NATO partners if it did not in turn support NATO. Adenauer concurred and emphasized that it was virtually impossible to hold on to the October contracts because giving priority to economic considerations could have serious political consequences. After a cabinet vote, Adenauer determined that the majority of the cabinet supported maintaining the statutory order of December 18, 1962. According to Dean (1974, 134), the government announced its decision to apply the NATO pipe embargo retroactively to the October contracts that is, to deny the export licenses, on the afternoon of the final day of the three-month period, a Sunday, assuming that the German Bundestag could no longer intervene thereafter.

The SPD, however, successfully argued that since the final day of the three-month deadline for recourse fell on a Sunday, the period would extend until the next workday. On Monday evening, March 18, 1962, the German Bundestag debated the retroactive application of the NATO pipe embargo to the October contracts (Deutscher Bundestag 1963). The special session had only one item on the agenda, the motion of the foreign trade committee to the Bundestag to rescind the statutory order unless the government made a binding declaration to grant export licenses to the October contracts. All parties: the government (CDU/CSU), the Social Democrats (SPD), and the Free Democrats (FDP) used the special session of the German Bundestag to reiterate their positions (*Frankfurter Allgemeine Zeitung* 1963; Dean 1974, 134–36; Rudolph 2004, 191; Stent 1981, 107).[163]

During the debate, the Adenauer government argued that the 163,000 tons of large-diameter steel pipes of the October contracts, equaling roughly the annual average of exports or 600 to 700 km of pipeline, were relevant in the confrontation with the Soviet Union (Deutscher Bundestag 1963, 3073). If the FRG permitted the export of the 163,000 tons, Dr. Schroeder argued that the pipes, which had not yet even been produced, would practically invalidate the NATO pipe embargo and emphasized that no member of the German Bundestag could support both the embargo and the delivery of large-diameter steel pipes to the Soviet Union for another year.[164] Dr. von Brentano emphatically asked the members of the Bundestag to consider the

[163] For a brief summary of the position of the government see Dr. Walter Loehr's introduction (Deutscher Bundestag 1963, 3063).

[164] The Adenauer government argued that the retroactive application of the NATO embargo did not violate the trade agreement with the Soviet Union because the agreement made no provisions for processing contracts. Paragraph 3 (2a) of the agreement on general questions of trade and shipping from April 25, 1958 explicitly allowed, according to Dr. von Brentano, that exports could be limited for security reasons. The Soviet Union, as a contractual partner, thus knew that the FRG could interfere with individual deliveries within the framework of the agreement, which the FRG certainly intended to comply with, without accusing the FRG of violating the agreement. Furthermore, the provisions of the long-term agreement on the movement of goods and payment transactions for the period from 1961 until 1963 did not apply to the processing contracts because they were concluded outside the agreement. This latter point was subsequently also emphasized by Dr. Erhard, who argued that although the quota of the long-term

consequences if the FRG flagrantly violated the unanimous NATO resolution (Deutscher Bundestag 1963, 3066–67). The question was not, Dr. von Brentano emphasized, about the contractual fidelity and the credibility of West German trade-policy but the loyalty and the credibility of the FRG in world politics (Deutscher Bundestag 1963, 3074). Dr. Ludwig Erhard, the deputy Chancellor of the FRG and Minister of Economic Affairs, similarly concluded that violating the NATO resolution would threaten the security and freedom of the FRG (Deutscher Bundestag 1963, 3071). Dr. Schroeder was even more outspoken, when he observed that if he had to choose between the interests of foreign policy and the interests of the economy, he would choose foreign policy (Deutscher Bundestag 1963, 3072). Clearly, for the Adenauer government political and security considerations outweighed export interests and bilateral German-Soviet considerations.

Fundamentally disagreeing with and reacting with laughter as well as derisive remarks, the SPD emphasized economic aspects. Referring to the principle of *pacta sunt servanda* (agreements must be kept) the SPD pointed out, that its issue was not with the application of the NATO resolution to future contracts but its retroactive application (Deutscher Bundestag 1963, 3065; Stent 1981, 107). The FDP concurred that existing contracts should not be infringed upon by the statutory order (Deutscher Bundestag 1963, 3070).[165] Regarding the agreement on general questions of trade and shipping from 1958, Dr. Deist pointed out, that the agreement explicitly

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agreement foresaw the export of German rolled iron and steel totaling 210 million DM for 1963, the agreement did not foresee the delivery of the tonnage of the processing contracts. Together with the Soviet pig iron delivered to Germany, the large-diameter steel pipes that would be delivered according to the October contracts would total 180 million DM. Given the export quota of 210 DM for 1963, the government had to take the size and value of the October contracts, not provided for in the trade agreement, seriously in the interest of the security of the FRG (Deutscher Bundestag 1963, 3071).

[165] According to Siegfried Zoglmann, the parliamentary executive of the FDP faction in the German Bundestag, the credibility and the contractual fidelity of the FRG did not permit the cancellation of preexisting contracts. For this reason alone, the FDP had to vote to rescind the statutory order. Zoglmann emphasized, however, that the FDP expected that the government would subsequently promptly issue the legislation required for the implementation of NATO pipe embargo (Deutscher Bundestag 1963, 3070).

provided for the delivery of large-diameter steel pipes after their removal from the embargo list in the same year and that the October contracts had been made based on and within its framework (Deutscher Bundestag 1963, 3068). Whether delivery of large-diameter steel pipelines constituted a threat could and should have been known when the trade agreement was concluded (Deutscher Bundestag 1963, 3069). Finally and from a political perspective, the SPD maintained, the confrontation with such a potent opponent as the East should not lead the FRG to carelessly provide the Soviet Union with the argument that the FRG did not take contracts seriously (Deutscher Bundestag 1963, 3069).

With the parties firmly entrenched in their positions, and the CDU/CSU dissidents refusing to vote against the motion, the CDU/CSU's leadership resorted to a procedural trick to prevent losing the vote; it ordered its members to boycott the final vote. Subsequently, 244 members of the German Bundestag voted in favor and one, Dr. Eugen Gerstenmaier, CDU member and president of the German Bundestag, against the motion of the foreign trade committee to rescind the statutory order.[166] Since a quorum required 250 votes,[167] Dr. Gerstenmaier, had no other choice but to terminate the session. The attempt to prevent the retroactive application of the NATO pipe embargo to the October contracts had failed and the pipe embargo became effective in its full scope.

[166] Only 244 of the 257 SPD and FDP members of parliament were present (*Frankfurter Allgemeine Zeitung* 1963; *Der Spiegel* 1963c) and had the CDU/CSU decided to participate it would have had only 242 votes (Dean 1974).
[167] According to Rule 45 of the procedural rules of the German Bundestag.

Figure 6.2. German Trade with the Soviet Union, 1960-1970 (Million DM)
Source: Statistisches Jahrbuch (Statistisches Bundesamt/Federal Statistical Office n.d.), several issues.

As the opposition had feared and the Adenauer government acknowledged as regretful but was willing to accept, the retroactive application of the NATO pipe embargo to the October contracts had an impact on both the German steel companies as well as German exports to the Soviet Union (see Figure 6.2). In May 1965, the Erhard government still defended the position of not recognizing an obligation to compensate the German steel companies for their significant losses (Deutscher Bundestag 1965, 9282).

The Adenauer government did not make the decision to apply the NATO embargo to the October contracts immediately and, when it did, it concealed its decision until the final moment and then still had to revert to a procedural trick to overcome domestic political opposition. In making the decision, the Adenauer cabinet had to consider the negative impact that the retroactive application of the NATO embargo to the October contracts would have. Most immediately, the West German steel industry would lose a lucrative trade deal and the decision

would have to be justified in terms of the existing trade agreement with the Soviet Union. The loss of face for infringing upon the contracts would have both economic and political repercussions and likely reverse the recent economic and political rapprochement that had promised more trade and improved bilateral relations with the Soviet Union. In 1962, the FRG was not dependent on energy imports from the Soviet Union and neither the overall trade volume nor the significant economic dimension for the West German steel industry outweighed alliance and security considerations as long as a potential conflict with the Soviet Union still loomed.

When NATO finally lifted its embargo on the sale of large-diameter steel pipes to the Soviet Union, it noted that the aim of the embargo had been to delay the construction of the oil network between the Soviet Union and Eastern Europe and that this network had now almost been completed (*New York Times* 1966). NATO furthermore stated that its "aim is not to place obstacles to East-West trade of goods which no longer have strategic significance" (*New York Times* 1966). While Soviet Union had by that time increased the capacity of its pipe industry and imported large-diameter pipes from Sweden and Japan and in the future possibly Italy, its expansion plans were great enough to promise the resumption of large-diameter steel pipe trade for the German steel companies coping with underutilization. However, a new, direct contract for the delivery of German large-diameter steel pipes to the Soviet Union would not be signed until 1970. When it was signed, it not only indicated that the mortgage of the pipe embargo had finally been overcome but also heralded the advent of the natural gas trade and the beginning of a new rapprochement between the FRG and the Soviet Union.

Soviet Natural Gas: The First Gas Agreement of 1970

After the building of the Berlin Wall in 1961 and the retroactive application of the NATO pipe embargo of 1962 to the existing October contracts, few would have imagined the FRG to become the second Western European signatory to a natural gas agreement with the Soviet Union by 1970. On one hand, the first natural gas agreement of 1970 between the FRG and the Soviet Union has to be seen in the context of the prior deterioration of bilateral relations between the two countries starting in 1967 that was subsequently exacerbated by the invasion of Czechoslovakia in August 1968, the pronouncement of the Brezhnev doctrine as well as the federal presidential elections of March 1969. On the other hand, the late 1960s also heralded a renewed political and economic rapprochement and the election of a new government in the FRG. This section examines the origin and negotiations of the first natural gas agreement and the role the government of the FRG had in its making to understand the benefit the Brandt government saw in the first natural gas agreement as a catalyst for the political rapprochement between the FRG and the Soviet Union. While the first natural gas agreement precipitated the first natural gas imports from the Soviet Union, it is, however, also indicative of how closely economic and political aspects were intertwined from the beginning of the natural gas trade between the FRG and the Soviet Union.

Political and Economic Rapprochement

The rapprochement and the exchange of notes on a renunciation of force initiated by the new grand coalition government under Kurt Kiesinger (CDU) and his Foreign Minister Willy Brandt (SPD) did not lead to the hoped for thawing of relations (Meissner 1975b). By fall of 1967, the Soviet Union described the FRG's policy as aggressive and revanchist, warned of

rising militarism and neo-Nazism in the FRG, and tied a bilateral renunciation of force declaration to the international recognition of the division of Germany (Brandt 1978, 172–73; Meissner 1975b, 769; United States Senate: Committee on Foreign Relations 1971c; 1971b). The Soviet media's stepped up propaganda in 1968 as well as the publication of Soviet documents on the renunciation of force in breach of confidentiality further indicated that the Soviet Union was no longer interested in the successful conclusion of the negotiations (Meissner 1975b, 769).

The invasion of Czechoslovakia August 20, 1968 and the declaration of the Brezhnev Doctrine in November 1968 led to a further deterioration of relations between East and West. The tensions between the FRG and the Soviet Union as well as the GDR grew further when the latter prohibited West German travel through East Germany for the federal presidential election convention in Berlin scheduled for early March 1969 (*New York Times* 1969).[168] The Soviet Union, moreover, accused the FRG of intending to unlawfully hold elections outside its territory stating that "West Berlin…will not belong to the West German militarists or neo-Nazis, no matter how often and under whatever pretexts they try to get into it" (United States Senate: Committee on Foreign Relations 1971b).When the FRG refused to move the location of the election, however, the Soviet Union did not press the issue and the election was held as scheduled. According to Stent (1981, 158–59), the reason for this volte face was the intensification of the Sino-Soviet conflict in early March 1969. The Sino-Soviet border clash was the beginning of a different position of the Soviet Union towards the FRG (Meissner 1975b, 773; Stent 1981, 159).[169] The subsequent rapprochement between the West and the Soviet Union has been ascribed to both Western governments seeking to exploit the new prospects for cooperation

[168] The GDR published the decree effective as of February 15, 1969 on February 9.
[169] Chancellor Kiesinger was reportedly the first Western head of state to be informed about the border clashes by Soviet Ambassador Tsarapkin.

resulting from the Soviet Union's need to restore its legitimacy and reputation on the international arena (Hoegselius 2013, 105) as well as to supporters of a policy of Détente prevailing over hardliners in the Soviet Union (Meissner 1975b, 771).

Politically, the Soviet Union indeed seemed to follow a different path. In their Budapest Appeal of March 17, 1969, the Warsaw Pact members supported the establishment of good relations with the West and called for a pan-European conference to discuss questions of European security and cooperation.[170] A further indication was the fiftieth anniversary celebration of the founding of the Communist International (Comintern) in March 1969, during which Politburo ideologues repudiated the Stalinist notion of social democracy as the ideological nemesis of communism (Meissner 1975b, 772; Stent 1981, 159).[171] By July 1969, Soviet Minister of Foreign Affairs Gromyko stated in front of the Supreme Soviet that he thought the development of normal relations between Moscow and Bonn was possible if the FRG followed the path of peace and accepted the status quo.[172]

In a next step, both the FRG and the Soviet Union began to express their interest in the improvement of economic relations. While the Budapest Appeal criticized the FRG for not recognizing the GDR and the postwar borders (Hoegselius 2013, 106), Brandt, in a meeting with Ambassador Tsarapkin on April 4, 1969, chose to emphasize its economic aspect (Zimmermann and Eibl 2000a, 450–51):

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[170] One of the main preconditions of safeguarding European security, it named the inviolability of the frontiers existing in Europe, including the frontiers on the Oder and Neisse and also the frontiers between the German Democratic Republic and the Federal Republic of Germany, recognition of the existence of the GDR and the RFG, renunciation by the FRG of its claims to represent the entire German people, and her renunciation of the possession of nuclear weapons in any shape. West Berlin, it moreover stated, had a special status and did not belong to West Germany (Zimmermann and Eibl 2000a, 443; United States Senate: Committee on Foreign Relations 1971a).
[171] For the role that the Italian Communist Party (CPI) played as intermediary between the SPD and SED see Zimmermann (1971), who is also quoted in Meissner (1975b), as well as Brandt (1978, 218–22) and Stent (1981).
[172] Gromyko expressed a similar position in front of the General Assembly of the United Nations on September 19, 1969 (*New York Times* 1969). See Footnote 170 for the Soviet Union's preconditions.

> a permanent system of European security would create the objective possibility and necessity to jointly realize great projects in energetics and transportation that are directly related to prosperity of the people of the entire continent. Especially this common ground[173] could and should be the foundation for the European cooperation. (unofficial translation)

The Soviet Union, in turn, demonstrated its interest in improving economic relations when Brezhnev and Kosygin visited West German company stands at the tools and machines exhibition in May 1969 in Moscow. West German industry also strongly urged for negotiations on technological and economic cooperation (Rudolph 2004, 288).

However, political deadlock persisted within the government of the FRG and would only intensify toward the approaching federal elections held in September 1969 (Hoegselius 2013, 106). Chancellor Kiesinger, distrusted by the Soviet Union for his controversial Nazi past and without a positive rapport with Ambassador Tsarapkin, was pessimistic with regard to finding common ground on important political matters and saw his skepticism of the trustworthiness of the Soviet Union confirmed by the invasion of Czechoslovakia. In addition, Chancellor Kiesinger warned about demonstrating great willingness to make concessions by decoupling economic and political questions (Rudolph 2004, 287). Brandt and his close advisor Egon Bahr, on the other hand, concluded that the Soviet Union was more interested than before in improving relations and that the effort to establish better relations should therefore be intensified. While growing internal disagreements prevented new political initiatives toward the Soviet Union, Brandt continued to make Détente more appealing by focusing on concrete economic projects (Hoegselius 2013, 106; Rudolph 2004, 287). According to Rudolph (2004, 286), Brandt used the economic power of the FRG not only to obtain political concessions for a regulated coexistence

[173] In German “dieses Gemeinsame.”

(*geregeltes Nebeneinander*) but to even bring it into play. Indeed, Rudolph (2004) argues that the liberalization of trade should not be seen purely as an initiative of political Détente to overcome the standstill following the suppression of the *Prague Spring*. This, he concludes, would misinterpret the foreign trade motives as well as the attempt by the new government to bundle Bonn's foreign and foreign trade policy. Stent (1981, 163) similarly concludes that economic incentives played an important role in the overall negotiations and reinforced the view that the Soviet Union considered a change of attitude toward the FRG even before the election of Brandt as chancellor.

In the context of the call for European cooperation in infrastructure of the Budapest Appeal and the Western gas industries expectation that the Soviet Union would be more flexible on price negotiations, it comes to no surprise that Brandt identified the natural gas agreement as an unique opportunity (Hoegselius 2013, 105–6; Meissner 1975b). The idea of importing Soviet natural gas was not new. It had already been discussed in 1966-67 but when the Soviet Union insisted on the unconditional recognition of the GDR as a precondition for further negotiations on concrete projects in October 1967, relations between the FRG and the Soviet Union soured (Hoegselius 2013, 87 and 107–8). Only two years later, domestic support for the import of Soviet natural gas had, however, grown substantially. Table 6.3. and Table 6.4. show how the role of natural gas in primary energy consumption and natural gas consumption increased significantly between 1964 and 1972.

Table 6.3. Primary Energy Consumption in 1968 (coal equivalent)

Primary Energy Source	**Composition**		**Change**	
	%	Million tons	Million tons	%
Stone coal	32	95	-3	-3
Brown and pitch coal	10	29	+0.5	+2.5
Mineral oil	51	153-154	+11.5-12.5	+7.5-9
Natural gas	4	12	+3	+29
Hydropower	2	6-7	-0.5-1.5	-6-19
Nuclear power	1	2	+1	+150
Wood, turf etc.	0	1	-0.5	-29
Primary Energy Consumption Total	100	298-300	+11-13	+4.0-4.5

Source: Annual Economic Report 1969 (Deutscher Bundestag 1969a).

Table 6.4. Natural Gas Consumption, 1964-1972

Natural Gas Consumption	**1964**	**1965**	**1966**	**1967**	**1968**	**1969***	**1970***	**1971***	**1972***
Natural Gas (% Change)	+50	+41.5	+23.5	+31	+69	+29	+8	+23	+25
Natural Gas in Million Tons of Coal Equivalent (tce)	2.4	3.4	4.2	5.5	9.3	12	13	16	20
Total Domestic Primary Energy Consumption in Million coal	258.9	266.0	266.1	266.1	286.9	298-300	308	319	330

* estimates
Source: Annual Economic Report 1969 (Deutscher Bundestag 1969a).

The main reasons for the increase in natural gas consumption by the FRG was the transition of several power supply grids to natural gas and the completion of transmission systems as well as the start of natural gas imports from the Netherlands (Deutscher Bundestag 1969a). Given the political rapprochement spearheaded by Brandt first as Foreign Minister and

subsequently as Chancellor as well as the developments in the domestic energy market, importing Soviet natural gas became a viable option.

In addition, Egon Bahr's position within the Federal Foreign Office had been strengthened by the departure of former officials and the position of the Federal Ministry of Economic Affairs under Karl Schiller, a Social Democrat, had become more pronounced, especially after the appointment of two new state secretaries, Klaus Dieter Arndt in 1967 and Klaus von Dohnanyi in 1968 (Hoegselius 2013). The Federal Ministry of Economic Affairs, which in 1967 still took a rather conservative stance on natural gas in general, started to look more favorably on the delivery of Soviet natural gas as long as it remained within acceptable limits and entire industrial areas would not become dependent on Soviet natural gas (Lantzke 1969a; Zimmermann and Eibl 2000e).

Previously, it had been assumed that the natural gas demand of the FRG could be met by domestic and Dutch sources, but the Federal Ministry of Economic Affairs now considered supplies from other countries desirable for competitiveness and deemed the import of up to 20% of the total German consumption of natural gas from the Soviet Union acceptable. In addition, the Federal Ministry of Economic Affairs pointed out that a future supply of France, Austria, Switzerland and Italy with Soviet natural gas through the FRG would make a supply disruption less likely and natural gas supply more secure. A supply of up to 5 bcm, the Federal Ministry of Economic Affairs concluded, would be worth 250 million DM, (whereas the total imports from the Soviet Union in 1968 had a total value of 1175 million DM). Although the Federal Foreign Office considered the percentage of Soviet natural gas envisaged by Federal Ministry of Economic Affairs as quite high, it also deemed it acceptable (Zimmermann and Eibl 2000e)

According to Hoegselius (2013, 108), the Soviet Union brought the idea of Soviet natural gas supplies back onto the table. At a meeting of the International Gas Union (IGU) in 1968, Alexei Sorokin, the international director of Mingazprom, repeatedly approached delegates of the German gas industry expressing the Soviet Union's interest in natural gas trade. This happened shortly after the invasion of Czechoslovakia and in the context of increased Soviet accusations of rising militarism and revanchism in the FRG. Yet, on February 11, 1969, at a luncheon with Brandt, Tsarapkin referring to conversations with the Bavarian Minister of Economics Schedl and Lord Mayor of Stuttgart Klett as well as conferences in Hamburg and Copenhagen mentioned that "in the Federal Republic there was interest in natural gas deliveries from the Soviet Union" (Brandt 1969a; also quoted in Hoegselius 2013, 108). Not wanting to confirm that he and Bahr were highly interested, Brandt understood the Soviet ambassador's words as a sign of increased Soviet interest in natural gas trade. In March 1969, at the next IGU conference held in Leningrad, Sorokin again approached German delegates and mentioned the Austrian contract (Austria had started importing Soviet natural gas in September 1968) as a model for a similar German-Soviet gas agreement (Hoegselius 2013). In March 1969, too, the conflict around the federal presidential election had abated.

In mid-March 1969, the FRG responded with a first high-level visit of State Secretary Arndt of the Federal Ministry of Economic Affairs to Stanislav Volchkov, the new director of the Soviet trade representation in Cologne, to establish the Soviet Union's seriousness. The meeting was found encouraging and seen to open the possibility for more formal discussions (Hoegselius 2013, 108). In a subsequent meeting between Tsarapkin and Brandt on April 4, 1969, Brandt focused on the common ground and emphasized the Budapest Appeal for all-European cooperation in the large infrastructure projects mentioned above. After Brandt tested the waters,

Schiller (1969) invited Minister of Foreign Trade Nikolai Patolichev to attend the German industrial Trade Fair in Hannover in late April. According to Hoegselius, the Soviets were highly satisfied since this meant that the first formal initiative regarding the exports of natural gas had come from the FRG (2013, 108–9).[174]

Contrary to this account of the Soviet Union's initiation, Tsarapkin, in a conversation with State Secretary Duckwitz on April 8, 1969, emphasized that the wish for Soviet natural gas trade had been initiated by the West German side and not from the Soviet Union. The issue, Tsarapkin pointed out, had been raised by West German business representatives as well as officials and discussed at national and international natural gas conferences (Zimmermann and Eibl 2000b). While it is thus difficult to determine which side initiated or raised the idea of Soviet natural gas imports, it cannot be denied that both the Soviet Union and the FRG were interested in natural gas trade. Very soon, however, the government of the FRG would take a more active role, clearly demonstrating the stake it saw in a natural gas agreement.

The Hannover Fair 1969 – The Ball Starts Rolling

At the German Industrial Fair held in Hannover from April 26 to May 1, 1969, Patolichev met with Schiller. It was the first time that a German cabinet minister met with his Soviet colleague since Soviet Minister of Foreign Trade Anastas Mikoyan visited the German Minister for Economic Affairs Ludwig Erhard in 1958. Referring to Hannover as *Delphi*, the Greek oracle, Schiller justified his invitation to Patolichev with the words "if no one else puts his head up, then we just have to do it" (*Der Spiegel* 1969b). In return, Patolichev, who aimed at

[174] Stent (1981, 166), however, argues that the visit was carefully arranged after the Soviet Union expressed interest in sending a high-level delegation to the FRG.

improving the trade relations with the FRG, neither touched upon the overdue trade agreement nor the NATO pipe embargo. The Hannover Fair not only served as the locale for the symbolic meeting of the two ministers, on its occasion the construction of pipe factories in the Soviet Union and Germany was announced and the first proposal for Soviet-German natural gas trade was made. At the Hannover Fair, the ball started rolling, as the FRG went from identifying the natural gas trade negotiations as an opportunity and putting them into motion to impressing the need for their successful conclusion given the political impact that their failure could have.

After a visit of the two Ministers to German mining companies on April 29, 1969, Thyssen's Chairman Dr. Ernst Wolf Mommsen announced an agreement for the joint construction of pipe factories the Soviet Union and West Germany capable of producing pipes with a diameter of up to 2.5m (*Frankfurter Allgemeine Zeitung* 1969a; *International Herald Tribune* 1969). This agreement, Mommsen stated, followed a year and a half of very open and "extremely interesting talks" adding that "when it goes well… it might be much more one day. Perhaps this is only a small step" (quoted from *Frankfurter Allgemeine Zeitung* 1969a; *International Herald Tribune* 1969). For Mommsen, the Soviet visit raised hopes that the Soviet Union would drop its reservations against direct pipe deliveries. Mommsen, who had remained in contact with Soviet industrial managers after the NATO pipe embargo, had been approached by Soviet technicians during a visit to Moscow already in fall 1967 (*Der Spiegel* 1969a; also mentioned in Stent 1981, 166). The first contacts with the German steel-pipe industry, Mommsen stressed, had been initiated by the Soviet Union (*International Herald Tribune* 1969).[175] The

[175] The negotiations thus started even before the conclusion of the triangular agreement between the Austrian steel company VOEST, the Soviet Union and the German steel companies, Thyssen pipe plants AG and Mannesmann AG, of June 1, 1968, which was the first time since the NATO embargo that the west German steel industry, albeit indirectly, functioned as a major supplier of steel pipes with a diameter of 1.22m to the Soviet Union (Kreile 1974; Rudolph 2004; Stent 1981; Wangerman 1970). VOEST and Promsyrioimport concluded the contract for the delivery

Federal Ministry of Economic Affairs, while not officially commenting on the agreement because it concerned a private commercial matter, stated that it had been aware of the negotiations for a long time and that it anticipated no legal difficulties (*Frankfurter Allgemeine Zeitung* 1969a).

Picture 6.1. Hannover Fair
Thyssen's Chairman Dr. Ernst Wolf Mommsen greets Soviet Minister of Foreign Trade Nikolai Patolichev, who visited Thyssen's exhibition stand at the Hannover Fair 1969 with the Federal Minister of Economic Affairs Karl Schiller and Soviet Ambassador Semyon Tsarapkin
Source: Thyssenrohr (1969).

Der Spiegel (1969b) argued that while media reports initially exaggerated the size of the pipe deal, the Soviet delegation presented an offer of potentially even greater dimensions: the long-term supply of natural gas.[176] The dimension, however, not only applied to the potential natural gas trade but extended to the improvement of bilateral trade and eventually bilateral

of 520,000 tons of large-diameter steel pipes for a value of 400 million DM, the pipes would be milled in Duisburg and Muelheim (both in Germany) using steel sheets from both VOEST and West Germany (*Der Spiegel* 1969a).
[176] The Soviet delegation reportedly preferred natural gas trade, they also showed interest in the potential supply of oil to a planned oil refinery in Salzgitter (Schiller 1969).

relations between the FRG and the Soviet Union themselves. During the meetings, the Soviet side had shown itself more interested in talks about specific projects and goods than negotiations for a new trade agreement. Schiller, in return, replied that he thought a pragmatic approach to improving mutual trade relations was promising (Schiller 1969; See also Footnote 2 in Zimmermann and Eibl 2000c). Reporting to Kiesinger, Schiller highlighted that the talks demonstrated the relatively strong Soviet interest in the meeting and concluded that it should only be considered as a beginning and the contacts made cultivated and developed (Schiller 1969).[177] When Schiller officially described the talks with his Soviet counterpart as a step toward a new round of trade talks, they raised the hope that trade relations between the FRG and the Soviet Union may be normalized (*International Herald Tribune* 1969). Trade between the FRG and the Soviet Union had been informal since 1966 when renewed negotiations on a new commodity list had stalled on the status of Berlin. However, trade between the two countries had accelerated after 1968 and by 1969 the FRG had regained its position as the Soviet Union's most important trade partner (Stent 1981, 163–64).[178] The FRG thus not only received the Soviet proposal of natural gas trade favorably for its own sake but also with regard to the positive impact it could have on a new trade agreement. The prospect of natural gas trade, moreover, raised the prospect of improving German-Soviet relations in general. While having pointed out the private nature of a natural gas agreement, it is thus not surprising that the German

[177] Separately, State Secretary Arndt and the deputy Trade Minister of the GDR Heinz Behrendt used the occasion for government-level contacts that had been denied to them first through the invasion of Czechoslovakia in 1968 and then during the federal presidential elections in March 1969 (*Der Spiegel* 1969b). Referring to the Budapest Appeal, Behrendt emphasized that in a permanent system of European security great energy projects could be realized and specifically mentioned oil and gas deliveries from Schwedt in an inner-German trade framework that could lead to the construction of competitive refineries in lower Saxony (*Die Welt* 1969). It is noteworthy that while reportedly neither Schiller nor Arndt talked politics in Hannover, both believed that long-term agreements could contribute to calming the political waves between Bonn and Moscow (*Der Spiegel* 1969b).

[178] The 1961 trade agreement (see Question of Expediency: The NATO Pipe Embargo of October 1962 and the Soviet-German Pipe Trade) expired in 1963.

government would in the proceeding weeks and months take on a more active role in supporting the conclusion successful of the first natural gas agreement.

Soon thereafter, May 22nd to 28th 1969, von Dohnanyi, State Secretary at the Federal Ministry of Economic Affairs, was in Moscow, where he met Patolichev on the 23rd. After a brief friendly exchange about the meeting in Hannover, Dohnanyi noted that the FRG was carefully analyzing the question of importing Soviet natural gas to the FRG. While Soviet Union expected to be contacted by the German customers, the FRG pointed out that it was first and foremost the seller's task to make that contact. After discussions on the terms of delivery during which the FRG also once more expressed it held no objections with regard to energy or trade policy to the import of between 1 and 5 bcm of Soviet natural gas per year, the Federal Ministry of Economic Affairs agreed to provide assistance with the formation of a negotiation group of potential purchasers for Soviet natural gas to meet a Soviet delegation under deputy Foreign Trade Minister Nikolai Osipov (Lantzke 1969b; Zimmermann and Eibl 2000d).[179] The takeaway for the FRG was that it was now necessary to organize the customer side to ensure that the Soviet Union had a potent negotiating partner. Von Dohnanyi would, moreover, contact Bavarian Minister of Economics Schedl, who would have to be a major partner in the negotiations for Southern Germany (Lantzke 1969b; Zimmermann and Eibl 2000d).

Again, the meeting was used to explore other possibilities of cooperation and seen in the context of creating trust and improving bilateral relations. During the same talks, von Dohnanyi thus suggested it expedient to expand the industrial and technological exchange to which

[179] Von Dohnanyi, commenting that the FRG was carefully considering the question of Soviet natural gas supply, argued that the primary question was whether Soviet natural gas would be competitive because private West German companies and not the government were the potential purchasers, the German market capacity was limited, and, apart from its own domestic production, contracts with the Netherlands and other supply sources existed. Patolichev responded, that in order to calculate a price, the minimum quantity and contract duration would have to be known and expressed that the Soviet Union was interested in long-term agreements of up to 10-15 years.

Patolichev expressed his support and, only a few days later, Soviet Minister of Instrument-Making[180] Konstantin Rudnev proposed the creation of a joint working group to discuss the possibility of an industrial-technological exchange between the FRG and the Soviet Union (mentioned in Zimmermann and Eibl 2000d). In early June, German Ambassador Dr. Helmut Allardt, advocating the continuation of the talks in the near future, concluded that contacts could be established that would create mutual trust beneath the disrupted political dimension (mentioned in Zimmermann and Eibl 2000d).

Officially, von Dohnanyi, while reconfirming that the FRG did not object to the supply of Soviet oil or gas and emphasizing that the government looked rather favorably upon it, downplayed the role of the government by stating that the negotiations had only served as a general discussion on trade and that no specific projects had been discussed (*Süddeutsche Zeitung* 1969; *Frankfurter Allgemeine Zeitung* 1969b). Although the Soviet press remained critical of the FRG, the atmosphere of the talks were indicative of the new approach taken by the Soviet Union as demonstrated in the Budapest Appeal of March 1969 and the repudiation of social democracy as the ideological nemesis of communism, (*Süddeutsche Zeitung* 1969). The visit of von Dohnanyi to Moscow, as well as the Ministry of Economic Affair's assistance in establishing a West German negotiating group, demonstrate the FRG's interest in the natural gas trade. In addition, the pragmatic approach of starting with individual projects and goods appeared to prepare the ground for greater cooperation in other areas.

The contract negotiations started at the end of June 1969 in Vienna (also referred to as Vienna or June talks), when the Bavarian Minister of Economics Otto Schedl[181] and the

[180] Complete name: Ministry of Instrument-Making, Automation Devices and Control Systems
[181] Schedl participated in the talks because in Bavaria, a region with a potentially very high demand for cheap natural gas no natural gas pipe and distribution company, comparable to Ruhrgas, existed yet (Zimmermann and Eibl 2000e, 213).

Chairman of Ruhrgas Herbert Schelberger first met with Osipov to discuss the Soviet ability, price and terms of delivery for natural gas. The talks, however, were postponed when after a few days of negotiations no agreement could be reached on the price (Hoegselius 2013; Zimmermann and Eibl 2000e). While the talks had been initiated with the consent and guidance of the Ministry of Economic Affairs, the Ministry of Foreign Affairs considered whether the supply of Soviet natural gas should be made dependent on a quit pro quo with the Soviet Union[182] (Zimmermann and Eibl 2000e). The Ministry of Foreign Affairs, noting that the Soviet Union was not ready to enter bilateral negotiations, concluded that it was in the FRG's interest to increase trade and long-term economic cooperation. The visible Soviet interest in the expansion of economic contacts during the natural gas negotiations should, the ministry reasoned, be used to improve trade relations in general. The significance of the natural gas question for a trade agreement with the Soviet Union, should therefore be stressed upon the Ministry of Economic Affairs (Herbst 1969). The Ministry of Foreign Affairs thus clearly recognized the opportunity that the natural gas negotiations offered for a new bilateral trade agreement.

Soon after the negotiations for the natural gas agreement started, the Federal Ministry of Economic affairs and the Ministry of Foreign Affairs increased their involvement demonstrating both the economic as well as the political importance of the successful conclusion of the negotiations. Von Dohnanyi, who was kept informed by Schelberger and Schedl, for example, unsuccessfully tried to intervene regarding the negotiation impasse with ambassador Tsarapkin (Hoegselius 2013, 115). In turn, the Soviet delegation unsuccessfully pleaded their position with von Dohnanyi before continuing its negotiations with Ruhrgas in Essen, Cologne and Dusseldorf

[182] More specifically, it was suggested that the government should not routinely agree with the natural gas trade but try to incorporate a more comprehensive economic agreement with the Soviet Union.

between July 9th and 17th (Hoegselius 2013; Zimmermann and Eibl 2000f, 246). In mid-July, moreover, Brandt emphasized to the Ministry of Economics that he believed that a positive outcome of this as well as subsequent negotiations, first on a commercial and subsequently on a governmental level, were significant for the development of the FRG's relations with the Soviet Union (*Der Spiegel* 1969c; Rueckert 1971). Brandt, adding that he "would not have any objections against a comparatively large volume of Soviet natural gas," hoped that "the clarification of the commercial and other aspects of the natural gas deliveries… will come about in time and in such a way that their results can be used as a possible basis for German-Soviet negotiations on a long-term governmental treaty" (Brandt 1969b; a slightly different translation in Hoegselius 2013, 118).[183] According to Stent (1981, 169), Brandt also gave direct encouragement to Ruhrgas. Von Dohnanyi similarly stressed the political importance of reaching an agreement to the German negotiators as the natural gas contract was expected to become "an important component" of the government's overall Eastern policy. Putting pressure on Schelberger, von Dohnanyi stressed that "for political reasons an interruption in the negotiations must, at all events, be avoided" (Hoegselius 2013, 118) and toward the chairmen of Esso and Shell, the main shareholders of Ruhrgas, he emphasized that "a significant deal is in our national interest" (*Der Spiegel* 1969c; Rueckert 1971). This was the first time that the government of the

[183] By July, the FRG was, moreover, aware that the conclusion of the natural gas agreement had also become a political test for the Soviet Union as Patolichev and Dzhermen Gvishiani, the deputy Chairman of the State Committee for Science and Technology, reportedly argued in a meeting with Mommsen during his private trip to the Soviet Union in July 13th to 21st, 1969 (Zimmermann and Eibl 2000f). It was furthermore demonstrated by Kosygin's reception of the Soviet delegation that had negotiated in Germany only a few days earlier in the presence of Gromyko on July 21st. Bahr noted after a meeting with Mommsen on July 25th that the natural gas agreement was no longer at a departmental level in the Soviet Union but had been raised to the political decision-making level. The Soviet Union, through Patolichev, furthermore once again indicated the possibility of a new trade agreement as when meeting with Mommsen, Patolichev raised the question of a trade agreement that would become interesting after the conclusion of a pipe deal. Referring to the Berlin clause that had let to stalling of the negotiations in 1966, Patolichev stated that this did not have to be the case anymore if both sides would be willing not to turn it into a matter of prestige.

FRG directly intervened to promote an economic transaction with the Soviet Union (Stent 1981, 169).Within two years the Federal Ministry of Economic Affairs had thus undergone a complete volte-face. Having looked conservatively upon not only Soviet natural gas but natural gas itself in 1967, the ministry now emphasized the political importance of concluding the natural gas agreement for improving the bilateral relations between the FRG and the Soviet Union.

The Ministry of Economic Affairs, taking a more active role, sought out both sides to prevent a collapse of the negotiations that had stalled on volume and price differences and sent Norbert Plesser from the ministry's gas division as an observer to the next round of negotiations in Moscow (Hoegselius 2013). By early August 1969, a general agreement for the supply of 3 bcm of Soviet natural gas starting in 1972 had been reached and both sides got closer with regard to the pricing as well as a price adjustment and most favorite clauses (Plesser 1969; Zimmermann and Eibl 2000f, 246). In late August, Plesser reported from Moscow that a positive conclusion of the negotiations could be expected before the end of the year (Hoegselius 2013, 118).

As the Federal Ministry of Foreign Affairs and the Federal Ministry of Economic affairs pressed for a successful conclusion of the natural gas negotiations, the different positions of Kiesinger and Brandt also became apparent. Chancellor Kiesinger continued to remain skeptical. During a meeting with US president Nixon early August 1969, the chancellor explained that *Ostpolitik* had, apart from improved relations with Rumania and Yugoslavia, had little success and that the invasion of Czechoslovakia had destroyed a lot. Chancellor Kiesinger reasoned that the Soviet Union perhaps desired better economic relations, for example, the trade of natural gas against pipes, but could personally not see a true indication that it intended to change its policy (Hoegselius 2013; Zimmermann and Eibl 2000g, 896).

After the federal elections of September 28, 1969, Brandt, the first post-World War II SPD chancellor, formed a social-liberal coalition with the Free Democratic Party (FDP) and its Chairman Walter Scheel as vice-chancellor and foreign minister. It quickly became apparent that Brandt entertained a different concept of *Ostpolitik* than his predecessor (Meissner 1975b, 774). In his government statement on October 28, 1969, Brandt (Deutscher Bundestag 1969b) acknowledged the existence of two states within Germany, supported a European security conference, promised to suggest a date for the negotiations on a renunciation of force treaty proposed by the Soviet Union in September 1969,[184] and expressed the willingness to sign the nonproliferation treaty. Words turned into actions when the FRG signed the nuclear nonproliferation treaty on November 28, 1969 and negotiations on the renunciation of force, which according to Brandt, could become the basis for the settlement of solvable political questions with Eastern European countries (Deutscher Bundestag 1970a), began on December 8, 1969. Both coincided with the initialing of the commercial agreements at the end of November and early December.

The First Natural Gas Agreement

On February 1st, 1970, three agreements were signed in Essen in presence of Schiller and Patolichev. One agreement was signed between Ruhrgas and Soyuzneftexport for the delivery of Soviet natural gas for 20 years starting October 1, 1973 with 500 million cbm (million cubic

[184] Dr. Helmut Allardt, who would become the German Ambassador in Moscow in May 1969, met with Gromyko already in August 1968 and in a meeting on December 11, 1968, Gromyko expressed to him the Soviet Union's intention to open talks. In response to this willingness for an open dialogue, mentioned by Brandt in an interview in January 1969, the FRG suggested renunciation of force talks in a note in July 1969. The Soviet Union in return proposed the start negotiations in Moscow in an aide-memoire on September 12, 1969 – thus before the federal elections in the FRG (Meissner 1975b, 773). Unofficial discussions that Brandt began with the GDR and the Soviet Union to improve relations before the elections and the role the Italian Communist Party (PCI) played in these talks are also mentioned in Brandt (Brandt 1978, 218–22), Stent (1981, 160), and Timmermann (1971).

meter)[185] and subsequently gradually increasing to 3 bcm per year. In a second agreement, Thyssen pipe plants AG, Mannesmann AG and Promsyrioimport agreed on the delivery of 1.2 million tons of steel pipes with a diameter of 1.42m including required machines and equipment worth 1.5 billion DM to the Soviet Union between 1970 and 1972. In the third agreement, a consortium of 17 banks under the leadership of Deutsche Bank and Vnechtorgbank agreed on a credit of 1.1 billion with an interest of 6.25% that would be repaid by 1982, within 10 years after the completion of the pipe deliveries (*Die Zeit* 1969; Meissner 1975a; Pautsch et al. 2000a; Rueckert 1971). In a first phase, a 1,500 mile long natural gas pipeline would be built from Siberia to the Czech-West German border at Marktredwitz (Stent 1981).[186]

At a news conference after the signing of the treaty, Schiller and Patolichev expressed that they both saw "great possibilities" for expanding exchanges between their countries (*New York Times* 1970). Bahr, meeting Gromyko in Moscow two days later, expressed that he was pleased that "our two ministers" had signed a good agreement in Essen and continued that it was an agreement with perspective demonstrating what the FRG envisioned when it spoke of cooperation. Gromyko replied that the Soviet Union was similarly satisfied and believed that it would have a positive impact on their mutual relations (Pautsch et al. 2000c). Officially, the FRG downplayed the significance of the agreement, arguing that the signatures in Essen were no political signal while at the same time protesting it was absurd to interpret the agreement as an economic Rapallo (Rueckert 1971, 74).[187] Nevertheless, the economic rapprochement and closure of the unfortunate NATO embargo chapter that the agreement represented manifested the

[185] 500 million cubic meters (million cbm) = 0.5 billion cubic meters (billion cubic meters)
[186] See Map 3.1.
[187] The Treaty of Rapallo signed between Germany and the Soviet Union at Rapallo, Italy on April 16, 1922, reestablished normal relations between the two countries. Germany and the Soviet Union agreed to cancel all financial claims against each other and strengthen their economic and military ties.

political course taken by Brandt and, at the same time, served as prelude for the economic and political rapprochement on a bilateral level.

Bahr, for example, asked Gromyko during a meeting on January 30, 1970 whether the FRG and the Soviet Union should, given the start of great economic projects, not also conclude a new trade agreement. Gromyko in turn stated that with regard to a trade agreement there were broad possibilities, for example, the natural gas agreement, and emphasized that it would be good if a common language could be found (Pautsch et al. 2000b, 28). The natural gas agreement signed in the middle of the renunciation of force negotiations has similarly been described as giving a further impetus to their successful conclusion (Stent 1981) to practically precluding their failure (Rueckert 1971). In the Treaty of Moscow (or Renunciation of Force Treaty) signed during Brandt's visit to Moscow on August 12, 1970, the FRG and the Soviet Union renounced the use of force, recognized the post-World War II borders (the Oder-Neisse line), and acknowledged the division of East and West Germany, which would lead to a considerable normalization of bilateral relations. Parallel negotiations on Berlin begun in March 1970 concluded in the Berlin Accord of September 3, 1971 (also known as the Four Power Agreement or Quadripartite Agreement on Berlin).[188] The Moscow Treaty, in turn, raised hopes of (*Handelsblatt: Deutsche Wirtschaftszeitung* 1970; Fack 1970) or removed the last significant obstacle (Rudolph 2004, 297) for the conclusion a new trade agreement, which both sides agreed upon by the end of 1971 and signed in April 1972.[189]

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[188] Subsequently, on December 21, 1972, the FRG and the GDR signed the Treaty concerning the basis of relations between the Federal Republic of Germany and the German Democratic Republic (short, Basic Treaty) in which both recognized each other's sovereignty. It led to a normalization of relations between the two countries, the establishment of permanent missions, de facto embassies, as well as their international recognition. Both were admitted to the U.N. in September 1973.

[189] Negotiations on technological cooperation also began in February 1970 (Meissner 1975b) and an agreement was signed on October 30, 1974 ("Das deutsch-sowjetische Abkommen über wirtschaftliche Zusammenarbeit" 1975).

Apart from the positive impact on bilateral relations, the import of Soviet natural gas itself was recognized as a welcome opportunity to diversify supply rather than a source of concern regarding a dependence on Soviet natural gas. The import of eventually 3 bcm of Soviet natural gas per year agreed upon in the first natural gas agreement would constitute only 50 percent of the amount imported from Italy and would by 1975 cover 10 percent of the total natural gas demand of the FRG or less than 1 percent of total energy consumption. Esso and Shell, the exporters of Dutch natural gas and owners of most of the northern German methane deposits would continue to supply 75% of the German demand (Rueckert 1971; Stent 1981). Throughout 1970, the government stressed that the agreement should be seen in the context of diversification and competition. It opened new sources of supply for southern Germany without making a region or even the FRG dependent on it because the magnitude of the imports was far too low (Deutscher Bundestag 1970c; 1970d; 1970b). The fact that Italy signed an agreement in 1969 and France was likely to do so as well represented an added factor for the security of supply (Wangerman 1970). Negotiations started after the conclusion of the new trade agreement led to a second natural gas agreement, which was signed in the presence of Schiller and Osipov on July 6, 1972. The Soviet Union agreed to increase natural gas supplies to 7 bcm per year and purchase 1.2 million tons of steel pipes using a credit of $500 million until 1983. Despite this further increase, it was pointed out that most of the FRG's natural gas supplies would continue to come from the Netherlands while only 15% of its natural gas supplies would by the end of the 1970s come from the Soviet Union (Stent 1981, 212). By 1980, it was estimated, natural gas would have increased from 7 percent in 1972 to only about 12 percent of the total energy consumption (Rutherford 1972).

The Ministry of Foreign Affairs, the Ministry of Economic Affairs and Brandt, first as Minister of Foreign Affairs and later as Chancellor, not only looked favorably on the first natural gas agreement but took an active role in bringing about its successful conclusion. The agreement combined both economic and political interests by raising the prospect of increasing bilateral trade and diversifying the natural gas supply as well as building trust and improving bilateral relations. While the timing of the first natural gas agreement preceded the political Détente between the FRG and the Soviet Union, the long-term prospect of a European transmission system for natural gas (and oil) (Deutscher Bundestag 1970b) assumed tranquil borders and a minimum level of mutual political trust (Rueckert 1971). While at this time energy import dependence was not a concern, there seems to have been a mutual dependence between natural gas imports and improving bilateral relations. Initial meetings regarding the natural gas trade served as nutritious soil to plant the idea of a new trade agreement while also presupposing better bilateral relations. When the negotiations stalled, however, it became not a question of improving the general atmosphere but one of successfully concluding the agreement lest their failure would sour the nascent contacts between the FRG and the Soviet Union and the prospect of improving bilateral relations.

The Pipeline Will Be Built[190] – The Siberian Natural Gas Pipeline[191] and U.S. Sanctions against It

During the early 1970s the policy of Détente bore fruit on both a bilateral as well as multilateral level. Throughout the 1970s trade and natural gas trade between the FRG and the Soviet Union expanded dramatically. After the Yom Kippur War of October 1973, moreover, demand and the share of natural gas in the total energy consumption of the FRG increased and the Soviet Union was increasingly recognized as a source of diversification of the FRG's natural gas supplies. With the arrival and subsequent increase of natural gas imports in the early 1970s, the impact of Soviet natural gas imports on the FRG had been debated but deemed negligible. The question was raised again in the late 1970 but the associated risks were similarly considered either comparatively low or mitigatable. Not surprisingly, the Soviet Union's idea of building a natural gas export pipeline from the large Yamburg field in the Northern region of Tyumen to Western Europe on scheme similar to the initial agreements thus fell on open ears in 1978. When the political climate worsened after the Soviet invasion of Afghanistan in December 1979, the government of the FRG once more had to decide how to react to U.S. opposition to and energy related sanctions against the Soviet Union. This time, however, the political and economic benefits of maintaining amicable relations with the Soviet Union outweighed domestic and U.S. concerns of the political and strategic impact of the Soviet natural gas imports to the FRG.

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[190] Chancellor Schmidt made this famous statement during an interview on CBS on July 23, 1982 (*New York Times* 1982e). On 25 August 1982, Schmidt repeated this in a conversation with the American Senators Baker, Boren, Brady, Hawkins and Mattinghly stating that "[t]he pipeline will be built, the gas will flow" (Ploetz, Szatkowski, and Michel 2013f, 1225).

[191] Originally referred to as the Yamal or Siberian Natural Gas Pipeline, it is now known as the Brotherhood, Urengoy-Pomary-Uzghorod, or Urengoy-Uzghorod Pipeline (See Map 3.1).

To shed light on the impact of Soviet natural gas imports on shaping the position and reaction of the FRG to the U.S. sanctions in 1981 and 1982, this subchapter examines the development of trade and bilateral relations between the FRG and the Soviet Union as well as the natural gas import dependence debates in the 1970s, the position and role of the government of the FRG in further increasing natural gas imports as well as its response to the U.S. opposition to the Siberian Natural Gas Pipeline.

Politics, Trade, and the Dependence Debates of the 1970s

The early to mid-1970 were shaped by Détente. The political as well as economic rapprochement between the FRG and the Soviet Union culminated in Chancellor Brandt's visit to Moscow to sign the Treaty of Moscow in August 1970 as well as Brezhnev's visit to Bonn in May 1973, during which an agreement on development of economic, industrial and technical cooperation was signed. On a multilateral level, the Conference of Security and Cooperation in Europe (CSCE) began in 1973 and 35 nations[192] signed the Helsinki Accords[193] in August 1975 and negotiations on mutual balanced force reduction in Europe (MBRF) began in 1974. The signing of the Strategic Arms Limitation Talks (SALT) I[194] and II[195] agreements in 1972 and 1979, respectively, moreover, heralded Détente between the United States and the Soviet Union.

[192] The United States, Canada, and every European country except Albania.
[193] Also known as Helsinki Final Act or Helsinki Declaration, it included principles covering political and military issues, territorial integrity, the definition of borders, the peaceful settlement of disputes and confidence building measures between opposing militaries. It furthermore addressed trade and scientific cooperation as well as human rights, including emigration and reunification of families, cultural exchanges and the freedom of the press ("Milestones 1969–1976: Helsinki Final Act, 1975" n.d.).
[194] The two most important agreements of the SALT I negotiations were the Treaty on Anti-ballistic Missile (ABM) Systems, which limited the United States and the Soviet Union to one ABM deployment area and 100 interceptor missiles, and the Interim Agreement and Protocol on the Limitation of Strategic Offensive Weapons, which froze the number of intercontinental ballistic missiles (ICBMs) and submarine-launched ballistic missiles (SLBMs) of each side at current levels for five years, pending SALT II.
[195] SALT II limited the number of strategic launchers (i.e., ICBMS with multiple independently targetable reentry vehicles [or MIRVed ICBMS, MIRVED SLBMs, long-range bombers]) to 2,400 for each side.

As bilateral Détente became a fait accompli and Cold War tensions between the two superpowers abated, the 1970s held the prospect of improved relations with the Soviet Union.

Domestically, Brandt's *Ostpolitik* continued to shape the foreign policy of the FRG even after Chancellor Brandt resigned May 6, 1974 when Günter Guillaume, a close aide to the Chancellor, was exposed as an East German spy.[196] Helmut Schmidt, a fellow social democrat, succeeded Brandt as Chancellor and Hans-Dietrich Genscher, Chairman of the FDP, became vice-Chancellor and Minister of Foreign Affairs. At the end of October 1974, Chancellor Schmidt visited Moscow, which Stent (1981, 200) argues, was rather businesslike. Subsequently, high-level talks between the FRG and the Soviet Union became more common.[197] Although the CDU/CSU alliance became the largest faction in parliament in the federal elections on October 3, 1976, the coalition between the SPD and the FDP winning a narrow victory remained in power with Schmidt as Chancellor and Genscher as vice-Chancellor and Minister of Foreign Affairs. The federal election of 1976 was thematically carried by the rising unemployment rate in the FRG as well as increasing CDU/CSU criticism of *Osthandel*. The Schmidt government, in turn, linked *Ostpolitik* and the domestic economic situation by emphasizing the economic importance and the number of jobs created by and dependent on trade with the Soviet Union (Stent 1981, 216).

For the Schmidt government trade with the Soviet Union was economically and politically important. During Brezhnev's second visit to Bonn in May 1978, both Brezhnev and Schmidt emphasized the importance and their commitment to the Treaty of Moscow of 1970. Schmidt, moreover, stressed that "the East-West trade was a significant instrument for security

[196] Brandt remained the Chairman of the Social Democratic Party (SPD) until 1987.
[197] Schmidt and Brezhnev met in Helsinki in 1975, Brandt visited the Soviet Union in 1975, President of the FRG Walter Scheel and Egon Bahr as well as Minister of Foreign Affairs Genscher visited the Soviet Union (Stent 1981).

and peace (Die Bundesregierung 1978, 427). On May 6, 1978, Brezhnev and Schmidt signed a joint declaration on good neighborly relations as well as a 25-year agreement on developing and deepening long-term cooperation in the economic and industrial fields ("Bekanntmachung des deutsch-sowjetischen Abkommens über die Entwicklung und Vertiefung der langfristigen Zusammenarbeit auf dem Gebiet der Wirtschaft und Industrie" 1979; Die Bundesregierung 1978). A few days later, Chancellor Schmidt pointed out to the Bundestag that bilateral trade between the Soviet Union and the FRG had quadrupled since 1971 and emphasized that the opportunities had not been exhausted (Deutscher Bundestag 1978, 7065–66). The fact that the Soviet Union had energy and raw resources the FRG lacked and the FRG could offer advanced technologies, capital goods, and processes offered further opportunities for cooperation. Schmidt specifically mentioned the natural gas for pipes compensation agreements as serving mutual interests. Beyond the economic aspect, moreover, Schmidt stressed the agreement's impact on the development of bilateral relations that presupposed that people of both countries acquired a permanent interest in the economic well-being of one another. The encounter of the two statesmen, Schmidt concluded, brought the FRG closer to the normalization of relations with the Soviet Union. Figure 6.3 shows how trade between the FRG and the Soviet Union increased between 1970 and 1980.While the proportion of trade with the Soviet Union remained just below 2.5% during the late 1970s, it more than quintupled between 1970 and 1980.

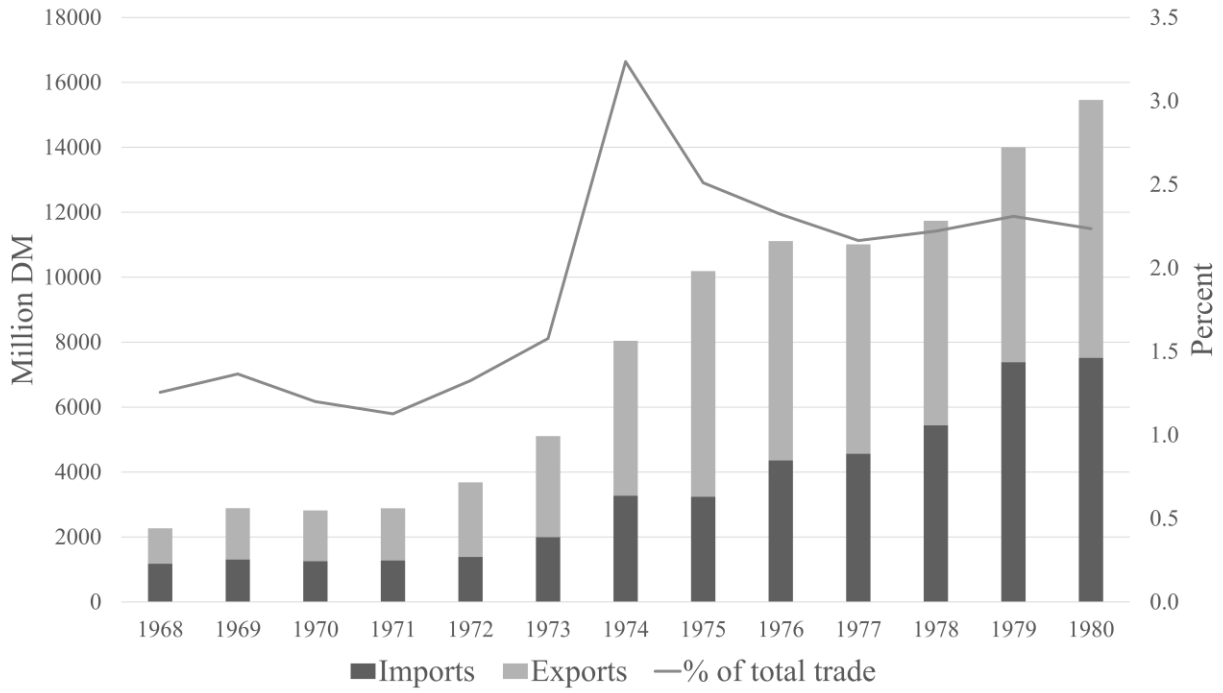

Figure 6.3. German Trade with the Soviet Union, 1968-1980 (Million DM)
Source: Statistisches Jahrbuch (Statistisches Bundesamt/Federal Statistical Office n.d.), several issues.

Soviet natural gas imports became an increasingly important part of trade between the FRG and the Soviet Union during the 1970s. The first and second natural gas agreements of 1970 and 1972 and the arrival of the first Soviet natural gas in Bavaria in October 1973 were followed by a third natural gas agreement in 1973, which provided for up to 2.5 bcm of Soviet natural gas to be delivered starting 1978 (Stent 1981). A fourth natural gas agreement was signed in November 1975 between Western European energy companies, the Soviet Union, and Iran providing for natural gas to be supplied starting in 1981 with an annual volume of 13 bcm to be reached by 1983. According to the agreement, Iran would supply natural gas to the Soviet Union, which in turn would export Soviet natural gas to Western Europe.[198] On May 5, 1978 during his

[198] See From Iranian to Siberian Natural Gas in Chapter 3 -

second visit to the FRG, Brezhnev not surprisingly highlighted that Soviet natural gas exports to the FRG increased year by year (Die Bundesregierung 1978, 425).

By the late 1970s, natural gas had become a viable source of energy in general. The outbreak of the Yom Kippur War that led to the first oil crises of 1973/4 made natural gas, its price trailing behind the oil price hikes, more competitive economically (Gustafson 1985, 8; Hoegselius 2013, 170). Moreover, the environmental aspects of natural gas were increasingly recognized, the FRG's domestic gas fields were being depleted, and domestic energy demand increased (Hoegselius 2013, 167 and 169).[199] As can be seen in Table 6.5, the share of natural gas in energy consumption more than tripled and overall demand for natural gas quadrupled between 1968 and 1975. In 1977, the share of natural gas in energy consumption and total demand was expected to continue to grow into the mid-1980s.

Table 6.5. Primary Energy Consumption in 1975 (coal equivalent)

	1968		**1975**		**1985***	
	Million tons	%	Million tons	%	Million tons	%
Stone coal	95	32	66.5	19.1	74.6	15.5
Brown and pitch coal	29	10	34.4	9.9	35.3	7.3
Mineral oil	153-154	51	181.0	52.1	222.9	46.2
Natural gas	**12**	**4**	**48.7**	**14.0**	**87.8**	**18.2**
Nuclear power	2	1	7.1	2.0	49.9	10.3
Other	7-8	2	10.0	2.9	12.0	2.5
Primary Energy Consumption Total	298-300	100	347.7	100	482.5	100

* estimates

Sources: 1968 Annual Economic Report 1969 (Deutscher Bundestag 1969a), 1975 and 1985 Zweite Fortschreibung des Energieprogramms der Bundesregierung/Second Update of the Energy Program of the Federal Government (Deutscher Bundestag 1977, 14).

[199] See also Chapter 3 - .

Figure 6.4 demonstrates how natural gas imports to the FRG steadily increased throughout the 1970s. The Soviet share of natural gas similarly increased significantly from 0.39% in 1971 to 7.79% in 1974, after the first pipeline deliveries started in 1973, and to 17.44% in 1978 after deliveries based on the third agreement commenced.

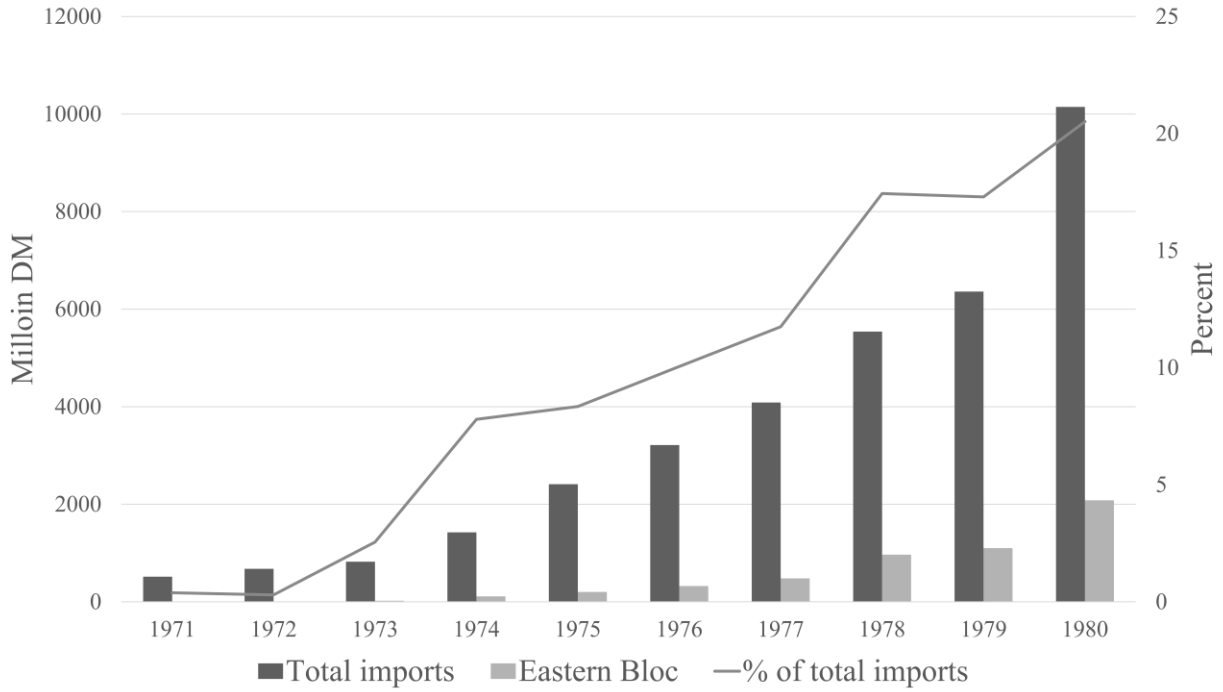

Figure 6.4. Natural Gas Imports, 1971-1980
Source: Statistisches Jahrbuch (Statistisches Bundesamt/Federal Statistical Office n.d.), various issues.

Nevertheless, the impending signing of the second natural gas agreement in July 1972 raised the question of how much would be too much. The second agreement would increase the annually available quantity of Soviet natural gas to 7 bcm by 1978/9.[200] However, the federal government estimated that by 1980 the FRG would still import three times as much natural gas from the Netherlands. The import of Soviet natural gas to the FRG was thus principally welcome and met the energy political goal of the government to achieve the greatest possible

[200] The agreement was for 4 bcm with an optional +1 bcm in case of discontinuation of the optional quantity of the first agreement.

diversification of supply sources. According to estimates of the natural gas supply for the FRG for 1980 at the time, "the import dependence of the Federal Republic on the USSR would, with 14 percent, not yet be worrisome" (Lumpe 1972; also quoted in Hoegselius 2013, 168). With regard to an unacceptable import dependence on the Soviet Union, the government concluded that as long as the German natural gas industry could obtain additional supplies from other regions, imports from the Soviet Union could increase. Chancellor Brandt confirmed this position in an interview with *Der Spiegel* (1973) in May 1973 when he was asked whether he was concerned that a dependence on energy supply from the Eastern Bloc could harm the FRG politically or strategically. Brandt, who pointed out that he had influenced the first natural gas agreement as foreign minister, replied that Germany could not choose from which quiet region to import its energy and concluded that "we don't have a choice." The FRG, Brandt argued, would be happy about any energy it can get. Referring to the ten percent of total energy consumption from the Soviet Union envisaged according to *Der Spiegel*, Brandt stated that no special dependence would arise.

As the decade progressed, moreover, Soviet natural gas became part of the solution not only compared to oil but also compared to alternative sources of natural gas. When the Netherlands was targeted by the Arab oil embargo in 1973, Dutch prime minister Joop den Uyl stated that the Netherlands would be forced to disrupt its gas supply if its neighbors would not re-export Arab oil (Kemezis 1974; Hoegselius 2013, 169–70). Although supply disruptions seemed unlikely in January 1974 (Kemezis 1974), the threat alone probably raised questions as to the security of natural gas supply from the Netherlands, at the time, the biggest supplier of the FRG. Additionally, Dutch export contracts were due to expire in the mid-1980s and, even with their renewal, its exports were expected to decline in the future (Hoegselius 2013, 191). Algeria,

then the second largest supplier, had not been very reliable in the past and its announcement in 1979 that it was reconsidering its gas arrangements (Tagliabue 1980, 28) did not install confidence.

When the Soviet Union approached Western Europe in early 1978 with the proposal to build a natural gas export pipeline dedicated to supplying Western Europe, it thus fell on open ears. Backed up by the government of the FRG and interested European energy companies, Ruhrgas Chairman Klaus Liesen visited the Soviet Union in April 1978 (Hoegselius 2013, 181). After his meetings with Minister of Foreign Trade Nikolai Patolichev and his deputy Nikolai Osipov as well as the Minister of the Gas Industry Sabit Orudzhev and visits to Western Siberia and Central Asia, Liesen (1978) reported to Federal Minister of Economics Dr. Otto Graf Lambsdorff that he considered an additional big natural gas export project feasible. Liesen did not question the ability and preparedness of the Soviet Union to expand its gas export business based on its natural gas reserves. However, due the difficult and expensive exploration and transport of natural gas, he added, deliveries would probably not commence before 1985. Responding to Patolichev about the volume of such a project, Liesen reported, he had replied that Ruhrgas would be able to take the for such a project technically and economically required volume of 20 to 25 bcm per year in cooperation with other interested West European countries.

Already in March 1978, the federal Ministry of Economics addressed the question of the import dependence of and related energy-political risks to the FRG (Engelmann 1978). Projections at the time foresaw an increase of Soviet and Iranian natural gas from 11 percent to 22 percent between 1985 and 1990. An additional 8 bcm per year would increase that share to 30 percent if no imports from other regions were added. However, the associated risk appeared acceptable and the threshold for politically motivated supply disruptions was deemed to be very

high. A number of factors, moreover, alleviated concerns of Soviet natural gas supply disruptions (Engelmann 1978; Hoegselius 2013; Stent 1981).

First, the network between Iran, the Soviet Union, the FRG, and France practically prevented targeted actions. In other words, intentional supply disruption would by default affect several Western European countries importing natural gas through the same pipeline and damage its reputation as a reliable supplier.[201] In addition, a high degree of interconnectedness had been achieved domestically by the late 1970s. In 1974, Bavaria was connected with northern Germany and thus by extension to Dutch natural gas and as of 1977 Norwegian gas could serve as a back-up (Hoegselius 2013, 168 and 191). Second, short-term supply disruptions of two to three months could be compensated by drawing on the flexibility of import contracts, especially with the Netherlands, and increasing domestic production to a limited extent. In addition, West European gas companies had taken precautionary measures (i.e., built storage facilities) to respond to supply disturbances based on temporary irregularities and technical issues they had experienced since the first deliveries of Soviet natural gas. The Soviet Union, moreover, always apologized, restored supplies, and compensated for lost volumes. Third, and setting the precedent for the current interdependence debate, long-term supply disruptions were against the self-interest of the Soviet Union. The Soviet Union derived substantial hard currency earnings from its natural gas exports, which it also used to obtain the necessary Western technology for the expansion of its own energy industry and infrastructure. At the time, the amortization of high costs for extraction facilities, pipelines, compressor stations and loans amounted to DM 450 million per year. Finally, an indefinite supply disruption could only be envisaged in the case of

[201] This was also pointed out by Liesen (1978) in his letter to Lambsdorff.

war.[202] Natural gas still had only a small share in total primary energy consumption and only a small part of total natural gas imports originated in the Eastern bloc (see Table 6.5 and Figure 6.4). The Ministry of Economics deemed acceptable a loss of a maximum of 6 percent of total primary energy consumption.

Moreover, the political risks were weighed in the context of other interests (Engelmann 1978; Rohweder 1978). An increase of imports from the Soviet Union was desirable to balance the terms of trade and it was easier for the FRG to import Soviet natural gas than other raw materials or industrial products. In addition, it made economic sense to optimally use the relatively low transport cost and large natural gas reserves of the Soviet Union. The Ministry of Economics agreed to a further increase of Soviet natural gas supplies between 8 to 10 bcm per year starting at the end of the 1980s and concluded that a maximum would then have been reached (Rohweder 1978). The favorable position of the Ministry of Economics was in line with the statements made by Schmidt and Brezhnev during the publicized visit of Brezhnev to Germany in May 1978 and Schmidt's statements in front of the Bundestag emphasizing the mutual benefit of trade between the FRG and the Soviet Union.

Moreover, events in Iran had brought back the focus on the Soviet Union as an energy supplier. Protests that had started in 1978 culminated in the outbreak of the Islamic Revolution in Iran. By mid-July 1979 Iran had cancelled the construction of the export pipelines IGAT II agreed upon in the triangular agreement between Western Europe, the Soviet Union and Iran (Whitney, Craig R. 1979; New York Times 1979). Having been caught by surprise, Ruhrgas Chairman Liesen expressed "confidence that the Soviets will honor their commitment to supply the gas" involved in the Iranian deal (quoted in Hoegselius 2013, 183). Once more, Soviet

[202] Engelmann (1978) refers to a state of defense ("Verteidigungsfall").

natural gas was seen as the solution as the Soviet Union formally invited major Western gas companies to Moscow in November 1979 (Gustafson 1985; Hoegselius 2013).

However, the nascent project would soon be challenged by geopolitical events. The second half of the 1970s had seen a decline in U.S.-Soviet relations that led the United States to change its interpretation of the Soviet Union's intentions and reevaluate the policy of Détente. Negotiations on SALT II had begun to stall in 1975 due to conflicts over the inclusion of the new Soviet bomber Backfire (Tupolev TU-22M) and U.S. cruise missiles. In 1976 it was disclosed that the Soviet Union had deployed a new generation of its mobile intermediate range missiles, the SS-20 (RSD-10), in Eastern Europe (Binder 1976; Gustafson 1985). In response, NATO in its Double-Track Decision of December 12, 1979 decided to deploy American middle-range missiles (Pershing II and BGM-109G Ground Launched Cruise Missiles) in Western Europe to restore the state of Mutually Assured Destruction (MAD) while also offering negotiations to ban nuclear armed middle-range missiles from Europe.[203] Gustafson (1985, 5) argues that the West Europeans, who had begun Détente and were reluctant to abandon its benefits, largely influenced NATO's response in the two-track decision.

Less than two weeks later, on December 26, 1979, Soviet troops invaded Afghanistan. The Soviet invasion of Afghanistan not only highlighted divergences between the United States and Western Europe over Détente but also over the use of linkage policy (Stent 1981, 223 and 237). Endorsing a negative linkage strategy, president Carter imposed a number of punitive economic sanctions (*Der Spiegel* 1980a, 71–73; Stent 1981, 237). The most severe were the cancellation of the delivery of 17 million tons of wheat worth 2 billion dollars (two-thirds of U.S.

[203] Disarmament negotiations started November 30, 1981. When the FRG agreed to the deployment of the American Pershing IIs, the Soviet Union aborted the negotiations.

wheat imports to the Soviet Union and 22 percent of total U.S. exports) and an embargo on high technology exports, which the Soviet Union needed especially for its energy industry.[204] In addition, the Carter administration imposed restrictions on civilian air traffic between the Soviet Union and the United States and drastic limitations for Soviet fish trawlers in U.S. waters (loss of 350,000 tons of fish in 1980). More symbolic were the boycott of the 1980 Moscow Summer Olympics, the annulment of a recent consular agreement for general consulates in Kiev and New York, and the reduction of embassy personnel in Moscow and Washington.[205]

Not surprisingly, the CDU/CSU raised the question of whether trade with the Soviet Union and/or COMECON members could threaten the energy supply of Germany during a crisis in parliament (Deutscher Bundestag 1980a, 15797–98; Frankfurter Allgemeine Zeitung 1980). The government replied that the percentage of primary energy imported from COMECON members was 11 percent – 2 percent for crude oil, 15 percent for natural gas and 3 percent for coal. A disruption of supplies of oil and gas would – like a similar disruption from other countries – have negative consequences for the energy supply of the FRG. However, the mentioned shares remained below critical dependence thresholds. In the case of gas, moreover, the government argued, disruptions from the Soviet Union could be compensated with increased

[204] During the Nixon administration, which supported Détente, CoCom restrictions on energy-related exports had been liberalized and subsequent to the first natural gas agreement of 1970, German, French, Italian, Japanese and American companies also helped to construct the Orenburg Pipeline (Jentleson 1983, 50). According to Jentleson (1983, 51), U.S. policy on exports zigzagged during the Carter administration. In May 1979, for example, an export license for rock drill bits and for the construction of a state-of-the-art factory was granted only to be suspended a few months later in the context of the trial and imprisonment of human rights activists Alexander Ginzburg and Anatoly Scharansky and then lifted again. In response to the Soviet invasion of Afghanistan, the Dresser license was revoked and Caterpillar's license application for the export of pipeline equipment was rejected in January 1980. In late 1980, however, the U.S. agreed to the export of Caterpillar pipelaying equipment from Caterpillar and the rotors for 25-megawatt gas turbines, for which General Electric was a main producer.

[205] Several U.S. companies followed suit (Lebahn 1983, 266). Armco dropped out of a project with the German company Klöckner to build an aluminum mill in Sajansk and another U.S. company pulled out from the construction of a steel mill in Nowo-Lipetzk. In the latter case, the Soviet Union found a willing French competitor. In addition, Citicorp closed its branch in Moscow and Coca-Cola refused to supply the 1980 Summer Olympics in Moscow.

domestic production, greater imports from the Netherlands and the transition of power plants to other fuels. With regard to additional contracts, the CDU/CSU inquired whether the government intended to increase the share of Soviet natural gas significantly or remain at 15 percent. The government explained that the additional natural gas supplies considered would only commence after 1985 at which point the share of the Soviet Union would be decreasing due to new natural gas supplies from other sources, for example, Algeria, and, hopefully, Norway. Still critical, the CDU/CSU also asked whether the government had considered the possibility that competing suppliers might be included in a supply disruption, for example, Algeria. The government maintained that it had no reason to doubt the contractual fidelity of the Soviet Union, which it had demonstrated time and again in difficult situations. It is noteworthy that the government acknowledged, however, that economic sanctions, should they become part of a political confrontation, could not exclude the risks suggested by the CDU/CSU.

Given the climate of Détente, the economic benefits of increasing Soviet natural gas supplies, the economic situation and the conclusion of the dependence debate, neither the Soviet invasion of Afghanistan nor U.S. sanctions against the Soviet Union prevented the start of preliminary negotiations for a new pipeline project in early 1980.

The Siberian Natural Gas Pipeline

An initial still rather vague Soviet proposal envisaged a scheme comparable to the previous German natural gas, pipeline, and credit agreements albeit on a much larger and European scale.[206] The new pipeline system would supply 40 bcm of Soviet natural gas from the

[206] In what Lebahn (1983, 263) calls a tidbit of history, the Yamal project was originally planned as a Soviet-American mammoth project. In the second half of the 1970s, General Electrics, using the codename “Northstar,”

Yamal Peninsula to Western Europe annually starting in 1984.[207] Mannesmann, as the general contractor,[208] would construct the pipeline worth 15 billion Deutsche Mark (DM) (approximately 11.6 billion dollars) and a further 5 billion DM would be contracted with other Western European companies for compressors and cooling units. A consortium of banks under the leadership of Deutsche Bank would again provide the financing (*Der Spiegel* 1980c; Stent 1981). Trailing the early negotiations of Ruhrgas Chairman Liesen in Moscow in 1978, representatives of Deutsche B.P. AG, a subsidiary of the British Petroleum Company, visited Moscow to discuss the pipeline to Western Europe in January 1980 and Friedrich Wilhelm Christians, co-Chairman of Deutsche Bank, visited Moscow twice in the first half of 1980 to discuss credits for the pipeline (*Der Spiegel* 1980c; Geddes 1980). Gustafson (1985, 6) argues, that the visit of French and German bankers in Moscow in January 1980 made "the point that détente was intact despite Washington's fulminations."

However, the discussion of the Western reaction to the Soviet invasion of Afghanistan, especially the pros and cons of the Western participation in the Summer Olympics in Moscow, cast a shadow over trade with the East (Lebahn 1983, 267). While the FRG was the only Western European Country to join the United States in boycotting the Summer Olympics,[209] it was reluctant to abandon Détente and jeopardize its improved relations with the Soviet Union (Gustafson 1985; Stent 1981). In a parliamentary debate in March 1980, Chancellor Schmidt

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made a feasibility study on importing Soviet LNG to the United States. Detailed plans were made to develop northwestern Siberian natural gas fields using American facilities, technology, and financing.

[207] Originally therefore known as the Yamal pipeline, the pipeline came to draw natural gas from the Urengoy field a few hundred kilometers to the South, see Map 3.1.

[208] Western companies had recently sold pipelines, compressors, and other equipment for the construction of the Orenburg Pipeline, where one general contractor had been chosen by the Soviet Union (Gustafson 1985), see Chapter 3 -

[209] The boycott of the FRG of the Olympics in Moscow was discussed in the German parliament on April 23, 1980 (Deutscher Bundestag 1980b) and Schmidt's statement published in the Bulletin (Die Bundesregierung 1980a).

stated that the FRG would keep its contracts but would not try to benefit from economic measures of its alliance partners against the Soviet Union and ensure that its economic relations would not strengthen Soviet rearmament measures and military potential. However, Schmidt also emphasized that the FRG continued to consider trade and economic cooperation with Eastern Europe important elements of European stability (Deutscher Bundestag 1980c, 16622; Stent 1981). The new natural gas pipeline was no exception.

During the ninth conference of the Soviet-West German Commission for Economic and Scientifically Technical Cooperation[210] May 29-30, 1980, German and Soviet representatives reportedly paid special attention to the possibilities of a more intensive cooperation in the energy field, including the new natural gas project (Geiger, Das Gupta, and Szatkowski 2011a, 801). In a meeting with First Deputy Chairman of the Council of Ministers Nikolai Tikhonov on May 30, 1980, Chancellor Schmidt emphasized that the German side had a clear political and economic interest in the continuation and expansion of trade between their countries (Geiger, Das Gupta, and Szatkowski 2011a, 802). Schmidt, moreover, explained that the cabinet had addressed the new natural gas pipeline project and added that a great interest in the cooperation in the field of energy policy or energy supply beyond natural gas existed.

One month later, from June 30 to July 1, 1980, Chancellor Schmidt, as the first Western leader since the invasion of Afghanistan, and Minister of Foreign Affairs Genscher visited Moscow, where the pipeline was raised again. Having praised the successful development of economic cooperation between the FRG and the Soviet Union, Brezhnev explained that many companies and banks wished to realize additional large supplies of natural gas from the Soviet

[210] In German, Deutsch-Sowjetische Kommission für wirtschaftliche und wissenschaftlichtechnische Zusammenarbeit.

Union. The Soviet Union, he added, had large natural gas reserves, especially in Western Siberia, and would be ready to increase supplies to the FRG and other Western countries. A new pipeline that could transport 40 bcm natural gas per year had been added to the Soviet Union's plans. If interest existed, Brezhnev concluded, "we should agree on a cooperation in its realization" (Geiger, Das Gupta, and Szatkowski 2011c, 1045).[211] Soviet Prime Minister Alexei Kosygin pointed out that the Soviet Union exported annually 26.5 bcm to Western countries of which the FRG received 11.5 bcm.[212] The pipeline, Kosygin emphasized, would be the biggest pipeline in the world. He highlighted that "we do not want to delay the matter" and called the financing and pipeline documents the biggest documents in the world, "not only economic, but political documents" (Geiger, Das Gupta, and Szatkowski 2011c, 1047–48, my own emphasis). Kosygin even suggested to add a section in the joint communiqué in which both sides expressed their satisfaction over the successful completion of the long-term agreements of 1972 and 1974 regarding natural gas supplies to the FRG. Schmidt, however, suggested that the wording should not use agreements because governments could not agree but should express their approval (Geiger, Das Gupta, and Szatkowski 2011c, 1048).[213] While the communiqué ultimately did not reference the agreements of 1972 and 1974, it stated that both sides approved that negotiations regarding a new project for natural gas supply from the Soviet Union would be held in the near future ("Zum Besuch des Bundeskanzlers in Moskau: Das gemeinsame Kommuniqué" 1980).

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[211] It is noteworthy that in an interview with the Soviet daily newspaper Prawda on June 17, 1980, First Deputy Chairman of the Council of Ministers Nikolai Tikhonov made the natural gas-pipeline-deal dependent on the protection through guarantees of the suppliers. In addition, it was explained to German Ambassador to Moscow Hans-Georg Wieck that the Soviet Union had to be sure that a new natural gas-pipeline agreement would not be disrupted by embargo measures. Deutsche Bank's co-Chairman, Christians had moreover received similar hints (Geiger, Das Gupta, and Szatkowski 2011c, 1045). This indicates that the memories of the NATO pipeline embargo still lingered among Soviet politicians in 1980.

[212] Austria received 2.6 bcm, Italy 7.4 bcm, France 4.2 bcm, and Finland 1.5 bcm.

[213] The speeches given by Brezhnev and Schmidt as well as the joint communiqué were issued in the Bulletin (Die Bundesregierung 1980b).

During Schmidt's visit, moreover, Ambassador Wieck and Soviet Ambassador to Western Germany Vladimir Semyonov signed the long-term program of the main directions of cooperation between the FRG and the Soviet Union in the economic and energy fields on July 1, 1980. In his report of the visit to the German parliament on July 3, 1980, Schmidt emphasized that both sides attributed special significance to the German-Soviet cooperation in the energy sector. "We have agreed," Schmidt added, "that in the near future, negotiations of a Western European consortium with the responsible Soviet authorities regarding a big natural gas project will be held" (Deutscher Bundestag 1980d, 18588).

Schmidt also defended his approach in light of American skepticism. Prior to his visit to Moscow, Schmidt had met President Carter during the 6th G7 summit held in Venice, Italy between June 22nd and 23rd, 1980.[214] Carter addressed American doubts about the FRG's reliability in implementing NATO's Double-Track Decision,[215] Schmidt's Moscow trip, prospects of ratifying the SALT-II agreement as well as concerns regarding the conflicts in Afghanistan and the Middle East (Geiger, Das Gupta, and Szatkowski 2011b, 182). After visiting Moscow despite American reservations, Schmidt emphasized that the government of the FRG had restarted the dialogue and helped overcome the phase of "speechlessness" ("Sprachlosigkeit," Deutscher Bundestag 1980d, 18584; Stent 1981, 236). Schmidt stressed that he had demonstrated Western unity and opposition towards the Soviet occupation of Afghanistan and expressed the hope that talks on the limitation of medium-range missiles in Europe would

[214] The Group of Seven (G7), an international intergovernmental economic organization, consists of Canada, France, Germany, Italy, Japan, the United Kingdom, and the United States.
[215] After a row between Willy Brandt and Horst Ehmke, the foreign relations experts of the SPD, and American journalists at the end of May 1980, relations between the FRG and the United States soured after a flaming letter (Brandbrief) from Carter to Schmidt, which indicated that Carter mistrusted Schmidt and suspected him of being willing to soften on the NATO Double-Track decision (*Der Spiegel* 1980b).

resume (*Der Spiegel* 1980d; Klose 1980).[216] While both sides agreed to disagree on Afghanistan ("Zum Besuch des Bundeskanzlers in Moskau: Das gemeinsame Kommuniqué" 1980), Schmidt's visit to Moscow not only indicated that the low-point of East-West relations had been overcome (*Der Spiegel* 1980d) both sides also affirmed their commitment to the Yamal project.[217] It is noteworthy that expressing criticism but ultimately agreeing to disagree on issues salient to the Soviet Union while continuing to emphasize mutual economic interests became a hallmark already during the Cold War. This held especially true as increasing Soviet natural gas imports did not raise significant political concerns.

In connection with the upcoming meeting of the Soviet-West German Commission for Economic and Scientifically Technical Cooperation, Chancellor Schmidt addressed the new natural gas-pipeline deal in a meeting of the cabinet on May 21, 1980 (Bundesarchiv/Federal Archives 1980). As long as the Federal Security Council (Bundessicherheitsrat) did not decide otherwise, the federal government, the cabinet concluded, was bound to the self-imposed ceiling of 30 percent share of Soviet natural gas of total natural gas imports. *Der Spiegel* (1980c; also mentioned in Stent 1981, 213) similarly noted that the last concerns against the deal were removed when the cabinet concluded that even increasing Soviet natural gas supplies to 30 percent of total imports would not pose an energy or security political threat.[218] This was,

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[216] Schmidt had reminded Carter in Venice that he had pushed through the boycott the Olympics in Moscow at great domestic political costs and that the FRG was with its decision isolated in Europe (Geiger, Das Gupta, and Szatkowski 2011b, 949–50). A few days later, Minister of Foreign Affairs Andrei Gromyko would tactfully joke with Genscher on the way to the guest house when they came by the Olympic village that "there are the facilities, that I, in order to spare your feelings, do not want to name further" (*Der Spiegel* 1980d, 20).

[217] The internal Soviet discussions on the project are very well described in Gustafson (1989). According to Gustafson (1989, 31–32), one factor for the Soviet Union's final commitment to the pipeline might have been that Prime Minister Kosygin, an advocate of coal and nuclear power, was ailing and First Deputy Chairman of the Council of Ministers Nikolai, who started to assume Kosygin's duties in early 1980 until officially replacing him in fall, was critical of the coal industry and favorable towards gas. Hard-currency earnings were another factor.

[218] More than a year later, in a meeting between Chancellor Schmidt and French President François Mitterrand on July 13, 1981, Mitterrand stated with regard to the natural gas deal that he thought the Soviet natural gas deliveries were useful (Taschler, Peter, and Michel 2013c, 1083). Mitterrand, however, also questioned how far one could go

moreover, in line with the conclusion the federal Ministry of Economics had reached already in 1978.

In the early 1980s, moreover, Europe was still grappling with the economic and psychological aftermath of the second oil crisis following the Islamic Revolution in Iran that would be further amplified by the outbreak of the Iran-Iraq war on September 22, 1980. Western countries were lending on liberal terms to recycle petrodollars while, at the same time, confronting the early signs of an impending economic recession, decline in trade and, thus, exports (Gustafson 1985, 5). In its declaration of June 23, 1980, the G7 thus emphasized that successive large increases in the price of oil had increased inflation and the threat of recession and unemployment in the industrialized countries (U.S. Department of State Bulletin 1980). As Figure 6.5 demonstrates, the FRG started the 1980s with rising unemployment and inflation rates, a decrease in GDP, and a negative trade balance.

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before becoming dependent on the Soviet Union. France had also set a limit of 30 percent of total natural gas imports and an additional 30 percent were imported from Algeria. Mitterrand pointed out that this created the danger of importing 60% of total natural gas imports from the Soviet Union and Algeria, a member of OPEC. Schmidt responded that he did not consider such a risk significant. In addition, Schmidt pointed out that while the Carter administration had not always kept to its uranium deliveries, the Soviet Union had always kept its contractual obligations. Schmidt added that the FRG currently received less than the 30 percent ceiling of total natural gas from the Soviet Union. Furthermore, the ceiling of 30 percent of Soviet natural gas constituted at most 6 percent of the total primary energy consumption of the FRG. The risk with regard to the Soviet Union was thus negligible (geringfügig). The Minister of Foreign Affairs, moreover, pointed out that in case of a supply disruption the discussed 30 percent could immediately be substituted as Great Britain and Norway were ready to step in in an emergency. Mitterrand's conclusion that one should "take this path" (s'engager dans cette voie) – illustrates that both the FRG and France were comfortable with increasing Soviet natural gas supplies.

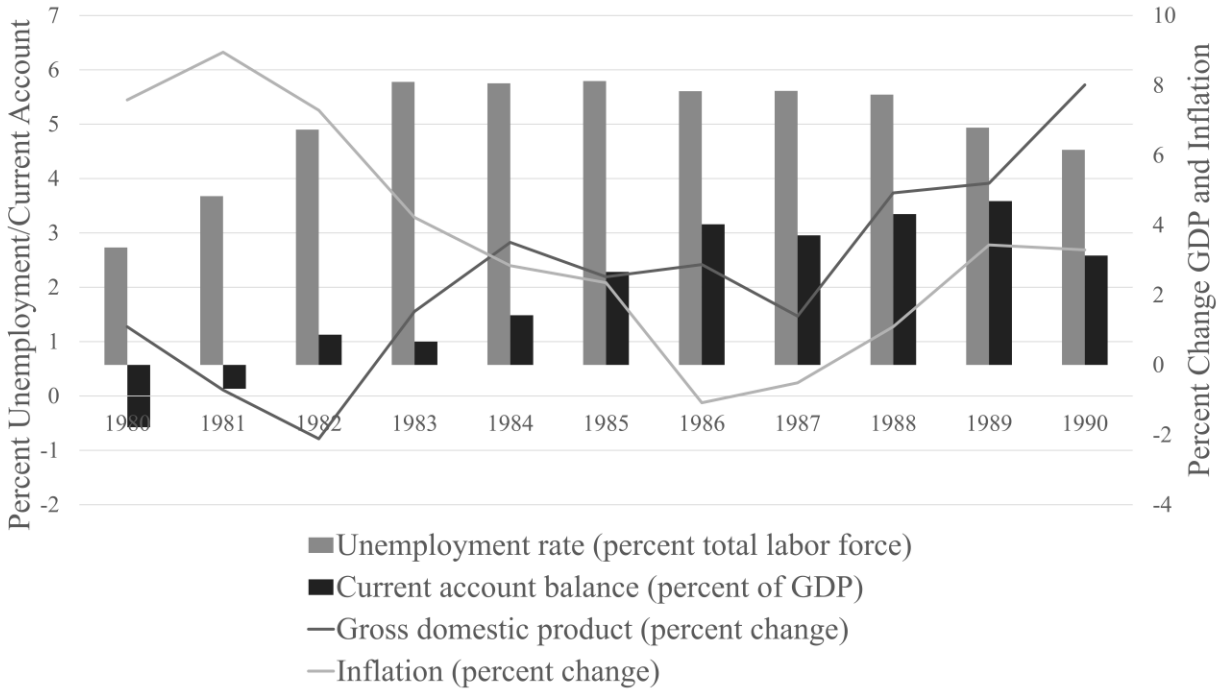

Figure 6.5. The FRG's Economic Situation, 1980-1990
Source: IMF ("World Economic Outlook Database (April 2020 Edition)" n.d.).

The economic situation for major Western European equipment exporters was dreary (Gustafson 1985, 8).[219] German AEG-Telefunken had not made profit in years and was headed for bankruptcy. The French company Creusot-Loire and Scottish John Brown & Company were making losses and still profitable French Alsthom-Altantique depended heavily on third-world orders subsidized by the French government. The steel industry was plagued by surplus capacity comparable to the early 1960s (Jentleson 1986, 189; Tagliabue 1981a). Mannesmann cut its pipeline production by 70 percent in 1981, a loss of almost $52 million, and its plant in Muehlheim depended almost entirely on orders from the Soviet Union. Italsider, an Italian steel company, had lost $1.3 billion in 1981. For many European companies and, by extension, their

[219] Export restrictions had been further relaxed in the 1970s and the Soviet Union was able to import compressors and parts from Italy, Great Britain and the United States, including General Electric and Rolls Royce, for the construction of the Orenburg pipeline (Hoegselius 2013).

governments the contracts with the Soviet Union were vital.[220] As Gustafson (1985, i) aptly puts it, the Soviet Union benefited from "the West European's simultaneous desire to buy gas, willingness to lend, and eagerness to sell equipment."

Negotiations between by now familiar partners commenced shortly after Schmidt's visit to Moscow. Previously, the Soviet Union had negotiated with one financial consortium and mostly one single Western general contractor or supplier but this time it changed its strategy (Gustafson 1985, 3–4). In summer 1980, the Soviet Union began negotiating separate credit packages with single-nation consortia of the major suppliers and, profiting from their competition, eventually received a total envelope considerably larger than it required (Gustafson 1985, 17–21).[221] Based on the Franco-Soviet protocol of January 1980, the French offered an interest rate of 7.8 percent that was matched by the German consortium.[222] Then, however, negotiations began to stall on the question of coverage. By early 1981, interest rates rising since 1980 had begun to dampen the banks enthusiasm. The impasse was overcome late July 1981 when the Soviet Union dropped its demand for 100 percent coverage and reportedly agreed to a shorter repayment period.[223] According to Gustafson (1985, 21), the banks with strong support

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[220] John Brown & Company was located in Clydesbank, Scotland, an area with 20 percent unemployment, and the Soviet contract equaled the total revenue of the company's gas turbine division of the prior year. Creusot-Loire had only recently returned a profit after losses the prior three years and company officials estimates that the Soviet contract would keep up to 50 percent of its personnel employed for several years (Jentleson 1986, 189–90).

[221] Deutsche Bank headed the German consortium of fourteen banks, which offered a credit of DM10 billion (then about $5.2 billion), the French consortium headed by Credit Lyonnais initially offered FF15 billion (about $ 3.3 billion) in buyers' credit and FF1.5 billion financial credit. The Belgian consortium headed by Société Générale offered BF30 billion (about $1 billion) and the Dutch consortium headed by Algemene Bank Nederland offered F1.24 billion (or about $1.25 billion). AT the same time, the Soviet Union also negotiated with the Japanese Eximbank as well as British, Italian and Austrian groups (Footnote 1 in Gustafson 1989, 17)

[222] Since the 1920s, German manufacturers had offered supplier credits at a nominal rater below the cost of funds and made up the difference by charging up to 20 percent more on their products. German companies were shocked to find out that the Soviet Union would not use this ploy this time (Gustafson 1985, 18–19).

[223] Western banks would only cover 85 percent of the loan at the below market rate because that was the maximum that Hermes and COFACE, the German and French government export credit insurances, would cover. The German consortium, moreover, helped break the impasse by reducing the financing envelope to DM 5 billion, leaving the credits for the pipe contracts for later negotiations. Part of the German credits came from the so-called "Basket B" of the Ausfuhrkreditanstalt (AKA), an export credit insurance corporation, a departure from the traditional German

from both the government and the industry agreed to go ahead. Christians, co-Chairman of Deutsche Bank, signed the German credit agreement on July 14, 1982 in Leningrad (New York Times 1982c). The Soviet Union could draw on $1.1 billion for equipment already ordered and extend the credit up to $1.6 if it ordered more equipment and services for the pipeline from the FRG in 1982 (New York Times 1982d).

By the end of 1980, the Soviet Union also decided to limit the role of the general contractor and to select and negotiate with individual equipment subcontractors (Gustafson 1985, 23–25).[224] For this purpose, Machinoexport, the Soviet organization conducting the negotiations, set up an office of experts in Cologne. The compressor units for the operation of the pipeline represented the largest equipment item. Once the Soviet Union decided to operate the pipeline at 75 atmospheres and, in late August 1981, chose to use GE technology for the gas-turbine drives for the compressor stations, negotiators soon concluded their negotiations. The Franco-German consortium headed by Mannesmann and Creusot-Loire was chosen as general contractor for the northern portion of the pipeline and would oversee Scottish John Brown & Company and German AEG-Kanis, a unit of the German electrical company AEG Telefunken.[225] The contracts

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position on subsidies. The AKA is an association of West German banks established in 1952 that became a specialist in large and-long-term export loans joining consortia when banks or groups of banks could not take on the volume or risk. Its funds derive from its member banks (Basket A) and from the German Bundesbank (Basket B) and the latter can be used to refinance supplier credits at advantageous rates. At the end of October the interest rates for Basket B were as low as 7.5 percent, however, only a fraction of the total package derived from Basket B (Gustafson 1985, 21). German exporters, who bore the cost of below-market rates, effectively bet on the interest rate being back down by the time the Soviet Union received the deliveries thus reducing the impact on their margins. A good description of the impact on the margin of German companies compared to their subsidized Italian and French competitors can be found in Lebahn (1983, 276).

[224] According to Gustafson (1985, 4), Western European firms learned about this decision at the end of 1980 and officially by February 1981. For the Orenburg pipeline the Soviet Union had selected Mannesmann as the general contractor, which selected the subcontractors and acted as a supervisor for the Western input for a fee of 11 percent. For the new pipeline, the general contractor would receive only a fee of 6 percent (Gustafson 1985, 22–23).

[225] In November 1981, moreover, the French company Alsthom-Atlantique was contracted 40 spare sets of rotor kits for a later delivery. According to Gustafson (1985, 25), this contract demonstrates that the Soviet Union anticipated a potential American embargo. Having declined the initial Soviet offer to build the rotor kits for all compressor stations due to a lack of capacity, Alsthom agreed to provide 40 kits at a later stage, which would have been significant had the American embargo gone beyond November 1982.

between Mannesmann and Creusot-Loire and the Soviet Union to install 22 gas compressor stations (each containing three 25 megawatt turbines) worth $956.6 million were signed on September 28, 1980 in Dusseldorf (Jentleson 1986, 184; Tagliabue 1981b). In addition, Mannesmann would supply compressor equipment including piping systems, skids, pumps and other supplies worth $58.6 million. AEG-Kanis would supply 47 compressor turbines worth $304.3 million and John Brown & Company 21 turbines beginning in August 1982.[226] General Electric would reportedly supply rotors for some of the turbines, but their value was not disclosed. AEG-Kanis, moreover, also submitted bids to supply electrical control components, communications, and remote-control systems for the pipeline. For struggling AEG, the pipeline contracts would secure 20,000 to 25,000 jobs over the next two years (Tagliabue 1981a). At the end of September, the Italian company Nuovo Pignone, a subsidiary of the state-owned Ente Nazionale Idrocarburi (ENI) was chosen to serve as general contractor for the southern portion of the pipeline and manufacture the 57 for 19 the compressor stations. As if anticipating issues, the Soviet Union also excluded "embargo" from the definition of force majeure in the supply contracts (Gustafson 1985). Although German equipment companies received less contracts than hoped for, the Soviet Union had signed a contract with Mannesmann for the delivery of 555,000 tons of large-diameter steel pipes (now defined at 56 inches) worth $650 on August 24, 1981 (New York Times 1981b; Jentleson 1986).[227]

[226] John Brown & Company would, in addition, supply turbine spare parts and equipment worth $60 million. According to Jentleson (1986, 184–85), the supply of computerized control equipment worth $350 million for the pipeline by the French firm Thomson-CSF was particularly controversial because of the potential military applications if the technology were reverse-engineered. Additional contracts included: $225 million to Creusot-Loire for nineteen refrigeration stations, $40 million to Alsthom-Atlantique for 40 spare turbine rotor kits, $30 million to Ruston Gas Turbines (Great Britain) for forty-five gas turbine generating sets, $30 million to Plenty (Great Britain) for fuel gas conditioning facilities, $15 million to Redifusion (Great Britain) for a computer information system, and $150 to Liebhen (West Germany) for 323 truck-mounted cranes.
[227] 400,000 tons of pipes worth $230 million would be supplied by Italsider.

The contracts were announced one day after the conclusion of the tenth conference of the Soviet-West German Commission for Economic and Scientifically Technical Cooperation held from September 24-28 in Moscow and Novosibirsk (Footnote 11 in Taschler, Peter, and Michel 2013g, 1576). While spokesman Klaus Germann of Mannesmann denied that the two were related stating that "[t]hey talked politics; we talked business" (Tagliabue 1981b), delegates to the conference discussed the natural gas deal as well as the possibility of cooperation in coal refining. In response to the Soviet desire for scientific and economic cooperation beyond the industrial field, however, the German delegation pointed to the lack of a governmental agreement including Berlin. As negotiations for the pipe contracts and the natural gas price continued, the Soviet and German delegates to conference expressed confidence that agreements might be reached before Brezhnev's third visit to Bonn in November 1981. Talks might have been held separately but political and business interests pulled in the same direction.

In a departure from its previous approach of negotiating only with a consortium led by Ruhrgas, the Soviet Union in January 1980 invited representatives of Deutsche BP AG (German BP), a subsidiary of the British Petroleum company (BP) to start gas contract negotiations (Geddes 1980). However, by July 1980, German BP joined the consortium that Ruhrgas had created the past two years (Gustafson 1985, 28). As a hedge against falling prices, the Soviet Union asked for a guaranteed floor price for the seller. The actual price that both assumed to be higher most of the time would consist of the sum of a base price plus an index of a basket of reference fuels. The Soviet Union asked for a minimum price of $6.05 per million btu, a base of $5.50 and an index based 100 percent on crude oil (Gustafson 1985, 29). In October 1981, however, the Soviet Union lowered its demand of a 100 percent link to crude oil to 50 percent and, eventually, based on German insistence to 20 percent. By late November, the Soviet Union

agreed with the Germans on a base FOB (free on board) price of $4.70 to $4.80. Ruhrgas Chairman Klaus Liesen and Nikolai Osipov, the Soviet Deputy Foreign Trade Minister, signed the agreement on November 20, 1981 in Essen for the delivery of 360.4 billion cubic feet (about 10.5 bcm) of natural gas per year for 25 years with the first gas scheduled to arrive in 1984 (Tagliabue 1981c; Taschler, Peter, and Michel 2013h). It is noteworthy that the originally considered 12 bcm per year were reduced to 10.5 bcm in order to stay within the self-imposed dependence limit of 30% (footnote 4 in Taschler, Peter, and Michel 2013h, 1835). Nevertheless, the agreement with an estimated value of more than $10 billion was the biggest transaction between East and West to that date.[228]

Only two days later, on November 22, 1981, Brezhnev arrived in Bonn to meet with Chancellor Schmidt. Prior to the visit, it was maintained in the Chancellery that the signing of the gas agreement depended on the emerging agreement on the natural gas price (Taschler, Peter, and Michel 2013g, 1575–76). The aim, furthermore, would be to include natural gas supply to Berlin. The FRG, while not linking the signing of the agreement and the inclusion of Berlin, would reserve the right to postpone the signing in case the Berlin clause was unsatisfactory. In their joint communiqué of the visit, Brezhnev and Schmidt subsequently welcomed the financing and equipment agreements (Die Bundesregierung 1981, 962). In addition, and in agreement with the government of the GDR, it was announced that Soviet natural gas would also be delivered to

[228] On January 23, 1982, France agreed to purchase 280 billion cubic feet of Soviet natural gas annually for 25 years with deliveries to start in 1984 (Lewis 1982b) and in February SNAM, the gas subsidiary of ENI, agreed with Soyuzgasexport on the import of 283 billion cubic feet of gas per year for 25 years (Gilbert 1982). According to Gustafson (1985, 29–30), France and Italy obtained similar terms to Germany. In addition, the gas price for France and Germany was quoted in their currency thus decoupling the price of natural gas from the high dollar. Italy, however, did not obtain pricing in lire.

West Berlin.[229] Schmidt and Brezhnev both declared their readiness to support the execution of the project within the means at their disposal.[230]

The breakthrough in the natural gas price negotiations with the Soviet Union partially relenting and the coincidence of the signing with Brezhnev's visit as well as the inclusion of the Berlin clause indicate that there was a tangible link between political and economic aspects for the FRG. With the financing, equipment and natural gas agreements signed, the partners to the contracts rightfully felt they were home free, but they had not reckoned with the Reagan administration. U.S. President Ronald Reagan had taken interest in the project since his election in November 1980 (Hoegselius 2013).

Enter President Reagan

President Reagan came to office with the goal to restore the international position and reputation of the United States. Concluding that Détente had failed, Reagan embraced the policy of containment and deterrence of the Soviet Union (Busch 1997), including, as Jentleson (1986, 194) puts it, a reduced chance of gas-induced Euroneutrality and a stronger Western alliance. The third and economic goal of Reagan's foreign policy strategy was to reduce the hard-currency earnings of the Soviet Union. Reagan was more skeptical and critical of Soviet natural gas supplies than his predecessor and openly declared his desire to prevent or delay the construction of the Siberian Natural Gas Pipeline (Hoegselius 2013; Jentleson 1986). Hoegselius (2013, 185)

[229] Following consultations with the federal government and the Senate of Berlin, the gas companies included the option of delivering up to 700 million cbm to Berlin in the agreement. In a next step, consultations on the transit of natural gas through the territory of the GDR would have to start with the government of the GDR (Taschler, Peter, and Michel 2013h).

[230] A slightly different translation appeared in the *New York Times* (1981c): "They declare their readiness to support the execution of the project within the limits of their possibilities." Original: "Sie erklärten ihre Bereitschaft, die Durchführung dieses Projektes im Rahmen ihrer Möglichkeiten zu unterstützen" (Die Bundesregierung 1981).

argues that this was something new. The United States had until then never intervened or objected to the import of Soviet natural gas. The FRG, moreover, had always asked for and obtained a green light from Washington for the natural gas agreements negotiated by Ruhrgas. The Reagan administration opposed the new pipeline for several reasons (Perle 1982, 18–19; Jentleson 1986, 172). According to Assistant Secretary of Defense Richard N. Perle, the pipeline would generate substantial hard currency earnings for the Soviet Union, which it could use for developments harmful to Western interests, including the strengthening and modernization of the Soviet military. Second, the pipeline would create an economic link that would increase the Soviet Union's influence among its allies. It would be naïve to believe, Perle suggested, that politics would stay far behind where jobs and profits originated from the Soviet Union. Third, the pipeline would create a dangerous vulnerability of Europe to natural gas supply disruptions by the Soviet Union. "[E]ven in the absence of a crisis severe enough to lead to a Soviet cutoff," Perle pointed out, "there is the day-to day influence that must flow, like the gas itself and, concluding he asked, whether there was "any doubt that our allies listen more carefully to kings and rulers who supply them with energy than to those who do not?" Fourth, and in addition to the political and energy vulnerability, the pipeline would create a weighty financial vulnerability and shared interests between Western banks and the Soviet government that was hardly needed to countervail the troubling neutralist trend in some European countries. Western banks, moreover, would carry the financial risks. Fifth, the pipeline would displace potential investments in safer alternatives including projects in Nigeria, Algeria, Norway, Cameroon, Canada, and the United States. Finally, the United States had serious doubts about the economics of the pipeline and believed that German customers would in the long-term pay more for Soviet gas than for available alternatives.

Novel, too, was the position of the FRG. The government of the FRG not only disagreed with the American evaluation of the new pipeline project but would also vehemently resist American attempts to obstruct or delay the construction of the pipeline. In previous dependence debates, the FRG had analyzed the security aspects and concluded that the Siberian Natural Gas Pipeline did not pose a threat (Hoegselius 2013). More specifically, the Schmidt government disputed the American analysis of the specific foreign policy impact of the new pipeline (Jentleson 1986, 191). The Europeans disagreed with the American evaluation of the strategic benefit the Soviet Union would gain from the trade and maintained that the United States grossly overestimated the vulnerability to a Soviet gas supply disruption. Even if the Europeans acknowledged the American worst case scenario of a politically motivated Soviet supply disruption during a crisis or as diplomatic leverage, Jentleson (1986, 191) points out, the Schmidt government felt secure enough to resist Soviet demands. With the dependence debate settled at a ceiling of 30 percent, the Schmidt government also didn't share the American concerns regarding increasing Soviet natural gas imports.

The Schmidt government attempted to dispel American concerns several times. In a meeting with Secretary of State Alexander Haig on March 9, 1981, Genscher emphasized that the FRG, well aware of the ceiling of 30 percent issue ("Grenzwertproblematik"), would thoroughly address the question of the dependency on its natural gas imports, before the conclusion of an agreement (Taschler, Peter, and Michel 2013a, 345). In addition, Genscher continued, the FRG attached great importance that the new American administration recognized the awareness of the FRG of the risks and the strict limit the FRG had imposed on itself. Genscher promised that his colleague from the economic department would explain the controversial gas pipeline deal and alleviate any American doubts (*Der Spiegel* 1981). One week

later and well equipped with numbers, Federal Minister of Economics Dr. Otto Graf Lambsdorff (FDP) explained to Haig that the FRG had thoroughly assessed all risks and that the FRG would in no way become politically dependent on Moscow by increasing Soviet natural gas supplies. It is noteworthy, that Haig was not concerned about the potential energy dependence arising from the deal but its timing (Footnote 62 Taschler, Peter, and Michel 2013a, 345). Due to Afghanistan, rising tensions in Poland and the Soviet Union's hegemonic ambitions, Haig responded, relations with the Soviet Union were so strained that it couldn't be business as usual (*Der Spiegel* 1981; Taschler, Peter, and Michel 2013a).

Then, President Reagan raised the pipeline issue bilaterally at the 7th G7 summit held in Montebello and Ottawa (or Ottawa summit) between July 20 and 21, 1981.[231] On July 19, Secretary of State Haig asked Chancellor Schmidt to delay the gas pipeline deal by four to six months to allow the United States to talk with its European partners about more reliable alternatives to Soviet natural gas supplies (Taschler, Peter, and Michel 2013d). In a meeting with President Mitterrand the next day, Schmidt was asked about American initiatives to tighten CoCom controls,[232] which the Germans concluded had replaced the unsuccessful American grain embargo (Taschler, Peter, and Michel 2013b).[233] Schmidt responded, that he had made clear to Reagan that he opposed any interference with Eastern trade and that he refused to be dissuaded

[231] Although the new gas deal received a lot of press attention, it was reportedly only discussed in bilateral meetings and not during the summit meetings themselves (Taschler, Peter, and Michel 2013f). The text of the Ottawa summit was published in the *New York Times* (1981a).
[232] Since the occupation of Afghanistan the United States had actively pursued to tighten the CoCom export control lists including stronger restrictions on technology transfers to the Eastern bloc (Footnote 8 in Taschler, Peter, and Michel 2013b, 925). According to Jentleson (1983, 52–53), European countries cooperated with the American position not to make exceptions to existing CoCom controls in most high-technology fields. One exception, however, that European countries insisted on was that this policy would not apply in the export of spare parts for oil and gas pipelines.
[233] On April 24, 1981, President Reagan, fulfilling his election promise, lifted the grain embargo on the Soviet Union in place by President Carter January 1980 (Taschler, Peter, and Michel 2013b).

from the natural gas pipeline deal by the Americans (Taschler, Peter, and Michel 2013e; Weisman 1981).[234]

At the end of July, Haig stated that the U.S. Administration was drafting proposals to offer Europeans greater access to coal, nuclear energy and oil and gas supplies from non-Middle Eastern sources hoping to forestall "the possibility of over-reliance" on the Soviet Union (Farnsworth 1981). In September 1981, the Europeans rebuffed the alternatives suggested by a U.S. delegation led by Myer Rashish, the Under Secretary of State (Tagliabue 1981c). The American proposal had contained two main components: an offer of American coal[235] as well as increasing imports of Norwegian gas – and both were difficult to sell (Jentleson 1986, 185–88).[236] Coal was both technically and environmentally problematic. Coal gasification plants would have to be constructed and the installation of antipollution devises involved high fixed costs. In addition, domestic coal miners and producers with higher production cost that already faced the conversion from coal to gas would oppose additional competition. Norwegian gas was not only more expensive than Soviet natural gas but also did not enjoy the support of the Norwegian government.[237] In addition, Norway's reliability began to be questioned, in summer 1981, as the Norwegian Ekofisk and Statfjord fields were plagued by strikes and unrest among offshore workers (Hoegselius 2013, 192). Jentleson (1986, 188) concludes, that the American

[234] Schmidt further added that he held reservations against letting the Americans impose restrictions, especially if it concerned a country such as the United States that based on national egoism supplied huge amounts of grain to the Soviet Union.
[235] Hoegselius (2013, 186) argues that the Reagan administration sought to exploit the fact that coal had become more competitive relative to other fuels. Interest in coal, not affected by the second oil crisis, had increased markedly, especially, since its relative price had decreased significantly, which challenged the competitiveness of natural gas for electricity production.
[236] According to Blinken (1987, 95–96) the alternatives included American coal, synfuels, and nuclear power technology, neither of which was as cheap and feasible as Soviet natural gas.
[237] Norway was very wary of the economic and social disruption that a rapid development of its oil and gas sector could potentially cause and the low world market prices in the early 1980s were a further disincentive (Jentleson 1986, 187).

proposal also fell on deaf ears because it could not compensate for the loss of exports and its impact on employment, the balance of payments and industrial production. This resonates with the explanation of Peter Gehrig of the Ministry of Economics in 1982 that the FRG "would have been able to survive the very comfortably without the Soviet natural gas… The pipeline contract was dictated by pure misery – jobs were the main consideration" (quoted in Brand 1982). Agreement was reached at Ottawa to talk at a high-level CoCom meeting in January 1982 (Dobson 2005). At the same time, the equipment and natural gas negotiations were entering their final phase in fall of 1981.

As both positions got more entrenched, Reagan on preventing the pipeline as demonstrated by Perle's testimony in Congress and the Europeans in their opposition to any American interference, the conflict was brought to a head by events in Poland (Jentleson 1986). On December 13, 1981, General Wojciech Jaruzelski, fearing a democratic revolution, declared martial law in Poland. Thousands of opposition activists were imprisoned, and the Soviet military appeared poised to intervene. Western European countries and the United States strongly condemned the events in Poland and the Soviet Union's involvement in them. Dramatic geopolitical turns, Hoegselius (2013, 187) asserts, threatened the Siberian Natural Gas Pipeline, a symbol of friendship and mutual understanding between the Soviet Union and Western Europe.

The American administration's response was not long in coming. The same day, the Reagan administration imposed economic sanctions against Poland: export credits by the Export Import Bank of the United States (Exim Bank) were prohibited, Polish fishing rights in U.S. waters suspended, and extensive export restrictions placed on high-technology goods (Woehrmann 1986, 143). A few days later, on December 29, 1981, Reagan added sanctions against the Soviet Union for its role in the events in Poland, including 1) the suspension of all

existing licenses and the issuing of new licenses for all high-technology exports, including oil and gas equipment, 2) the expansion of export controls in the energy sector beyond exploration and production equipment to transmission and refining equipment for oil and gas (e.g. pipe layers, pipeline compressor stations), 3) the postponement of negotiations on a new grain agreement; 4) the expiry of cooperation and exchange agreements without renewal (including agreements on energy, science and technology); 5) the closing of the Soviet Government Procurement Commission (also known as Soviet Commission for Procurement); and 6) the suspension of permits for Aeroflot flights (Jentleson 1986, 173; Woehrmann 1986, 143). The sanctions would be lifted based on the conditions in Poland, that is, an end to martial law, the release of Lech Walesa, the trade-union leader, and other political prisoners, and the initiation of a dialogue by the Polish government with the Catholic church and Solidarity headed by Walesa (Jentleson 1986).

Large diameter-pipes were not at issue in 1981 but Reagan's advisors had discovered that European producers relied on American technology for critical components of the compressors, especially turbine blades and rotors developed by General Electric (Hoegselius 2013, 189). Since the sanctions were applied retroactively General Electric, Caterpillar, Dresser, and Cooper Industries were forced to cancel contracts and prohibited from supplying their products to European licensees (Blinken 1987). Several European companies either imported or produced critical components on license from GE. On January 8, 1982, the Reagan administration denied export licenses to General Electric for components worth $175 million for gas turbine compressors to be built under license by AEG-Telefunken, John Brown & Company and Nuovo Pignone (New York Times 1982a; Lewis 1982a). Having already shipped rotating components for 22 turbines to Europe (Hofhansel 1996), GE was now denied any further export licenses

(Hoegselius 2013). Pipe laying machines from Caterpillar worth $100 million were also affected when all not formally confirmed export licenses were suspended (Woehrmann 1986). In addition, the Reagan administration asked its European allies to similarly stop supplying vital components for the construction of the pipeline (Lewis 1982a).

In early 1982, the United States exhausted multilateral institutions and bilateral channels to obtain European support for its sanctions against the Soviet Union and, by extension, the Siberian Natural Gas Pipeline. After the emergency meeting of the NATO foreign ministers on January 11, 1982 in Brussels, the allies condemned the imposition of martial law in Poland and deplored the Soviet Union for its active support for the "systematic suppression in Poland" *(New York Times* 1982b). The joint communiqué also recognized "the importance of economic measures to persuade the Polish authorities and the Soviet Union of the seriousness of Western concern" and stressed the significance of the measures already announced by President Reagan. The actions of the Soviet Union toward Poland, the foreign ministers continued, made it necessary "to examine the course of future economic and commercial relations with the Soviet Union." In addition, the allies would "reflect on longer-term East-West economic relations" including energy. At the same time, however, each of the allies, the communiqué recognized, would "act in accordance with its own situation and laws." While pledging not to undermine the American sanctions, energy trade controls, in other words, remained unilateral (Jentleson 1986, 192).[238]

[238] After a visit of Schmidt to the United States early January 1980, it was reported that the United States would "not ask its allies to act in unison on economic sanctions against the Soviet Union, something that would cause domestic problems for several allies, particularly Germany, in view of its commitment to large-scale projects with the Soviet Union" (Gwertzman 1982). In return, the New York Times reported, the FRG would join the United States in placing responsibility for the events in Poland on the Soviet Union.

The FRG's take became clear two days later, when Lambsdorff, the Minister of Economics, reportedly told the cabinet that the American request not to undercut its sanctions against the Soviet Union "referred only to such American deliveries in which the United States is the prime supplier, and not a secondary supplier" (Tagliabue 1982). According to Lambsdorff's knowledge, "the participants in the Western European natural gas deal continue to adhere fundamentally" to the project. On February 17, 1982, Lambsdorff informed the cabinet that based on paragraph 22 of the Foreign Trade and Payments Ordinance (Außenwirtschafts-verordnung – AWV)[239] he would instruct the Federal Office for Industrial Economics (Bundesamt für Gewerbliche Wirtschaft) to issue the required permit for the natural gas contract with the Soviet Union (Bundesarchiv/Federal Archives 1982; Woehrmann 1986, 149).[240] Europeans also responded to the new sanctions by increased their own licensed production of the GE parts (Hoegselius 2013, 189). Thus, and as Jentleson (1986, 192) points out, the energy clause in the communiqué was a Pyrrhic victory for the United States because the credibility of the threats was weakened by statements elsewhere as well as the fact that the resolution was non-binding.

Shortly after the NATO meeting, the high-level CoCom meeting agreed upon at the Ottawa summit was held on January 19, 1982 in Paris. The members agreed to strengthen its enforcement procedures, review the embargo list, and extend the export no-exception policy adopted in 1980 to at least 1983, however, the Europeans rejected the American initiative to control technology, process know-how and equipment not directly related to military use (Dobson 2005, 544). A high-level American interagency mission to Europe from March 13th to

[239] Today, the Federal Office for Economic Affairs and Export Control (Bundesamt für Wirtschaft und Ausfuhrkontrolle, BAFA).
[240] The permit would furthermore be conditional on the negotiations regarding the supply of natural gas from the Soviet Union to West Berlin continuing swiftly and reaching a satisfactory conclusion by mid-1982.

20th, 1982 headed by James Lane Buckley, Under Secretary of State for Arms Control and International Security Affairs, (hence also Buckley Mission) sought agreement on curbing credits and credit guarantees to the Soviet Union and encouraged the European allies to review their commitment to purchase Soviet gas ("Report on Interagency Mission to Europe" n.d.).[241] However, the Germans were reportedly very negative and apparently believed they had reached agreement with Secretary Haig on the pipeline[242] and thus did not need to take the Buckley mission seriously (Erst 1982).

At the 8th G7 summit held in Versailles, France between June 4th and 6th, 1982, the heads of states arrived with the hope to settle the pipeline conflict. However, while Reagan aimed at collective action, the Europeans sought an end to American pressure (Jentleson 1986, 193). In the end, the joint communiqué surely fell short of American aims. The heads of state once more only agreed to pursue a prudent and nuanced economic approach to the Soviet Union and Eastern Europe consistent with the political and security interests (Die Bundesregierung 1982).[243] Chancellor Schmidt made his position clear to Reagan on June 9 in the German Chancellery, where he emphasized that the natural gas pipeline deal was based on mutual interests and once more refuted the dependence argument. In addition, Schmidt explained no

[241] Republican Senator Ted Stevens, the assistant Republican leader, threatened the withdrawal of 337,000 troops from Europe. "If they can turn of our electricity" he reportedly said, "it is high time to get out" (Meyer-Larsen 1982, 33). If the Europeans would stop the deal, Stevens moreover allured, they could immediately receive substitute deliveries from Alaska, his home state. Alaskan natural gas would not require a pipeline but could be shipped to Europe using LNG submarines and they could be built by destitute German shipyards.

[242] In a meeting with Secretary Haig on March 8th in Washington, Minister of Foreign Affairs Genscher reportedly mentioned that Germany kept concluded contracts and Haig agreed that it would have been up to the Carter Administration to prevent the deal at the time and concluded that it was too late now (Ploetz, Szatkowski, and Michel 2013a, 372). According to the German Ambassador Hermes, Haig repeated this position in a meeting with the prime minister of Schleswig-Holstein, Dr. Stoltenberg, on March 25 – after the Buckley Mission. Asked about the American position towards the natural gas pipeline deal, Hair replied that it was too late to stop it and that if the United States had wanted to do so, it would have had to happen in 1979 (Ploetz, Szatkowski, and Michel 2013b, 466). Haig, who had as NATO Commander strictly opposed to the natural gas pipeline deal, now supported a compromise in order to prevent further tensions in the Atlantic alliance, especially as the chances to stop the construction of the pipeline were considered low (Müller 2010, 514; Woehrmann 1986, 146).

[243] A slightly different translation can be found in Jentleson (1986, 193–94).

public loans were serviced for the deal which allowed the FRG to agree the Versailles communiqué without problems because it was practically not affected by it (Ploetz, Szatkowski, and Michel 2013c, 927). In the declaration following the NATO Council meeting held in Bonn on June 10, 1982 the heads of state declared that they would approach their economic relations with Warsaw Pact members "in a prudent and diversified manner consistent with our political and security interests," manage financial relations on sound economic basis," and agreed to "exchange information in the appropriate for a on all aspects of our economic, commercial and financial relations with Warsaw Pact countries" ("Meeting of the North Atlantic Council, Bonn 10 June 1982: Declaration of the Heads of State and Government" n.d.). By June 1982, it was abundantly clear that neither the FRG nor its European partners were keen on joining the U.S. sanctions.

On June 18, 1982, the Reagan administration went one step further and retroactively claimed extraterritorial application of its export controls of December (Jentleson 1986, 194). U.S. sanctions were now extended[244] to "equipment produced by subsidiaries of U.S. companies abroad, as well as equipment produced abroad under licenses issued by U.S. companies" with the stated aim to "advance reconciliation in Poland" (Reagan 1982a).[245] Violations would be punished with ten-year prison sentences for company executives, fines up to $100,000 per infraction, and denial of trading privileges with the United States (Jentleson 1986). A white house spokesman, while denying a linkage between American attempts to restrain European credits to the Soviet Union and the pipeline, said the decision to ban export of oil and gas

[244] Based on the Export Administration Act of 1979 (*Oil & Gas Journal* 1982). The Department of Commerce promulgated the rules on June 22, 1982 and invited public comments to be made by August 21 (*New York Times* 1982f).
[245] Reportedly, the resignation of Secretary of State on June 25, 1982 was related to the sanctions, which had been decided upon in his absence (Ploetz, Szatkowski, and Michel 2013d, 1019).

equipment rested solely on White House opposition to the pipeline and its objective of reconciliation in Poland (*Oil & Gas Journal* 1982). It was also stated that the administration had "opposed this pipeline for a very long time in terms of energy security of western Europe." The administration furthermore estimated that this could delay the Siberian Natural Gas Pipeline by 1-3 years and increase the costs of the project. The new sanctions affected all of the major European producers of compressors or parts thereof – AEG-Kanis and Mannesmann, John Brown & Company, Nuovo Pignone, Creusot-Loire and the French subsidiary of Dresser.

The U.S. sanctions united European opposition and led to what would eventually come to be referred to as *Familienstreit* (or family dispute) between the FRG and the Reagan administration (Ploetz, Szatkowski, and Michel 2013e, 1176). The European Community expressed its position in a condemnatory message delivered to the Department of Commerce. The European Community considered the measures contrary to international and U.S. law and argued that the sanctions would neither materially delay the construction of the pipeline nor the delivery of the gas (New York Times 1982f). The European Community also maintained that the Siberian gas would not create a dangerous dependence and pointed out that even when reaching the maximum rate by 1990, it would constitute less than 4 percent of the European Community's total energy consumption. Economically, the statement moreover continued, the "measures, applied retroactively and without sufficient consultation, are unquestionably and seriously damaging."[246]

Chancellor Schmidt's position was made clear in conversations with Nordic ministers[247] at the end of June (Ploetz, Szatkowski, and Michel 2013d). Schmidt explained that the U.S.

[246] The Ministers of Foreign Affairs meeting in the Council on June 21-22 similarly criticized the U.S. sanctions ("Industrialized Countries: United States" 1982).
[247] Swedish Prime Minister Nils Fälldin, Danish Prime Minister Anker Jørgensen, Finnish Prime Minister Kalevi Sorsa, Gunnar Thoroddsen Prime Minister of Iceland, and Norwegian Prime Minister Kåre Willoch.

administration had not revealed that it was contemplating the extension of the sanctions and that Bonn interpreted this as a breach of trust. While the extension of the sanctions would cause certain delays in the natural gas-pipeline deal, Schmidt concluded that the damage was mainly of political and psychological nature.[248] Asked about dependence, Schmidt maintained that based on the quantity no dependence on the Soviet Union could arise. The FRG, moreover, was determined to diversify its energy imports based on energy source as well as type.[249] Germany's share in the natural gas pipeline agreement would, Schmidt added, contribute to a total of 25 percent of natural gas consumption and 6 percent of primary energy consumption. Schmidt also clarified that at this time only one pipeline was being discussed and he did not expect concrete planning for a second pipeline for several years.

While the German financing agreement was signed on July 14, 1982, opposition to the sanctions stiffened as the date for the first shipments neared. On a private visit to the United States July 20-27, Schmidt made his famous statement "the pipeline will be built" in an interview on CBS News on July 22 adding that "the British, the French, the Germans and other Europeans will stick to the agreements which their firms have been making with the Soviets" (New York Times 1982e). On the same day, the French government announced that French companies would honor their contracts despite U.S. sanctions and actions by the British government indicated that it would similarly ignore the sanctions. Great Britain, France, Italy, and the FRG

[248] It is noteworthy that Norwegian Prime Minister Willoch stated during the same conversations that Norway had made clear to the Americans that Norway would not be able to fill the gap in the Western Europe's gas supply caused by the cancellation of the currently planned pipeline. Most recent discoveries made it seem possible, however, that Norway might be able to contribute significantly to an increase of natural gas supplies to Western Europe in about ten years (Ploetz, Szatkowski, and Michel 2013d, 1019).

[249] It is ironic, that Schmidt would mention that Carter's threat to stop supplies of enriched uranium had contributed to this decision.

went so far as to invoke national laws to order their companies to keep their contracts (Jentleson 195).

European companies complied and shipments began as planned (Hoegselius 2013; Jentleson 1983; 1986). Dresser France, which had received GE rotors before the December sanctions, shipped the first three French-made compressors on August 26, 1982 from Le Havre; Nuovo Pignone shipped two compressors on a Soviet vessel from Livorno on September 4; John Brown & Company similarly shipped six turbines on a Soviet vessel from Glasgow on September 9; and AEG-Kanis shipped turbines from Hamburg early October. Each time, the Reagan administration immediately responded with Temporary Denial Orders (TDOs) (Demidova 2013; Jentleson 1986). The initial TDO against Dresser France and Creusot-Loire prohibited all existing U.S. exports to (47 Fed. Reg. 168, 38170 1982). Subsequent TDOS sanctioned Nuovo Pignone (47 Fed. Reg. 175, 39709 1982), John Brown & Company (47 Fed. Reg. 177, 40205 1982) as well as AEG-Kanis after it discharged the first 2 of a total of 47 turbines at the port of Klaipeda (*47 Fed. Reg. 196, 44603* 1982; *Der Spiegel* 1982) and Mannesmann Anlagenbau[250] (47 Fed. Reg. 196, 44604 1982). The initial TDO against Dresser and Creusot-Loire (47 Fed. Reg. 175, 39709 1982) was changed to align with the others which sanctioned export privileges of U.S. commodities and technical data relating to oil and gas exploration, production, transmission, or refinement.

Linkages drawn to other issues and continued U.S. exports hardened the Western European position. Republican Senator Ted Stevens, for example, suggested the U.S. reduce troops in Europe as retaliation for the non-cooperation of Western Europe on the pipeline issue

[250] This also included the following businesses owned by or affiliated with Mannesmann: Essener Hochdruck-Rohrleitungsbau GmbH, Kocks Pipeline Planung GmbH.

(Jentleson 1986; Joffe 1983). Meanwhile Western Europeans were not hesitant to point out that the U.S. had never interrupted its grain supplies. In fact, on October 15, when the U.S. Customs Service made its first seizure of $3 million worth of turbine parts owned by blacklisted Nuovo Pignone destined for Algeria, President Reagan announced his readiness to increase the currently agreed upon 8 million tons of grain exports to the Soviet Union within the next year to 23 million tons while also promising contract sanctity (Cole 1982; Jentleson 1986; Joffe 1983; Reagan 1982b). Chancellor Helmut Kohl (CDU), who had succeeded Chancellor Schmidt on October 4, 1982 after a vote of no confidence in the German Bundestag, similarly didn't fail to point out U.S. grain exports as well as the fact that Caterpillar had been allowed to make its deliveries (Ploetz, Szatkowski, and Michel 2013g, 1334). While not enthusiastic about the natural gas pipeline deal, moreover, Kohl considered the deal a matter of principle and emphasized that reliable politics was a policy of peace (Ploetz, Szatkowski, and Michel 2013h, 1529; 2013g, 1334). The change in the government of the FRG thus did not promise a change its position on the natural gas pipeline deal.

By October 1982, the U.S. sanctions had proven to be largely ineffective (*Der Spiegel* 1982). By the end of the year three further turbines with GE rotors would be ready for shipment from Germany and after that Alsthom-Atlantique and Rolls-Royce, which were working on a substitute rotor, were planning to step in for GE. Additionally, the European manufacturers had months to prepare themselves against the sanctions and AEG-Kanis, for example, estimated that the sanctions would only delay deliveries by about six months. The sanctions against Mannesmann and its affiliates, on the other hand, had come as a surprise and were condemned as a collective punishment. The U.S. government punished the company only, *Der Spiegel* argued,

because it had contractual relations with AEG-Kanis and Machinoimport.[251] However, since neither Mannesmann, a leader in pipeline technology, nor its affiliates relied on U.S. products or licenses, the TDO had little impact and had a rather symbolic nature.

On November 13, Reagan having stated that "it's no secret that our allies didn't agree" announced the lifting of both the December and June sanctions as well as a substantial agreement on a plan of action between the United States and its Western allies ("Radio Address to the Nation on East-West Trade Relations and the Soviet Pipeline Sanctions" 1982).[252] The allies had agreed that: 1) CoCom would study ways to strengthen the effectiveness of strategic trade controls, 2) the International Energy Agency (IEA) would evaluate the costs and benefits of East-West energy trade and no new contracts would be signed until the study had been completed, and 3) the OECD would aim to harmonize credit policies to prevent the Soviet Union from being subsidized preferentially (Mastanduno 1992, 261). The agreement reached, however, was comparable to the achievements of the Reagan administration at earlier multi- and bilateral meetings. The Europeans only agreed to hold off on new energy contracts and had not agreed to be bound by the outcome of the studies (Jentleson 1986, 197).

The German reaction to the U.S. sanctions was long in the coming. The successes of Détente in the 1970s, the natural gas contracts with the Soviet Union of the early 1970s, the rattling experiences of the Yom Kippur war and the outbreak of the Iranian Revolution led to the

[251] Mannesmann, the TDO states had "as a member of a consortium with Creusot-Loire, a French corporation, … entered into a contract (the "Main Contract") with V/ O Machinoimport of the Soviet Union to deliver twenty-two complete gas turbine compressor stations for a portion of the "Siberia-West Europe Gas Pipeline"" and had "also entered into a contract with V/O Machinoimport and AEG-Kanis Turbinenfabrik GmbH (AEG-Kanis), a West German corporation, under which AEG-Kanis will provide 47 gas turbines for the compressor stations covered by the Main Contract" (*47 Fed. Reg. 196, 44604* 1982).
[252] The December and June sanctions were officially lifted by NSDD 66 on November 29, 1982.

dawn of Soviet natural gas as the solution and shaped the foreign and trade policy of the FRG. The Schmidt government reached an interpretation of the impact of increasing Soviet natural gas supplies that increasingly put it at odds with the United States, especially, after Ronald Reagan's election as president. Geopolitical events in Afghanistan and Poland notwithstanding, the government of the FRG continued to try to convince the Reagan administration that increasing Soviet natural gas supplies would not pose a security risk and when it failed to do so defended the pipeline agreements against U.S. sanctions. The FRG by no means decided to shift its alliances – at the time it also faced strong domestic opposition to the deployment of Pershing missiles in Germany – but its vocal and strong defense of the political soundness and sanctity of the natural gas agreements marked a clear departure from the stance of the Adenauer government two decades earlier. Moreover, the conclusions of the dependence debate of the late 1970s, including the self-imposed ceiling of a 30 percent share of Soviet and later Russian natural gas of total natural gas consumption, would shape the FRG's position in the decades to come. The pipeline itself was commissioned in 1983 and Soviet natural gas reached Western Europe as planned in 1984.

One More – The North European Gas Pipeline (aka Nord Stream)

The Urengoy-Uzghorod pipeline as the Yamal pipeline came to be known was commissioned in 1983 and delivered the first Soviet natural gas to the West in 1984. Only a few years later the Cold War ended. Hungary opened its borders to Austria in June 1989, the Berlin Wall fell five months later, and by late 1991 the Soviet Union had ceased to exist. The end of the Cold War promised the normalization of relations between the East and the West and economic cooperation with the RF came to be seen as an opportunity to help combat the political and economic instability following the dissolution of the Soviet Union. Not long after the distribution of Soviet natural gas assets – pipelines – to newly independent or created countries,[253] natural gas and transit pricing and debt issues between the RF and its neighbors and new transit countries led to disputes and supply disruptions. At the same time, the combination of instability in the Middle East in the early 1990s and again after the 9/11 attacks as well as the international endeavors to curb greenhouse gas emissions made Russian natural gas once more an attractive source of energy. Despite the disputes between the RF and transit countries, the EU increasingly recognized the RF as a historically reliable supplier and previously self-imposed ceilings to the quantities of Russian natural gas imported became an inconceivable artifact of a past conflict. A combination of factors led to the rediscovery of the Northern supply route or corridor by the late 1990s not only by the European Union but also by regional actors as well as corporate interests. Normalization and increase of political relations between the FRG and the RF begun under Chancellor Kohl continued and gained strength during Chancellor Schroeder's first term. Economic ties and natural gas trade increased correspondingly. The restructuring of Russia's

[253] Germany was unified October 3, 1990, Czechoslovakia split into the Czech Republic and Slovakia on January 1, 1993, Russia, Belarus and Ukraine declared its independence August 24, 1991, Belarus on August 25, 1991, and the Russian Soviet Federative Socialist Republic became the Russian Federation in December 1991.

natural gas sector initially heralded a change in the FRG's previous negotiating partner, Mingazprom. By the early 2000s, however, the Russian government had consolidated its influence and control over the energy sector bringing about an alignment of the interests of Gazprom and the Russian government.

This subchapter reviews the political and economic changes following the end of the Cold War as well as the origin of the idea of a pipeline through the Baltic Sea and how it came to be embraced by the European Union and regional initiatives in the 1990s to early 2000s as concerns of diversification of supply sources shifted to diversification of supply routes and energy trade came to be considered a tool to support the political and economic transition processes in the RF. It is important to understand this shift in thinking and the already existing European and regional support for the North European Gas Pipeline (NEGP, later renamed Nord Stream) before analyzing Chancellor Schroeder's support for the pipeline as well as a strategic partnership with the RF. While increasing Russian natural gas import dependence was acknowledged, neither a dependence debate, comparable to the one of the late 1970s and early 1980s, occurred nor were concerns about the use of natural gas as an energy weapon raised (yet). Rather, and despite geopolitical events and supply disruptions in former Soviet republics, natural gas trade became an area of shared interest.

Political and Economic Relations after the End of the Cold War

The end of the Cold War heralded a new era between the West and the Soviet Union, soon to be replaced by the RF. Politically the FRG and RF grew closer accompanied by a significant increase in trade and growing Russian natural gas imports by the FRG. New climate goals and renewed conflict in the Middle East made Russian natural gas an attractive energy

source as Western Europe had to reckon with a changed dynamic in the Russian natural gas market as well as the disappearance of its previous negotiating and trade partner, Mingazprom.

The end of the Cold War made the normalization of relations between the FRG and the Soviet Union possible. On September 12, 1990, France, the Soviet Union, the United Kingdom and the United States as well as the FRG and GDR[254] signed the Treaty on the Final Settlement with Respect to Germany (or Two Plus Four Agreement) in Moscow restoring the internal and external sovereignty of the reunited FRG. Shortly thereafter, on November 9, 1990, one year after the opening of the Berlin Wall and a little bit more than a month after the reunification of Germany on October 3, 1990, Chancellor Helmut Kohl and President of the Soviet Union Michael Gorbachev, signed the Treaty on good-neighborliness, partnership and cooperation.[255] Twenty years after Chancellor Brandt and Premier Kosygin signed the Treaty of Moscow,[256] the FRG and the Soviet Union pledged to respect each other's sovereign equality, territorial integrity and political independence. When Russian President Boris Yeltsin visited the FRG in November 1991, Chancellor Kohl declared that the FRG would do all it could for rapprochement and reconciliation, cooperation and good neighborliness (Die Bundesregierung 1991). Apart from offering the FRG's advice for the development of a market economy, Kohl also considered cooperation in the field of energy, especially, oil and natural gas, very promising. The end of the Cold War and agreements on the withdrawal of Soviet troops not only led to the normalization of political relations but opened promising opportunities of economic cooperation.

Domestically, the late 1990s saw the return of a social democratic Chancellor. In the federal elections of 1998, the SPD won 40.9 percent of the vote and formed a coalition with the

[254] Signed by both the FRG and the GDR, the treaty was ratified by the unified FRG on March 15, 1991.
[255] The German Bundestag ratified it on April 25, 1991.
[256] The Treaty of Moscow was signed August 12, 1970.

Alliance 90/the Greens (Bündnis 90/Die Grünen), the German environmental or green party. Gerhard Schroeder (SPD) became Chancellor and Joschka Fischer (FDP) the vice-Chancellor and foreign minister. It was the first time since 1982 that a social democrat became Chancellor, the first federal red-green coalition, and the first time a center-left government was formed in the FRG since the end of WWII. As only the third social democratic Chancellor of the FRG and the first of a unified Germany, Schroeder valued good relations with the RF, as his predecessors Willy Brandt and Helmut Schmidt had done before him. Chancellor Schroeder made clear from the beginning that the relations with the RF at the political, cultural and economic level would remain of crucial importance (Deutscher Bundestag 1998, 111). Actions soon followed suit. An annual high-level German-Russian consultation was established in 1998, a bilateral strategic working group on economics and finance (Strategische Arbeitsgruppe für Wirtschaft und Finanzen) to facilitate economic engagement of German companies in Russia and vice versa in 2000, the Petersburger Dialog, an annual conference dedicated to contemporary issues and German-Russian relations, in 2001, and a high-level working group on security policy (Hohe Arbeitsgruppe für Sicherheitspolitik, HAGS) in 2003.

In the federal elections of September 22, 2002, Chancellor Gerhard Schroeder (SPD) secured is reelection with a narrow majority in the Bundestag for this red-green coalition of the SDP and Alliance90/the Greens. In his government declaration of October 29, 2002 Chancellor Schroeder made two important foreign policy positions clear (Deutscher Bundestag 2002b, 59). The FRG, Schroeder stated, would continue the policy of friendly partnership with the RF. Schroeder expressed solidarity with the Russian people following the hostage taking of 700 people by Chechen rebels in a theater in Moscow October 23, 2002 but continued to add that the FRG would focus on a political solution to the conflicts in Chechnya. Second, as Schroeder had

made clear previously, the FRG would continue to oppose a military intervention in Iraq (Deutscher Bundestag 2002a). For Schroeder when the United States would attack Iraq and how its European allies as well as other world actors, most of all, the RF, would respond were critical questions because it concerned the transatlantic relationship, including NATO, the unity of the European Union as well as the German-Russian strategic partnership (Schoellgen 2015, 651). Both Germany and the RF increasingly talked about the strategic partnership and Chancellor Schroeder repeatedly spoke with President Vladimir Putin. Throughout the next two years, Chancellor Schroeder would on several occasions stand together with French President Jacques Chirac and President Putin in opposition to the military intervention in Iraq and together with Putin to express the importance of the economic and political cooperation between the FRG and the RF.

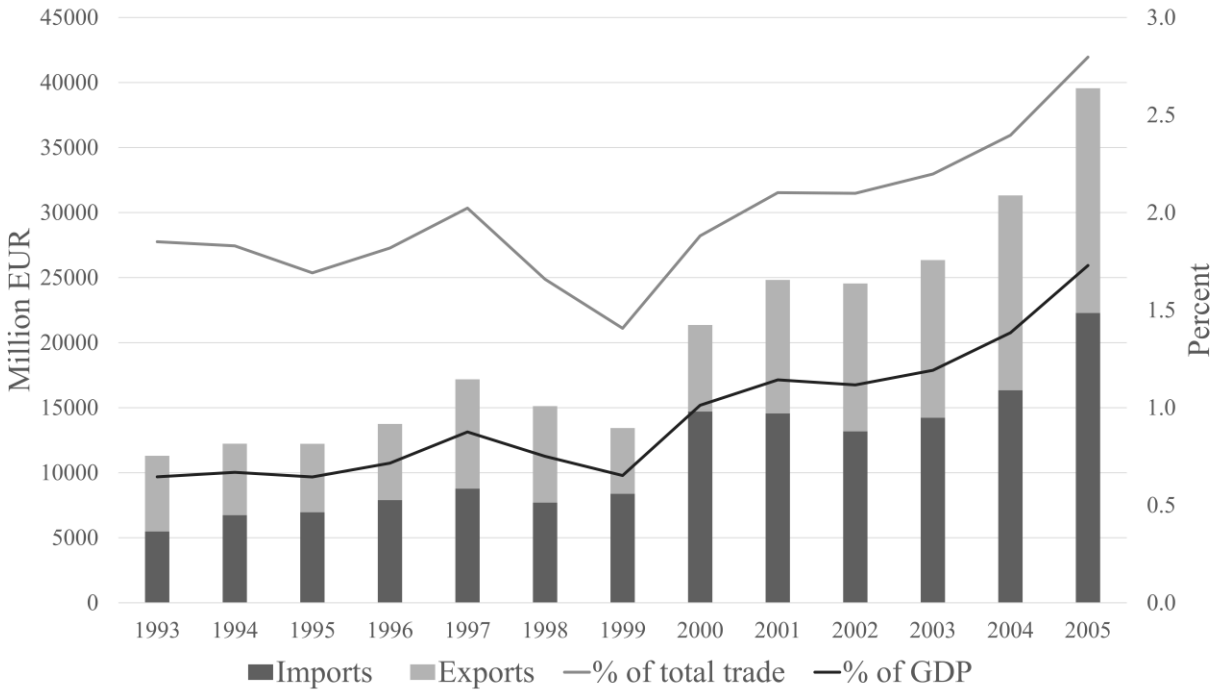

Figure 6.6. German Trade with the Russian Federation, 1993-2005
Source: Statistisches Bundesamt Deutschland (2020).

Economically, trade between the FRG and the RF increased significantly and, as the role of natural gas in the FRG's energy consumption and natural gas imports increased, so did imports of Russian natural gas. As can be seen in Figure 6.6, trade between Germany and the RF more than tripled between 1993 and 2005 and in relative terms increased as a share of total trade from 1.8 to 2.8 percent and as share of GDP from 0.65 to 1.73 percent.

By the 1990s, Russian natural gas imports had become a pillar in the trade between the FRG and the RF. This was due to the fact that already in the 1980s, natural gas had emerged as a viable source of energy amongst others for its environmental properties and the risks of nuclear power that the Chernobyl disaster had exposed so tragically in April 1986.[257] In the 1990s, moreover, concerns over climate change gained wider recognition. In 1997, an international endeavor culminated in the conclusion of the Kyoto Protocol, in which industrialized countries and economies in transition committed to limiting and reducing greenhouse gas (GHG) emissions. By January 2003, the FRG had reduced its greenhouse emissions by 18 percent between 1990 and 2001 and was only three percent away from its climate protection target of 21 percent of the Kyoto Protocol (Deutscher Bundestag 2003, 23). In order to ensure a secure, economic and environmentally friendly energy supply, the government argued, it would continue to rely on a broad and balanced energy mix. However, it also explained that while it would continue to pursue renewable energy, energy sources such as gas, oil as well as coal would continue to play an important role (Deutscher Bundestag 2003, 54). At the same time, however, the government expected that the consumption of natural gas by the industrial, manufacturing, and service sectors, energy industry, private households and transport would increase over the next couple of years (Deutscher Bundestag 2003, 70). In addition, the

[257] See also Chapter 3 - .

government endorsed the use of natural gas in transport by exempting natural gas as fuel from the German Law on Taxation of Mineral Oil (Mineralölsteuergesetz, MinöStG) until December 31, 2020. This evaluation corresponded with the existing trend of natural gas consumption and imports since 1990. As can be seen in Table 6.6, the share of natural gas in energy consumption increased from 16.3 to 23.9 percent while the share of coal decreased, and the share of mineral increased only slightly between 1990 and 2000.

Table 6.6. Final Energy Consumption, 1995-2000 (coal equivalent)

Energy Source	**1990**		**1995**		**2000**	
	Million tons	%	Million tons	%	Million tons	%
Stone coal	19.5	6.0	15.5	4.9	14.7	4.7
Brown and pitch coal	33.3	10.3	6.1	1.9	2.8	0.9
mineral oil	138.6	42.9	150.2	47.2	141.5	44.9
gas	61.0	18.9	73.8	23.2	79.4	25.2
natural gas, associated gas	**52.6**	**16.3**	**69.1**	**21.7**	**75.2**	**23.9**
Renewable energy	1.8	0.6	3.8	1.2	6.8	2.2
Other	0.0	0.0	0.0	0.0	0.0	0.0
Electricity	55.9	17.3	56.2	17.7	60.7	19.3
District heat	13.1	4.0	12.5	3.9	9.0	2.9
Total	323.2	100.0	318.1	100.0	315.1	100.0

Source: AGEB AG Energiebilanzen e.V. (2020).

The increase of natural gas consumption during the 1990s was based on a corresponding reliance on more natural gas imports. As can be seen in Figure 6.7, natural gas imports increased from 62 bcm in 1993 to 81 bcm in 2002, an increase of about 30.5 percent. Russian natural gas imports increased from 25 bcm to 33 bcm at a comparable increase of 32.3 percent. The late 1990s, moreover, also saw the extension of existing natural gas contracts dating back to the 1970s to 2020. In May 1998, Ruhrgas, for example, signed contracts for the supply of up to 13 bcm per year starting in 2008 (Atkins 1998). It is noteworthy that while the share of Russian

natural gas of total natural gas imports fluctuated between 40 and 46 percent between 1993 and 2002, it was with 41 percent in 2002 only slightly higher than it had been in 1993 with 40 percent. By 2002, Russian natural gas import dependence was higher than it had been during the dependence debates in the late 1970s and early 1980s, but not significantly larger than it had been at the end of the Cold War. A new pipeline with a capacity of more than 40 bcm a year, as reportedly considered in the late 1990s (*Oil & Gas Journal* 1997), with part of the capacity for Germany, would increase Russian natural gas export significantly.

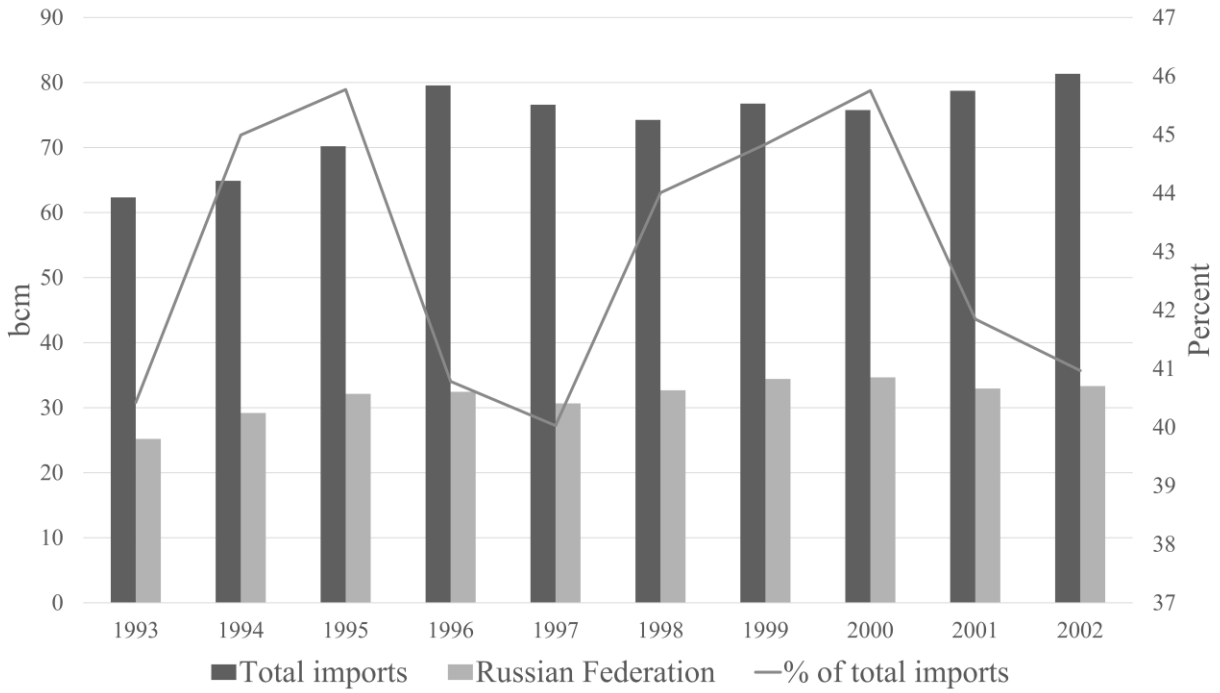

Figure 6.7. Total and Russian Natural Gas Imports to the FRG, 1993-2002
Source: Eurostat (n.d.).

Moreover, unrest in the Persian gulf once more justified the argument that the FRG should diversify its energy supplies by relying on imports from its more reliable continental neighbor (Goldman 2010, 136 and 157). However, Western Europe was no longer alone in this endeavor. Japan, heavily dependent on energy imports, vied for Russian natural gas imports. In October 2001, ExxonMobil, for example, announced that it was ready to spend $4 billion within

the next five years to develop offshore oil and gas fields off Sakhalin Island (Tavernise 2001). Its partners included the Japanese Sakhalin Oil and Gas Development company, Indian ONGC Videsh, and the Russian oil company Rosneft. In 2005, Sakhalin Energy Investment Company, a consortium now owned by Gazprom, Shell, Mitsui and Mitsubishi, planned to start the construction of a natural gas pipeline from the offshore operation to a LNG plant, from where LNG tankers would supply Japan (Brooke 2002). China, with its increasing energy appetite, similarly sought to diversify its energy supply by turning to Russian natural gas. In 2002, plans to build an oil pipeline from Siberia to a Chinese refinery in Daqing in northeastern China[258] and a Russian-Chinese study to build a pipeline to Daqing or Beijing were already underway (Bradsher 2002). This changed dynamic in the Russian natural gas market was not lost on German companies. Wulf Bernotat, the chief executive of E.ON Ruhrgas, acknowledged in 2005 that "[m]ore than ever…security of supply is the key challenge of our time" adding that "Western Europe is now competing with countries like China and India, which although their economic development is just taking off, are already showing huge hunger for energy" (quoted in A. Kramer and Dempsey 2005). In the face of increasing competition, it became a question of securing future Russian natural gas supplies.

With Russia appreciated as a reliable and secure source of natural gas, the discourse shifted away from the question of Russian natural gas import dependence to the need to diversify supply routes from Russia to overcome irregularities that had occurred after the breakup of the Soviet Union. Since the construction of the Bratstvo export pipeline in the 1960s, the expansion of the Soviet natural gas export network to Western Europe had been based on pipelines

[258] Russia and China signed the agreement to construct the Eastern-Siberia-Pacific Ocean oil pipeline (also referred to as ESPO pipeline or ESPOOP) on May 29, 2003.

converging on Uzghorod in the Ukraine and continuing from there through Czechoslovakia (which in 1993 split into the Czech Republic and Slovakia) to Western Europe.[259] From the early 1990s onward, however, disputes between transit countries and the RF led to natural gas and oil supply disruptions. Especially, the unexpected natural gas supply reduction by more than 50 percent through Ukraine in October 1992[260] highlighted the reliance on the single export corridor to Western Europe. It also led to the recognition that nothing like that had ever happened during Soviet times and that fears of the early 1980s that "reliance on Russian gas would make Western Europe vulnerable to Soviet manipulation" had proven unfounded as Soviet deliveries had proven to be "rock-solid" (Bahree, Rubinfien, and Feduschak 1992). At the time, the disruption was attributed to Ukraine taking more than its normal share due to cold weather, pricing and debt issues between Ukraine and the RF, instability in newly independent countries, as well as the privatization or breakup of the former Soviet energy infrastructure. While unexpected, the disruption was estimated to have little impact on Western Europe's main importers, including the FRG, France, and Italy, due to available reserve capacities, projected increases in demand, it was recognized, would make Western Europe even more dependent on the RF (Bahree, Rubinfien, and Feduschak 1992). Rather than making European natural gas importers wary, the solution became the diversification of supply routes for Russian natural gas as demonstrated by the inclusion of the Yamal-Europe/Europol Pipeline[261] through Belarus and Poland in the EU's Trans-European Networks for Energy (TEN-E) program and its identification as a project of common interest in 1994. The embracement of the diversification of supply routes was more than the recognition of the narrow corridor previously used, it was also a European endorsement

[259] See Map 3.1.
[260] See Chapter 3 -
[261] See Chapter 3 -

of Russian natural gas imports. Fears of direct supply disruptions by the RF had been discounted in the dependence debates of the late 1970s and early 1980s as possible only in the case of a major conflict and did not appear to resurface with the supply disruptions of the early 1990s between the RF and former Soviet republics.

From the first natural gas agreement to the Urengoy-Uzghorod pipeline, institutional and political relationships between West German energy companies and Mingazprom and as such the FRG and the Soviet Union had created a basis of traditions and trust. The breakup of the Soviet Union in December 1991 initially promised to unravel part of this foundation. Not only were Mingazprom's assets abroad redistributed the Soviet natural gas sector itself underwent restructuring and privatization. Organized under the Ministry of the Gas Industry (Mingazprom) in 1965, the natural gas industry became briefly part of the Ministry of Oil and Gas before breaking away and becoming Gazprom in August 1989 (Stern 1999). In February 1993, the State Gazprom Gas Concern was reorganized into the Russian joint-stock company Gazprom, or RJSC Gazprom leading to its privatization in April 1994 and the first general shareholder meeting in 1995. In 1998 Gazprom was organized into an open joint stock company. After a period of asset-stripping in the 1990s, the Russian government under Putin's leadership began to regain and consolidate its control over the natural gas sector.[262] In June 2000, Dmitry Medvedev became Chairman of the Gazprom Board of Directors and in May 2001 Alexey Miller became Chairman of the Gazprom management Committee. With the majority of its shares controlled by the Russian government and its directors deemed loyal to the Kremlin, Gazprom and by extension its projects could by the early 2000s be considered to enjoy the support of if not representing the interest of the Russian government. Gazprom was, however, not the only new actor. From the

[262] A very good account of both the privatization as well as recover y after 1998 can be found in Goldman (2010).

early 1990s onward, the European Union as well as regional initiatives shaped the search for natural gas supply routes.

European, Corporate, and Regional Support for the Baltic Sea Pipeline

The idea to transport natural gas to Western Europe using a northern or even a Baltic route existed already during Soviet times. New was, however, the momentum it gained when the European Union recognized it as a project of common interest and corporate interests identified it as a viable project. In addition, it found a strong advocate in the Finnish Prime Minister Paavo Lipponen, who presented a Northern Dimension that identified economic cooperation, especially in the energy sector, with the RF as a means to support the economic and political transition process in the RF and the northern supply route as a way to secure natural gas supplies.

Options to use and expand existing pipelines to Finland to Sweden and from there to Great Britain and the FRG had already been discussed during Soviet times (Hoegselius 2013, 214). While early attempts faltered due to Swedish hesitation, Sweden held a non-binding referendum on nuclear power and the government subsequently decided to phase out nuclear power in 1980, a trend reinforced by the Chernobyl disaster in 1986.[263] The same year, Sweden and Denmark signed an agreement for the delivery of Danish natural gas to Sweden.[264] In the 1980s, the Swedish and Finnish energy companies, Swedegas and Neste Oy, a Finnish Energy company, studied options for supplying Soviet natural gas to Sweden and western Finland (Hoegselius 2013). Russian natural gas was even considered by the United Kingdom. A

[263] This referendum took place about a year after the Three Mile Island nuclear accident. The Swedish parliament repealed this policy in June 2010.
[264] The first Danish natural gas arrived in Sweden in 1985 when the first stage from Dragor in Denmark to Helsingborg in Sweden was completed.

feasibility study conducted by J.P. Kenny on behalf of Bank of Scotland and Fiscot Ltd, and a group of companies of potential future customers, for example, studied the possibility of importing Russian gas to the United Kingdom using the European grid and a cross-channel pipeline already in 1992 (*Oil & Gas Journal* 1992).

Starting in the early 1990s, moreover, the European Union became an actor to be reckoned with regarding energy infrastructure and supply. During a meeting of the European Council in June 1990, the Dutch Prime Minister Ruud Lubbers[265] suggested that the economic recovery of Eastern Europe and the Soviet Union could be accelerated and East and West be connected through cooperation in the energy sector ("Final Act of the European Energy Charter Conference" 1994, 4). This laid the foundation for the Energy Charter Process, which led to the signing of the Energy Charter Treaty in Lisbon in December 1994.[266] On the EU level, the Treaty of Maastricht of July 2, 1992 (or Treaty on European Union) stated that the Community would contribute to the establishment and development of Trans-European Networks (TENs) in areas of transport, telecommunications and energy ("Treaty on European Union" 1992, 25).[267] In its White Paper on Growth, Competitiveness and Employment of 1994, the European Union acknowledged that "with regard to gas, Europe must come to terms with growing consumption which will increasingly (be) covered by imports from the North Sea, Algeria or Russia" and concluded that

> [i]t is essential, in the interest of economic security, to speed up construction of trans-European gas pipelines capable of guaranteeing supplies and creating avenues for long-term cooperation with the producer countries. (European Commission 1994, 31)

[265] It is therefore also known as the "Lubbers Plan."
[266] The RF signed the treaty and applied it provisionally but has not ratified it.
[267] Article 129b Title XII Trans-European Networks.

This was reflected in the Agreement of Partnership and Cooperation between the European Union and the RF of 1997 in which both sides pledged to cooperate in the "improvement of the quality and security of energy supply" and agreed upon "the introduction of a range of institutional, legal, fiscal and other conditions necessary to encourage increased energy trade and investment" ("Agreement on Partnership and Cooperation Establishing a Partnership between European Communities and Their Member States, of One Part, and the Russian Federation, of the Other Part" 1997, 21).

Institutionally, this was reflected in the adoption of a series of guidelines for Trans-European Energy Networks in June 1996 according to which the European Union would identify projects of common interests and create more favorable conditions for their completion and operability ("Decision No 1254/96/EC of the European Parliament and of the Council of 5 June 1996 Laying down a Series of Guidelines for Trans-European Energy Networks" 1996).[268] One month later, in July 1996, the European Commission proposed to include the creation and development of connections between the networks of Norway, Denmark, Sweden, Finland, Russia, and the Baltic States with the goal of setting up an integrated gas network (European Commission 1996, 11). In May 1997, the route was officially added to the list of TENs making the North-European axis a project of mutual interest ("Decision No 1047/97/EC of the European Parliament and of the Council of 29 May 1997 Amending Decision No 1254/96/EC Laying down a Series of Guidelines for Trans- European Energy Networks" 1997). Shortly thereafter, in July 1997, the European Commission agreed with seven Nordic energy companies[269] to jointly finance a $1.4 million feasibility study to analyze the economic and environmental feasibility of

[268] It included Russia-Ukraine-EU and Russia-Belarus-Poland-EU but did not include a northern route.
[269] Denmark's Naturgas A/S from Denmark; Finland's Neste Oy and Gasum Oy; and Sweden's Vattenfall Naturgas AB, Sydgas AB, Goteborg Energi AB, and Mellansvenska Naturgaskonsortiet.

a gas grid connecting Norway and Russia to western Europe (*Oil & Gas Journal* 1998; European Commission 1997; Whetton 1997). Neste Oy was selected as coordinator and Tebodin B.C., a Dutch consulting company, and Arthur D. Little from the United Kingdom to prepare the study by 1998 (Stone 1998; Whetton 1997). When the feasibility study was presented in 1998, Cristobal Burgos, the acting head of the Gas Unit at the European Commission's Energy Directorate, stated that the study provided a good basis of the "necessary commercial decisions" (Stone 1998).

By 1998 the idea of a Northern route had also been embraced by corporate interests. Two days after the European Commission's announcement to finance the feasibility study in July 1997, Neste[270] and Gazprom announced that they had signed a letter of intent in January 1997 to establish North Transgas Oy (NTG),[271] a 50-50 joint venture company, to study a route for a northern European pipeline (Whetton 1997). The *Oil & Gas Journal* (1997) reported that the companies planned to build a 45 bcm/year pipeline from Russia to Finland and from there on to Sweden and Western Europe. A Neste official was quoted saying that "[t]he plan will probably mean another big pipeline in addition to the existing gas import line" that would certainly cost several billion dollars (*Oil & Gas Journal* 1997). The feasibility study, which was reportedly completed in July 1999, identified three possible routes for a trans-Baltic natural gas pipeline to transport 21.6-35.5 bcm per year (*Oil & Gas Journal* 1999). The route would be 1,000 kilometers shorter than existing routes transporting natural gas from Western Siberia to Germany and less dependent on transit countries (*Oil & Gas Journal* 1999; *BBC Monitoring Former*

[270] In 1998, Neste Oy and Imatran Voima Oy merged and became Fortum Oy, which later split into Fortum and Neste in 2004.
[271] Headquartered in Espoo, Finland, the Chairman of the Board was Rem I. Vyakhirev, the Chairman of the Board of Gazprom, and its deputy Chairman was Jaakko Ihamuotila, the Chairman and CEO of Neste. While it was Neste and Gasum Oy that signed the contract, Gasum Oy was owned 75% by Neste and 25% Gazprom.

Soviet Union - Economic 1999). According to NTG, the pipeline would enhance "the E.U.'s objectives to create a homogeneous gas market within the E.U." (*Oil & Gas Journal* 1999). Fortum (formerly Neste) and Gazprom were joined by Ruhrgas and Wintershall in April 2001, when the four companies announced that they had decided to work on a feasibility of a major gas pipeline from Russia through the Baltic Sea to Germany, now called the North European Gas Pipeline (NEGP) project, together (*BBC Monitoring Former Soviet Union - Economic* 2001). According to Gazprom, the four companies believed that the inclusion of the project in the list of projects for the Trans-European Network would lead to the political support of the project in individual EU member states as they would be asked to give national priority to projects identified as being of common interest (Burt and Jack 1999).

While the RF drew international criticism for war crimes and human rights violations committed in the war in Chechnya in 1999, an all-time high in oil prices and increasing dependence on energy imports meant secure energy supply considerations would outweigh concerns about what happened in the North Caucasus. On October 30, 2000, ten years after Lubbers' proposal, the European Union and the RF announced the establishment of an energy dialogue[272] during a EU-Russia Summit in Paris (European Commission 2000a). The EU increasingly began to acknowledge the RF as a reliable past and future supplier of energy. On the other hand, Russian Deputy Prime Minister Viktor Khristenko told Commission President Romano Prodi that the RF was ready to increase its energy exports to the West (*Oxford Analytica Daily Brief Service* 2000). In November 2000, for example, the Commission of the European Communities noted "that despite various difficulties the USSR and subsequently Russia always

[272] Initially referred to as the Prodi Plan for Romano Prodi, the President of the European Commission, who was the driving force behind the plan.

fulfilled its supply obligations under its long-term contracts with the European Union" (European Commission 2000b, 22). The European Commission also recognized that "[w]ith regard to the major reserves located in Russia … a certain increase in dependence on that country appears inevitable" highlighting at the same time that "the continuity of supplies from the former Soviet Union, and then Russia, over the last 25 years is testimony to an exemplary stability" (European Commission 2000b, 44). A long-term strategic partnership with the RF was seen as an important step toward the security of supply. In return, the European Union would offer aid to improve "its transport networks and develop new technologies within a political framework that could [stabilize] supply and guarantee investment" (European Commission 2000b, 51).

Pursuing the Energy Dialogue more concretely, EU and Russian experts worked from February until October 2001 in four working groups to analyze areas of common interests in the energy sector, including: energy strategies and balances, infrastructure and technologies, investments, and energy efficiency and environment (Directorate-General for Energy 2011, 8–9). In a joint statement released after the next EU-Russia Summit on October 3, 2001, both sides recognized certain new transport infrastructures as being of "common interest" including the northern trans-European gas pipeline[273] (European Council 2001, 12–13). Such cooperation happened despite the natural gas pricing and debt disputes between the Ukraine and the RF. In the same month, the Ukrainian prime minister Anatoliy Kinakh and Russian prime minister Mikhail Kasyanov signed three agreements settling the debt issue and including an intergovernmental agreement on additional measures to safeguard the transit of natural gas through Ukraine (*BBC Monitoring Former Soviet Union - Political* 2001b).[274] In December

[273] For gas, they also identified the Yamal-Europe gas pipeline as well as the development of the Shtokman field as being of "common interest."
[274] Stern (2005, 86–102) gives a good account of the disputes of the RF with Ukraine, Belarus and Moldova.

2001, the European Commission officially proposed to revise the guidelines for Trans-European Energy Networks of 1996 ("Decision No 1047/97/EC of the European Parliament and of the Council of 29 May 1997 Amending Decision No 1254/96/EC Laying down a Series of Guidelines for Trans- European Energy Networks" 1997). The proposal listed Russian natural gas through the North TransGas-Pipeline from St. Petersburg through the Baltic Sea to continental Europe as an important planned or considered natural gas supply project for Europe (European Commission 2001, 41).[275] Subsequently, the European Parliament and Council replaced the existing guidelines for Trans-European Energy Networks in 2003 and the list of projects of common interest included the North European Gas Pipeline: Russia, Baltic Sea, Germany ("Decision No 1229/2003/EC of the European Parliament and the of the Council of 26 June 2003 Laying down a Series of Guidelines for Trans-European Energy Networks and Repealing Decision No 1254/96/EC" 2003, 27).

It is in this context that the question of limits on quantities of natural gas imports should be considered. Interestingly, the RF had raised the issue. A statement released after an EU-Russia Summit on November 11, 2002 in Brussels, for example, pointed out that the RF had repeatedly expressed its concern regarding the existence of legal requirements within a possible EU or Member State limiting natural gas imports from a single non-EU supplier to 30% of consumption (European Council 2002). The European Commission maintained that there was "no such requirement on quantitative limits for importing different kinds of fossil fuels from Russia" (European Council 2002, 13). The RF asked the EU for an indication that its opening up

[275] In the version published in the Official Journal of the European Communities ("COM(2001) 775 Final - 2001/0311(COD) Proposal for a Decision of the European Parliament and of the Council Amending Decision No 1254/96/EC Laying down a Series of Guidelines for Trans-European Energy Networks" 2002), the project is, however, not listed by company name but rather under h03 Nordic Gas Grid: the north European gas pipeline: Russia, Baltic Sea, Germany, and project (h) stands for developing gas transport capacity (gas supply pipelines) needed in order to meet demand and diversify supplies from internal and external sources, as well as supply routes.

of the electricity and natural gas markets to competition would not be conceived to limit Russian supplies in the EU (European Council 2002, 14).

Two years later, the EU saw its biggest enlargement when ten new countries among them many former Eastern Bloc countries, including the Czech Republic, Estonia, Hungary, Latvia, Lithuania, Poland, the Slovak Republic and Slovenia, joined in May 2004. Prior to the enlargement, on April 27, 2004, the European Union and the RF acknowledged that the enlargement would offer opportunities for strengthening their strategic relationship and increase the interdependence between them to new levels (European Council 2004a, 1).[276] Both sides also recognized the fundamental importance as well as growing potential for cooperation on energy. The EU, moreover, once again confirmed that it did not impose any limits on imports of fossil fuels (European Council 2004a, 3).[277]

By 2004, Russian natural gas had once more become the solution, this time, even making limits on imports inconceivable. In December 2004, when evaluating the Energy Dialogue from 2000 to 2004, the EU recognized that "Russia can help the EU to diversify its fossil fuel supplies" and stated that "[i]t is therefore inconceivable that the EU should impose quantitative restrictions on its imports" (European Commission 2004, 7). Moreover, the EU recognized that the gas sector, on which the EU would become most dependent in the future, as particularly vulnerable and stated that "Russia should remain the EU's principal external supplier."[278]

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[276] On the same day, April 27, 2004, the EU and the RF also signed a Protocol to the Partnership and Cooperation Agreement (PCA) extending it to the new EU members. They highlighted the importance of their strategic partnership again at the 14th EU-Russia Summit held on November 25, 2004 in The Hague (European Council 2004b, 2).

[277] The EU also recognized that long-term contracts had and would continue to play an important role in ensuring stable and reliable supplies of Russian natural gas (European Council 2004a, 3).

[278] This was based on the assumption that the share of gas of total energy would rise from one fifth to one third between 2000 and 2030 and from one third to one half for electricity. By 2030, the EU estimated, 80 percent of its gas needs could be covered by imports and, therefore, even if the 50% share was maintained the volume of Russian natural gas imports was bound to increase.

European energy supply policy was, the EU concluded, "less aimed at maximi[z]ing energy autonomy or reducing dependence on imports, more at reducing the risks associated with the latter" (European Commission 2004, 9). Turning to Russia, "on which dependence is inevitably going to rise," cooperation, the EU surmised, had to "aim to establish a relation of constructive interdependence."[279] The EU had come from recognizing the Soviet Union's and subsequently the RF's reliability as a supplier of natural gas to embracing an inevitable increase of imports of Russian natural gas, emphasizing that it did not impose any restrictions on quantities imported, and focusing on risk reduction. The latter was reflected in the recognition of the North European Gas Pipeline as a project of common interest.

It was, however, not only the European Union and corporate interests that saw value in the North European Gas Pipeline. Regional actors, foremost among them Finland, contributed to the recognition of the strategic value of the pipeline for securing future natural gas supplies on an EU level. Based on the initiative of Finnish Prime Minister Lipponen, the pipeline became already in the late 1990s part of a bigger "Northern Dimension." In September 1997, Prime Minister Lipponen presented the concept of a collective EU policy for the "Northern Dimension" during a speech at the international conference on the future of the Barents/Euro-Arctic region in Rovaniemi (Finland) (Sergounin 2000, 59–60).[280] Prime Minister Lipponen would subsequently argue that common policy decisions were necessary to address major issues. Lipponen would furthermore state that the EU would depend on the RF for up to 70 percent of its natural gas and asked such questions as "how will the pipelines be built and financed?" and "where will they end?" (Barry 1998). In December 1997, one month after Finnish prime minister Paavo Lipponen

[279] This would include the establishment of predictable trade rules, the improvement of networks and the encouragement of investments through the promotion of a more stable and transparent legal framework and the encouragement of key reforms in the Russian energy sector.
[280] The concept was first developed at the time of the Finnish-Russian bilateral treaty in 1992 (Burt and Jack 1999).

had presented the "Northern Dimension" to the EU (Svahn 1999, 8), the European Council requested the European Commission to prepare an interim report on the subject (European Parliament 1998). In its report presented to the European Council in December 1998 (European Parliament 1999c), the European Commission called for a feasibility study on the use of the energy sources, especially natural gas, in northwestern Russia and pointed to EU's dependence on external energy sources (European Commission 1998). The European Council also recognized that while the potential for the extraction of oil, natural gas, and mineral resources was enormous, substantial improvement of the energy and transport infrastructure was required (European Parliament 1999c). At the next meeting of the European Council in June 1999, the EU adopted a common strategy on Russia that called for

> cooperation with Russia in regional and cross border cooperation and infrastructure … by working more effectively with Russia in the various fora for regional cooperation (CBSS, BSEC, Barents Euro-Arctic Council),[281] and by enhancing cross-border cooperation with neighbouring Russian regions…, especially in view of the EU's enlargement and including in the framework of the Northern Dimension. (European Parliament 1999a)

Under the Finnish presidency of the European Council, a foreign ministers conference on the Northern Dimension was held in Helsinki in November 1999. Based upon its conclusions, the European Council invited the European Commission to prepare an Action Plan for the Northern

[281] The CBSS is the Council of the Baltic Sea States and BSEC (or BSREC) stands for Baltic Sea Region Energy Cooperation. The Council of the Baltic Sea States (CBSS), an intergovernmental regional cooperation platform had been established in 1992 under the leadership of the Foreign Ministers of Germany and Denmark Hand-Dietrich Genscher and Uffe Ellemann-Jensen in response to the geopolitical changes in the Baltic Sea region after the end of the Cold War (Council of the Baltic Sea States n.d.). Already in 1997, the CBSS took "note of the various studies on the possible interconnection of various energy networks" while also pointing out "that decisions on investments will be taken by the energy enterprises" (Council of the Baltic Sea States 1997, 5). When the European Council adopted the "Northern Dimension" in 1998, the Foreign Ministers of the CBSS welcomed it because it would strengthen ongoing activities, including in the field of energy (Council of the Baltic Sea States 1998a). During their CBSS summit in the same year, the heads of government, moreover, also underlined the importance of providing credits for projects of relevance to regional cooperation and recognized the need to cooperate with Poland, the Baltic States as well as Russia (Council of the Baltic Sea States 1998b, 2).

Dimension (European Parliament 1999b). The Action Plan endorsed in 2000 (European Council 2000; European Parliament 2000) called for an inventory of regionally relevant energy projects and financial sources to avoid conflicts and duplication that would describe the relevance of the projects with respect to EU, national and regional energy policies (European Council 2000, 10). With regard to how to enhance security of gas supply and the most economical way to connect the Baltic Sea Region, the Action Plan concluded that the TEN-E may be used. At the time, it was concluded that the Northern Dimension sought to integrate the RF into western Europe "to minimize the potential for security unrest that could develop if Russia were left to muddle through its democratization process alone" and that it mostly tried to coordinate the financing to develop Russia's natural resources (Svahn 1999, 8). As Lipponen stated himself in 1999 "[t]he basic aim is to integrate Russia into Europe as a democracy and market economy. This is the strategic goal" and the pipeline was part of the program from early on (Burt and Jack 1999). After Russian-Finnish talks January 2001, Prime Minister Lipponen stated that the plan of building a gas pipeline from Russia to Europe through Finnish territorial waters along the Baltic Sea was one of the priority projects for Russia and Finland (*BBC Monitoring Former Soviet Union - Political* 2001a). This thus preceded the proposed revision of the guidelines of December 2001 and the recognition of the NEGP as a project of common interest when the existing TEN-E guidelines were replaced in 2003.

Notwithstanding geopolitical events in Chechnya and natural gas supply disputes between the RF and former Soviet republics, instability in the Middle East, the forecasted increase in natural gas demand as well as the historical reliability of the Soviet Union led to the recognition of Russian natural gas as the solution. The diversification of supply routes by adding a Northern route would address the instability caused by supply disputes and thus reduce the

risks associated with increasing Russian natural gas import dependence. Moreover, the North European Gas Pipeline became a European tool for integrating the RF and support its economic and political transition with a constructive interdependence in mind. Prime Minister Lipponen was an early and ardent supporter of the Baltic Sea pipeline, who not only introduced the EU to the strategic significance of the "Northern Dimension" but also lobbied fellow statesmen, including, Chancellor Schroeder, for it.

German Support for the North European Gas Pipeline

At the beginning of February 2001, prime minister Lipponen wrote Chancellor Schroeder that "Germany could share our opinion about the special significance of the pipeline through the Baltic Sea" (original letter BKGS/ZA:PK, Januar-März 2001: Paavo Lipponen an Gerhard Schröder, 1. Februar 2001 quoted in Schoellgen 2015, 727).[282] According to Schoellgen (2015, 272), it took some time until Chancellor Schroeder gave in to the urging of Germany's neighbors and German companies and began to officially back the project. In April 2001, Chancellor Schroeder (2001; for an English translation see *BBC Monitoring European - Political* 2001) outlined his vision of Germany's policy toward RF in *Die Zeit*, a weekly national newspaper. According to Schroeder, "German foreign policy is European foreign policy" and this applied especially to *Ostpolitik*, which had always played a key role for Germany. Schroeder clarified that Germany did not want to hide behind Europe but that it excluded any special path for Germany with regard to its relations to the RF. Given the FRG's geographic location and history, however, Schroeder identified the FRG as an impulse-giver and engine ("Impulsgeber

[282] German original, "dass Deutschland mit uns die Auffassung über die besondere Bedeutung der Gasleitung durch die Ostsee teilen könnte."

und Motor") in the EU's foreign policy toward the RF. Schroeder subsequently pointed out that while German companies had continued their economic engagement even during difficult times, future development of economic relations would depend upon an improved climate for trade and investment, a reduced bureaucracy, and the achievement of reliable rule of law. This, Schroeder continued, applied especially to the energy sector in which the German economy had traditionally been heavily involved. However, Schroeder also explained that the energy policy dialogue with Russia proposed by the European Commission should mainly change the framework for energy investments. For example, decisions about the routes of new pipelines should be reserved for those companies that make them together with their Russian partners based on economic rationales.

It is noteworthy, that Schroeder's statement at the end of the month was followed by the announcement that Fortum, Gazprom, Ruhrgas and Wintershall had agreed to work on a feasibility study for the NEGP. However, December 2001 also saw the proposal to revise the guidelines for the Trans-European Networks, which would lead to a revision of the guidelines in June 2003 that added the NEGP to the list of projects of common interest ("Decision No 1254/96/EC of the European Parliament and of the Council of 5 June 1996 Laying down a Series of Guidelines for Trans-European Energy Networks" 1996; "Decision No 1229/2003/EC of the European Parliament and the of the Council of 26 June 2003 Laying down a Series of Guidelines for Trans-European Energy Networks and Repealing Decision No 1254/96/EC" 2003). Thus, while one could interpret Schroeder's statement as defending the companies' right to determine the route based on economic and technical feasibility, NEGP had by the end of the year been put on the list of projects of common interests that was formally cemented in 2003.

In April 2002, the second Petersburger Dialog as well as intergovernmental consultations were held in Weimar without significant reference to the pipeline. However, by the time of the 6th intergovernmental meeting October 8-9, 2003[283] in Yekaterinburg, Chancellor Schroeder and President Putin both expressed their support for the North European Gas Pipeline (*BBC Monitoring Newsfile* 2003).[284] Both expected a declaration of intent for the construction of the pipeline to be signed in the near future (Jack 2003; *Daily News Bulletin* 2003a). Schroeder, moreover, stated that it was the job of the politicians of both countries to encourage economic cooperation between them (*Daily News Bulletin* 2003a). One day later, on October 10, 2003, Gazprom and Ruhrgas celebrated thirty years of Soviet and Russian natural gas deliveries to Germany in St. Petersburg.[285] Burkhard Bergmann, the Chairman of the board of Ruhrgas and member of the board of E.ON was quoted saying that

> [o]ur business has been built on a long-term basis and mutual benefit. That is why we were able to successfully survive the period of struggle between the East and the West, oil crises and the dismantling of the Soviet Union. The Russian gas industry has been very successful in the creation of an infrastructure for the transport of gas to Europe. (*Daily News Bulletin* 2003b)

On the occasion, the companies were expected to agree to fund a feasibility study and express their support for the construction of the pipeline through the Baltic Sea (Jack and Ostrovsky 2003). Despite the public statements made in support of the projects, the hopes of

[283] In 2003, the Petersburg Dialog was held on April 11 in St. Petersburg.
[284] On the occasion German Minister of Foreign Affairs Joschka Fischer and Russian Foreign Minister Igor Ivanov signed several important agreements: 1) an intergovernmental agreement on the transit of military property and personnel through the RF via Kazakhstan and Uzbekistan to Afghanistan (a first for a NATO member), 2) a joint statement on facilitating trips by Russian and German citizens, 3) an agreement for German assistance in eliminating Russian nuclear weapons, 4) a joint statement on continuing the program to increase the qualifications of leading economic personnel in Russia, 5) a memorandum on mutual understanding between the Russian and German railway companies cooperate in the movement of passengers and cargo, and 6) an agreement on cooperation to enable Russian studies in Germany and vice versa (*BBC Monitoring Newsfile* 2003).
[285] The first Soviet natural as arrived in the FRG on October 1, 1973.

Schroeder and Putin, however, were not met when the signing of an agreement was postponed reportedly due to disagreements between Gazprom, Ruhrgas and Wintershall (*Oxford Analytica Daily Brief Service* 2003b). The next day, Russia's Energy Minister Igor Yusufov said that he was seeking two to three additional foreign partners to finance the pipeline. Ruhrgas officials meanwhile confirmed that they had agreed to help finance a feasibility study and expressed their strong interest in partaking in its construction pending a definite assessment of its viability (Jack 2003).

While Schroeder and Putin met in Yekaterinburg, the offices of Yukos, a Russian oil and gas company, were raided by Russian police and it was reported that German business had expressed concern about the abuse of the judicial system in a personalized struggle between Putin and Mikhail Khodorkovsky, the CEO of Yukos (*Oxford Analytica Daily Brief Service* 2003b). Mikhail Khodorkovsky's subsequent arrest and charge with tax evasion and fraud on October 25, 2003 as well as the breakup of Yukos was internationally criticized. Subsequent to the summit, Chancellor Schroeder was heavily criticized for his muted response to the breakup of Yukos as well as Chechnya, where presidential elections had been held on October 5, 2003 that led to an overwhelming majority for the RF's favorite Akhmat Kadyrov (*Oxford Analytica Daily Brief Service* 2003b). Schroeder reportedly raised the issues in private conversations (Dempsey 2005) with Putin, but appeared to agree to disagree. Without being able to sway Putin's opinion on these matters, Schroeder seemed to focus on their common and mostly economic interests instead, including the pipeline.

In January 2004, Prime Minister Kasyanov signed a resolution authorizing Gazprom to build the NEGP ("Russia Wants Access to Europe" 2004). By calling on the energy ministry and Gazprom to prepare the necessary documentation and the State Construction Committee and

Natural Resources Ministry to begin studies the RF took a proactive stance. In Europe, too, the project took on more concrete forms. In early February, Russian Deputy Prime Minister Viktor Khristenko announced after talks with the European Commission's Director General for Energy and Transport, Francois Lamoureux that the European Union had agreed to invest 3 million euros (about 3.75 million dollars) in a new feasibility study ("One Way: Gazprom Goes For Direct Access To Europe" 2004; *BBC Monitoring Former Soviet Union* 2004a). A decision on the cost and route of the North European Gas Pipeline was expected by the end of the year ("One Way: Gazprom Goes For Direct Access To Europe" 2004; "Russia's North Europe Gas Pipeline Moves" 2004). Seppo Aho, the vice president of gas at Fortum, said the feasibility study prepared in 1998-9 "included not only the undersea pipeline, but also other options including lines to Finland and Sweden" but "[t]he outcome of that study was that the Baltic Pipe would be the most feasible" ("Russia's North Europe Gas Pipeline Moves" 2004). Meanwhile, Wintershall described itself and Ruhrgas as "logical and important partners for Gazprom in such a project" arguing that growing European gas demand made it "imperative in the long-term to add additional transport routes from Russia westwards" ("Russia's North Europe Gas Pipeline Moves" 2004). The pipeline was also discussed during a meeting between Russian Prime Minister Mikhail Kasyanov[286] and E.ON Chief Executive Wulf Bernotat and Chairman of the Management Board of Ruhrgas Burckhard Bergmann mid-February 2004.

This happened in the backdrop of the escalating natural gas debt and pricing disputes between Belarus and the RF that culminated a supply disruption in February 2004, which if anything confirmed the need for an alternative route. While President Putin clearly stated in his

[286] Shortly thereafter, President Putin dismissed Kasyanov and replaced him with Deputy Prime Minister Viktor Khristenko.

annual address to the Federal Assembly[287] on May 26, 2004 that with regard to energy export the construction of the North European Gas Pipeline was most important, the terminology used by Schroeder and Putin together still remained rather general. During a highly publicized visit of Chancellor Schroeder to Moscow, for example, Chancellor Schroeder and President Putin issued a joint statement on July 8, 2004 on the expansion of business ties in the energy field between the FRG and the RF. They recognized that,

> [t]he development of gas resources in Russia and the expansion of gas infrastructure have key significance in covering additional demand on the natural gas market, and also for ensuring the reliability and security of the gas supply in the Federal Republic of Germany and Europe as whole. (Putin 2004)

Both leaders welcomed the intention of Gazprom and E.ON to work together to extract natural gas and produce electrical energy, construct a gas pipeline through the Baltic Sea, expand the infrastructure for selling Russian natural gas in the FRG and Europe as a whole, and realize projects in gas electric power stations in Europe. Emphasizing the great importance both attached to the cooperation on the corporate level, they concluded that,

> [t]he governments of both countries will work closely on issues concerning these projects, and regularly exchange information on their realization, in order to minimize non-commercial risks as much as possible, and also to assist in removing obstacles on the European level that hinder successful realization of these projects. (Putin 2004)

On the same day and in the presence of Schroeder and Putin, Gazprom and E.ON's executives, Alexey Miller and Wulf Bernotat, signed a memorandum of understanding on the cooperation between their companies in gas supply as well as the extraction of natural gas in the RF, joint gas transport projects, including the North European Gas Pipeline, and sale of Russian

[287] The Federal Assembly consists of the State Duma, the lower house, and the Federation Council, the upper house.

natural gas in the FRG and Europe and power generation in the RF (*BBC Monitoring Former Soviet Union* 2004b).[288] Miller was quoted saying that "cooperation comprises all the links in the chain from extraction to the end consumer" and that "[n]o doubt, a new step has been made to boost our cooperation" (*BBC Monitoring Former Soviet Union* 2004b). Meanwhile Bernotat stated that he would have toasted "to effective and successful cooperation between (the) companies" had there been champagne.

In September 2004, the international community uniformly expressed its horror and condemnation of the Beslan school hostage crisis (or Beslan massacre) carried out by Chechen separatists that left more than three hundred people, the majority of which were children, dead. In the aftermath of the hostage crisis, Schroeder said that in a situation that required solidarity, he did not "want to give advice about how the conflict in Chechnya should be settled" adding that he had always called for a political solution (*BBC Monitoring European* 2004a). Although Schroeder did not publicly criticize Putin during his visit to Russia at the end of August, a foreign policy spokesman of the SPD said he was certain that "frank words" were spoken in private talks (*BBC Monitoring European* 2004b). It is furthermore noteworthy that Schroeder enjoyed bipartisan support. A foreign policy expert of the CDU, while maintaining that Schroeder's statements "could have been a bit clearer," for example, warned against quarrels over the issue at the time (*BBC Monitoring European* 2004b).

Then toward the end of 2004, Russo-Ukrainian relations deteriorated after protests against the victory of pro-Russian Viktor Yanukovych in the run-off vote in the Ukrainian presidential election on November 21, 2004 sparked the Orange Revolution that brought pro-

[288] Russian Marta and German REWE Zentral also signed a framework agreement for a joint venture, and AFK Sistema and Siemens AG signed a framework agreement on strategic partnership and cooperation.

Western Viktor Yushchenko to the presidency. As relations between Ukraine and Russia remained tense, however, political and corporate actors in the FRG and the RF were working together to realize the NEGP. In early February 2005, for instance, Miller, Bernotat, and Bergman met again to discuss the progress made based on their memorandum of understanding, especially with regard to the NEGP (*NEFTE Compass* 2005). Then, after a meeting between Russian business representatives and Chancellor Schroeder in mid-February, Miller stated that "[t]he North TransGas Pipeline will be launched in 2010" as well as that the project would make an increase in gas supplies to Germany and other EU members possible (*Daily News Bulletin* 2005). In mid-May, moreover, Fortum announced that its subsidiary Fortum Heat and Gas Oy would sell its 50 percent stake in North Transgas to Gazprom, making Gazprom the sole owner of the company. This happened in the context of the escalating gas price dispute between Ukraine and Gazprom after Gazprom had informed Ukraine in March that it would increase prices to market levels in 2006.

On September 8, 2005, Chancellor Schroeder and President Putin met in Berlin to discuss aspects of Russian-German cooperation and approved a joint statement on energy cooperation. The same day, Alexey Miller of Gazprom, Wulf Bernotat of E.ON and Jurgen Hambrecht of BASF signed a letter of intent to build the NEGP in the Intercontinental Hotel in Berlin in the presence of Schroeder and Putin. Less than three months later NEGP,[289] an international consortium for the construction and operation of the pipeline, was incorporated in Zug, Switzerland on November 30, 2005. The agreement was seen as binding the FRG and the RF

[289] The original shareholders were OAO Gazprom (now PJSC Gazprom, 51%), E.ON Ruhrgas AG (now E.ON SE, 24.5%), and BASF SE/Wintershall Holding GmbH (now Wintershall Dea GmbH, 24.5%). They were joined by Gasunie in 2007 (officially registered in 2008) and Gas de France (subsequently GDF Suez, now ENGIE) in 2010. Gazprom now holds 51%, Wintershall DEA 15.5% (prior 20%), PEG Infrastructure, a subsidiary of E.ON, 15.5% (prior 20%), Gasunie 9%, and ENGIE 9% of the shares.

even closer together than could have been imagined thirty years earlier when Soviet natural gas first arrived in Germany (Dempsey 2005). During a news conference after the signing of the agreement, Schroeder stated that the agreement had "a truly historic quality" and that it would secure Germany's energy supply for decades (*New York Times* 2005).

The signing of the agreement came ten days before the Bundestag election on September 18, 2005 following the premature dissolution of the Bundestag in July. Advisers to Angela Merkel, the Chairman of the CDU, maintained with regard to the agreement that Schroeder had "been more interested in promoting the interests of German industry at the expense of raising human rights issues, particularly regarding Chechnya" (Dempsey 2005). However, Gernot Erler, the foreign policy spokesman and Russia expert of the SPD, stated that Schroeder had discussed these issues during private meetings with Putin at which notetakers were rarely present. According to Erler, "Schroeder did not want to raise these issues publicly" and "knew what he could say privately and publicly." Of course, however, Erler added, Schroeder had defended Germany's business interests as "part of his job" (Dempsey 2005). While conservatives maintained that they would raise human rights violations, the rule of law, Chechnya, and press freedom with Putin when elected, Wolfgang Schaeuble, the CDU's foreign policy expert acknowledged that he had not raised the issue of Chechnya when he returned two weeks earlier from a trip to the RF stating that "[t]he issue is so complicated." In addition, and despite of the CDU's initially critical position toward German involvement in the pipeline, Schaeuble said that "[t]he decision has been made: The pipeline will be built" (Dempsey 2005) – echoing Chancellor Schmidt's statement regarding the Urengoy-Uzghorod pipeline in July 1982 (*New York Times* 1982e). This promised the continuation of government support of the pipeline no matter the outcome of the Bundestag election.

The end of the Cold War paved the way for the normalization of relations between both the EU and the FRG and the RF. From the early 1990s, the EU pursued strategic and economic cooperation, especially in the energy field, to help in the economic recovery and democratization of the RF and secure its energy supplies. From early on, the EU, regional actors, first and foremost Finland, as well as corporate interests identified a Northern route as a worthwhile project. At this time, it is difficult to judge what role the government of Chancellor Kohl played within the EU during the 1990s and much attention and criticism has focused on the support the NEGP received from his successor, Chancellor Schroeder. When Schroeder became Chancellor in 1998, he made clear that he would pursue a close strategic partnership with the RF. In doing so, however, he can be said to have been in step with the EU as well as in keeping with the *Ostpolitik* of his social democratic predecessors Chancellors Brand and Schmidt. Whether and, more specifically, to what extent a debate on the question of import dependence occurred within the government of the FRG can currently not be determined. On the EU level, however, a clear shift towards embracing Russian natural gas happened in the late 1990s and early 2000s and, in public, Chancellor Schroeder subsequently – perhaps more strongly and repeatedly – similarly supported cooperation in the energy field between the FRG and the RF. It is not uncommon for business representatives to travel with political leaders but the presence of Schroeder and Putin on several occasions of meetings between Gazprom and German energy companies and their meetings with company representatives attest to their strong interest in and support of the NEGP. The public political support for the pipeline in early October 2003, however, was nevertheless not a guarantee for success and Gazprom and E.ON only signed the memorandum of understanding in July 2004. Geopolitically, the project's supporters, if anything, gained momentum from the natural gas disputes between Gazprom and its neighbors and criticism of

Russia's actions in Chechnya and in the context of the Orange Revolution in Ukraine did not hamper cooperation with the RF when it came to natural gas. In sum, while Chancellor Schroeder strongly supported a strategic partnership with the RF, the NEGP and as such the interests of German energy companies, he cannot be said to have been a forerunner in doing so. Neither, however, can it be denied that the existing long-term natural gas trade relationship between the FRG and the Soviet Union had laid the foundation for what came to be known as Nord Stream in 2007.

Chapter 7 - Conclusion

This dissertation has shown that the energy weapon needs to be assessed in terms of the influence that the mere the existence of the conditions for its effective application has on the foreign policy of the import dependent state. While it is important to analyze reactions of import dependent countries to specific actions of the RF, for example, the Georgian-Russian War in 2008, as well as their responses to the direct application of the energy weapon or threat thereof, the question is whether the mere existence of the conditions for the use of energy as a foreign policy tool leads to the alignment of the foreign policy of the dependent state with the energy supplying state in general.

Chapter 2 and 3 provided a historical overview of Western European imports of oil and natural gas and their use as a foreign policy tool by the supplying states. Chapter 2 on the emergence of oil as an important source of energy and rise of Western European import dependence showed that while commercial interests underlay some of the oil disputes and supply disruptions, (geo)-political dimensions of the Russian use of oil as a foreign policy tool to influence both commercial and political decisions in the former Soviet republics are difficult to dismiss. Chapter 3 presented the historical development of the East-West natural gas trade, major Russian natural gas export infrastructure as well as Russian natural gas price disputes and supply disruptions. Together with inflexible characteristic of natural gas market and natural gas statistics, Chapter 3 laid the foundation for understanding why new natural gas supply agreements as well as the construction of new Russian natural gas supply pipelines have received great scrutiny.

Chapter 4 presented the dependence and interdependence interpretations of the European-Russian natural gas trade relationship as well as evaluations of the use of natural gas

as a foreign policy tool by the RF. The latter include the use of natural gas for incentives as well as punishment, strategic bargaining approaches and the analysis of the actual impact of the use of natural gas as a foreign policy tool. The effectiveness of the energy weapon itself has been analyzed in terms of individual, structural characteristics, and geographic differences as well as in a wider political context. I then used the existing theories of economic power as well as the notion of anticipated foreign policy decisions to explain how natural gas import dependence comes to influence the foreign policy of the importing state. Most fundamentally, state A derives economic power from its trade with state B, when state B values its trade with state A to such a degree that it will give state A certain military, political or economic advantages to avoid a disruption of trade with state A (Hirschman 1945) or, as Keohane and Nye (1977), surmised, power is the ability of an actor to get others to do something they would otherwise not do. Moreover, and based on the notion of anticipation, I argued that the dependent state modifies its behavior in mere *anticipation* of state A's demands, wishes or proposals (Knorr 1973; 1975) in order to maintain security of supply. Based on this understanding as well as the specific characteristics of the natural gas market, I proposed that a greater Russian natural gas import dependence leads to greater degree of foreign policy alignment or *Affinity* of the energy import dependent state with the exporting state.

Chapters 5 and 6 then analyzed this proposition quantitatively and qualitatively. Chapter 5 consisted of a time-series cross-sectional analysis of 19 European countries from 1995 to 2013 as well as a time-series analysis of Germany from 1979 to 2012. The time-series cross-sectional analysis confirmed that a higher level of Russian natural gas import dependence leads to a greater foreign policy alignment of the import dependent state with the RF. The time-series analysis of Germany similarly corroborated that natural gas import dependence increases the

Affinity between the import dependent state and the RF. A higher level of both, Russian natural gas imports and a greater importance of Russian natural gas imports to the economy of the importing state, leads to a greater foreign policy alignment of the import dependent state with the Soviet Union or the RF, respectively. I thus conclude that the energy weapon has a systemic impact on the foreign policy of the import dependent state by inducing foreign policy alignment and deterring foreign policy decisions that might alienate the RF. The energy weapon not only affects the foreign policy of states directly affected by a supply disruption or threat thereof but natural gas import dependent states that have made their own judgment about the supplying state's preferences and resolve in general.

Next, a series of qualitative studies examined the position of the government of the FRG as represented by the Chancellor and his or her government toward the Soviet Union and the Russian Federation as well as Russian natural gas imports and how it changed as they increased. The retroactive application of the NATO pipe embargo of November 1962 demonstrates how, in the absence of natural gas imports, security considerations were weighted against and came to prevail over the economic interest of Mannesmann, Hoesch and Phoenix-Rheinrohr and the impact that the retroactive application of the embargo would have on the foreign and economic relations with the Soviet Union. The Adenauer government neither made the decision to apply the NATO pipe embargo of November 1962 retroactively to pipe contracts signed in October 1962 immediately nor lightly. However, in the context of the FRG's accession to NATO in May 1955, the building of the Berlin Wall in August 1961, the Cuban Missile Crisis in October and November 1962 and as such the Cold War as well as the absence of Russian natural gas imports, the Adenauer put the FRG's loyalty to NATO, as guarantor of its security, first and when

threatened by political opposition even reverted to a procedural trick to bring the embargo into effect.

The role of Soviet natural gas changed in lieu of the negotiations for the first natural gas agreement of February 1970. The analysis of the negotiations leading toward the conclusion of the first natural gas agreement demonstrates how the Ministry of Foreign Affairs, the Ministry of Economic Affairs and Chancellor Brandt from early on identified the natural gas negotiations as a catalyst to improve trade in general as well as bilateral relations between the FRG and the Soviet Union and took an active role in the negotiations. The Soviet natural gas imports themselves were seen as an opportunity to diversify natural gas supply rather than raising concerns of dependence. However, once negotiations had opened up prospects for a new trade agreement as well as political rapprochement, the Brandt government had a political stake in their successful conclusion. Even without existing Soviet natural gas imports, the negotiations of the first natural gas agreement obtained political significance as their failure portended to negatively impact the prospects of improving bilateral relations between the FRG and the Soviet Union. From the initial stages of natural gas trade, economic and political aspects were very closely intertwined.

After the increases in the supply of Soviet natural gas in the first half of the 1970s, the prospect of building the Siberian Natural Gas pipeline dedicated to delivering Soviet natural gas to the West sparked a dependence debate. In the context of the positive experiences associated with Détente and the successful first Soviet natural gas deliveries as well as the rattling experiences of the Yom Kippur War, the outbreak of the Iranian Revolution, Soviet natural gas came to be seen as a source of diversification of supply sources once natural gas had become a viable source of energy. While the pipeline would increase Soviet natural gas imports to 30

percent of total imports, a now agreed upon self-imposed ceiling, the associated risk was considered acceptable given increased interconnectedness, flexibility of import contracts with other suppliers, increased reserves, and proven reliability of the Soviet Union as a supplier. In addition, an indefinite supply disruption could only be envisaged in the case of open conflict. Once Chancellor Schmidt had embraced the pipeline his support did not falter despite of geopolitical events – the Soviet invasion of Afghanistan and the declaration of martial law in Poland – nor U.S. opposition and sanctions against the pipeline. While the FRG certainly did not shift alliances, the Schmidt government would not be the last to voice criticism but realistically agree to disagree with the Soviet Union's foreign policy and concentrate on mutual economic interests.

Finally, the end of the Cold War not only led to a normalization of relations between former adversaries but also the eager identification of more opportunities for cooperation, especially in the energy sector. Given unrest in the Middle East and gas pricing and transit disputes between the RF and newly independent states following the demise of the Soviet Union, the North Stream pipeline was recognized as a way to secure reliable natural gas supplies, diversify supply routes, and integrate and stabilize the RF both economically and politically. Supply disruptions targeting the Western European recipients of Russian natural gas directly had already been discounted in the late 1970s and by 2004 restrictions on quantities had become inconceivable. Moreover, the idea of a Northern route was embraced by the European Union and gained strong regional supporters even before Chancellor Schroeder became its champion. Comparable to his social democratic predecessor, Schroeder endorsed the Nord Stream pipeline and agreed to disagree when it came Russian actions in Chechnya or the Orange Revolution.

While Schroeder's vocal support for the pipeline was not a guarantee for a timely conclusion of the agreements, he clearly prioritized the strategic relationship with the RF.

The findings of this dissertation have important theoretical implications. Most generally, I demonstrate that rather than analyzing the reactions of natural gas import dependent states to direct supply disruptions or the threat thereof or to specific foreign policies of the RF, it is important to understand the systematic impact that Russian natural gas import dependence has on the foreign policy of the importing state through a *silent* mechanism of foreign policy alignment. Future studies could take these insights further by incorporating different levels of issue salience for both the importing and exporting state, defining more quantifiable measures of foreign policy alignment or *Affinity* and/or levels of political criticism, and incorporating signaling effects.

There are also important policy implications. The quantitative analysis has shown that the dependence thesis, which maintains that the RF derives military, economic, and political benefits from the dependence of individual states on Russian natural gas, is not without merit and that past and current concerns regarding the impact of increases in Russian natural gas imports on the foreign policy of the importing state cannot be dismissed out of hand.

Following the tenets of the interdependence thesis, Gérôme Guillet, a French banker and an expert in natural gas, said in 2006 that "[p]ipelines are like kids in a marriage … The seller cannot sell his gas elsewhere; the buyer cannot buy gas elsewhere. The two sides are welded together" (quoted in Landler 2006). A realist perspective would argue that such marriages work best "when both partners have no illusions about changing the other" (Landler 2006). Muted criticism and/or the willingness to agree to disagree regarding controversial foreign policies of the RF, as for example in the case of the invasion of Afghanistan in 1979 or human rights

violations in Chechnya, might just be the realization that the Soviet Union's or Putin's position on matters silent to them will not change.

Chancellor Angela Merkel's support of Nord Stream 2 and her criticism of U.S. sanctions against the nearly completed pipeline present a continuation of her predecessor's positions from Brandt to Schroeder. Merkel's continuing support of the project in light of the recent arrest on January 17, 2021 of Alexei Navalny, a Russian opposition leader and outspoken critic of Putin, after his return to Russia from Germany, where he had been treated after having been poisoned with a nerve agent in the RF in August 2020, are also not discordant with existing precedent. Neither is Merkel's statement that she attends to address U.S. oil companies' Russia business with president Joe Biden when she tries to find a negotiated solution with regard to Nord Stream 2 ("Merkel hofft auf Pipeline-Verhandlungen mit US-Präsident Biden" 2021). On the other hand, Chancellor Merkel supported sanctions against the RF after its invasion and annexation of Crimea in March 2014 and criticized the RF during the escalation of the conflict in November 2014 stating that, nothing justified or excused the annexation of Crimea nor the direct or indirect participation of the RF in the fighting in Donetsk and Luhansk (Deutscher Bundestag 2014, 6503). While the dissertation did not address the issue of salience, this example demonstrates that the FRG can sent a signal through its open criticism and the support of sanctions despite of increasing Russian natural gas supplies on issues salient to the FRG.

Since the end of World War II, American administrations have feared the alignment of Western Europe with the Soviet Union. To prevent the spread of communism and counter the Soviet threat, the Truman administration enacted the Marshal Plan in 1948 and created NATO in 1949. Subsequently and until today, this fear continues in economic terms with regard to the impact that Russian natural gas import dependence will have on the foreign policy of Western

European importers. Successive American administrations starting with Reagan have opposed Soviet and Russian natural gas pipelines, respectively, to Western Europe. While further analysis is warranted, the evidence presented here suggests that this fear has not been entirely unfounded.

Bibliography

47 Fed. Reg. 168, 38170. 1982. https://tile.loc.gov/storage-services/service/ll/fedreg/fr047/fr047168/fr047168.pdf.

47 Fed. Reg. 175, 39709. 1982. https://tile.loc.gov/storage-services/service/ll/fedreg/fr047/fr047175/fr047175.pdf.

47 Fed. Reg. 177, 40205. 1982. https://tile.loc.gov/storage-services/service/ll/fedreg/fr047/fr047177/fr047177.pdf.

47 Fed. Reg. 196, 44603. 1982. https://tile.loc.gov/storage-services/service/ll/fedreg/fr047/fr047196/fr047196.pdf.

47 Fed. Reg. 196, 44604. 1982. https://tile.loc.gov/storage-services/service/ll/fedreg/fr047/fr047196/fr047196.pdf.

AGEB AG Energiebilanzen e.V. 2020. "Auswertungstabellen zur Energiebilanz für die Bundesrepublik Deutschland 1990 bis 2018 (Stand März 2020)." April 2020. https://ag-energiebilanzen.de/10-0-Auswertungstabellen.html.

"Agreement on Partnership and Cooperation Establishing a Partnership between European Communities and Their Member States, of One Part, and the Russian Federation, of the Other Part." 1997. *Official Journal of the European Communities*, no. L 327 (November): 3–69.

Annual Register of World Events: A Review of the Year 1959. 1959. London: Longmans.

Armstrong, Adrienne. 1981. "The Political Consequences of Economic Dependence." *The Journal of Conflict Resolution* 25 (3): 401–28.

Atkins, Ralph. 1998. "Germans Sign Big Gas Deal with Russians." *Financial Times*, May 22, 1998.

"Außenwirtschaftsgesetz (AWG)." 1961. Bundesgesetzblatt Teil I.

Baade, Fritz. 1963. "Politik der Nadelstiche: Die falsche Rechnung mit dem Röhren-Embargo." *Die Zeit*, January 28, 1963.

Baer, George W. 1973. "Sanctions and Security: The League of Nations and the Italian-Ethiopian War, 1935-1936." *International Organization* 27 (2): 165–79.

Bahree, Bhushan. 1992. "Russia Curtails Gas Deliveries into Europe." *Wall Street Journal*, October 19, 1992, Europe edition.

Bahree, Bhushan, and Rubinfien, Elisabeth. 1992. "Energy Worries: Further Disruptions to Supplies of Gas in Europe Are Feared." *Wall Street Journal*, October 23, 1992, Europe edition.

Bahree, Bhushan, Elisabeth Rubinfien, and Natalia A Feduschak. 1992. “Disruptions in Flow of Natural Gas from Russia Give Europe Jitters.” *Wall Street Journal*, October 27, 1992, Eastern edition.

Bailey, Michael A., Anton Strezhnev, and Erik Voeten. 2017. “Estimating Dynamic State Preferences from United Nations Voting Data.” *The Journal of Conflict Resolution* 61 (2): 430–56.

Baldwin, David A. 1980. “Interdependence and Power: A Conceptual Analysis.” *International Organization* 34 (4): 471–506.

Barnhart, Michael A. 1987. *Japan Prepares for Total War: The Search for Economic Security, 1919-1941*. Ithaca, NY: Cornell University Press.

Barry, James. 1998. “Finland Aims to Give EU a ‘Northern Dimension’: Its Objective Is Coordination in Strategy toward Russians.” *International Herald Tribune*, March 18, 1998.

BBC Monitoring European. 2004a. “Germany’s Schroeder Declines Comment on Putin’s Chechen Policy,” September 4, 2004.

———. 2004b. “Schroeder Defended over Comments on Putin’s Chechnya Policy,” September 4, 2004.

BBC Monitoring European - Political. 2001. “Schroeder Views Germany’s Policy toward Russia,” April 7, 2001.

BBC Monitoring Former Soviet Union. 2004a. “Russia Says EU to Invest in North European Pipeline Feasibility Study,” February 3, 2004.

———. 2004b. “German, Russian Companies Sign Energy Cooperation Deals,” July 8, 2004.

BBC Monitoring Former Soviet Union - Economic. 1999. “Russian-Finnish Gas Pipeline Study Completed,” October 30, 1999.

———. 2001. “Four Major Russian Gas Companies to Build Russia-Germany Pipeline,” April 28, 2001.

BBC Monitoring Former Soviet Union - Political. 2001a. “Russian, Finnish Premiers Outline Economic Cooperation,” January 24, 2001.

———. 2001b. “Ukrainian, Russian Premiers Sign Gas Deal,” October 4, 2001.

BBC Monitoring Newsfile. 2003. “Russia, Germany Sign Six Cooperation Agreements,” October 9, 2003.

Beck, Nathaniel, and Jonathan N. Katz. 1995. “What to Do (and Not to Do) with Time-Series Cross-Section Data.” *The American Political Science Review* 89 (3): 634–47.

Bennett, Andrew. 2010. “Process Tracing and Causal Inference.” In *Rethinking Social Inquiry: Diverse Tools, Shared Standards*, edited by Henry Brady and David Collier, 2nd ed. Lanham, MD: Rowman and Littlefield Publishers.

Binder, David. 1976. “U.S. Aide Accuses Soviet on New Missile.” *New York Times*, September 1, 1976.

Black, Jeremy. 2017. *Naval Warfare: A Global History since 1860*. Lanham, MD: Rowman & Littlefield.

Blinken, Anthony J. 1987. *Ally versus Ally: America, Europe and the Siberian Pipeline Crisis*. New York, NY: Praeger Publishers.

Bohlen, Celestine. 1992. “Why Are Russians Still Here? The Free Baltics Ask: Troops Keep Alive Many Unpleasant Memories.” *New York Times*, August 7, 1992.

Bradsher, Keith. 2002. “China Struggles to Cut Reliance on Mideast Oil.” *New York Times*, September 3, 2002.

Brand, David. 1982. “Energy Enigma: Europeans Subsidized Soviet Pipeline Work Mainly to Save Jobs.” *Wall Street Journal*, November 2, 1982.

Brandt, Willy. 1969a. “Brant, February 11, 1969.” PA AA, B 150, Bd. 146, fol. 902 f. Politisches Archiv des Auswärtigen Amts (The Political Archive of the Federal Foreign Office).

———. 1969b. “Brandt to Schiller.” BArch, B102-152194. Bundesarchiv/Federal Archives.

———. 1978. *People and Politics: The Years 1960-1975*. 1st American edition. Boston, MA: Little Brown.

Brooke, James. 2002. “Japan Looks to Eastern Russia for Oil.” *New York Times*, October 3, 2002.

Bueno de Mesquita, Bruce, and Randolph M. Siverson. 1995. “War and the Survival of Political Leaders: A Comparative Study of Regime Types and Political Accountability.” *The American Political Science Review* 89 (4): 841–55.

Bundesarchiv/Federal Archives. 1962. “56. Kabinettssitzung am Mittwoch, dem 5. Dezember 1962. B. Embargo für die Ausfuhr von Großrohren nach dem Ostblock.” December 5, 1962. https://www.bundesarchiv.de/cocoon/barch/0000/k/k1962k/kap1_2/kap2_58/para3_8.html.

———. 1963a. “59. Kabinettssitzung am Mittwoch, dem 9. Januar 1963: 2. Lieferung von Großrohren an die UdSSR.” January 9, 1963. https://www.bundesarchiv.de/cocoon/barch/0000/k/k1963k/kap1_2/kap2_1/para3_12.html#Start.

———. 1963b. “60. Kabinettssitzung am Mittwoch, dem 16. Januar 1963: A. Embargo für die Ausfuhr von Großrohren nach dem Ostblock.” January 16, 1963. https://www.bundesarchiv.de/cocoon/barch/0000/k/k1963k/kap1_2/kap2_2/para3_1.html.

———. 1963c. “68. Kabinettssitzung am Freitag, dem 15. März 1963: B. Ausfuhr von Großrohren in den Ostblock.” March 15, 1963. https://www.bundesarchiv.de/cocoon/barch/0000/k/k1963k/kap1_2/kap2_12/para3_2.html.

———. 1980. “179. Kabinettssitzung am 21. Mai 1980: 3. Internationale Lage; u. a. Iran-Sanktionen.” May 21, 1980. https://www.bundesarchiv.de/cocoon/barch/0000/k/k1980k/kap1_1/kap2_21/para3_3.html.

———. 1982. “64. Kabinettssitzung am 17. Februar 1982: 3. Internationale Lage.” February 17, 1982. https://www.bundesarchiv.de/cocoon/barch/0000/k/k1982k/kap1_1/kap2_7/para3_3.html.

———. n.d. “Kabinettsprotokolle 1959: Die Staatssekretäre.” Accessed January 13, 2021. https://www.bundesarchiv.de/cocoon/barch/0000/k/k1959k/kap1_3/kap2_1/para3_2.html.

Burt, Tim, and Andrew Jack. 1999. “Finland in Push on EU-Russia Accord.” *Financial Times*, March 4, 1999.

Busch, Andrew E. 1997. “Ronald Reagan and the Defeat of the Soviet Empire.” *Presidential Studies Quarterly* 27 (3): 451–66.

Caporaso, James A. 1978. “Dependence, Dependency, and Power in the Global System: A Structural and Behavioral Analysis.” *International Organization* 32 (1): 13–43.

Chivers, C. J. 2006. “Explosions in Southern Russia Sever Gas Lines to Georgia.” *The New York Times*, January 23, 2006.

Cole, Robert J. 1982. “U.S. Cites Pipe Sanction In Making First Seizure.” *New York Times*, October 16, 1982.

“COM(2001) 775 Final - 2001/0311(COD) Proposal for a Decision of the European Parliament and of the Council Amending Decision No 1254/96/EC Laying down a Series of Guidelines for Trans-European Energy Networks.” 2002. *Official Journal of the European Communities*, no. C 151 E (June): 207–20.

Council of the Baltic Sea States. 1997. “Sixth Ministerial Session, Riga 2-3 July 1997.” Riga. https://cbss.org/wp-content/uploads/2020/05/1997-CBSS-6th-Ministerial-Session-Communique.pdf.

———. 1998a. “Communiqué of the 7th Ministerial Session of the CBSS: Nyborg, 22-23rd June 1998.” Nyborg. https://cbss.org/wp-content/uploads/2020/05/1998-CBSS-7th-Ministerial-Session-Communique.pdf.

———. 1998b. “Presidency Declaration: Baltic Sea States Summit Riga 22-23 January 1998.” Riga. https://cbss.org/wp-content/uploads/2020/05/1998-2nd-BSS-Summit-Presidency-Declaration.pdf.

———. n.d. “History.” CBSS. Accessed November 9, 2020. https://cbss.org/organisation/history/.

Crane, Keith, Andreas Goldthau, Michael Toman, Thomas Light, Stuart E. Johnson, Alireza Nader, Angel Rabasa, and Harun Dogo. 2009. “Oil as a Foreign Policy Instrument.” In *Imported Oil and U.S. National Security*, 25–42. Santa Monica, CA: RAND Corporation.

Crescenzi, Mark J. C. 2003. “Economic Exit, Interdependence, and Conflict.” *The Journal of Politics* 65 (3): 809–32.

———. 2005. *Economic Interdependence and Conflict in World Politics*. Lanham, MD: Lexington Books.

Dahl, Erik. 2000. “Naval Innovation: From Coal to Oil.” *Joint Forces Quarterly* 1: 51–56.

Dahl, Robert A. 1957. “The Concept of Power.” *Behavioral Science* 2 (3): 201–14.

Daily News Bulletin. 2003a. “Contract on Building Gas Pipeline via Northern Europe to Be Signed Soon,” October 9, 2003, English edition.

———. 2003b. “Gazprom and Ruhrgas Celebrate 30 Years of Gas Supplies to Germany,” October 10, 2003, English edition.

———. 2005. “Gazprom Promises to Launch North Transgas Pipe in 2010,” February 15, 2005, English edition.

Daoudi, M. S., and M. S. Dajani. 1985. *Economic Diplomacy: The Political Dynamics of Oil Leverage*. Boulder, CO: Westview Press.

“Das deutsch-sowjetische Abkommen über wirtschaftliche Zusammenarbeit.” 1975. *Osteuropa* 25 (1): A6–8.

Dean, Robert. 1974. *West German Trade with the East: The Political Dimension*. New York, NY: Praeger Publishers.

“Decision No 1047/97/EC of the European Parliament and of the Council of 29 May 1997 Amending Decision No 1254/96/EC Laying down a Series of Guidelines for Trans-European Energy Networks.” 1997. *Official Journal of the European Communities* 40 (L 152): 12–14.

“Decision No 1229/2003/EC of the European Parliament and the of the Council of 26 June 2003 Laying down a Series of Guidelines for Trans-European Energy Networks and Repealing Decision No 1254/96/EC.” 2003. *Official Journal of the European Communities*, no. L 176 (July): 11–28.

"Decision No 1254/96/EC of the European Parliament and of the Council of 5 June 1996 Laying down a Series of Guidelines for Trans-European Energy Networks." 1996. *Official Journal of the European Communities*, no. L 161 (June): 147–53.

Demidova, Ksenia. 2013. "The Deal of the Century: The Reagan Administration and the Soviet Pipeline." In *European Integration and the Atlantic Community in the 1980s*, edited by Kiran Klaus Patel and Kenneth Weisbrode, 59–82. Cambridge University Press.

Dempsey, Judy. 2005. "Schroder and Putin Forge Pact on Energy Contract Cements Special Relationship." *International Herald Tribune*, September 9, 2005.

Dempsey, Judy, and Dan Bilefsky. 2008. "U.S. and Czechs Sign Accord on Antiballistic Missile Shield." *New York Times*, July 9, 2008.

Der Bundespräsident (The Federal President). n.d. "Walter Scheel (1974-1979)." Accessed January 13, 2021. https://www.bundespraesident.de/DE/Die-Bundespraesidenten/Walter-Scheel/walter-scheel-node.html.

Der Spiegel. 1963a. "Osthandel: Rohrkrepierer," 1963.

———. 1963b. "'Wir lassen uns nicht zu Lumpen Stempeln': Spiegel-Gespräch mit dem Generaldirektor der Hoesch AG, Dr.-Ing. E. h. Willy Ochel," March 26, 1963.

———. 1963c. "Röhrenembargo: Hat gut gegangen," March 27, 1963.

———. 1969a. "Ruhr/Sowjet-Entwicklungsauftrag: Turnier der Großrohre," 1969.

———. 1969b. "Osthandel: Öl auf Bonn," May 4, 1969.

———. 1969c. "Osthandel/Russen-Erdgas: Auf kleiner Flamme," November 8, 1969.

———. 1970. "Osthandel/Röhren-Kredit: Salto am Trapez," February 9, 1970.

———. 1973. "Ich Hoffe, Wir Bekommen Mehr Erdgas Und Öl: Bundeskanzler Willy Brandt Über Breschnew-Besuch, Osthandel Und Berlin-Formel," May 28, 1973.

———. 1975. "Dreiecksgeschäft mit Erdgas perfekt?," November 17, 1975.

———. 1980a. "Moskaus Griff nach Afghanistan," January 7, 1980.

———. 1980b. "Die Stimmung ist unterkühlt bis eisig," June 23, 1980.

———. 1980c. "Osthandel: Diskret geklärt - Pünktlich zur Kanzlerreise steht das Konzept für das bisher prächtigste Geschäft der deutschen Industrie mit den Sowjets," June 23, 1980.

———. 1980d. "Das lief in Moskau - Zucker!," July 7, 1980.

———. 1981. "Osthandel: Später wäre besser," March 23, 1981.

———. 1982. “Hieb ins Leere,” October 11, 1982.

———. 1992. “Bis zum letzten Blutstropfen,” January 13, 1992.

Deutscher Bundestag. 1962. “4. Wahlperiode Drucksache IV/858 Vierte Verordnung zur Änderung der Ausfuhrliste – Anlage zur Außenwirtschaftsverordnung – vom 14. Dezember 1962,” December. http://dipbt.bundestag.de/doc/btd/04/008/0400858.pdf.

———. 1963. “4. Wahlperiode 68. Sitzung, Bonn, den 18. März 1963.” http://dipbt.bundestag.de/doc/btp/04/04068.pdf.

———. 1965. “4. Wahlperiode 185. Sitzung, den 20. Mai 1965.” http://dipbt.bundestag.de/doc/btp/04/04185.pdf.

———. 1969a. “5. Wahlperiode Drucksache V/3786 Jahreswirtschaftsbericht 1969 der Bundesregierung.” http://dipbt.bundestag.de/doc/btd/05/037/0503786.pdf.

———. 1969b. “6. Wahlperiode 5. Sitzung. Bonn, Dienstag, den 28. Oktober 1969: Abgabe einer Erklärung der Bundesregierung.” http://dipbt.bundestag.de/doc/btp/06/06005.pdf.

———. 1970a. “6. Wahlperiode 22. Sitzung. Bonn, Mittwoch, den 14. Januar 1970, Bericht über die Lage der Nation.” http://dipbt.bundestag.de/doc/btp/06/06022.pdf.

———. 1970b. “6. Wahlperiode Drucksache VI/281 Jahreswirtschaftsbericht 1970 der Bundesregierung.” http://dipbt.bundestag.de/doc/btd/06/002/0600281.pdf.

———. 1970c. “6. Wahlperiode 29. Sitzung, Bonn, den 17. Februar 1970.” http://dipbt.bundestag.de/doc/btp/06/06029.pdf.

———. 1970d. “6. Wahlperiode Drucksache VI/1252 Der Parlamentarische Staatssekretär des Bundesministers für Wirtschaft.” http://dipbt.bundestag.de/doc/btd/06/012/0601252.pdf.

———. 1977. “8. Wahlperiode Drucksache 8/1357 Zweite Fortschreibung des Energieprogramms der Bundesregierung//Second Update of the Energy Program of the Federal Government.” http://dipbt.bundestag.de/doc/btd/08/013/0801357.pdf.

———. 1978. “8. Wahlperiode 90. Sitzung, den 11. Mai 1978.” http://dipbt.bundestag.de/doc/btp/08/08090.pdf.

———. 1980a. “8. Wahlperiode 198. Sitzung, den 23. Januar 1980.” http://dipbt.bundestag.de/dip21/btp/08/08198.pdf.

———. 1980b. “8. Wahlperiode 213. Sitzung, den 23 April 1980.” http://dipbt.bundestag.de/doc/btp/08/08213.pdf.

———. 1980c. “8. Wahlperiode 208. Sitzung, den 20. März 1980.” http://dipbt.bundestag.de/doc/btp/08/08208.pdf.

———. 1980d. “8. Wahlperiode 229. Sitzung, den 3. Juli 1980.” http://dipbt.bundestag.de/doc/btp/08/08229.pdf.

———. 1998. “14. Wahlperiode 3. Sitzung, den 10. November 1998.” http://dip21.bundestag.de/dip21/btp/14/14003.pdf.

———. 2002a. “14. Wahlperiode 253. Sitzung, den 13. September 2002.” https://dipbt.bundestag.de/dip21/btp/14/14253.pdf.

———. 2002b. “15. Wahlperiode 4. Sitzung, den 29. Oktober 2002.” https://dipbt.bundestag.de/dip21/btp/15/15004.pdf.

———. 2003. “15. Wahlperiode Drucksache 15/372 - Jahreswirtschaftsbericht 2003 der Bundesregierung.” https://dserver.bundestag.de/btd/15/003/1500372.pdf.

———. 2014. “18. Wahlperiode 69. Sitzung, den 26. November 2014.” https://dserver.bundestag.de/btp/18/18069.pdf.

Die Bundesregierung. 1978. “Besuch des Generalsekretärs des Zentralkomitees der KPdSU vom 4. bis 7. Mai 1978.” In *Bulletin*, 421–36. 44. Bonn: Presse- und Informationsamt der Bundesregierung/Press and Information Office of the Federal Government of Germany.

———. 1980a. “Erklärung des Bundeskanzlers vor dem Deutschen Bundestag: Zur internationalen Lage und zu den Olympischen Spielen in Moskau.” In *Bulletin*, 373–76. 44. Bonn: Presse- und Informationsamt der Bundesregierung/Press and Information Office of the Federal Government of Germany.

———. 1980b. “Der Besuch des Bundeskanzlers in der Sowjetunion.” In *Bulletin*, 661–65. 79. Bonn: Presse- und Informationsamt der Bundesregierung/Press and Information Office of the Federal Government of Germany.

———. 1981. “Besuch des Generalsekretärs des Zentralkomitees der KPdSU vom 22. Bis 25. November 1981.” In *Bulletin*, 961–68. 112. Bonn: Presse- und Informationsamt der Bundesregierung/Press and Information Office of the Federal Government of Germany.

———. 1982. “Wirtschaftsgipfel Versailles: Treffen der Staats- und Regierungschefs vom 4. bis 6. Juni 1982.” In *Bulletin*, 469–76. 55. Bonn: Presse- und Informationsamt der Bundesregierung/Press and Information Office of the Federal Government of Germany.

———. 1991. “Besuch des Praesidenten von Russland vom 21. bis 23. November 1991.” In *Bulletin*. 133–91. Bonn. https://www.bundesregierung.de/breg-de/service/bulletin/besuch-des-praesidenten-von-russland-vom-21-bis-23-november-1991-787616.

Die Welt. 1963. “Entlassungen in Großrohrwerken?: Stahlindustrie fürchtet ernste Folgen der Lieferbeschränkung,” January 18, 1963.

———. 1969. “Der Osten bringt Erdöl ins Gespräch,” May 5, 1969.

Die Zeit. 1969. “Gibst du Röhren – geb’ ich Gas“: Im deutsch-sowjetischen Tauschgeschäft geht es nur noch um den Zins,” December 19, 1969. https://www.zeit.de/1969/51/gibst-du-roehren-geb-ich-gas.

“Direction of Trade Statistics (DOTS).” n.d. International Monetary Fund. Accessed November 18, 2019. https://data.imf.org/?sk=9D6028D4-F14A-464C-A2F2-59B2CD424B85.

Directorate-General for Energy. 2011. “EU-Russia Energy Dialogue: The First Ten Years 2000-2010.” Brussels: European Commission. https://ec.europa.eu/energy/sites/ener/files/documents/2011_eu-russia_energy_relations.pdf.

Dobson, Alan P. 2005. “The Reagan Administration, Economic Warfare, and Starting to Close Down the Cold War.” *Diplomatic History* 29 (3): 531–56.

Doty, Robert C. 1969. “Italy to Import Natural Gas from Soviet: E.N.I. Signs a Pact That May Set New Pattern in Pricing of Fuel.” *New York Times*, December 11, 1969.

Drezner, Daniel. 1999. *The Sanctions Paradox: Economic Statecraft and International Relations*. Cambridge: Cambridge University Press.

———. 2021. “Introduction: The Uses and Abuses of Weaponized Interdependence.” In *The Uses and Abuses of Weaponized Interdependence*, edited by Daniel Drezner, Henry Farrell, and Abraham L. Newman, 1–16. Washington, DC: Brookings Institution Press.

Duvall, Raymond D. 1978. “Dependence and Dependencia Theory: Notes Toward Precision of Concept and Argument.” *International Organization* 32 (1): 51–78.

Engelmann. 1978. “Engelmann to Lambsdorff, Erdgasimporte aus der UdSSR.” BArch, B102-257471. Bundesarchiv/Federal Archives.

Epstein, Edward Jay. 1986. “Petropower and Soviet Expansion.” *Commentary,* 1986.

Ericson, Richard E. 2009. “Eurasian Natural Gas Pipelines: The Political Economy of Network Interdependence.” *Eurasian Geography and Economics* 50 (1): 28–57.

Erst, Maurice C. 1982. “Results of the Buckley Mission.” CIA-RDP84T00109R000100090006-6. Central Intelligence Agency Electronic Reading Room. https://www.cia.gov/library/readingroom/docs/CIA-RDP84T00109R000100090006-6.pdf.

European Commission. 1994. “Growth, Competitiveness, Employment: The Challenges and Ways Forward into the 21st Century - White Paper.” Brussels. https://op.europa.eu/en/publication-detail/-/publication/0d563bc1-f17e-48ab-bb2a-9dd9a31d5004.

———. 1996. “Proposal for a European Parliament and Council Decision Amending European Parliament and Council Decision No. 1254/96/EC Laying down a Series of Guidelines on

Trans-European Energy Networks." COM(96)390 final. Brussels. https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:51996PC0390&from=DE.

———. 1997. "Press Release: TENs Projects in the Energy Sector - ECU 7.48 Million for Feasibility Studies." ip/97/675. Brussels. https://ec.europa.eu/commission/presscorner/detail/en/IP_97_675.

———. 1998. "Eine Nordische Dimension Für Die Politik Der Union." KOM(1998) 589 endg. Brussels. https://op.europa.eu/en/publication-detail/-/publication/0fad01a0-8051-48f9-9aec-b3b00492834a/language-en?_publicationDetails_PublicationDetailsPortlet_source=search.

———. 2000a. "Press Release: EU/Russia Summit Joint Declaration." IP/00/1239. Paris. https://ec.europa.eu/commission/presscorner/detail/en/IP_00_1239.

———. 2000b. "Green Paper: Towards a European Strategy for the Security of Energy Supply." COM(2000) 769 final. Brussels. https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:52000DC0769&from=EN.

———. 2001. "KOM(2001) 775 endgültig Vorschlag für eine Entscheidung des europäischen Parlaments und des Rates zur Änderung der Entscheidung Nr. 1254/96/EG über eine Reihe von Leitlinien betreffend die transeuropäischen Netze im Energiebereich." Brussels. https://ec.europa.eu/transparency/regdoc/rep/1/2001/DE/1-2001-775-DE-F1-1.Pdf.

———. 2004. "The Energy Dialogue between the European Union and the Russian Federation between 2000 and 2004." COM(2004) 777 final. Brussels. https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:52004DC0777&from=EN.

———. 2009. "Member State General Situation According the Significance of Impact." European Commission Press Release Database. January 9, 2009. https://europa.eu/rapid/press-release_MEMO-09-3_en.htm.

———. 2013. "Member States' Energy Dependence: An Indicator-Based Assessment." Occasional Papers 145. Brussels: Directorate-General for Economic and Financial Affairs. https://ec.europa.eu/economy_finance/publications/occasional_paper/2013/pdf/ocp145_en.pdf.

European Council. 2000. "Action Plan for the Northern Dimension with External and Cross-Border Policies of the European Union 2000-2003." 9401/00. http://register.consilium.europa.eu/doc/srv?l=EN&f=ST%209401%202000%20INIT.

———. 2001. "EU-Russia Summit: Joint Statement." 12423/01 (Presse 342-G). Brussels. https://data.consilium.europa.eu/doc/document/ST-12423-2001-INIT/en/pdf.

———. 2002. “EU-Russia Summit, Brussels, 11 November 2002.” 13970/02 (Presse 347). Brussels. https://www.consilium.europa.eu/uedocs/cms_data/docs/pressdata/en/er/73188.pdf.

———. 2004a. “EU Council Press Release: Joint Statement on EU Enlargement and EU-Russia Relations.” C/04/122. Luxembourg. https://ec.europa.eu/commission/presscorner/detail/en/PRES_04_122.

———. 2004b. “14th EU-Russia Summit: Joint Press Release.” 15061/04 (Presse 333). The Hague. https://www.consilium.europa.eu/uedocs/cms_data/docs/pressdata/en/er/82799.pdf.

European Network of Transmission System Operators for Gas (ENTSOG). n.d. “The European Natural Gas Network 2017.” Brussels: European Network of Transmission System Operators for Gas (ENTSOG). https://www.entsog.eu/sites/default/files/2018-09/ENTSOG_CAP_2017_A0_1189x841_FULL_064.pdf.

European Parliament. 1998. “Luxembourg European Council 12 and 13 December 1997: Presidency Conclusions.” https://www.europarl.europa.eu/summits/lux1_en.htm.

———. 1999a. “Cologne European Council 3-4 June 1999: Conclusions of the Presidency.” https://www.europarl.europa.eu/summits/kol2_en.htm.

———. 1999b. “Helsinki European Council 10 and 11 December 1999: Presidency Conclusions.” https://www.europarl.europa.eu/summits/hel1_en.htm.

———. 1999c. “Vienna European Council 11 and 12 December 1998: Presidency Conclusions.” https://www.europarl.europa.eu/summits/wie1_en.htm.

———. 2000. “Santa Maria Da Feira European Council 19 and 20 June 2000: Conclusions of the Presidency.” https://www.europarl.europa.eu/summits/fei2_en.htm#an7.

Eurostat. n.d. “Imports of Natural Gas by Partner Country.” Accessed January 20, 2019. https://appsso.eurostat.ec.europa.eu/nui/show.do?dataset=nrg_ti_gas&lang=en.

Evangelista, Matthew. 1999. *Unarmed Forces: The Transnational Movement to End the Cold War*. Ithaca, NY: Cornell University Press.

Fack, Fritz Ullrich. 1970. “Handelsofferten aus Moskau.” *Frankfurter Allgemeine Zeitung*, September 14, 1970.

“Factbox: Russian Oil and Gas as Political Weapon?” 2007. Reuters. May 2, 2007. https://www.reuters.com/article/us-russia-estonia-energy/factbox-russian-oil-and-gas-as-political-weapon-idUSL0211261020070502.

Farchy, Jack, and Kathrin Hille. 2014. “Russia Cuts off Gas Supplies to Ukraine.” *FT.Com*, June.

Farnsworth, Clyde H. 1981. “U.S. Pushes Soviet Gas Alternative: More Coal Use Being Proposed For Europeans.” *New York Times*, July 29, 1981.

Farrell, Henry, and Abraham L. Newman. 2019. “Weaponized Interdependence: How Global Economic Networks Shape State Coercion.” *International Security* 44 (1): 42–79.

Fearon, James D. 1995. “Rationalist Explanations for War.” *International Organization* 49 (3): 379–414.

———. 1997. “Signaling Foreign Policy Interests: Tying Hands versus Sinking Costs.” *The Journal of Conflict Resolution* 41 (1): 68–90.

“Final Act of the European Energy Charter Conference.” 1994. AF/EECH/en. International Energy Charter. https://www.energycharter.org/fileadmin/DocumentsMedia/Legal/1994_Final_Act.pdf.

Frankfurter Allgemeine Zeitung. 1963. “Bundestagsentscheidung über das Röhrenembargo verhindert,” March 19, 1963.

———. 1969a. “Bonn über Sowjet-Großauftrag für Thyssen im Bilde: Mommsen Wenn es gut läuft, wird es vielleicht eines Tages viel mehr,” April 30, 1969.

———. 1969b. “Dohnanyi berichtet Schiller aus Moskau,” May 28, 1969.

———. 1980. “Von der Sowjetunion nur begrenzt abhängig,” January 30, 1980.

Frieden, Jeffrey A. 1999. “Actors and Preferences in International Relations.” In *Strategic Choice and International Relations*, edited by Frieden A. Lake and Robert Powell, 39–76. Princeton, NJ: Princeton University Press.

Friedman, Norman. 1978. *Battleship Design and Development 1905-1945*. Greenwich: Conway Maritime Press.

———. 1985. *US Battleships: An Illustrated Design History*. Annapolis, MA: Naval Institute Press.

Gartzke, Erik. 1998. “Kant We All Just Get Along? Opportunity, Willingness, and the Origins of the Democratic Peace.” *American Journal of Political Science* 42 (1): 1–27. https://doi.org/10.2307/2991745.

———. 2000. “Preferences and the Democratic Peace.” *International Studies Quarterly* 44 (2): 191–212.

Gartzke, Erik, Quan Li, and Charles Boehmer. 2001. “Investing in the Peace: Economic Interdependence and International Conflict.” *International Organization* 55 (2): 391–438.

Gasiorowski, Mark, and Solomon W. Polachek. 1982. “Conflict and Interdependence: East-West Trade and Linkages in the Era of Detente.” *The Journal of Conflict Resolution* 26 (4): 709–29.

Gazprom. 2013a. “Beltransgaz to Be Renamed Gazprom Transgaz Belarus.” April 5, 2013. http://www.gazprom.com/about/subsidiaries/news/2013/april/article161005/.

———. 2013b. “Beltransgaz Renamed Gazprom Transgaz Belarus.” April 22, 2013. http://www.gazprom.com/about/subsidiaries/news/2013/april/article161005/.

———. n.d. “Projects.” Accessed September 13, 2019a. https://www.gazprom.com/projects/#pipeline.

———. n.d. “Yamal-Europe: Russian Gas Supplies to Western Europe.” Accessed April 25, 2019b. http://www.gazprom.com/projects/yamal-europe/.

Gazprom Export. n.d. “Foreign Partners: Czech Republic.” Accessed May 1, 2019a. http://www.gazpromexport.com/en/partners/czech/.

———. n.d. “Foreign Partners: Denmark.” Accessed May 1, 2019b. http://www.gazpromexport.com/en/partners/denmark/.

———. n.d. “Foreign Partners: Finland.” Accessed May 5, 2019c. http://www.gazpromexport.com/en/partners/finland/.

———. n.d. “Foreign Partners: Netherlands.” Accessed May 1, 2019d. http://www.gazpromexport.com/en/partners/netherlands/.

———. n.d. “Gazprom and OMV Discuss Gas Supplies, Nord Stream 2, and Cultural Cooperation.” Accessed May 1, 2019e. http://www.gazpromexport.com/en/presscenter/news/2229/.

———. n.d. “History.” Accessed May 1, 2019f. www.gazpromexport.com.

———. n.d. “Transportation.” Accessed May 5, 2019g. http://www.gazpromexport.com/en/projects/transportation/.

“GDP and Spending - Gross Domestic Product (GDP).” n.d. OECD Data. Accessed February 3, 2020. http://data.oecd.org/gdp/gross-domestic-product-gdp.htm.

Geddes, John M. 1980. “Germans Meet Soviet on Pipeline: German-Soviet Pipeline Talks.” *New York Times*, January 18, 1980.

Geiger, Tim, Amit Das Gupta, and Tim Szatkowski, eds. 2011a. “Dokument 151: 16. Mai 1980 Gespräch Des Bundesministers Genscher Mit Dem Sowjetischen Außenminister Gromyko in Wien.” In *Akten Zur Auswärtigen Politik Der Bundesrepublik Deutschland (1980)*, 800–809. Berlin, Boston: De Gruyter. https://doi.org/10.1524/9783486718065.

———, eds. 2011b. “Dokument 182: 22. Juni 1980 Aufzeichnung Des Ministerialdirektors von Staden, Bundeskanzleramt, z.Z. Venedic.” In *Akten Zur Auswärtigen Politik Der Bundesrepublik Deutschland (1980)*, 948–59. Berlin, Boston: De Gruyter. https://doi.org/10.1524/9783486718065.

———, eds. 2011c. “Dokument 193: 1. Juli 1980 Deutsch-Sowjetisches Regierungsgespräch in Moskau.” In *Akten Zur Auswärtigen Politik Der Bundesrepublik Deutschland (1980)*, 1035–50. Berlin, Boston: De Gruyter. https://doi.org/10.1524/9783486718065.

George, Alexander L. 1979. “Case Studies and Theory Development: The Method of Structured, Focused Comparison.” In *Diplomacy: New Approaches in History, Theory, and Policy*, 43–68. New York, NY: Free Press.

George, Alexander L., and Andrew Bennett. 2005. *Case Studies and Theory Development in the Social Sciences*. Cambridge, MA: MIT Press.

Gerring, John. 2001. *Social Science Methodology: A Critical Framework*. Cambridge: Cambridge University Press.

Gettysburg Times. 1963. “Will Try to Cut off Pipe for Russians,” March 27, 1963.

Gidadhubli, R. G. 2006. “Oil and Politics in Russia: Tightening Grip on Pipelines.” *Economic and Political Weekly* 41 (31): 3358–60.

Gilbert, Sari. 1982. “Italy Nears Agreement for Soviet Gas Supply.” *Washington Post*, February 6, 1982. https://www.washingtonpost.com/archive/politics/1982/02/06/italy-nears-agreement-for-soviet-gas-supply/a452273e-d578-41dc-9e83-1ba583ca3591/.

Gleditsch, Kristian Skrede. n.d. “Distance Between Capital Cities.” Kristian Skrede Gleditsch // Data, Etc. Accessed February 4, 2020. http://ksgleditsch.com/data-5.html.

Goetz, Roland. 2007. “Russlands Erdgas und Europas Energiesicherheit (Russia’s Natural Gas and Europe’s Energy Security).” SWP-Studie S 21.

———. 2014. “Zwischen Angst und Größenwahn: Gas und Öl als Politische Druckmittel (Between Anxiety and Megalomania: Gas and Oil as a means of exerting political pressure).” *Osteuropa* 64 (5–6): 277–92.

Goldman, Marshall I. 1972. “Red Black Gold.” *Foreign Policy*, no. 8: 138–48. https://doi.org/10.2307/1147820.

———. 2010. *Petrostate: Putin, Power and the New Russia*. New York, NY: Oxford University Press.

Goldthau, Andreas. 2008. “Rhetoric versus Reality: Russian Threats to European Energy Supply.” *Energy Policy* 36 (2): 686–92.

Gowa, Joanne, and Edward D. Mansfield. 1993. “Power Politics and International Trade.” *The American Political Science Review* 87 (2): 408–20.

Gujarati, Damodar N., and Dawn C. Porter. 2010. *Basic Econometrics*. 5th edition. New York, NY: McGraw-Hill.

Gumbel, Peter. 1990. “Gorbachev Increases Pressure on Lithuania by Sharply Cutting Natural Gas Supplies.” *Wall Street Journal*, April 20, 1990, Eastern edition.

Gustafson, Thane. 1985. “Soviet Negotiating Strategy: The East-West Gas Pipeline Deal, 1980-1984.” Rand Publication Series. Santa Monica, CA: The Rand Corporation. https://www.rand.org/pubs/reports/R3220.html.

———. 1989. *Crisis amid Plenty: The Politics of Soviet Energy under Brezhnev and Gorbachev*. Princeton, NJ: Princeton University Press.

Gwertzman, Bernard. 1982. “U.S. Is Relenting on NATO Sanctions against Russians.” *New York Times*, January 7, 1982.

Handelsblatt: Deutsche Wirtschaftszeitung. 1970. “Nun könnte der Handelsvertrag folgen,” August 10, 1970.

Harsanyi, John C. 1962a. “Measurement of Social Power in N-Person Reciprocal Power Situations.” *Behavioral Science* 7 (1): 81–92.

———. 1962b. “Measurement of Social Power, Opportunity Costs, and the Theory of Two-Person Bargaining Games.” *Behavioral Science* 7 (1): 67–80.

Harsem, Øistein, and Dag Harald Claes. 2013. “The Interdependence of European-Russian Energy Relations.” *Energy Policy* 59: 784–91.

Heinrich, Andreas. 2014. “Introduction: Export Pipelines in Eurasia.” In *Export Pipelines from the CIS Region: Geopolitics, Securitization, and Political Decision-Making*, 10:13–73. Changing Europe. Stuttgart: Ibidem Press.

Herbst. 1969. “Sowjetisches Erdgas; hier: Bedeutung für ein Wirtschaftsabkommen mit der Sowjetunion.” BArch, B102-152194. Bundesarchiv/Federal Archives.

Herzog, Stephen. 2011. “Revisiting the Estonian Cyber Attacks: Digital Threats and Multinational Responses.” *Journal of Strategic Security* 4 (2): 49–60.

Hirschman, Albert O. 1945. *National Power and the Structure of Foreign Trade*. Expanded ed. Berkeley, CA: University of California Press.

“History.” n.d. Transneft. https://en.transneft.ru/about/story/.

Hoegselius, Per. 2013. *Red Gas: Russia and the Origins of European Energy Dependence*. New York, NY: Palgrave Macmillan.

Hofhansel, Claus. 1996. *Commercial Competition and National Security: Comparing U.S. and German Export Control Policies*. Westport, CT: Praeger Publishers.

"Industrialized Countries: United States." 1982. *Bulletin of the European Communities* 15 (6): 73–74.

Interfax: Ukraine General Newswire. 2016. "Naftogaz Sues Russia over Assets in Crimea - Kobolev," April 21, 2016. 1783269317. ProQuest Central. https://er.lib.k-state.edu/login?url=https://www.proquest.com/wire-feeds/naftogaz-sues-russia-over-assets-crimea-kobolev/docview/1783269317/se-2?accountid=11789.

International Energy Agency. 2018a. *Natural Gas Information (2018 Edition)*. International Energy Agency Publications.

———. 2018b. *Oil Information (2018 Edition)*. International Energy Agency Publications.

———. n.d. "Data Services." IEA. Accessed February 8, 2020. https://www.iea.org/subscribe-to-data-services.

International Herald Tribune. 1969. "Thyssen to Build Pipe Factories with Soviets," April 30, 1969.

Iwaskiw, Walter R., ed. 1995. *Estonia: A Country Study*. Washington, DC: GPO for the Library of Congress. http://countrystudies.us/estonia/.

Jack, Andrew. 2003. "Moscow Calls for Pipeline Partners." *Financial Times*, October 11, 2003.

Jack, Andrew, and Arkady Ostrovsky. 2003. "German Energy Companies Set to Back Construction of Gas Pipeline from Russia." *Financial Times*, October 10, 2003.

Jason Seawright, and John Gerring. 2008. "Case Selection Techniques in Case Study Research: A Menu of Qualitative and Quantitative Options." *Political Research Quarterly* 61 (2): 294–309.

Jentleson, Bruce W. 1983. "Khrushchev's Oil and Brezhnev's Natural Gas Pipelines." In *Will Europe Fight for Oil? Energy Relations in the Atlantic Area*, edited by Robert J. Lieber, 33–69. New York, NY: Praeger Publishers.

———. 1986. *Pipeline Politics: The Complex Political Economy of East-West Energy Trade*. Ithaca, NY: Cornell University Press.

Joesten, Joachim. 1958. "Soviet Oil: It Poses a Political, Not an Economic, Threat to the West." *Barron's National Business and Financial Weekly*, July 7, 1958.

Joffe, Josef. 1983. "Europe and American: The Politics of Resentment (Cont'd)." *Foreign Affairs* 61 (003): 569–90.

Jones Luong, Pauline, and Erika Weinthal. 2001. “Prelude to the Resource Curse: Explaining Oil and Gas Development Strategies in the Soviet Successor States and Beyond.” *Comparative Political Studies* 34 (4): 367–99.

Kanter, James. 2014. “Accord Reached on Resuming Russian Deliveries of Natural Gas to Ukraine.” *New York Times*, October 31, 2014. 1943694070. ProQuest Historical Newspapers: The New York Times with Index.

Kemezis, Paul. 1974. “Gas Plentiful in Oil-Short Netherlands.” *New York Times*, January 12, 1974.

Kemp, Peter. 1969. *History of the Royal Navy*. London: Barker.

Keohane, Robert O. 1967. “The Study of Political Influence in the General Assembly.” *International Organization* 21: 221–37.

Keohane, Robert O., and Joseph S. Nye. 1977. *Power and Interdependence: World Politics in Transition*. Boston, MA: Little Brown.

Kim, Soo Yeon, and Bruce Russett. 1996. “The New Politics of Voting Alignments in the United Nations General Assembly.” *International Organization* 50 (4): 629–52.

Klose, Kevin. 1980. “Schmidt Hopeful on Missiles After Talks in Moscow.” *Washington Post*, July 2, 1980. https://www.washingtonpost.com/archive/politics/1980/07/02/schmidt-hopeful-on-missiles-after-talks-in-moscow/6f18493e-45f1-491e-b5a5-a77520deb02d/.

Knorr, Klaus. 1973. *Power and Wealth: The Political Economy of International Power*. New York, NY: Basic Books.

———. 1975. *Power of Nations: The Political Economy of International Relations*. New York, NY: Basic Books.

———. 1977. “International Economic Leverage and Its Uses.” In *Economic Issues and National Security*, edited by Klaus Knorr and Frank N. Trager, 99–126. Lawrence, KS: Regents Press of Kansas for the National Security Education Program.

Kramer, Andrew, and Judy Dempsey. 2005. “From Russia to Europe With a Natural Gas Pipeline: Former German Chancellor to Head Unit.” *New York Times*, December 10, 2005.

Kramer, Andrew E. 2006a. “Russia Cuts Off Gas to Ukraine as Talks on Pricing and Transit Terms Break Down.” *New York Times*, January 2, 2006.

———. 2006b. “Ukraine Concedes It Took Gas from Pipeline but Says It Had the Contractual Right.” *New York Times*, January 4, 2006.

———. 2006c. “Russia and Ukraine Reach Compromise on Natural Gas.” *New York Times*, January 5, 2006.

———. 2006d. “Lithuania Suspects Russian Oil Grab; Pipeline Dispute Seen as a Play for Refinery.” *International Herald Tribune*, June 6, 2006.

———. 2008. “Czechs See Oil Flow Fall and Suspect Russian Ire.” *New York Times*, July 12, 2008.

Kreile, Michael. 1974. “Ostpolitik und ökonomische Interessen.” In *Die Ostpolitik der BRD: Triebkräfte, Widerstände, Konsequenzen*, edited by Egbert Jahn and Volker Rittberger, 71–94. Opladen: Westdeutscher Verlag.

Kroll, John A. 1993. “The Complexity of Interdependence.” *International Studies Quarterly* 37 (3): 321–47.

Kropatcheva, Elena. 2011. “Playing Both Ends against the Middle: Russia’s Geopolitical Energy Games with the EU and Ukraine.” *Geopolitics* 16 (3): 553–73.

Krutikhin, Mikhail. 2021. “Russia’s Gazprom: A Case Study in Misused Interdependence.” In *The Uses and Abuses of Weaponized Interdependence*, edited by Daniel Drezner, Henry Farrell, and Abraham L. Newman, 185–200. Washington, DC: Brookings Institution Press.

Landler, Mark. 2006. “Europe Comes to Terms with Need for Russian Gas: The West Deals with a Quirky Supplier.” *New York Times*, January 8, 2006.

Lantzke. 1969a. “Lantzke to Arndt, ‘Sowjetische Absichten zur Lieferung russischen Erdgases nach Westeuropa’” BArch, B102-100003. Bundesarchiv/Federal Archives.

———. 1969b. “Ergebnis der Moskau-Reise von Herrn Staatssekretär Dr. von Dohnanyi im Energiebereich.” BArch, B102-152194. Bundesarchiv/Federal Archives.

Larsson, Robert L. 2006. “Russia’s Energy Policy: Security Dimensions and Russia’s Reliability as an Energy Supplier.” Defense Analysis. Stockholm: FOI Swedish Defense Research Agency.

Lebahn, Axel. 1983. “Die ‘Jamal Erdgasleitung’ UdSSR-Westeuropa im Ost-West Conflict.” *Aussenpolitik: Zeitschrift für internationale Fragen* 34 (3): 256–80.

“Less Pipe from NATO Countries.” 1963. *Petroleum Press Service* 30 (12).

Levy, Clifford J. 2010. “Ukraine Woos Russia With Lease Deal: Critics Irate as Russian Navy Gets 25 More Years at Crimea Base.” *New York Times*, April 22, 2010.

Levy, Jack S. 2003. “Economic Interdependence, Opportunity Costs, and Peace.” In *Economic Interdependence and International Conflict: New Perspectives on an Enduring Debate*, edited by Edward D. Mansfield and Brian M. Pollins, 127–47. Ann Arbor, MI: University of Michigan Press.

———. 2008. “Case Studies: Types, Designs, and Logics of Inference.” *Conflict Management and Peace Science* 25 (1): 1–19.

Lewis, Flora. 1974. “Giscard and Brezhnev Sign Five-Year Trade Pact.” *New York Times*, December 7, 1974.

Lewis, Paul. 1982a. “U.S. Asks Its Allies to Deny Soviet Parts for Pipeline.” *New York Times*, January 11, 1982.

———. 1982b. “France Is Buying More Russian Gas despite U.S. Fears: A Big Contract Is Signed.” *New York Times*, January 24, 1982.

Lewiss, Paul. 1987. “Europe After Chernobyl: Cooler Attitudes Toward Nuclear Power.” *New York Times*, April 27, 1987.

Licklider, Roy E. 1988. *Political Power and the Arab Oil Weapon: The Experience of Five Industrial Nations*. Berkeley, CA: University of California Press.

Lijphart, Arend. 1971. “Comparative Politics and the Comparative Method.” *The American Political Science Review* 65 (3): 682–93. https://doi.org/10.2307/1955513.

Lippert, Werner D. 2011. *The Economic Diplomacy of Ostpolitik: Origins of NATO’s Energy Dilemma*. New York, NY: Berghahn Books.

“List of Commissions and Officials: 1910-1919 (Nos. 146-174).” 1995. In *Office-Holders in Modern Britain: Officials of Royal Commissions of Inquiry 1870-1939*, 10:57–69. London: University of London.

Long, Andrew G, and Brett Ashley Leeds. 2006. “Trading for Security: Military Alliances and Economic Agreements.” *Journal of Peace Research* 43 (4): 433–51.

Lumpe. 1972. “Erdgas-Röhren-Kreditgeschäft mit der Sowjetunion; hier: Vorgesehene Unterzeichnung des zweiten Vertrages.” BArch, B102-240343. Bundesarchiv/Federal Archives.

Maachou, Abdelkader. 1983. *OAPEC: An International Organization for Economic Cooperation and an Instrument for Regional Integration*. New York, NY: St. Martin’s Press.

MacFarquhar, Neil. 2014. “Gazprom Cuts Russia’s Natural Gas Supply to Ukraine.” *New York Times*, June 17, 2014.

“Major Gas Pipelines of the Former Soviet Union and Capacity of Export Pipelines.” n.d. East European Gas Analysis. Accessed September 13, 2019. https://eegas.com/fsu.htm.

Mansfield, Edward D., and Jon C. Pevehouse. 2000. “Trade Blocs, Trade Flows, and International Conflict.” *International Organization* 54 (4): 775–808.

Massie, Robert K. 1991. *Dreadnought: Britain, Germany, and the Coming of the Great War*. New York, NY: Random House.

———. 2003. *Castles of Steel: Britain, Germany, and the Winning of the Great War at Sea*. 1st ed. New York, NY: Random House.

Mastanduno, Michael. 1992. *Economic Containment: CoCom and the Politics of East-West Trade*. Ithaca, NY: Cornell University Press.

Matthews, Michael. 1976. "The Growth and Development of the Organization of Petroleum Exporting Countries 1959-1976." *Humboldt Journal of Social Relations* 3 (2): 17–24.

Maull, Hanns. 1975. *Oil and Influence: The Oil Weapon Examined*. London: International Institute for Strategic Studies.

McDivitt, James F. 1961. "The Threat of Soviet Oil." *Challenge* 9 (8): 20–22.

"Meeting of the North Atlantic Council, Bonn 10 June 1982: Declaration of the Heads of State and Government." n.d. NATO. Accessed September 8, 2020. https://www.nato.int/docu/comm/49-95/c820610a.htm.

Meissner, Boris, ed. 1975a. "Meldung zur Unterzeichnung von drei Abkommen über die Lieferung sowjetischen Erdgases gegen Großröhren aus der Bundesrepublik Deutschland am 1. Februar 1970." In *Moskau Bonn: Die Beziehungen zwischen der Sowjetunion und der Bundesrepublik Deutschland 1955-1973 Dokumentation*, 1209. Cologne: Verlag Wissenschaft und Politik.

———, ed. 1975b. *Moskau Bonn: Die Beziehungen zwischen der Sowjetunion und der Bundesrepublik Deutschland, 1955-1973, Dokumentation*. Cologne: Verlag Wissenschaft und Politik.

"Merkel hofft auf Pipeline-Verhandlungen mit US-Präsident Biden." 2021. Der Spiegel. February 1, 2021. https://www.spiegel.de/wirtschaft/unternehmen/nord-stream-2-russland-merkel-plant-verhandlungen-mit-us-praesident-biden-a-950c736b-0084-4959-a6c5-b4f3f49f835c.

Meyer-Larsen, Werner. 1982. "Der unverziehene Strang nach Osten." *Der Spiegel*, March 22, 1982.

Mikdashi, Zuhayr. 1974. "Cooperation among Oil Exporting Countries with Special Reference to Arab Countries: A Political Economy Analysis." *International Organization* 28 (1): 1–30.

"Milestones 1969–1976: Helsinki Final Act, 1975." n.d. U.S. Department of State: Office of the Historian. Accessed June 2, 2020. https://history.state.gov/milestones/1969-1976/helsinki.

Monaghan, Andrew. 2005. “Russian Oil and EU Energy Security.” 05/65. Russian Series. Watchfield: Conflict Studies Research Centre at the Defense Academy of the UK.

Moon, Bruce E. 1983. “The Foreign Policy of the Dependent State.” *International Studies Quarterly* 27 (3): 315–40.

Moraski, Bryon, and Magda Giurcanu. 2013. “European Reactions to the 2008 Georgian-Russian War: Assessing the Impact of Gas Dependence.” *Studies in Comparative International Development* 48 (4): 432–56.

Morrow, James D. 1989. “Capabilities, Uncertainty, and Resolve: A Limited Information Model of Crisis Bargaining.” *American Journal of Political Science* 33 (4): 941–72.

———. 1999. “The Strategic Setting of Choices: Signaling, Commitment, and Negotiation in International Politics.” In *Strategic Choice and International Relations,* edited by Frieden A. Lake and Robert Powell, 77–114. Princeton, NJ: Princeton University Press.

———. 2003. “Assessing the Role of Trade as a Source of Costly Signals.” In *Economic Interdependence and International Conflict: New Perspectives on an Enduring Debate*, edited by Edward D. Mansfield and Brian M. Pollins, 89–95. Ann Arbor, MI: University of Michigan Press.

Müller, Christian. 2010. “Der Erdgas-Röhren-Konflikt 1981/1982.” In *Ökonomie im Kalten Krieg*, 501–20. Bonn: Bundeszentrale für Politische Bildung.

Münch, Ingo von, ed. 1971a. “Abkommen über Allgemeine Fragen des Handels und der Seeschiffahrt zwischen der Bundesrepublik Deutschland und der Union der Sozialistischen Sowjetrepubliken vom 25. April 1958.” In *Ostverträge I: Deutsch-sowjetische Verträge*, 81–85. Berlin: Walter de Gruyter.

———, ed. 1971b. “Konsularvertrag zwischen der Bundesregierung Deutschland und der Union der Sozialistischen Sowjetrepubliken vom 25. April 1958.” In *Ostverträge I: Deutsch-sowjetische Verträge*, 85–102. Berlin: Walter de Gruyter.

———, ed. 1971c. “Langfristiges Abkommen über den Waren- und Zahlungsverkehr zwischen der Bundesrepublik Deutschland und der Union der Sozialistischen Sowjetrepubliken für die Jahre 1961 bis 1963 vom 31. Dezember 1960.” In *Ostverträge I: Deutsch-sowjetische Verträge,* 115–31. Berlin: Walter de Gruyter.

———, ed. 1971d. “Übereinkommen über die Aufnahme diplomatischer Beziehungen vom 13. September 1955: Schlußkommuniqué der Moskauer Besprechungen.” In *Ostverträge I: Deutsch-Sowjetische Verträge,* 69–70. Berlin: Walter de Gruyter.

———, ed. 1971e. “Vereinbarung zwischen der Regierung der Bundesrepublik Deutschland und der Regierung der Sozialistischen Sowjetrepubliken über kulturellen und technisch-wirtschaftlichen Austausch vom 30. Mai 1959.” In *Ostverträge I: Deutsch-sowjetische Verträge,* 102–9. Berlin: Walter de Gruyter.

Murdock, Clark A. 1977. “Economic Factors as Objects of Security: Economics, Security and Vulnerability.” In *Economic Issues and National Security*, edited by Klaus Knorr and Frank N. Trager, 67–98. Lawrence, KS: Regents Press of Kansas for the National Security Education Program.

Myers, Steven Lee. 2007. “Europe’s Oil Supply Is Disrupted; Flow from Russia through Belarus Is Stopped in Fee Dispute.” *International Herald Tribune*, January 9, 2007.

Nagel, Jack H. 1968. “Some Questions about the Concept of Power.” *Behavioral Science* 13 (2): 129–37.

NEFTE Compass. 2005. “Gas Leak: Gazprom Looks into Expanding Exports,” February 7, 2005.

New York Times. 1962. “Comecon Pipeline Carries First Crude Oil to Hungary,” September 20, 1962.

———. 1963a. “Oil Pipeline from Russia Opened in East Germany,” December 19, 1963.

———. 1963b. “Poland to Mark Pipeline Opening: Last Link Completed in Unit to Transport Soviet Oil,” December 28, 1963.

———. 1966. “NATO Lifts Its Ban on Sale of Large Pipe to Red Bloc,” November 11, 1966.

———. 1968. “Austria Will Get Gas from Soviet: First Deliveries to West Involve Steel Exchange,” July 5, 1968.

———. 1969. “Excerpts from Address of Foreign Minister Gromyko to U.N. General Assembly,” September 20, 1969.

———. 1970. “Bonn and Moscow Sign Pact Trading Pipes for Gas,” February 2, 1970.

———. 1979. “Gas Pipeline Is Canceled by Iran,” July 19, 1979.

———. 1981a. “The Text of Communique Issued After the Ottawa Conference:,” July 22, 1981.

———. 1981b. “Soviet Pipe Purchase,” August 25, 1981.

———. 1981c. “Excerpts from Communique on Schmidt-Brezhnev Meeting,” November 26, 1981.

———. 1982a. “G.E. Cites U.S. Bar On Soviet Project,” January 9, 1982.

———. 1982b. “Text of Declaration on Poland By the Foreign Ministers of NATO,” January 12, 1982.

———. 1982c. “Soviet-German Pipeline Parley,” July 13, 1982.

———. 1982d. “German Loans for Soviet Pipeline,” July 14, 1982.

———. 1982e. “Schmidt Expects Others To Follow French Lead,” July 23, 1982.

———. 1982f. “Text of Common Market Statement on Embargo,” August 13, 1982.

———. 2005. “Pipeline to Link Siberia and Germany,” September 9, 2005.

Newnham, Randall E. 2011. “Oil, Carrots, and Sticks: Russia’s Energy Resources as a Foreign Policy Tool.” *Journal of Eurasian Studies* 2 (2): 134–43.

———. 2013. “Pipeline Politics: Russian Energy Sanctions and the 2010 Ukrainian Elections.” *Journal of Eurasian Studies* 4 (2): 115–22.

Nordic Business Report. 2009. “Russian Gazprom to Double Gas Deliveries to DONG Energy,” October 2, 2009.

Nygren, Bertil. 2008. “Putin’s Use of Natural Gas to Reintegrate the CIS Region.” *Problems of Post-Communism* 55 (4): 3–15.

Oil & Gas Journal. 1982. “Reagan Extends Limits on Trade with U.S.S.R,” June 28, 1982.

———. 1992. “U.K. to Resume Natural Gas Imports,” February 17, 1992.

———. 1997. “Gazprom and Neste Plan North European Gas,” February 10, 1997.

———. 1998. “Nordic Natural Gas Grid Viability Affirmed,” December 14, 1998.

———. 1999. “OGJ Newsletter,” July 26, 1999.

“One Way: Gazprom Goes For Direct Access To Europe.” 2004. *NEFTE Compass*, February.

Oneal, John R., Frances H. Oneal, Zeev Maoz, and Bruce M. Russett. 1996. “The Liberal Peace: Interdependence, Democracy, and International Conflict, 1950-85.” *Journal of Peace Research* 33 (1): 11–28.

Oneal, John R., and Bruce M. Russett. 1997. “The Classical Liberals Were Right: Democracy, Interdependence, and Conflict, 1950-1985.” *International Studies Quarterly* 41 (2): 267–93.

———. 1999. “Is the Liberal Peace Just an Artifact of Cold War Interests? Assessing Recent Critiques.” *International Interactions* 25 (3): 213–41.

Organization for Economic Co-operation and Development (OECD). n.d. “International Trade - Trade in Goods.” OECD Data. Accessed February 3, 2020. https://data.oecd.org/trade/trade-in-goods.htm.

Orttung, Robert W., and Indra Overland. 2011. “A Limited Toolbox: Explaining the Constraints on Russia’s Foreign Energy Policy.” *Journal of Eurasian Studies* 2: 74–85.

Oxford Analytica Daily Brief Service. 2000. “RUSSIA: New Gas Routes to the West May Bypass Ukraine,” October 2, 2000.

———. 2003a. “Latvia/Russia: Crude Pressure to Gain Ventspils Port,” January 13, 2003.

———. 2003b. “Russia/Germany: Relations to Focus on Economics,” October 10, 2003.

Pace, Eric. 1975. “Iranian Gas Deal to Supply Europe: Pipeline to Carry Fuel to Russia and Tranship It to Nations in the West.” *New York Times*, December 1, 1975.

Papayoanou, Paul A. 1996. “Interdependence, Institutions, and the Balance of Power: Britain, Germany, and World War I.” *International Security* 20 (4): 42–76.

Parker, George, and Stefan Wagstyl. 2007. “Russia Rail Move to Hit Estonian Supply Line.” *Financial Times*, May 3, 2007.

Parkes, Oscar. 1970. *British Battleships: Warrior, 1860 to Vanguard, 1950. A History of Design Construction and Armament*. London: Seeley Service & Co.

Pautsch, Ilse Dorothee, Daniela Taschler, Franz Eibl, Frank Heinlein, Mechthild Lindemann, and Matthias Peter, eds. 2000a. “Dokument 23: 26. Januar 1970 Aufzeichnung Des Ministerialdirektors Herbst.” In *Akten Zur Auswärtigen Politik Der Bundesrepublik Deutschland (1970)*, 86–88. Berlin, Boston: De Gruyter. https://doi.org/10.1524/9783486718171.

———, eds. 2000b. “Dokument 28: 30. Januar 1970 Gespräch Des Staatssekretärs Bahr, Bundeskanzleramt, Mit Dem Sowjetischen Außenminister Gromyko in Moskau.” In *Akten Zur Auswärtigen Politik Der Bundesrepublik Deutschland (1970)*, 105–8. Berlin, Boston: De Gruyter. https://doi.org/10.1524/9783486718171.

———, eds. 2000c. “Dokument 33: 3. Februar 1970 Gespräch Des Staatssekretärs Bahr, Bundeskanzleramt, Mit Dem Sowjetischen Außenminister Gromyko in Moskau.” In *Akten Zur Auswärtigen Politik Der Bundesrepublik Deutschland (1970)*, 105–8. Berlin, Boston: De Gruyter. https://doi.org/10.1524/9783486718171.

Peker, Emre. 2019. “Russia, Ukraine Agree to Gas Flows to EU, as U.S. Sanctions Hit Pipeline Project; The Agreement Secures Steady Supplies for Europe, amid Concerns over Its Dependence on Russian Natural Gas.” *Wall Street Journal*, December 21, 2019. 2329346422.

Perle, Richard N. 1982. “Soviet Connection II: Moscow’s Dangerous Pipeline to Europe.” *Defense* 1982 (2): 18–19.

“Pipe for Russia: Germany Temporises Again.” 1963. *The Economist*, January, 236.

Pirani, Simon. 2007. “Ukraine’s Gas Sector.” Oxford Institute for Energy Studies. Oxford. https://www.oxfordenergy.org/wpcms/wp-content/uploads/2010/11/NG21-UkrainesGasSector-SimonPirani-2007.pdf.

———. 2009a. *Russian and CIS Gas Markets and Their Impact on Europe*. 1st ed. Oxford: Oxford Institute for Energy Studies.

———. 2009b. “Russian Gas Transit through Ukraine after 2019: The Options.” *Oxford Energy Insight* 2009 (4): 1–21.

Pirani, Simon, Jonathan Stern, and Katja Yafimava. 2009. “The Russo-Ukrainian Gas Dispute of January 2009: A Comprehensive Assessment.” Oxford Institute for Energy Studies. Oxford.

Pirog, Robert. 2007. “Russian Oil and Gas Challenges.” *Connections* 6 (3): 82–99.

Plesser. 1969. “Deutsch-sowjetische Verhandlungen über die Lieferung sowjetischen Erdgases am 31.7 und 1.8. 1969 in Moskau.” BArch, B102-152194. Bundesarchiv/Federal Archives.

Ploetz, Michael, Tim Szatkowski, and Judith Michel, eds. 2013a. “Dokument 74: 8. März 1982 Aufzeichnung Des Gesandten Wallau, Washington.” In *Akten Zur Auswärtigen Politik Der Bundesrepublik Deutschland 1982*, 369–76. Berlin, Boston: De Gruyter. https://doi.org/10.1524/9783486722543.

———, eds. 2013b. “Dokument 93: 24. März 1982 Botschafter Hermes, Washington, an Das Auswärtige Amt.” In *Akten Zur Auswärtigen Politik Der Bundesrepublik Deutschland 1982*, 464–67. Berlin, Boston: De Gruyter. https://doi.org/10.1524/9783486722543.

———, eds. 2013c. “Dokument 177: 9. Juni 1982 Gespräch Des Bundeskanzlers Schmidt Mit Präsident Reagan.” In *Akten Zur Auswärtigen Politik Der Bundesrepublik Deutschland 1982*, 464–67. Berlin, Boston: De Gruyter. https://doi.org/10.1524/9783486722543.

———, eds. 2013d. “Dokument 194: 26./27. Juni 1982 Gespräche Des Bundeskanzlers Schmidt Mit Den Ministerpräsidenten Fälldin, Jørgensen, Sorsa, Thoroddsen Und Willoch in Kiely.” In *Akten Zur Auswärtigen Politik Der Bundesrepublik Deutschland 1982*, 1018–32. Berlin, Boston: De Gruyter. https://doi.org/10.1524/9783486722543.

———, eds. 2013e. “Dokument 222: 28. Juli 1982 Vortragender Legationsrat I. Klasse Höynck, z.Z. Frobisher Bay, and das Auswärtige Amt.” In *Akten zur Auswärtigen Politik der Bundesrepublik Deutschland 1982*, 1172–80. Berlin, Boston: De Gruyter. https://doi.org/10.1524/9783486722543.

———, eds. 2013f. “Dokument 232: 25. August 1982 Gespräch des Bundeskanzlers Schmidt mit den amerikanischen Senatoren Baker, Boren, Brady, Hawkins und Mattingly.” In *Akten zur Auswärtigen Politik der Bundesrepublik Deutschland 1982*, 1222–29. Berlin, Boston: De Gruyter. https://doi.org/10.1524/9783486722543.

———, eds. 2013g. “Dokument 254: 4. Oktober 1982 Gespräch des Bundeskanzlers Kohl mit Staatspräsident Mitterand in Paris.” In *Akten zur Auswärtigen Politik der Bundesrepublik Deutschland 1982*, 1330–35. Berlin, Boston: De Gruyter. https://doi.org/10.1524/9783486722543.

———, eds. 2013h. “Dokument 292: 5. November 1982 Gespräche des Bundeskanzlers Kohl mit Ministerpräsident Werner in Luxemburg.” In *Akten zur Auswärtigen Politik der Bundesrepublik Deutschland 1982*, 1526–33. Berlin, Boston: De Gruyter. https://doi.org/10.1524/9783486722543.

Polachek, Solomon W. 1992. “Conflict and Trade: An Economic Approach to Political International Interactions.” In *Economics of Arms Reduction and the Peace Process: Contributions from Peace Economics and Peace Science*, edited by Walter Isard and Charles H. Anderton, 89–120. New York, NY: North Holland.

Polachek, Solomon W., and Judith A. McDonald. 1992. “Strategic Trade and the Incentive for Cooperation.” In *Disarmament, Economic Conversion, and Management of Peace*, edited by Manas Chatterji and Linda R. Forcey, 273–84. New York, NY: Praeger Publishers.

Pollins, Brian M. 1989. “Conflict, Cooperation, and Commerce: The Effect of International Political Interactions on Bilateral Trade Flows.” *American Journal of Political Science* 33 (3): 737–61.

Powell, Robert. 1991. “Absolute and Relative Gains in International Relations Theory.” *The American Political Science Review* 85 (4): 1303–20.

Putin, Vladimir. 2004. “Statement on the Expansion of Business Ties between the Russian Federation and the Federal Republic of Germany in the Energy Sphere.” President of Russia. http://en.kremlin.ru/supplement/1968.

“Radio Address to the Nation on East-West Trade Relations and the Soviet Pipeline Sanctions.” 1982. Ronald Reagan Presidential Library. November 13, 1982. https://www.reaganlibrary.gov/research/speeches/111382a.

Raff, Anna. 2004. “Belarus Gets Relief in Gas Dispute; Contract for 10-Day Supply Averts Immediate Problem; Gazprom Issues Unresolved.” *Wall Street Journal*, February 20, 2004, Europe edition.

Reagan, Ronald. 1982a. “Statement on the Extension of United States Sanctions on the Export of Oil and Gas Equipment to the Soviet Union.” Ronald Reagan Presidential Library. June 18, 1982. https://www.reaganlibrary.gov/research/speeches/61882c.

———. 1982b. “Radio Address to the Nation on Agriculture and Grain Exports.” Ronald Reagan Presidential Library. October 15, 1982. https://www.reaganlibrary.gov/research/speeches/101582a.

Reed, William. 2000. “A Unified Statistical Model of Conflict Onset and Escalation.” *American Journal of Political Science* 44 (1): 84–93.

Reed, William, David Clark, Timothy Nordstrom, and Wonjae Hwang. 2008. “War, Power, and Bargaining.” *The Journal of Politics* 70 (4): 1203–16.

"Report on Interagency Mission to Europe." n.d. Collection: Matlock, Jack F.: Files; Folder Title: Pipeline - USSR (4) Box: 30. Ronald Reagan Library. Accessed August 10, 2020. https://www.reaganlibrary.gov/sites/default/files/digitallibrary/smof/nsc-europeanandsovietaffairs/matlock/box-030/40-351-7452065-030-015-2018.pdf.

Richardson, Neil R. 1976. "Political Compliance and U.S. Trade Dominance." *The American Political Science Review* 70 (4): 1098–1109.

———. 1978. *Foreign Policy and Economic Dependence*. Austin, TX: University of Texas Press.

Richardson, Neil R., and Charles W. Kegley. 1980. "Trade Dependence and Foreign Policy Compliance: A Longitudinal Analysis." *International Studies Quarterly* 24 (2): 191–222.

Ristuccia, Christiano Andrea. 2000. "The 1935 Sanctions against Italy: Would Coal and Oil Have Made a Difference?" *European Review of Economic History* 4 (1): 85–110.

Rohweder. 1978. "Rohweder to Genscher." BArch, B102-257471. Bundesarchiv/Federal Archives.

Roosevelt, Franklin D. 1941. "Public Papers and Addresses of Franklin D. Roosevelt." HeinOnline.

Roth, Andrew. 2015. "Russia Cuts off Gas Flow, Ukraine Closes Airspace in Expanding Trade War." The Washington Post. Washington, D.C.: WP Company LLC d/b/a The Washington Post. 1736262386. ProQuest One Academic; U.S. Newsstream. November 26, 2015.

Rudolph, Karsten. 2004. *Wirtschaftsdiplomatie im Kalten Krieg: Die Ostpolitik der westdeutschen Großindustrie 1945-1991*. Frankfurt/New York: Campus Verlag.

Rueckert, Axel. 1971. "Ostpolitik Und Ostgeschäft." *Dokumente: Zeitschrift Für Übernationale Zusammenarbeit* 27 (April): 69–77.

"Russia Wants Access to Europe." 2004. *Natural Gas Week*, January.

"Russia's North Europe Gas Pipeline Moves." 2004. *World Gas Intelligence*, February, 1.

Rutherford, Malcom. 1972. "Soviet Union to Supply West Germany with 15% of Gas Need." *Financial Times*, 72/7207 1972.

Rutland, Peter P. 2008. "Russia as an Energy Superpower." *New Political Economy* 13 (2): 203–10.

Sagan, Scott D. 1988. "The Origins of the Pacific War." *The Journal of Interdisciplinary History* 18 (4): 893–922.

Saivetz, Carol R. 2012. “The Ties That Bind? Russia’s Evolving Relations with Its Neighbors.” *Communist and Post-Communist Studies* 45 (3–4): 401–12.

Schiller. 1969. “Schiller to Kiesinger.” BArch, B102-152194. Bundesarchiv/Federal Archives.

Schoellgen, Gregor. 2015. *Gerhard Schröder: Die Biographie*. Munich: Deutsche Verlags-Anstalt.

Schroeder, Gerhard. 2001. “Deutsche Russlandpolitik - europäische Ostpolitik: Gegen Stereotype, für Partnerschaft und Offenheit - eine Positionsbestimmung.” *Die Zeit*, April 5, 2001. https://www.zeit.de/2001/15/Deutsche_Russlandpolitik_-_europaeische_Ostpolitik.

Sergounin, Alexander. 2000. “The Rise of Transregionalism in Russia: The Case of the European Union’s Northern Dimension.” *International Journal of Political Economy* 30 (3): 58–80.

Shaffer, Brenda. 2009. *Energy Politics*. Philadelphia, PA: University of Pennsylvania Press.

———. 2013. “Natural Gas Supply Stability and Foreign Policy.” *Energy Policy* 56: 114–25.

Signorino, Curtis S., and Jeffrey M. Ritter. 1999. “Tau-b or Not Tau-b: Measuring the Similarity of Foreign Policy Positions.” *International Studies Quarterly* 43 (1): 115–44.

Smith-Stegen, Karen. 2011. “Deconstructing the ‘Energy Weapon’: Russia’s Threat to Europe as Case Study.” *Energy Policy* 39 (10): 6505–13.

Statistisches Bundesamt/Federal Statistical Office. 1964. *Statistisches Jahrbuch für die Bundesrepublik Deutschland 1963*. Wiesbaden: Statistisches Bundesamt/Federal Statistical Office. http://resolver.sub.uni-goettingen.de/purl?PPN514402342.

———. 2020. “Die Datenbank des Statistischen Bundesamtes/The Database of the Federal Statistical Office.” September 22, 2020. https://www-genesis.destatis.de/genesis/online.

———. n.d. “Statistisches Jahrbuch.” Accessed November 1, 2019a. https://www.destatis.de/DE/Themen/Querschnitt/Jahrbuch/_inhalt.html.

———. n.d. *Statistisches Jahrbuch für die Bundesrepublik Deutschland*. Wiesbaden: Statistisches Bundesamt/Federal Statistical Office. Accessed October 31, 2019b. https://www.destatis.de/DE/Themen/Querschnitt/Jahrbuch/_inhalt.html.

Stein, Arthur A. 2003. “Trade and Conflict: Uncertainty, Strategic Signaling, and Interstate Disputes.” In *Economic Interdependence and International Conflict: New Perspectives on an Enduring Debate*, edited by Edward D. Mansfield and Brian M. Pollins, 111–27. Ann Arbor, MI: University of Michigan Press.

Stent, Angela E. 1981. *From Embargo to Ostpolitik: The Political Economy of West German-Soviet Relations, 1955-1980*. Cambridge: Cambridge University Press.

Stern, Jonathan P. 1987. *Soviet Oil and Gas Exports to the West: Commercial Transaction or Security Threat?* Brookfield, VT: Gower Publishing Company.

———. 1999. “Soviet and Russian Gas: The Origins and Evolutions of Gazprom’s Export Strategy.” In *Gas to Europe: The Strategies of Four Major Suppliers*, 135–99. New York, NY: Oxford University Press.

———. 2005. *The Future of Russian Gas and Gazprom*. New York, NY: Oxford University Press.

Stone, Rod. 1998. “Nordic Gas Grid Could Become Viable within 10 Years, Study Says.” *Wall Street Journal*, October 29, 1998. https://www.wsj.com/articles/SB909620949699027500.

Stulberg, Adam N. 2012. “Strategic Bargaining and Pipeline Politics: Confronting the Credible Commitment Problem in Eurasian Energy Transit.” *Review of International Political Economy* 19 (5): 808–36.

Süddeutsche Zeitung. 1969. “Dohnanyi sondiert das Klima in Moskau: Neben allgemeinen Handelsfragen wurden Öl- und Gaslieferungen erörtert,” May 28, 1969.

Svahn, Satu S. 1999. “Finland at the Helm: Steering the EU into a New Millennium.” *Scandinavian Review*, 1999.

Tagliabue, John. 1980. “West Germans Planning Soviet Pipeline Talks.” *New York Times*, July 5, 1980.

———. 1981a. “Bonn Needs The Business Even More Than the Gas.” *New York Times*, August 16, 1981.

———. 1981b. “Europeans In Pact on Soviet Gas: Venture Gets Pipeline Job Context of Broader Talks 41 Stations in All.” *New York Times*, September 30, 1981.

———. 1981c. “Soviet in Accord On Sending Gas To West Europe: Pipeline Deal Would Be Worth $10 Billion.” *New York Times*, November 21, 1981. 121650747.

———. 1982. “Bonn to Honor Contracts for Siberian Gas Pipeline.” *New York Times*, January 14, 1982.

Taschler, Daniela, Matthias Peter, and Judith Michel, eds. 2013a. “Dokument 62: 9. März 1981 Gespräch Des Bundesministers Genscher Mit Dem Amerikanischen Außenminister Haig in Washington.” In *Akten Zur Auswärtigen Politik Der Bundesrepublik Deutschland (1981)*, 333–47. Berlin, Boston: De Gruyter. https://doi.org/10.1524/9783486718041.

———, eds. 2013b. “Dokument 169: 12. Juni 1981 Botschafter Wieck, Brüssel (NATO) an Das Auswärtige Amt.” In *Akten Zur Auswärtigen Politik Der Bundesrepublik Deutschland (1981)*, 922–26. Berlin, Boston: De Gruyter. https://doi.org/10.1524/9783486718041.

———, eds. 2013c. “Dokument 201: 13. Juli 1981 Gespräch des Bundeskanzlers Schmidt mit Staatspräsident Mitterrand.” In *Akten zur Auswärtigen Politik der Bundesrepublik Deutschland (1981)*, 1077–86. Berlin, Boston: De Gruyter. https://doi.org/10.1524/9783486718041.

———, eds. 2013d. “Dokument 209: 19. Juli 1981 Deutsch-amerikanisches Regierungsgespräch in Montebello.” In *Akten zur Auswärtigen Politik der Bundesrepublik Deutschland (1981)*, 1139–44. Berlin, Boston: De Gruyter. https://doi.org/10.1524/9783486718041.

———, eds. 2013e. “Dokument 212: 20. Juli 1981 Gespräch des Bundeskanzlers Schmidt mit Staatspräsident Mitterrand in Montebello.” In *Akten zur Auswärtigen Politik der Bundesrepublik Deutschland (1981)*, 1152–55. Berlin, Boston: De Gruyter. https://doi.org/10.1524/9783486718041.

———, eds. 2013f. “Dokument 220: 27. Juli 1981 Runderlaß des Vortragenden Legationsrats I. Klasse Steinkühler.” In *Akten zur Auswärtigen Politik der Bundesrepublik Deutschland (1981)*, 1177–81. Berlin, Boston: De Gruyter. https://doi.org/10.1524/9783486718041.

———, eds. 2013g. “Dokument 294: 12. Oktober 1981 Botschafter Meyer-Landrut, Moskau, and das Auswärtige Amt.” In *Akten zur Auswärtigen Politik der Bundesrepublik Deutschland (1981)*, 1573–76. Berlin, Boston: De Gruyter. https://doi.org/10.1524/9783486718041.

———, eds. 2013h. “Dokument 339: 24. November 1981 Gespräch des Bundesministers Genscher mit dem sowjetischen Außenminister Gromyko.” In *Akten zur Auswärtigen Politik der Bundesrepublik Deutschland (1981)*, 1835–37. Berlin, Boston: De Gruyter. https://doi.org/10.1524/9783486718041.

Tavernise, Sabrina. 2001. “Exxon Says Way Is Cleared for Development in Russia.” *New York Times*, October 30, 2001.

The Guardian. 2007. “Merkel Hits out at Russian Oil Pipeline Closure,” January 9, 2007.

Thursfield, James R. 1913. *Naval Warfare*. London: Cambridge University Press.

Thyssenrohr. 1969. “Hannover Messe 1969 - Höhepunkt für unser Unternehmen.” *Thyssenrohr - Werkzeitschrift für die Mitarbeiter und Freunde Der Thyssen Röhrenwerke und ihrer Tochtergesellschaften*, 1969.

Timmermann, Heinz. 1971. “Im Vorfeld der neuen Ostpolitik.” *Osteuropa* 1971 (6): 388–99.

“Treaty on European Union.” 1992. *Official Journal of the European Communities* 92 (C 191): 1–112.

Treverton, Gregory F. 1988. “West Germany and the Soviet Union.” In *Western Approaches to the Soviet Union*, edited by Michael Mandelbaum, 1–23. New York, NY: Council on Foreign Relations.

UK Department for Business, Energy & Industrial Strategy. 2013. “Crude Oil and Petroleum Products: Imports by Product 1920-2018.” GOV.UK. January 22, 2013.

United States Senate: Committee on Foreign Relations, ed. 1970. “Communiqué on Negotiations for Establishment of Diplomatic Relations Between the Soviet Union and the Federal Republic of Germany, Moscow, September 13, 1955.” In *Documents on Germany, 1944-1970*, 271–72. Washington, DC: U.S. Government Printing Office.

———. 1971a. “Communique Issued by the Political Consultative Committee of the Warsaw Pact Appealing for a Conference on European Security, Budapest, March 17, 1969.” In *Documents on Germany, 1944-1970*, 802–3. Washington, DC: U.S. Government Print Office.

———, ed. 1971b. “Note from the Soviet Union to the Federal Republic of Germany Urging West German Acceptance of Soviet Draft Statements to Be Exchanged on Renunciation of the Use of Force, January 29,1968.” In *Documents on Germany, 1944-1970*, 755–57. Washington, DC: U.S. Government Print Office.

———, ed. 1971c. “Statement by the Soviet Union Alleging Revival of Nazism and Militarism in the Federal Republic of Germany, January 28, 1967.” In *Documents on Germany, 1944-1970*, 718–20. Washington, DC: U.S. Government Print Office.

UPI Archive: Financial. 1982. “Austria Wednesday Signed an Agreement with the Soviet Union,” June 23, 1982.

UPI International. 1982. “France Signed a 25-Year Agreement Today with the Soviet,” January 23, 1982.

U.S. Department of State Bulletin. 1980. “Declaration June 23, 1980,” August 1980.

U.S. Energy Information Agency. n.d. “International Energy Statistics.” Accessed January 21, 2019. https://www.eia.gov/beta/international/.

US Fed News Service, Including US State News. 2006. “VOA News: Russia, Moldova Reach Natural Gas Price Deal,” January 17, 2006.

Vital, David. 1967. *The Inequality of States: A Study of the Small Power in International Relations*. Oxford: Clarendon.

Voeten, Erik. 2000. “Clashes in the Assembly.” *International Organization* 54 (2): 185–215.

———. 2004. “Resisting the Lonely Superpower: Responses of States in the United Nations to U.S. Dominance.” *The Journal of Politics* 66 (3): 729–54. https://doi.org/10.1111/j.1468-2508.2004.00274.x.

———. 2013. “Data and Analyses of Voting in the UN General Assembly.” In *Routledge Handbook of International Organization*, edited by Bob Reinalda, 54–66. Taylor & Francis Group.

Voeten, Erik, Anton Strezhnev, and Michael Bailey. 2009. “United Nations General Assembly Voting Data.” Edited by Erik Voeten. Harvard Dataverse. https://doi.org/10.7910/DVN/LEJUQZ.

Wagner, R. Harrison. 1988. “Economic Interdependence, Bargaining Power, and Political Influence.” *International Organization* 42 (3): 461–83.

Wall Street Journal. 1992. “Financial Brief: Wintershall Erdgas Handelshaus,” February 20, 1992, Europe edition.

Waltz, Kenneth N. 1970. “The Myth of National Interdependence.” In *The International Corporation*, edited by Charles Kindleberger, 205–23. Cambridge, MA: MIT Press.

———. 1979. *Theory of International Politics*. Reading, MA: Addison-Wesley.

Wangerman, Karl. 1970. “Tube for Gas: The Contract with Moscow.” *Aussenpolitik (English Edition)* 21 (2): 179–87.

Weisman, Steven W. 1981. “Accord Viewed as Symbolic, With Deep Rifts Remaining.” *New York Times*, July 22, 1981.

Whetton, Cris. 1997. “Pipeline Expansion Focuses on Baltic.” *InTech* 44 (10): 73.

White, Gregory L, and Vanessa Mock. 2014. “Russia’s Gazprom Cuts Gas to Ukraine, Sparking EU Shortage Fears; Natural-Gas Shutoff Threatens to Further Destabilize Ukrainian Economy.” *Wall Street Journal*, June 16, 2014.

Whitney, Craig R. 1979. “Iran Gas Cutoff Hurts Soviet Republics: Encouragement of Doubts Seen Future of Agreement Uncertain.” *New York Times*, January 24, 1979.

Winzer, Christian. 2012. “Conceptualizing Energy Security.” *Energy Policy* 46: 36–48.

Woehrmann, Claudia. 1986. *Osthandel als Problem der Atlantischen Allianz: Erfahrungen aus dem Erdgas-Röhrengeschäft mit der UdSSR*. Arbeitspapiere zur Internationalen Politik 38. Bonn: Europa Union Verlag.

Wood, David. 2007. “Russia’s Drive for Power-2: Gazprom Controls Gas Exports to Europe, Asia.” *Oil & Gas Journal*, July 7, 2007.

“World Economic Outlook Database (April 2020 Edition).” n.d. International Monetary Fund. Accessed July 8, 2020. https://www.imf.org/external/pubs/ft/weo/2020/01/weodata/weorept.aspx?sy=1980&ey=1990&scsm=1&ssd=1&sort=country&ds=.&br=1&c=134&s=NGDP_RPCH%2CPCPIPCH%2CLUR%2CBCA_NGDPD&grp=0&a=&pr1.x=48&pr1.y=10.

Yarbrough, Beth V., and Robert M. Yarbrough. 1992. *Cooperation and Governance in International Trade: The Strategic Organizational Approach*. Princeton, NJ: Princeton University Press.

Zhdannikov, Dimitry. 2007. “Russia Halts Estonia Fuel Transit Amid Satue Row.” *Reuters,* May 2, 2007.

Zimmermann, Hubert, and Franz Eibl, eds. 2000a. “Dokument 116: 4. April 1969 Gespräch zwischen Brandt und Zarapkin (Conversation between Brandt and Zarapkin April 4, 1969).” In *Akten zur Auswärtigen Politik der Bundesrepublik Deutschland (1969),* 446–51. Berlin: De Gruyter. https://doi.org/10.1524/9783486718188.428.

———, eds. 2000b. “Dokument 117: 8. April 1969 Gespräch zwischen Duckwitz und Zarapkin (Conversation between Duckwitz and Zarapkin April 8, 1969).” In *Akten zur Auswärtigen Politik der Bundesrepublik Deutschland (1969),* 451–58. Berlin: De Gruyter. https://www.degruyter.com/view/product/221863.

———, eds. 2000c. “Dokument 135: 26. April 1969 Aufzeichnung des Bundesministers Brandt.” In *Akten zur Auswärtigen Politik der Bundesrepublik Deutschland (1969),* 519–20. Berlin: De Gruyter. https://doi.org/10.1524/9783486718188.428.

———, eds. 2000d. “Dokument 176: 26. Mai 1969 Botschafter Allardt, Moskau and Das Auswärtige Amt.” In *Akten Zur Auswärtigen Politik Der Bundesrepublik Deutschland (1969),* 641–43. Berlin: De Gruyter. https://doi.org/10.1524/9783486718188.428.

———, eds. 2000e. “Dokument 213: 27. Juni 1969 Aufzeichnung des Ministerialdirektors Herbst.” In *Akten,* 740–42. Berlin: De Gruyter. https://www.degruyter.com/view/product/221863.

———, eds. 2000f. “Dokument 246: 25. Juli 1969 Aufzeichnung des Ministerialdirektors Bahr.” In *Akten zur Auswärtigen Politik der Bundesrepublik Deutschland (1969),* 857–58. Berlin: De Gruyter. https://www.degruyter.com/view/product/221863.

———, eds. 2000g. “Dokument 257: 7. August 1969 Gespräch zwischen Kiesinger und Nixon.” In *Akten zur Auswärtigen Politik der Bundesrepublik Deutschland (1969),* 887–98. Berlin: De Gruyter. https://doi.org/10.1524/9783486718188.428.

“Zum Besuch des Bundeskanzlers in Moskau: Das gemeinsame Kommuniqué.” 1980. *Osteuropa* 30 (10): A 469-470.

Appendix A - Impact of the Russian-Ukrainian Gas Dispute 2009

The table below demonstrates to what extend European importers were affected by the Russo-Ukrainian gas dispute and shutdown in 2009.

Table A.1. Impact of the Russo-Ukrainian Gas Dispute 2009

Country	Cut	Diversification	Gas storage	Alternative fuel
Bulgaria	100%	No diversification	Gas storage for 2-3 days, covering 35% of gas demand	Alternative fuel for 20 days
Slovakia	97%	No diversification	Gas storage for several weeks, covering 76% of gas demand	Alternative fuel for 1 month
Greece	80% BG and TR	Only LNG terminal, fully capable, booked more ships	Only in LNG terminal	One gas power plant switched to oil, sufficient till end of January
Austria	66%	Increased import from Norway and Germany	Gas in storage for several weeks	Yes
Czech Republic	71%	Increased import by 8mcm from Norway, and via Yamal/ Germany	Gas from storage 40days, 15% increase of domestic production	Not used now, could be coal and oil
Slovenia	50%	Gas from Algeria via Italy, and from Austria, but not increased amount	Gas from storage in Austria till Monday then possible decrease of supply by another 20%	Yes
Hungary	45%	Increased gas from Norway by 5%	Gas storage for 45 days	Alternative fuel – crude 90 days, fuel oil 30 days
Poland	33%	Half of the cut covered by Yamal, more gas from Norway	Gas storage for several weeks	Yes
Romania	34%	No diversification	Increased domestic production (60%) and withdrawal from storage	Yes

Germany	60% cut in Southern Germany, 10% total	+20 mcm receiving from Yamal, more from Norway and Netherlands	Gas storage for several weeks	Not used now
Italy	25%	Increased import from Libya, Norway, and Netherlands	79% full, covers 50% of demand	Not used now
France	15%	Industry covered	80% full	Not used now

Energy community[290] countries:

Country	**Cut**	**Diversification**	**Gas storage**	**Alternative fuel**
Serbia	100%	12% renegotiated with HU	1 mcm, less than 1 day, 8% covered by production	3 weeks of fuel oil
Bosnia and Herzegovina	100%	No diversification	No storage	Fuel oil only for 20 days
The former Yugoslav Republic of Macedonia (FYROM)	100%	No diversification	No storage	Fuel oil stocks need only for industry
Croatia	40%	Diversification to Italy, but not used, negotiations ongoing	Increased domestic production (43%) and storage withdrawal, 500mcm stored	Fuel oil for industry
Moldova (observer)	100%	No diversification	No storage	No alternative fuel

Source: European Commission (2009).

[290] The Energy Community (previously known as the Energy Community of South East Europe) is an international organization established by the European Union and a number of third countries in order to extend the European Union's internal energy market to Southeast Europe and beyond.

Appendix B - List of Countries included in the Qualitative Analysis

Table B.1. List of Countries included in the Qualitative Analysis

	Ccode	Country
1.	305	Austria
2.	316	Czech Republic
3.	390	Denmark
4.	375	Finland
5.	220	France
6.	255	Germany
7.	350	Greece
8.	310	Hungary
9.	325	Italy
10.	212	Luxembourg
11.	210	Netherlands
12.	385	Norway
13.	290	Poland
14.	235	Portugal
15.	317	Slovak Republic
16.	230	Spain
17.	380	Sweden
18.	640	Turkey
19.	200	United Kingdom

Appendix C - Time-Series Cross-Sectional Regression

Factor Analysis and Alpha Scores

Factor Analysis

Factor analysis/correlation — Number of obs. = 323
Method: principal factors — Retained factors = 2
Rotation: (unrotated) — Number of params = 3

Factor	Eigenvalue	Difference	Proportion	Cumulative
Factor1	0.707	0.512	1.200	1.200
Factor2	0.195	0.508	0.331	1.531
Factor3	-0.313		-0.531	1.000

LR test: independent vs. saturated: chi2(3) = 82.97 Prob>chi2 = 0.0000

Factor loadings (pattern matrix) and unique variances

Variable	Factor1	Factor2	Uniqueness
Import	0.609	-0.122	0.615
RussianNG	0.577	0.174	0.637
NGEnergy	-0.068	0.387	0.846

Factor analysis/correlation — Number of obs. = 342
Method: principal factors — Retained factors = 2
Rotation: orthogonal varimax (Kaiser on) — Number of params = 3

Factor	Variance	Difference	Proportion	Cumulative
Factor1	0.699	0.495	1.186	1.186
Factor2	0.204	.	0.345	1.531

LR test: independent vs. saturated: chi2(3) = 82.97 Prob>chi2 = 0.0000

Rotated factor loadings (pattern matrix) and unique variances

Variable	Factor1	Factor2	Uniqueness
Import	0.588	-0.199	0.615
RussianNG	0.594	0.098	0.637
NGEnergy	-0.017	0.393	0.846

Factor rotation matrix

	Factor1	Factor2
Factor1	0.992	-0.129
Factor2	0.129	0.992

Alpha Scores

Test scale = mean (standardized items)

Item	Obs.	Sign	item-test correlation	item-rest correlation	average interitem correlation	alpha
Import	323	+	0.6529	0.1797	0.1192	0.213
RussianNG	323	+	0.8081	0.4459	-0.1822	.
NGEnergy	323	+	0.4822	-0.037	0.451	0.6216
Test scale					0.1293	0.3083

Interitem correlations (obs. = 323 in all pairs)

	Import	RussianNG	NGEnergy
Import	1		
RussianNG	0.451	1	
NGEnergy	-0.1822	0.1192	1

Time-Series Cross-Sectional Regression Analyses

Prais-Winsten Regression, Correlated Panels Corrected Standard Errors (PCSEs)

Variable	**Model 1**	**Model 2**	**Model 3**	**Model 4**	**Model 5**
	Coefficients (St. Err.)	Coefficients (St. Err.)	Coefficients (St. Err.)	Coefficients (St. Err.)	Coefficients (St. Err.)
% of Russian NG of Total NG Imports	0.136*** (0.042)				
Russian NG Dependence + NG Import Dependence + NG Dependence		0.025 (0.023)			
Russian NG Dependence + NG Import Dependence			0.030* (0.022)		
Russian NG Imports to GDP				-0.594 (1.810)	
Russian NG Imports to Total Imports of Goods					0.864** (0.503)
Bilateral Trade as Percentage of GDP	-2.645** (0.96727)	-1.710 (1.715)	-1.703 (1.702)	-0.837 (1.803)	-1.755 (1.684)
Distance between the Capitals	0.000 (0.000)	0.000 (0.000)	0.000 (0.000)	0.000 (0.000)	0.000 (0.000)
Constant	0.626*** (0.058)	0.674*** (0.071)	0.670*** (0.072)	0.695*** (0.092)	0.671*** (0.080)
R2	0.467	0.456	0.457	0.457	0.460
Chi-square	15.612	1.438	1.870	0.727	3.086
Observations	323	323	323	323	323

Prais-Winsten Regression, Heteroskedastic Panels Corrected Standard Errors

Variable	**Model 1**	**Model 2**	**Model 3**	**Model 4**	**Model 5**
	Coefficients (St. Err.)	Coefficients (St. Err.)	Coefficients (St. Err.)	Coefficients (St. Err.)	Coefficients (St. Err.)
% of Russian NG of Total NG Imports	0.136*** (0.039)				
Russian NG Dependence + NG Import Dependence + NG Dependence		0.025 (0.023)			
Russian NG Dependence + NG Import Dependence			0.030 (0.023)		
Russian NG Imports to GDP				-0.594 (1.919)	
Russian NG Imports to Total Imports of Goods					0.864** (0.487)
Bilateral Trade as Percentage of GDP	-2.645*** (0.675)	-1.710*** (0.718)	-1.703*** (0.714)	-0.837 (0.882)	-1755*** (0.702)
Distance between the Capitals	0.000 (0.000)	0.000 (0.000)	0.000 (0.000)	0.000 (0.000)	0.000*** (0.000)
Constant	0.626*** (0.048)	0.674*** (0.053))	0.670*** (0.052)	0.695*** (0.049)	0.671*** (0.048)
R^2	0.467	0.456	0.457	0.457	0.460
Chi-square	20.033	5.777	5.933	2.237	7.399
Observations	323	323	323	323	323

Standard errors are in parentheses, * p < .10 ** p <.05 *** p < .01, one-tailed test

Regression Analyses with Alternative *Affinity* Measure

Linear Regression, Correlated Panels Corrected Standard Errors (PCSEs)[291]

Variable	**Model 1**	**Model 2**	**Model 3**	**Model 4**	**Model 5**
	Coefficients (St. Err.)	Coefficients (St. Err.)	Coefficients (St. Err.)	Coefficients (St. Err.)	Coefficients (St. Err.)
% of Russian NG of Total NG Imports	-0.271*** (0.045)				
Russian NG Dependence + NG Import Dependence + NG Dependence		-0.121*** (0.021)			
Russian NG Dependence + NG Import Dependence			-0.149*** (0.020)		
Russian NG Imports to GDP				-2.635** (1.240)	
Russian NG Imports to Total Imports of Goods					-3.575*** (0.448)
Bilateral Trade as Percentage of GDP	5.327*** (1.736)	5.026*** (1.714)	5.273*** (1.666)	3.793** (1.586)	5.400*** (1.654)
Distance between the Capitals	0.000*** (0.000)	0.000*** (0.000)	0.000*** (0.000)	0.000*** (0.000)	0.000*** (0.000)
Constant	0.826*** (0.057)	0.799*** (0.064)	0.810*** (0.063)	0.666*** (0.078)	0.771*** (0.069)
R2	0.108	0.086	0.109	0.045	0.111
Chi-square	122.80	96.26	123.40	130.69	172.21
Observations	323	323	323	323	323

[291] Ideal point data from Baily et al. (2017) is used to measure *Affinity*. Where Affinity is measured as the absolute distance between country 1 and country 2 posterior mean ideal point estimates and expected to be negative, that is, the distance decreases as natural gas dependence increases.

Prais-Winsten Regression, Correlated Panels Corrected Standard Errors (PCSEs)

Variable	**Model 1**	**Model 2**	**Model 3**	**Model 4**	**Model 5**
	Coefficients (St. Err.)	Coefficients (St. Err.)	Coefficients (St. Err.)	Coefficients (St. Err.)	Coefficients (St. Err.)
% of Russian NG of Total NG Imports	-0.208*** (0.073)				
Russian NG Dependence + NG Import Dependence + NG Dependence		-0.060 (0.038)			
Russian NG Dependence + NG Import Dependence			-0.089** (0.036)		
Russian NG Imports to GDP				-0.497 (2.468)	
Russian NG Imports to Total Imports of Goods					-2.528*** (0.824)
Bilateral Trade as Percentage of GDP	4.300 (2.745)	3.690 (2.706)	3.968 (2.659)	3.042 (2.670)	4.193 (2.680)
Distance between the Capitals	0.000** (0.000)	0.000*** (0.000)	0.000*** (0.000)	0.000*** (0.000)	0.000** (0.000)
Constant	0.760 (0.105)	0.692*** (0.116)	0.717*** (0.115)	0.614*** (0.126)	0.707*** (0.123)
Chi-square	32.54	28.63	30.56	30.45	30.92
Observations	323	323	323	323	323

Prais-Winsten Regression, Heteroskedastic Panels Corrected Standard Errors

Variable	**Model 1**	**Model 2**	**Model 3**	**Model 4**	**Model 5**
	Coefficients (St. Err.)	Coefficients (St. Err.)	Coefficients (St. Err.)	Coefficients (St. Err.)	Coefficients (St. Err.)
% of Russian NG of Total NG Imports	-0.208*** (0.075)				
Russian NG Dependence + NG Import Dependence + NG Dependence		-0.060 (0.041)			
Russian NG Dependence + NG Import Dependence			-0.089** (0.042)		
Russian NG Imports to GDP				-0.497 (2.972)	
Russian NG Imports to Total Imports of Goods					-2.528*** (0.853)
Bilateral Trade as Percentage of GDP	4.300*** (1.238)	3.685*** (1.244)	3.968*** (1.227)	3.042** (1.448)	4.193*** (1.223)
Distance between the Capitals	0.000 (0.000)	0.000** (0.000)	0.000** (0.000)	0.000*** (0.000)	0.000* (0.000)
Constant	0.768*** (0.096)	0.692*** (0.098)	0.717*** (0.095)	0.614*** (0.081)	0.707*** (0.088)
Chi-square	17.95	12.26	14.69	10.13	18.31
Observations	323	323	323	323	

Time-Series Cross-Sectional Regression Analysis: Larger Dataset

Ccode	Country
305	Austria
344	Croatia
316	Czech Republic
390	Denmark
366	**Estonia**
375	Finland
220	France
255	Germany
350	Greece
310	Hungary
325	Italy
367	**Latvia**
368	**Lithuania**
212	Luxembourg
343	**Macedonia**
210	Netherlands
385	Norway
290	Poland
235	Portugal
360	**Romania**
317	Slovak Republic
349	**Slovenia**
230	Spain
380	Sweden
640	Turkey
200	United Kingdom

Countries in bold are the ones that were added.

Linear regression, correlated panels corrected standard errors (PCSEs)

Variable	**Model 1**	**Model 2**	**Model 3**
	Coefficients (St. Err.)	Coefficients (St. Err.)	Coefficients (St. Err.)
% of Russian NG of Total NG Imports	0.127649*** (0.019620)		
Russian NG Dependence + NG Import Dependence + NG Dependence		0.04697*** (0.01070)	
Russian NG Dependence + NG Import Dependence			0.04816*** (0.00969)
Bilateral Trade as Percentage of GDP	-2.843783*** (0.723018)	-2.67741*** (0.73479)	-2.62679*** (0.71671)
Distance between the Capitals	-0.000013** (0.000008)	-0.00003*** (0.00001)	-0.00003*** (0.00001)
Constant	0.681785*** (0.033928)	0.71077*** (0.03934)	0.71869*** (0.04026)
R^2	0.1093	0.1569	0.118
Wald Chi-square	20.14	73.81	24.87
Observations	475	475	475

Standard errors are in parentheses, * p < .10 ** p <.05 *** p < .01, one-tailed test

Prais-Winsten regression, correlated panels corrected standard errors (PCSEs)

Variable	**Model 1**	**Model 2**	**Model 3**
	Coefficients (St. Err.)	Coefficients (St. Err.)	Coefficients (St. Err.)
% of Russian NG of Total NG Imports	0.03154*** (2.35000)		
Russian NG Dependence + NG Import Dependence + NG Dependence		-0.00019 (0.01916)	
Russian NG Dependence + NG Import Dependence			0.00275 (0.01831)
Bilateral Trade as Percentage of GDP	-0.67589 (1.05826)	-0.29118 (1.07214)	-0.29480 (1.05956)
Distance between the Capitals	0.00000 (0.00001)	-0.00001 (0.00002)	-0.00001 (0.00002)
Constant	0.62037*** (0.06699)	0.67953*** (0.07578)	0.67415*** (0.67415)
R^2	0.483	0.478	0.4783
Chi-square	9.50	0.79	0.71
Observations	475	475	475

Standard errors are in parentheses, * p < .10 ** p <.05 *** p < .01, one-tailed test

Prais-Winsten regression, heteroskedastic panels corrected standard errors

Variable	**Model 1**	**Model 2**	**Model 3**
	Coefficients (St. Err.)	Coefficients (St. Err.)	Coefficients (St. Err.)
% of Russian NG of Total NG Imports	0.07401** (0.03185)		
Russian NG Dependence + NG Import Dependence + NG Dependence		-0.00019 (0.01811)	
Russian NG Dependence + NG Import Dependence			0.00275 (0.01862)
Bilateral Trade as Percentage of GDP	-0.67589* (0.42849)	-0.29118 (0.43316)	-0.29480 (0.42972)
Distance between the Capitals	0.00000 (0.00002)	-0.00001 (0.00002)	-0.00001 (0.00002)
Constant	0.62037*** (0.04666)	0.67953*** (0.04982)	0.67415*** (0.04794)
R^2	0.4827	0.478	0.478
Chi-square	6.56	0.68	0.68
Observations	475	475	475

Standard errors are in parentheses, * p < .10 ** p <.05 *** p < .01, one-tailed test

Appendix D - Time-Series Regression Germany

Factor Analysis and Alpha Scores

Factor Analysis

Factor analysis/correlation — Number of obs. = 34
Method: principal factors — Retained factors = 2
Rotation: (unrotated) — Number of params = 3

Factor	Eigenvalue	Difference	Proportion	Cumulative
Factor1	1.416	1.085	0.940	0.940
Factor2	0.330	0.570	0.219	1.159
Factor3	-0.240	.	-0.159	1.000

LR test: independent vs. saturated: chi2(3) = 33.04 Prob>chi2 = 0.0000

Factor loadings (pattern matrix) and unique variances

Variable	Factor1	Factor2	Uniqueness
Import	0.725	0.325	0.369
RussianNG	0.864	-0.067	0.249
NGEnergy	-0.380	0.469	0.636

Factor analysis/correlation — Number of obs.= 34
Method: principal factors — Retained factors = 2
Rotation: orthogonal varimax (Kaiser on) — Number of params = 3

Factor	Variance	Difference	Proportion	Cumulative
Factor1	1.160	0.573	0.770	0.770
Factor2	0.586	.	0.389	1.159

LR test: independent vs. saturated: chi2(3) = 33.04 Prob>chi2 = 0.0000

Rotated factor loadings (pattern matrix) and unique variances

Variable	Factor1	Factor2	Uniqueness
Import	0.791	-0.068	0.369
RussianNG	0.723	-0.478	0.249
NGEnergy	-0.104	0.594	0.636

Factor rotation matrix

	Factor1	Factor2
Factor1	0.874	-0.486
Factor2	0.486	0.874

Alpha Scores

Test scale = mean (standardized items)

Item	Obs.	Sign	item-test correlation	item-rest correlation	average interitem correlation	alpha
Import	34	+	0.888	0.600	-0.438	.
RussianNG	34	+	0.682	0.187	-0.058	.
NGEnergy	34	+	0.274	-0.269	0.695	0.820
Test scale					0.0663	0.1755

Interitem correlations (obs. = 35 in all pairs)

	Import	RussianNG	NGEnergy
Import	1		
RussianNG	0.6946	1	
NGEnergy	-0.0582	-0.4376	1

Regression Analysis with Alternative *Affinity* Measure

Newey-West Standard Errors Specifying a Common First-Order Correlation)[292]

Variable	**Model 1**	**Model 2**	**Model 3**	**Model 4**	**Model 5**
	Coefficients (St. Err.)	Coefficients (St. Err.)	Coefficients (St. Err.)	Coefficients (St. Err.)	Coefficients (St. Err.)
% of Russian NG of Total NG Imports	-4.637*** (0.592)				
Russian NG Dependence + NG Import Dependence + NG Dependence		-2.506** (0.972)			
Russian NG Dependence + NG Import Dependence			-2.773*** (0.751)		
Russian NG Imports to GDP				-155.177* (78.783)	
Russian NG Imports to Total Imports of Goods					-59.028** (22.073)
Bilateral Trade as Percentage of GDP	17.205** (7.329)	36.285*** (10.425)	26.883** (9.732)	69.715*** (24.211)	45.706*** (10.845)
SocDemParty	0.416*** (0.092)	0.534*** (0.128)	0.444*** (0.115)	0.608*** (0.119)	0.575*** (0.098)
Post-Cold War	-2.063*** (0.127)	-1.957*** (0.330)	-1.824*** (0.287)	-2.328*** (0.272)	-2.308*** (0.253)
F-test	297.02	152.86	256.33	86.01	147.27
Prob > F	0.000	0.000	0.000	0.000	0.000
N	34	34			

Standard errors are in parentheses, * p < .10 ** p <.05 *** p < .01, one-tailed test

[292] Ideal point data from Baily et al. (2017) is used to measure *Affinity*. Where Affinity is measured as the absolute distance between country 1 and country 2 posterior mean ideal point estimates and expected to be negative, that is, the distance decreases as natural gas dependence increases.