Everything Revolves Around Oil and Natural Gas: Russia’s Economic and Political Centers of Gravity

by

Ivan Z. Stoitzev
Class of 2013

A thesis submitted to the faculty of Wesleyan University in partial fulfillment of the requirements for the Degree of Bachelor of Arts with Departmental Honors in Government
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Acknowledgements:

First and foremost, I would like to thank my thesis advisor Peter Rutland for the countless meetings, journal articles, books and comments on my drafts, as well as his patience with the quantitative part of my thesis. I am additionally indebted to him because he has been my advisor since I declared the Government major at the end of my sophomore year. I would never have been able to complete this thesis without his assistance, informed insight, and constant support.

I would also like to express gratitude to Michael Nelson. I have acquired countless quantitative and qualitative skills by working as his research assistant. Most of the skills I have learned from him over the last several years were crucial in every step of the thesis process.

Michael Rochlitz, of the Institute for Advanced Studies in Lucca, Italy, was instrumental in the quantitative work and the editing process. I am extremely grateful for all time he donated towards making this project as econometrically robust as possible.

I also owe a great deal of gratitude to Kevin Arritt, whose assistance, humor, and constant supply of caffeine made it possible to work through many sleepless nights, and countless days. I would like to thank Nicolas Cavallo for the many hours we spent exchanging ideas, books, and articles. I would also like to thank my roommates for listening to my endless thesis-related concerns, and offering their support.

This thesis is dedicated to my Mom. Her endless encouragement and support has been a perpetual source of motivation. None of this would have been possible without her.
Chapter 1:

Introduction

“Russia is an extremely dynamic country within Europe, not just in political terms but also in economic terms.” –Vladimir Putin

Structural Framework

Russia’s natural resource endowment is impressive by all standards. This thesis sets out to examine the effects oil and natural gas have had on Russian economic and political development since the collapse of the Soviet Union by means of analyzing economic data and major domestic and international political events. The following chapters are separated by topic in order to provide an organized and structured assessment of Russian development. Chapter 1 discusses basic Russian statistics, provides a survey of the existing literature on Russian energy resources, and explains the historical context for the subsequent analysis. Chapter 2 focuses on the distortive effects oil and natural gas have had on Russian international trade and economic growth. It finds that Russian trade severely underperforms without energy exports, and that the Russian economy is essentially driven by the success of major energy companies.

Chapters 3, 4, and 5 examine the effects oil and natural gas have had on Russian politics. Chapter 3 concentrates on the intricacies of domestic Russian energy politics. This chapter finds that the Kremlin, particularly under Vladimir Putin, has been determined to maintain control either directly or indirectly over Russian oil and gas. Chapter 4 takes a broader perspective, and analyzes the interplay between
Russian foreign policy and energy products. Russia’s interactions with the European Union are the main focus of this chapter due to the high volume of contact between Russia and the EU. This chapter concludes that while the Russian government has been willing to use state-owned energy companies as a part of its foreign relations, Russian international political maneuvers occasionally have negative repercussions in the long run. Chapter 5 analyzes the European Union’s attempts to standardize its energy trade with Russia through international institutions and domestic legislation. It deduces that while many of the proposed policy changes would be effective, they are unlikely to be ratified by Russia, and may even be in conflict with the goals of certain EU member states.

All of the arguments are brought together in Chapter 6. This chapter reconciles the different layers of dependence, with respect to oil and natural gas, between Russia and the European Union. It concludes that while Europe is dependent on Russia for a substantial percentage of its energy imports, Russia is heavily reliant on stable European demand for its oil and natural gas. This thesis fills a void in the existing literature on the complex dependence structure between Russia and the EU, and adds to the existing academic analysis on the effects energy resources have had on Russian economic performance and political development.

Basic Background

Russia has gone through a series of massive changes since the early 1990s. The collapse of the Soviet Union and the rapid transition to a market economy has shaken Russia to its core. Russia’s experience since the collapse of the Soviet Union
has been economically and politically complicated, and often filled with corruption and cronynism. Through all of the shifts in government structure, policy, and public opinion, however, Russia’s endowment of energy resources has remained vital to its stability. Most recent estimates place Russia’s proven natural gas reserves at 47.5 trillion cubic meters, and oil reserves at 60 billion barrels; Russia holds the world's largest natural gas reserves and the eighth largest crude oil reserves. (“Russia Country Brief”) After the U.S.S.R. dissolved, the Russian economy, government, and energy sector were in shambles. Since that time, Russia has recovered much of its old capacity to extract, refine, and export energy products. For example, from 1998-2005, 44.4 percent of the increase in the world’s oil exports was accounted for by Russia. (Tabata, “Influence” 2) The resurgence of the Russian energy sector has given Russia a way back from the economic and political catastrophe brought about by the collapse of the Soviet Union.

Since the transition to a market economy, several energy companies have developed within Russia. Some of these companies are state-owned and others privately-owned. Many of the major state-owned energy companies enjoy near monopolies. Transneft is a state-owned company that has a monopoly over domestic oil pipelines. Gazprom is the state-owned natural gas company, which has a near monopoly on the development of gas fields and sale of natural gas. Rosneft is also a massive state-owned company, but instead of developing and selling natural gas, like Gazprom, it is predominantly concerned with crude oil. Yukos was an enormous privately-owned oil company that was absorbed by the state in a hostile and abrupt way. Finally, Sibneft was also a privately owned oil company that was taken over by
the state, but in a much less aggressive process. All of these companies played incredibly important roles since the collapse of the Soviet Union, both in the energy industry and within the Russian political sphere as a whole.

Many political scientists have claimed that Russia has been using its endowment of oil and natural gas as a means of leveraging negotiations in its favor, and achieving political objectives. Russia has been able to use energy products for political goals because of their scarcity, their consistently high and inelastic demand, and the difficulty associated with finding different sources of energy products in the short-term. The use of this type of leverage, which often comes in the form of threats, ultimatums, or natural gas stoppages, has caused many to describe Russia’s foreign policy as Realist or even neo-Mercantilist, especially in relation to Europe. The aggressive attitude of Russian foreign policy has been attributed to Russia’s definition of sovereignty. For the Kremlin, sovereignty seems to be defined as the right to do what it wants on its territory and to eliminate its enemies; while the EU sees sovereignty as a “seat at the table”. (Krastev, 1) For all the supposed ideological differences between Russia and the European Union, however, Russia has usually acted in a more practical, rather than ideological, manner regarding the achievement of political goals. Nevertheless, Russia’s use of energy resources to accomplish political objectives has strained Europe’s trade relations with Russia.

The different types of energy products that European states purchase further complicate Europe’s affairs with Russia. The ways in which natural gas and oil are internationally traded are fundamentally different: oil is sold at the prevailing market price, while natural gas is sold in long-term contracts at varying prices. This makes
the negotiations over gas contracts extremely critical, and vulnerable to brinksmanship. These types of negotiations are usually exceedingly complex, and are often the stage for disputes between Russia and various European countries.

The relations between Russia and Europe, however, are not as asymmetric as they appear. Russian dependence on energy resources is extensive, both economically and politically, in the domestic and international realms. The effects of oil and natural gas spill over into every part of the Russian economy and government. Russian international trade is dominated by the exchange of energy resources. Similarly, the energy sector is the main driving force behind the growth of the Russian domestic economy. Energy products are also incredibly important to Russia and the Kremlin as a source of power, profit, and security. The Kremlin draws both domestic and international influence from the demand for its oil and natural gas. It is for this reason that domestically, the government is careful to maintain control over these vital resources, either directly as with the scandal over Yukos and the imprisonment of its owner Mikhail Khodorkovsky, or indirectly through ambiguous intermediaries like Gennady Timchenko. The Kremlin sees energy resources as a shortcut to international clout. This influence often takes the form of large infrastructure projects like the South and Nord Stream pipelines. Russian geopolitical objectives and concerns always seem to focus on energy resources.

Since the dissolution of the Soviet Union, Russia has had to reevaluate its role on the international stage. From the Russian perspective energy resources are able to boost Russia’s standing and authority in regional geopolitics and on the global arena altogether. In recent years, the high prices of gas and oil have made Russia more
powerful, more arrogant, and less cooperative. (Krastev, 1) Russia’s almost complete
dependence on energy products, however, has made the country’s politics and
economics one-dimensional, and undiversified. Energy resources are the main
economic and political drivers behind Russian power and influence, it is for this
reason that control over domestic reserves of oil and natural gas is jealously guarded
by the Russian government, which is determined to increase its influence, both
domestically and internationally.

Literature Review

The academic literature on Russia’s use of energy resources, domestically and
internationally, has mostly remained separated between a quantitative approach for
economic analysis and a qualitative method for political matters. In order to gain a
more complete understanding of Russia’s use of oil and natural gas, however, a
combined approach is necessary. It is for this reason that a more econometric method
is required when analyzing Russian trade flows, and more a qualitative, and nuanced,
approach is used when examining Russian political maneuvers.

Basic trade statistics indicate that the EU imports a large percentage of its
energy products from Russia; a considerable portion of the existing literature on
Russian trade uses basic trade statistics and a breakdown of Russian exports by
product type to conclude that Russian international trade is dependent on, and over-
inflated by, oil and natural gas. In order to convincingly conclude that Russian trade
is reliant on energy resources, a more advanced econometric approach is required.
There exists a wide range of quantitative techniques that would allow for a more complete understanding of the driving forces behind Russian international trade; among them is the Gravity model. The basic economic intuition behind the Gravity model says that countries with larger Gross Domestic Products will trade more with one another, as will states that are geographically closer together. Originally, theoretical support for the Gravity model was weak, and few economists and political scientists worked with the Gravity equation, but over the last few decades there has been a resurgence in the number of theoretical articles written that attempted to ground the Gravity model in widely accepted economic theory. Anderson (1979) and Deardorff (1995) mathematically derived the Gravity equation from existing economic trade theories. Krugman (1985) added to the Gravity model’s legitimacy by utilizing the Gravity equation alongside theories on product differentiation. These papers, amongst many others, demonstrated that the Gravity model could be extracted from other existing economic theories, and that it could be effectively used in modern econometric analysis.

The Gravity model’s ability to accurately predict trading patterns between nations is useful when trying to find the economically optimal level of trade between any pair of countries. A baseline for trade can be helpful when analyzing Russian trade, especially when the model’s estimates are compared to the actual levels of trade. This will illustrate any irregularities in Russian international trade, and better show the importance of Russian energy resources. An analysis of the over or under-performance of trade will also shed light on any other biases that exist in Russian
international trade; political or otherwise. A base estimate for trade will be instrumental in the analysis of Russian trading patterns.

Comparing real bilateral trade levels to the predicted values of trade will allow for an analysis of the degree of distortion present in Russian trade. Bussière, Fidrmuc, and Schnatz (2008) established an effective method of comparing the predicted values of trade to the real trade levels, and visualizing the degree of trade distortion once the results from the Gravity model regression are obtained. They were able to determine key patterns of trade between a variety of nations. While Bussière’s, Fidrmuc’s, and Schnatz’s article was not used to explain the trade distortion due to energy products, their methodology can easily be applied to the Russian case.

Quantitative work on effects of oil and natural gas on the domestic Russian economy have been extensive. Tabata (2011) and Kuboniwa (2010) have made significant steps in modeling the far-reaching effects of Russian energy resources, particularly their effects on other domestic sectors, like the manufacturing industry, and the Russian economy as a whole. Furthermore, Rautava (2004) and Gaddy and Ickes (2010) have shown a lot of support for the theory that the Russian business cycle can be almost fully explained by the fluctuations of the international price of oil. All of this quantitative work, however, is not isolated from the political realm. Brugato (2008) correlated aggressive Russian political maneuvers to fluctuations in the international price of oil. Brugato’s paper quantitatively shows that the economics of oil and natural gas are inherently linked to Russian politics. The econometric work of all these authors has shown the effects Russian energy resources have on economy,
but few have articles, aside from Brugato (2008), have drawn connections from the quantitative analysis to the political effects of oil and natural gas.

Previous scholarly articles on the effects of oil and natural gas on the Russian economy and the Kremlin’s actions have all found that energy resources are vital to both the economics and politics of Russia. The politics surrounding Russian energy resources have been analyzed and examined by a variety of prominent political scientists. Most scholars agree that the chain of causation that explains the current political atmosphere surrounding Russian energy resources began with the collapse of the Soviet Union in the early 1990s.

The work of political scientists like Li-Chen Sim (2008), Peter Rutland (2009), and Thane Gustafson (2012) have all thoroughly examined the privatization strategies under the Yeltsin regime that set the basis for the current economic power structure, particularly with respect to the energy sector. There is some disagreement by Gustafson on the significance of certain privatization programs (i.e. loans-for-shares) on the current power balance in the energy sector, though these differences of opinion are relatively minor. These authors primarily point to the corrupt privatization strategies implemented by the Russian state as the catalyst for the concentration of economic power in the hands of a few Russians. These authors also have relatively similar analyses of the series of events that led to the rise of Vladimir Putin. They argue that Boris Yeltsin played an instrumental role in helping Putin get elected as President of Russia. On the whole, there is relatively little disagreement amongst scholars about the sequence of occurrences that took place during the years of privatization, and the rise of Putin to the Presidency.
The degree of attention scholarly work has given Russian domestic politics surrounding the energy sector varies widely across different events and political actors. There is surprisingly little disagreement on the interpretation of the arrest of Mikhail Khodorkovsky, the Russian oil-tycoon, in 2003. Sim (2008), Sakwa (2009), and Gustafson (2012) mostly agree that the arrest was politically motivated. The alternative is the official story that the Kremlin supports, and actively propagates. The Kremlin’s series of events states that the arrest was motivated by a desire to uphold the rule of law within Russia, and that Khodorkovsky had been evading taxes while simultaneously embezzling from his company. The Kremlin’s version of events has little support in the academic literature. While the literature on Khodorkovsky is extensive, there is little academic literature on the alleged connections Putin has with various wealthy Russians, like Gennady Timchenko. There is also little written about the specific role Timchenko played in the Russian political realm and the dissolution of Yukos. Analyses of the alleged corruption and cronyism between Putin and Timchenko are mostly confined to the world of journalism. While Putin, Timchenko, and the Kremlin vehemently deny the allegations of corruption and cronyism, evidence to the contrary has been mounting. The varying levels of analysis and consensus on Russian politics by academic literature are largely due to the lack of transparency in the Kremlin, especially in recent years.

Academic literature on the motivation behind the construction of new Russian pipelines, especially with respect to the South and Nord Stream pipelines, is varied in its conclusions. Rawi Abdelal (2012) suggests a firm-oriented rationale behind the large infrastructure projects. His work argues that the pipelines were mainly
constructed to circumvent a number of problematic transit countries for Russia energy exports. This was done in an attempt to maximize profits and decrease the exposure to future political conflict. Abdelal also analyzes the political problems Gazprom faces when it tries to act as a profit-maximizing firm. He concludes that these projects were the product of inter-firm cooperation (i.e. between Gazprom and the Italian energy company: ENI). Andrey Kazantsev (2012) supports a more corruption driven argument that focuses on the connections between various heads of state within the European Union, and Vladimir Putin. He discusses the “dark side” of EU-Russia gas deals, and generally concentrates on the cronyism surrounding both the South Stream and Nord Stream. Most of his analysis focuses on the former German Chancellor: Gerhard Schröder, and former Italian Prime Minister: Silvio Berlusconi. Kazantsev concludes by briefly discussing attempts to institutionalize EU-Russian gas relations in an attempt to reduce corruption and standardize the trade of energy products between the European Union and Russia. While Abdelal’s analysis is not mutually exclusive with Kazantsev’s argument, they both present unique motivating factors for the development of Russian pipeline infrastructure.

Some authors have emphasized the importance of involving Russia in international institutions in an attempt to bring more stability to the energy trade between the EU and Russia. Gilbert (2009) discussed the difficulty associated with passing legislation in the European Commission due to the broad range of opinions on Russia. He saw the diversity in European relations with Russia as major obstacle in passing legislation that would either hinder or assist Russian access to the European energy market. Belyi (2009) analyzed the international institutions the EU
has suggested, namely the Energy Charter Treaty. He was pessimistic about the effects such an institution would have on European trade with Russia, mainly due to the Russian desire to not be constrained by any third party. Similarly to Gilbert, he discussed the broad range of opinions within the EU on Russian political objectives. Both Gilbert and Belyi focus on the difficulties the EU faces in eliciting coordinated action from all member states.

Russian economics and politics appear to be very closely related, but are often examined independently. This has been predominantly due to the fact that each field is better suited for a different type of analysis: either quantitative or qualitative. While persuasive and influential academic articles have been published with both types of analysis, a more unified approach stands to bring together various aspects of the Russian economy and political sphere. While econometric analysis occasionally lacks the proper case study work to properly ground the results in reality, qualitative work can sometimes be too narrowly focused. By using both techniques in conjunction, a broader and more accurate analysis of the effects of Russian energy resources can emerge.

**Historic Context and the Rise of Putin**

The current political atmosphere in Russia has its roots in the privatization that took place after the Soviet Union collapsed. In 1992, Boris Yeltsin, the first president of Russia, introduced a period of liberalization. Initially, liberalization meant the emergence of independent economic actors, among who were factory directors who were free to manage their still state-owned factories without
supervision by central planners. (Rutland, “Putin” 3) As liberalization progressed, the majority of shares from newly privatized companies gradually concentrated in the hands of a few Russians. (Sim, 33) The consolidation of economic power in a few individuals created the foundation for the Russian oligarchy. The Russian oligarchs would be the basis for most economic activity within Russia. The crucial liberalization initiative that crystallized the oligarchs’ power came in the form of a series of auctions of massive state-owned companies. In 1995, Yeltsin introduced the “Loans-for-Shares” program, in which banks and wealthy individuals were encouraged to extend credit to the Russian government in the form of a loan that used shares of state-owned companies as collateral. (Treisman, 1) While only three major oil companies, Yukos, Sibneft and Sidanco, were privatized in this manner, these companies comprised a substantial percentage of the Russian oil industry and economy; additionally, the oligarchs who took control of these corporations would play central roles in the interaction between the Kremlin and the energy sector during Putin’s presidency. (Gustafson, 102) The auctions for these shares were rigged to exclude competitive bidding, and the whole loan aspect of the programs was used to avoid giving the impression of a direct sell-off of state assets. (Rutland, “Putin” 4) After a year, when the government was not able to pay back the loans, the lenders became the owners of large portions of previously public companies, for a fraction of the real cost. (Treisman, 3) The loans-for-shares program was the method by which a large portion of state-assets was distributed to the oligarchs.

The oligarchs, however, ran into political obstacles in 1996, as Yeltsin’s popularity waned, and another presidential election quickly approached. The
oligarchs depended on Yeltsin to remain in power, or else his reforms could be undone; specifically the loans-for-shares program. In an attempt to defeat the Communist party, and its leader Gennadi Zyuganov, many oligarchs met in Davos, Switzerland, and discussed ways in which to keep Yeltsin in power. In what became known as the Davos Pact, the oligarchs resolved to give Yeltsin their full support in the upcoming election, and to fund his reelection campaign. (Cowell, 59) Yeltsin won the 1996 election, and upheld the loans-for-shares program that had made the oligarchs richer and more powerful than any other Russians.

The oligarchs’ support of Yeltsin in the 1996 election was unexpected because of the fractious nature of the Russian oligarchy. The oligarchs were deeply divided, and continuously fought amongst themselves. (Rutland, “Putin” 5) In the chaos of liberalization, power moved from formal political institutions to networks of influence among individuals who had political contacts or control over economic resources. (Rutland, “Putin” 3) This created the basis for the future corrupt dealings. The corrupt nature of the Russian free-market initiatives bred distrust and paranoia amongst the oligarchs, and made cooperation almost impossible. Therefore, the oligarchs did not have the chance or capacity to form a core set of shared values, and could not unite and legitimate their influence and power in the eyes of the Russian public. (Rutland, “Putin” 1 and 5) This lack of support from the Russian people made it easier for Putin to wrestle power back from the oligarchs once he became President.

Yeltsin orchestrated Putin’s rise to power, as his second term was coming to a close. During this time, Putin was the Prime Minister under Yeltsin. Yeltsin pre-empted the presidential election following his second term by resigning on December
31st 1999, and nominating Putin as acting president; Putin proceeded to sweep the March 2000 presidential elections. (Rutland, “Putin” 5) When Putin became president, he brought with him his ideas about the role the state should play in big business as well as a group of political allies known as the Siloviki, or strongmen. Many of the Siloviki were Putin’s former KGB colleagues. (Sixsmith, 52) The Siloviki comprised a large part of Putin’s inner circle of political allies. Among the Siloviki were men like Igor Sechin, who worked as a KGB operative with Putin during the Cold War. (Sixsmith, 55) Sechin and other Siloviki would be central in the seizure of Yukos’ assets and the charges filed against Mikhail Khodorkovsky. (Gustafson, 347) In addition to the Siloviki, Putin also brought with him a number of political allies from St. Petersburg, known as Pitertsy. Unlike the Siloviki, the Pitertsy were not former KGB operatives; they were mostly politicians, economists, and lawyers that had worked in the St. Petersburg mayoral office with Putin after the U.S.S.R. collapsed. Putin placed many of the Pitertsy in positions of power within the government, among the Pitertsy who took these positions was Aleksei Miller. Miller had worked in St. Petersburg’s mayoralty in the early 1990s as a minor staffer in Putin’s International Relations Committee, and in 2001 Putin chose him to replace Rem Vyakhirev, as chief of Gazprom, the Russian state-owned natural gas company. (Gustafson, 267) Miller and Gazprom would play essential roles in Russia’s pipeline politics. Putin trusted the Siloviki and Pitertsy to do as he instructed and support his political goals.

Originally, it seemed as if Putin would continue Yeltsin’s privatization reforms, and not upset the existing balance between the state and the oligarchs; this
assumption proved to be false. Over the years, Putin replaced many of Yeltsin’s appointees with members of the Siloviki or the Pitertsy, as he sought to bring the actions of the oligarchs under the Kremlin’s control. Putin wanted to establish new rules for the oligarchs: they were to keep away from politics, and in return Putin would allow them to keep their empires, and follow a policy of “equal distance,” by not favoring one oligarch over another. (Gustafson, 278) From 2000-2003, Putin appeared as though he would leave the oligarchs to their own devices. After 2003, however, he took a much more aggressive course of action, and began expanding the state’s power into the energy sector.
Chapter 2:
The Russian Economy and Energy Resources

“We have still not yet succeeded in breaking away from the inertia of development based on energy resources and commodities.” –Vladimir Putin

The collapse of the Soviet Union in the early 1990s, and Russia’s transition to a market economy, produced a basic economic structure that is different from most other countries; it is for this reason that a thorough understanding of the fundamental economic statistics is required before any type of quantitative analysis is performed. Since the breakup of the Soviet Union, the Russian economy has reemerged in a way many thought impossible. In 2011, Russia’s Gross Domestic Product reached 1.86 trillion dollars, qualifying Russia as the country with the tenth largest GDP, just behind India, and ahead of Canada. (“World Development Indicator”) Russia’s large supply of oil and natural gas, coupled with the consistent international demand for energy resources, has helped elevate the Russian economy. In the Appendix, Graphs I and II illustrate the exports of oil and natural gas, relative to Russia’s domestic consumption. These energy resources have created large trade surpluses, and have greatly increased Russia’s holdings of foreign currencies. As of January 2013, Russia has accumulated approximately 528 billion dollars of international reserves, which include foreign currencies as well as holdings of gold. (“Foreign Reserves”) International trade has constantly played a large role in the Russian economy. Total trade (the sum of exports and imports) has consistently totaled approximately 40 percent of Russia’s GDP.
Russian international trade is predominantly focused on Europe. In 2010, the European Union was Russia’s largest trading partner, constituting slightly more than 47 percent of all Russian trade, followed by China with ten percent, and Ukraine with approximately five percent. (“Statistical Office”) Russian exports to the European Union are primarily comprised of energy resources. In 2010, Russian oil and natural gas accounted for more than 30 percent of all energy imports into the European Union. (“Statistical Office”) Russia’s energy sector is also extremely active in the domestic economy. The enormous influence of the Russian energy sector, however, directly translates into a relatively undiversified domestic economy.

The large percentage of EU-Russia trade that consists of natural gas and oil has caused many political scientists and economists to claim that the European Union is heavily dependent on Russian energy resources. Additionally, the rapid rise in production and vital importance of the Russian energy resource sector has proliferated the idea that the Russian economy is solely based on oil and natural gas. A more detailed quantitative analysis of the topic of Russian trade, however, stands to shed light on the forces that drive Russian trade, the importance of energy resources, and the major Russian trading partners. It is precisely for this reason that a quantitative method known as the Gravity model will be utilized to better understand the intricacies of Russian trading patterns, and any distortions in trade due to energy resources. On the whole, energy resources skew Russian international trade with the European Union; additionally Russia is heavily dependent on the continued demand for Russian oil and natural gas since the energy sector is the fundamental driver of Russian economic development.
Data

The dataset used in the quantitative analysis includes data from 34 countries, and every iteration of trading partners; which totals 561 different combinations per year. In addition to the twenty-seven countries in the European Union and Russia, Ukraine, the People’s Republic of China, India, Japan, the Republic of Korea, and Thailand were also included in the model. All of these countries either have a large impact on global trade, a larger amount of trade with Russia, or both. These states provide an adequately large sample size for the model to accurately predict trade flows. The years examined by the Gravity model span between 1997 and 2009. The timeframe was deliberately chosen in an attempt to examine a long enough period of time to provide the model with a sufficient amount of data. Steps were taken to control for the fluctuation of the global economy during this period.

The independent variables used in the regressions were acquired from a number of different sources. The data on national GDP and per capita GDP was obtained from the World Bank Database, and deflated into real 2000 U.S. dollars. The squared difference in per capita GDP between all countries for every year was calculated in an attempt to test the Linder Effect, in the same manner as Martinez-Zarzoso and Nowak-Lehmann (2003). The Linder Effect states that countries with similar per capita GDPs will trade more with one another because of similar demand structures. (Martinez-Zarzoso and Nowak-Lehmann, 305) Membership in the European Union was included in an attempt to control for the increase in trade that is likely to occur when a country joins the European single market economy. Membership is coded as a dummy variable; it is equal to one when both trading
partners are in the EU in a given year. This data was obtained from the European Union’s website. Data on language was also included as a dummy variable; this information was found in the CIA World Factbook, which lists the primary languages of every country in the world. The language variable equals one when both countries in question share the same primary language. The variable on contiguity, or geographic adjacency, was also input as a dummy variable, and was created with the help of an atlas of the region. A time variable was included in an attempt to capture any global trends in trade. This variable can also be used as a proxy for globalization, and broad trends in global economic performance. A dummy variable for former U.S.S.R. states was also included to control for any existing infrastructural links between the former Soviet countries that could still influence international trade. Initial regressions that excluded this variable appeared to be skewed. This variable is equal to one when both trading partners were once members of the Soviet Union.

The variable on the distance between nations was acquired differently from the other independent variables. This variable was calculated as the distance in kilometers between capitals. This has been the accepted norm for almost all papers that utilize the Gravity model. The distance from capital to capital was calculated using the great circle formula. The great circle formula, seen as equation 1, is used to determine the shortest path between two points on the surface of a sphere. (Weisstein) Equation 1 is more formally known as the haversine formula. The distance was calculated using the latitude and longitude of the capital cities; the coordinates for which were also found in the CIA World Factbook.
(1) \[\text{distance} = 2r \cdot \arcsin\left(\sqrt{\sin^2\left(\frac{\phi_2 - \phi_1}{2}\right) + \cos(\phi_1) \cdot \cos(\phi_2) \cdot \sin^2\left(\frac{\lambda_2 - \lambda_1}{2}\right)}\right)\]

- \(r\) = Radius of the Earth (6,371 kilometers)
- \(\phi_1\) and \(\phi_2\) = Respective Latitude of capital cities
- \(\lambda_1\) and \(\lambda_2\) = Respective Longitude of capital cities

In addition to the independent variables, the dependent variable used is the value of bilateral trade. This information was obtained from the International Monetary Fund’s Direction of Trade Statistics (DOTS) database, and was similarly deflated from nominal U.S. dollars into real 2000 U.S. dollars. The GDP deflator was utilized to correct for inflation instead of the Consumer Price Index because of inherent biases of the Consumer Price Index, and its tendency to overstate inflation, as per the substitution bias, the new product bias, and the quality bias. The choice to include all of these variables was made in light of the existing literature and preliminary regressions that suggested the need for additional independent variables.

A common complaint about the Gravity model is that the distance between nations is not measured accurately because the capital city of a country is not necessarily its economic center. This argument, while valid, has a limited effect on the model as a whole. This is due to the fact that smaller nations, like many of those in Europe, have tightly packed economically active populations, which are usually located around the capital. This line of argument also has a limited scope for the larger nations used in this model, namely Russia, India, and China. This is due to the location of the capital cities in these countries. While Moscow is not geographically
centralized in Russia, and is located relatively close to Europe; it is also where the majority of infrastructure and population can be found. (Charkasov) Russian infrastructure can be seen as Map I in the Appendix. In China, Beijing is located on the eastern coast of the country, which is the most economically active. (“Map of China”) Finally, New Delhi is relatively centralized in India, and is an adequate approximation for the economic core of the country. As previously stated, using the capitals as the endpoints for distance is not a perfect approximation, but the potentially inaccuracies have very restricted effects, and this approach is widely accepted by the academic literature that uses the Gravity model.

On the whole, very little data is missing or unrecorded from the variables discussed above. This is due to the fact that by the late 1990s, data was recorded regularly and relatively accurately by all of the nations examined. Furthermore, the sources from which the data was drawn, predominately the World Bank, the IMF, and the CIA World Factbook, are all trusted resources for information. The observations in the model are the trading pairs of countries: every combination of partners between the 34 countries. In total, the dataset consists of 561 trading pairs per year, over the span of 13 years. The quality of the data and the few missing observations establish the foundations for a robust model.

Methodology and Econometric Issues

The concepts that lie at the heart of the economic Gravity model can be traced back to Newton’s law of universal gravitation. Newton’s equation states that a gravitational force exists between any two bodies with mass; it also states that
gravitational force is proportional to the mass of the objects, and inversely
proportional to the distance between the objects. The universal gravitation equation
 can be seen as equation 2 below, in which F stands for the force of attraction, G is the
gravitational constant, M₁ and M₂ represent the masses of the objects, and d is the
distance.

(2) \[ F = G \left( \frac{M_1 \cdot M_2}{d^2} \right) \]

The largest difference between the universal gravity equation and the economic
Gravity model is that there is no gravitational constant that is present in every form of
international exchange. The other major difference is that the masses are usually
portrayed as the GDPs of countries, and the “force” is the bilateral trade between a
pair of states. The physical distance between the countries is used as a proxy for the
fixed and marginal transaction costs associated with doing business internationally. In
essence, the economic Gravity model suggests that the larger the GDPs of two
countries, and the smaller the distance between those countries, the more they will
trade with one another.

In regression analysis, the economic Gravity model is estimated using natural
logarithms because of the need to linearize the scientific gravity formula on which the
economic equation is based. The basic Gravity model regression equation can be seen
below, as equation 3.

(3) \[ \ln(\text{Trade}_{ij}) = \beta_0 + \beta_1 \cdot \ln(\text{GDP}_i) + \beta_2 \cdot \ln(\text{GDP}_j) + \beta_3 \cdot \ln(\text{Distance}_{ij}) \]
While the basic Gravity model only focuses on the economic mass and distance, the augmented Gravity model is usually more complex, and incorporates a number of social, political, and economic factors that have a significant role in explaining trade flows. These variables were discussed in the previous section, some of which are the differences in per capita GDP between trading partners, dummy variables for a common language, a common border, or membership in a regional trading agreement. These models address a wider range of factors that affect trade, and are often used to better illustrate international trade flows. The augmented model that will be utilized in the regression analysis can be seen in equation 4 below.

\[
(4) \ln(\text{Trade}_{ijt}) = \beta_0 + \beta_1 \cdot \ln(\text{GDP}_{it}) + \beta_2 \cdot \ln(\text{GDP}_{jt}) + \beta_3 \cdot \ln(\text{Distance}_{ij}) + \\
\beta_4 \cdot \ln(\text{Difference in Per Capita GDP}_{ijt}) + \beta_5 \cdot (\text{EU Membership}_{ijt}) + \\
\beta_6 \cdot (\text{Contiguity}_{ij}) + \beta_7 \cdot (\text{Common Language}_{ij}) + \beta_8 \cdot (\text{Year}_t) + \\
\beta_9 \cdot (\text{Former USSR States}_{ij})
\]

The Gravity model, while useful in predicting trading patterns, has a number of inherent econometric complications. Zero trade and unobserved heterogeneity are the two major issues that are most often discussed in academic articles that use the Gravity model. The concerns over zero trade flows come from the log linearization of the original gravity formula that’s necessary to create a regression type equation. Zero trade is an issue because the natural log of zero is undefined, and therefore cannot be used in the model. This is believed to skew the coefficients of the regression due to an omission of information. This complication is easily solved by the dataset utilized by this model because only about half of one percent of all trade values examined had a
value of zero. The issue of unobserved heterogeneity, however, is a more difficult problem to address. The unobserved heterogeneity in the model can most easily be explained as economic, social, or political factors that affect trade, but are extremely difficult, or even impossible, to control for with independent variables, and are therefore left in the error term of the regression. These effects could be caused by a wide variety of events that have either occurred in the past, or are currently taking place. These types of effects produce biased estimates that generate flawed results because of the likely correlations between the error term of the regression and the dependent and independent variables.

Originally, many academic papers chose to ignore the heterogeneity completely, and run cross-sectional ordinary least squares (OLS) regressions. The cross-sectional models failed to account for the heterogeneity, and produced biased estimates. The pooled approach was also shown to be inefficient by a number of articles like Matyas (1997). This inefficiency is due to the fact that the pooled OLS approach combines the data across the years in question into one large dataset, and does not differentiate between the cross-sectional and time components of the data. Pooled OLS, like the cross-sectional OLS regression, ignores the unobserved heterogeneity, and produces biased estimates due to misspecifications in the model. This made it clear that a panel approach was needed to accurately account for the unobserved effects.

The random effects approach to panel data allows for the differentiation between time and cross-sectional parts of the data, but its basic assumptions are problematic. One of its assumptions is that the unobserved effects are presumed to be
uncorrelated with the independent variables in the model. (Wooldridge, 844) This assumption, however, does not hold true in the Gravity model. Unobserved heterogeneity is inherent in trade flows, and assuming it does not exist does not mitigate its effects. Additionally, the Hausman test regularly shows the inapplicability of the random effects specification in Gravity model regressions; it frequently rejects the null hypothesis, which states that the random effects model is unbiased. The Hausman test run in this set of regressions rejected the null hypothesis with a chi-squared value of over 480, thereby ruling out the effectiveness of the random effects approach. The results of this test can be seen in the Appendix as Table I.

The fixed effects model, unlike the random effects model, allows for the unobserved effects to be correlated with the independent variables. It is for this reason that the fixed effects approach is the clear candidate for Gravity model regressions. This allows for the unobserved heterogeneity to be controlled for by the regression, and thereby produce more accurate estimates. Fixed-effects regressions are supposed to produce the same coefficients as ordinary regression when dummy variables are included for each of the observations. (Gould) It is through this characteristic of the fixed effects model that the biases of the heterogeneity specific to country pairs can be captured. Cheng and Wall (2012) have described the fixed effects model as the consequence of ignorance: the variables that are responsible for the heterogeneity bias, are unclear so allowing each trading pair to have its own dummy variable helps control for the bias. This is essentially true, since the country pair dummies capture all of the characteristics specific to that pair of trading partners.
The fixed effects approach, however, has its own set of drawbacks; most prominent among which is its inability to estimate time invariant variables such as distance, contiguity, language, and membership in the former Soviet Union. This is unacceptable when estimating a Gravity model regression because of the importance of these variables to the results. Even though there has been some disagreement on the subject of what constitutes economic distance, the exclusion of a distance variable in a Gravity equation would be extremely detrimental to the predictive power of the overall model. It is for this reason that many academic papers to do not use the fixed effects model by itself.

One of the many possible methods for estimating the Gravity model, while neither ignoring the inherent heterogeneity, nor allowing the time-invariant variables to drop out, is to utilize the Hausman-Taylor estimation technique. The Hausman-Taylor instrumental variable approach addresses correlation between regressors and unobserved individual effects while simultaneously allowing for the estimation of time-invariant variables. (Serlenga and Shin, 7) The Hausman-Taylor approach assumes that some independent variables are correlated with the unobserved effects, and are therefore, by definition, endogenous. Alternatively, exogenous variables are factors that affect the dependent variable without being affected by it or the unobserved effects. As stated above, the Hausman-Taylor estimation technique controls for the endogeneity through the use of internal instrumental variables. Instrumental variables can be defined as variables that are correlated with the endogenous variables, are exogenous, and are uncorrelated with the unobserved effects. One of the Hausman-Taylor model’s major advantages is that it eliminates the
need to choose external instrumental variables. Hausman and Taylor created a model, which is able to remove the endogeneity by using the certain dimensions of the data to construct instruments from inside the model. (Egger, 883) The Hausman-Taylor model uses the means over time of the exogenous variables as the instruments for the endogenous variables. (García-Mainar and Montuenga, 81) By identifying which variables are endogenous, or correlated with the unobserved effects, the Hausman-Taylor approach accounts for the unobserved effects, and produces more exact, and unbiased results. A useful way to think about this approach is that a Hausman-Taylor model that assumes all regressors are correlated with the individual effects reduces the regression down to a fixed effects model, and a model that assumes all the regressors are exogenous effectively creates a random effects approach. (Mitze, 5) The Hausman-Taylor model creates a functional middle ground between the fixed-effects and random-effects approaches for estimating the Gravity equation.

Even though external instruments are not required, the task of choosing endogenous variables is a difficult one, but with the use of existing literature, preliminary regressions, and the Sargan test, it is possible to correctly select the variables that are correlated with the individual effects out of the full list of independent variables. Egger (2005) used GDP as an endogenous variable, referring to its correlation with unobservable effects through inherent endowments of human and capital stocks, which directly affect trade. (Egger, 883) Egger’s argument is valid since GDP is fundamentally a variable that generalizes the whole economy, including the human and capital stock, as well as a host of other factors. Serlenga and Shin (2007) chose to use common language as an endogenous variable; they cited its
correlation with cultural, historic, and linguistic development. Common language is a good instrumental variable because it is likely that it is correlated with other cultural and social norms that could make interaction between two countries easier. These types of similarities are expected to facilitate trade. Finally, the dummy variable on former U.S.S.R. states was also utilized as an endogenous variable because of the infrastructural links between the states of the former Soviet Union. The Soviet era infrastructural and historic links became evident when preliminary regressions, which excluded the U.S.S.R. dummy, were run. Egger (2005), Serlenga and Shin (2007), and the still relevant Soviet era bonds between former U.S.S.R. states were the motivating factors behind the choice of GDP, and dummy variables on common languages and membership in the former U.S.S.R. as the endogenous variables.

Even with the theoretical support for the choice of endogenous variables, more rigorous tests must be passed before these variables can be considered effective. It is important to note that a requisite of the Hausman-Taylor model is that the number of time-invariant endogenous variables must be less than or equal to the number of time-variant exogenous variables. (Rault et al, 1560) Since this condition is met by using language and membership in the Soviet Union as the two time-invariant endogenous variables, and the difference in per capita GDP, EU membership, and year as the time-variant exogenous variables, the internal instruments derived from the means of the exogenous variables are considered valid. A robustness check on the validity of the choice of endogenous variables was performed with the use of the Sargan statistic. The Sargan test confirmed the correct choice of instruments, by not rejecting the null hypothesis, which states that variables
used as instruments are exogenous. The Sargan test produced a p-value of 0.4331: well below the threshold for rejection. The results of this test can be seen as Table II in the Appendix. It is because of these econometric reasons, in addition to the theoretical rationale, that the variables chosen as endogenous are assumed to be correlated with the individual effects, and the instruments are presumed to effectively control for that correlation.

A common critique of the Hausman-Taylor model is that it is inefficient for small sample sizes. Fortunately, the large dataset used in the regressions mitigates any inefficiency that could arise from a small dataset. The pooled, random effects, and fixed effects models are all included in the regression results table, in addition to the Hausman-Taylor model. This is done in an attempt to illustrate the bias that can come about because of unobserved heterogeneity. The other models are also included because of the large degree of disagreement in the academic world about which assumptions are the most efficient for the Gravity model. Every method has advantages and disadvantages; it is because of this reason that it has become a frequent practice in the literature to include several estimation methods for the same data. (Herrera, 6) Robust standard errors were utilized in the regressions in an attempt to account for outliers and other unexpected deviations of the data that could bias the significance of the results. In this set of regression, it is believed that the Hausman-Taylor approach produces the least biased and most complete estimates; this is because it actively addresses the inherent heterogeneity, while simultaneously including at time-invariant variables.
Results

While the results of the regressions can be seen in Table III in the Appendix, it is essential to first discuss the expected outcomes. The massive number of academic papers using the Gravity model provides a huge pool of scholarly work from which to draw predictions. The literature consistently shows a positive correlation between trade and the size of the economies of the trading partners, and negative relationship between the level of trade and the distance variable. Most articles also demonstrate an overall positive effect on trade from membership in a regional trade agreement, the sharing of a language and a common border. The difference in per capita GDP is expected to have a negative coefficient, this expectation is based on the Linder effect, which states that countries with similar wealth have similar demands functions, and will therefore trade more with one another. Larger differences in per capita GDP are expected to produce less trade. Much of the literature also shows a positive effect on trade coming from globalization and an increase in interconnectedness; the proxy for this concept is illustrated by the time variable. As previously discussed, the dummy variable on membership in the Soviet Union is expected to have a positive coefficient because of the theoretical evidence and preliminary regression results. The regression results for every model, ranging from the basic pooled regression to the Hausman-Taylor model, can be seen in Table III.

It is relatively easy to observe the differences in coefficients between models; it is similarly easy to observe the benefits of adding additional variables to the basic Gravity regression, such as a time variable, and membership in the European Union. For the most part, the results from all of the regression models fit the expectations
established by the literature relatively well. The variables on GDP always produce positive and significant coefficients; distance always has a negative coefficient and is similarly significant. As expected, the dummy variable on membership in the former Soviet Union had a consistently positive and significant coefficient. This suggests that even more than two decades after the collapse of the Soviet Union, some of the old infrastructural and cultural connections between these countries still continue to have effects on trade. The positive and significant estimate for the year variable supports the idea that globalization is increasing international trade. The positive coefficient and statistical significance of the European Union dummy clearly illustrates the benefits to trade that are associated with joining a single market across a number of countries. The EU dummy variable also helps show the skewing effects pooled models can have on regressions. In the augmented pooled regression, the EU dummy produced a negative and statistically significant coefficient, but a positive and significant estimate in every other regression. The Gravity model, however, did not completely produce the expected results.

It was unexpected that the dummy variable for adjacency did not produce a significant estimate. The other unexpected result of the regressions was the consistent lack of significance of the language variable. Even though it constantly produced a positive coefficient, it always failed to generate a significant estimate. This lack of significance can be partially attributed to the overlap between the countries that share the same language and membership in the European Union. It is likely that the EU dummy variable diluted the effects of the language variable because in further analysis when the regressions were run without the EU variable, the language dummy
returned more significant results. For the most part, the regression models consistently provided the expected results for the independent variables, however, in the interest of controlling for the inherent heterogeneity between country pairs, the Hausman-Taylor model will be used to calculate the predicted level of trade in the following section.

In addition to the previously discussed Sargan test, two other robustness checks were performed on the Gravity model. One robustness check is built into the methodology: a similarity in coefficients between the Hausman-Taylor model and the fixed effects approach is often viewed as evidence that the Hausman-Taylor equation is properly specified and applied correctly. The augmented fixed effects model and the Hausman-Taylor regression provide almost identical coefficients for the independent variables. The single difference is that the time invariant variables could not be estimated by the fixed effects approach, as previously discussed. The other commonly used robustness check is the comparison of coefficients produced by the augmented fixed effects regression run for the full sample to that of the fixed effects model run only on OECD countries. This check was performed in articles like Bussière, Fidrmuc, and Schnatz (2008), though it has become a common practice for many academic articles to run separate regressions on the OECD countries because these states have better economic institutions, and are relatively more stable. Essentially, by running the regression on OECD countries alone, the model is controlling for inadequate institutions that are more often seen in developing countries.
The results of the OECD regression can be seen as Table IV in the Appendix. The similarity between the OECD regression and the full sample regression suggests that the model holds true for more economically advanced countries as well. All of the variables maintained their sign and significance, and were very close to the coefficients of the full sample. Furthermore, the similarity between R-squared values suggests that there is relatively little noise in the data, and that the goodness of fit is close to the same between the OECD regressions and the full sample model. The robustness of the Hausman-Taylor regression, as well as the choice of variables altogether, is supported by the acceptance of the null in the Sargan test, the similarity between coefficients in the fixed effects approach and the Hausman-Taylor model, and the relatively small changes seen between the estimates of OECD countries and the full sample.

*Predicted Trade vs. Real Trade with Russia*

In order to put the regression results in perspective, and effectively analyze Russian trading patterns with Europe, the expected values of trade between Russia and every other country are extracted from the Hausman-Taylor regression model. The average predicted and actual values of trade over the 13 years analyzed are presented in Graph III in the Appendix. By averaging the estimates over the 13-year period, it is possible to view the results of the Hausman-Taylor model more easily in one graph, as opposed to several.

The predicted and actual values match up relatively well, which adds credence to the model’s predictive power. The differences between the two values, however,
are also of interest. By utilizing a similar methodology to that of Bussière, Fidrmuc, and Schnatz (2008), it is possible to produce a graph that compares the average predicted and actual values of trade between Russia and the other countries in the model. Equation 5 shows the method by which these values are obtained. The equation is almost identical to that of Bussière, Fidrmuc, and Schnatz (2008), and while Bussière et al used their model to analyze the level of trade integration between separate countries and the world, their methodology can be easily applied on a bilateral interaction. For the purposes of this analysis, only the significant variables in the Hausman-Taylor model will be used to generate the expected values of trade.

\[
(5) \quad \text{Ratio} = \ln\left(\frac{\text{Actual Trade}_{ijt}}{\hat{\beta}_0 + \hat{\beta}_1 \cdot GDP_{it} + \hat{\beta}_2 \cdot GDP_{jt} + \hat{\beta}_3 \cdot Distance_{ij} + \hat{\beta}_4 \cdot EU_{it} + \hat{\beta}_5 \cdot Year, + \hat{\beta}_6 \cdot USSR_{ij}}\right)
\]

If the ratio of trade between two countries is negative, then those two countries are considered to be trading below what is economically optimal, given the variables examined. Inversely, if the ratio is positive, then the two countries are considered to be trading above their potential, according to the model. Similar to Graph III, in order to present the data more succinctly, the average was taken for each country’s trading ratio with Russia over the 13-year span analyzed by the model. The average over the timeframe creates a general trend in trade relations between Russia and its various trading partners. Bussière, Fidrmuc, and Schnatz (2008) interpret this ratio as the level of market integration between two countries, and the strength of their trade links. Alternatively, the trade ratio can be interpreted as the preference of two states to trade with one another. This type of preference can be caused by a
number of factors including the political environment between the countries. Both of these interpretations will be useful when each country’s trade relations with Russia are examined more thoroughly.

Graph IV in the Appendix uses equation 5 to illustrate the differences between the predicted and real levels of trade over the 13 years examined. European countries are colored blue and Asian countries are colored red in an attempt to illustrate any difference in trade with Russia relative to geographic location. Graph IV demonstrates a wide range of differences amongst the trading patterns of European countries with respect to Russia. Graph IV shows that of all the countries examined; 14 countries traded more with Russia than the model predicted, and 19 trade less, of the 33 trading partners, 12 countries were relatively close to their predicted trade with an average ratio between one and negative one.

As previously mentioned, Bussière, Fidrmuc, and Schnatz have interpreted the trade ratio as the degree of market integration. Graph IV suggests that while a number of countries fall within a reasonable range of the model’s estimates, a large number of states are either exceeding the amount of trade that would be economically optimal, or not sufficiently integrated with the Russian economy. More broadly, Graph IV suggests that Russian international trade is underperforming; approximately 60 percent of the states’ trade ratios fall below zero, and 40 percent of the countries’ ratios fall below negative one. While trade with the Asian countries seems relatively more balanced, European trade with Russia is distorted.

The topic of energy exports has been at the forefront of a lot of discussion on Russian trade. It is often said that Russia is a one-resource economy, and that natural
gas and oil exports distort and overinflate Russian trade. It is also common for academic papers to show a breakdown of Russian exports based on kinds of goods, and to scrutinize trade balances. These types of analytical methods, however, do not address the issue of the economically optimal amount of trade between Russia and various countries; they simply show a heavy weighting towards energy resources. Fortunately, with the use of the Gravity model, it is possible to compare the predicted values of bilateral trade to the real values of trade without Russian energy exports. This approach will illustrate the extent to which Russian energy resources affect trade with other countries. Graph V in the Appendix shows Russian trade with the EU without Russian exports that fall under class 3 of the Standard International Trade Classification. Category 3 of the SITC includes products such as natural gas, crude oil, lubricants and related materials. Graph V also includes the trade ratios shown in Graph IV in an attempt to clearly illustrate the effects oil and natural gas have on the performance of Russian trade in the European Union.

Graph V illustrates the degree to which Russian trade with the EU depends on energy resources. A clear and significant downward shift becomes evident when the trade ratios with and without Russian exports that fall under SITC 3 are compared. There is an evident and considerable movement down for almost all countries’ trade ratios. The trade ratios without the energy products became greatly skewed towards underperformance: 17 countries have negative trade ratios, 14 of which are below negative one. The degree of market integration without the products that fall under SITC 3 is greatly diminished. It appears as though energy resources are not overinflating Russian international trade beyond what it should be, but are instead
propping it up. While Russian trade that includes SITC 3 products was not overperforming, it was much closer to the optimal levels predicted by the model. The exclusion of SITC 3 products showed Russian trade substantially underperform, and generally not fit the estimates of the Gravity equation. The lack of market integration for non-energy products suggests that Russian trade with the EU is mainly perpetuated by natural resources. A number of EU member states, however, maintained positive trade ratios with Russia even without Russian oil and natural gas. This suggests that even though Russian trade is dominated by oil and natural gas sales, other factors also affect the ways in which Russia trades internationally.

Graph V shows that the underperformance of trade, when oil and natural gas are excluded, is especially prominent in countries that have less than friendly relationships with Russia, i.e. Poland. It is also of interest to note that Cyprus, a very accommodating nation to Russian objectives, has a large positive trading ratio. These observations suggest that Russian trade is not only skewed by oil and natural gas, but also by states’ political attitude toward Russia. Leonard’s and Popescu’s article “A Power Audit of EU-Russia Relations,” classifies all members of the European Union into five categories based on their relations with Russia. Ranging from political adversaries to close friends, the categories are: “New Cold Warriors,” “Frosty Pragmatists,” Friendly Pragmatists,” “Strategic Partners,” and “Trojan Horses”. Leonard’s and Popescu’s paper categorizes all of the EU nations based on recent events and interactions with Russia. These vary from cyber-attacks and disputes over the sale and distribution of natural gas within the European Union to support and protection from Russia in various international bodies. When the EU states and their
trading ratios are ordered based on their relations with Russia, an easily visible correlation emerges. This relationship can be observed in Graph VI in the Appendix. In recent years, Cyprus has had particularly close relations with Russia. Currently, Cyprus is one of the largest tax havens for Russian capital. It is for this reason that a number of large Russian companies have various shell corporations that are registered in Cyprus. This relationship is likely responsible for a large degree of trade between the two countries. On the other end of the spectrum, Poland has had a series of disputes with Russia in recent years, and has actively opposed Russian objectives in the region, and in the European Union as a whole. Therefore, it is not surprising that Cyprus and Poland would be located at opposite ends of the continuum on relations with Russia. It is also interesting that both countries’ trade ratios perform according to their political dealings with Russia.

A simple correlation test between the variable coding for the political preference of EU countries with respect to Russia, and the values of the trade ratios produces a positive and statistically significant coefficient with a p-value of 0.0005. The results of this correlation test can be seen as Table V in the Appendix. This suggests that the closer European states are with Russia, on a political basis, the more they are going to trade. This type of an observation has a basis in the existing literature on Russian international trade. This is due to the fact that Russia highly politicizes international trade, particularly energy products. The Kremlin has been actively trying to convert economic power, which often takes the form of vital resources like oil and natural gas, into political influence, both in the region and on the international stage as a whole.
It seems that while the trade ratio can clearly be interpreted as market integration or the strength of trade link, as Bussière, Fidrmuc, and Schnatz would suggest, it can also be understood as an a measure of political preference, especially with Russia. The trade ratio can have more of a political interpretation with regard to Russian trade because of the large degree of state involvement in the Russian economy, particularly in the energy sector. The Kremlin’s involvement in the economy dilutes clear economic incentives with political objectives, especially with regard to energy resources. The deep connections between the Kremlin and the Russian energy sector have clear effects on the international trade of oil and natural gas. These connections will be thoroughly examined in chapter 4.

Energy resources are undoubtedly important to Russian international trade. Without oil and natural gas, Russian trade, relative to the economically optimal estimates, falls drastically short of what is expected. In 2011, 79 percent of Russian exports to the EU were categorized under SITC 3. (“Statistical Office”) The next closest category was SITC 6, with 7.9 percent. (“Statistical Office”) SITC 6 is comprised of all manufactured goods. Natural resources and energy products greatly outweigh the other sectors of the Russian economy, especially in international trade with the European Union. The relatively small amount of Russian manufactured goods that are exported further supports the theory that European demand for Russian manufactured goods is relatively low. This is predominantly due to the difficulty the Russian manufacturing sector has had ever since the collapse of the Soviet Union. The Russian energy sector has had a role in the development of other parts of the Russian economy, like manufacturing. The successes and failures of the Russian oil
and gas companies often have far reaching effects that spill over into other parts of the economy as well as the political realm.

The Dutch and Russian Diseases

The effects of oil and natural gas on Russian international trade and trading partner preference are relatively clearly represented by the Gravity model results; oil and natural gas, however, have large effects on other Russian industries as well as the Russian political sphere. The growth and decline of the oil and natural gas industry are not economically isolated from other sectors in the Russian economy. It is not uncommon for countries rich in energy resources to experience distortions in other sectors of the economy due to the high international demand for their energy products. Most commonly cited among these distortions is the “Dutch disease”. The “Dutch disease” is a term that was coined in order to explain the decline in manufacturing in the Netherlands after large natural gas reserves were found in the late 1950s. (Stijns, 10) The economic rationale for the decline in manufacturing follows as such: the growth in exports of the natural resource increase the real exchange rate of the domestic currency, this inflates the value of the domestic currency, and keeps it artificially high because of the considerable level of international demand for energy products. The highly valued domestic currency directly translates into a decline in the manufacturing sector because of the relative cheapness of foreign products owing to their countries’ less valuable currencies. (Stijns, 8) The manufacturing industry thereby enters into a cycle of underperformance and decay because of the non-competitive nature of its products in
the market. The Russian economy has followed a different development path than the one prescribed by the “Dutch disease”.

In contrast, Russia seems to defy the “Dutch disease’s” predicted correlation between its energy sector and its domestic manufacturing industry. From 1998 to 2008, as oil prices steadily grew, the Russian manufacturing sector experienced relatively strong growth as well. (Kuboniwa, 2) This positive correlation between growth in the energy resource sector and the domestic manufacturing sector became known as the “Russian disease”. The Russian manufacturing sector was divided into sub-sectors and analyzed by Kuboniwa in his paper, “Diagnosing the ‘Russian Disease’: Growth and Structure of the Russian Economy, Then and Now”. Kuboniwa discovered a positive, and statistically significant, relationship between every manufacturing sub-sectors’ performance and the international price of oil between 1995 and 2009; this was the exact opposite relationship that was predicted by the “Dutch disease”. (Kuboniwa, 17) This strong correlation between the price of oil and the manufacturing sector makes the Russian economy extremely volatile, and dependent on the international demand and supply of oil. A high oil price correlates with a large value for total factor productivity for the manufacturing sector, and the economy as a whole. (Kuboniwa, 26) Inversely, this means that any decrease in the price of oil directly translates into a sharp decline for the Russian economy. The exaggerated swings in growth and decline in the manufacturing sector were observed in every sub-sector of manufacturing, as the price of oil grew from 1998 to 2008, and then promptly declined in 2009. (Kuboniwa, 17) In essence, the “Russian disease” means that Russia will experience rapid growth when oil prices are high, compared to
other oil exporting countries, but it will also experience much more severe declines when the price of oil decreases.

The “Russian disease” presents an interesting problem for the Russian economy. The positive correlation between the international oil price and the growth of the domestic manufacturing sector means that the Russian business cycle can be almost completely explained by the fluctuations in the price of oil. This theory has been thoroughly examined by various academic papers like Gaddy and Ickes (2010), Tabata (2011), and Rautava (2004). The positive correlation between the price of oil and the growth of the manufacturing sector signifies that diversification away from the energy sector must come at a time when oil prices are high, since this is when the manufacturing industry will be profitable enough to merit investment. Times when oil prices are high, however, are also when the energy industry is strongest. During these instances, the manufacturing industry would be unlikely to get much capital from the private sector because the energy industry would be a less risky environment in which to invest. This means that any funding would have to come from the government, however, the government’s heavy reliance and exposure to the energy sector renders such investments improbable. Thus, a true diversification away from oil and natural gas must be initiated by a fundamental change in the correlation between the energy and the manufacturing sectors.

This change in correlation may come soon; the most recent economic data suggests that the effects of the “Russia disease” may be waning. The World Bank’s Russian Economic Report for 2012 indicated a break in a number of Russian economic trends. The most significant of these was the year-on-year decline of the
Russian manufacturing sector. According to the World Bank, this is the first time
Russian manufacturing sector has declined year-on-year since 2009. This decline
came during a year of stable, though still elevated, international oil prices. It is
possible that the decline in Russian manufacturing could be signifying the loosening
of the relationship between the energy sector and industrial production. The break in
the correlation may be due to the previously discussed lack of investment in Russian
manufacturing, and general depreciation of existing facilities. Whether or not the
Russian manufacturing sector continues to decline will depend greatly on the actions
the government takes in the years to come. The recent break in the relationship
described by the “Russian disease,” however, could be a sign that the Russian
economy stands to make yet another transition with respect to its energy sector in the
future.

*Petro-confidence*

The importance of natural gas and oil to the modern global economy has
given Russia a large degree of influence on the international stage. This importance
has given Russia, what some authors call, “petro-confidence”. The effects of Russian
petro-confidence have been far-reaching and expanding over the last decade. Thomas
Brugato examined the political effects the rising oil price had on the Russian
government in this paper, “Drunk on Oil: Russian Foreign Policy 2000-2007”. In this
paper, Brugato created an “aggression index” for Russian foreign policy by
examining news articles from sources like *The Economist, The Washington Post,* and
*The New York Times*; he defined aggression as “policy maneuvers that have the
impact of harming Western interests.” (Brugato, 5) Brugato finds a strong, statistically significant, correlation between the price of oil and Russian aggression on the international stage. (A graph that summarized Brugato’s findings is available in the Appendix as Graph VII) Oil and natural gas have worked to centralize control in the Kremlin, and create confidence amongst Russian political elites who feel that they have more flexibility to act assertively abroad. (Brugato, 20) In reality, however, the political effects of energy resources are much more intricate and complex than a simple correlation could model for.

While Brugato’s “aggression index” is subjective in many ways, it is undeniable that the Kremlin has drawn a large amount of its perceived power and importance from what many Russian political elites see as an asymmetric dependence between the energy resource importing European countries and Russia. Furthermore, the state-owned nature of Gazprom, Rosneft, and Transneft gives the Russian government a direct way to control the extraction, refinement, and transport of energy resources. The large degree of public sector activity in the energy sector allows for the politicization of energy resources since the commitments of publicly owned companies are often different than the profit-maximizing nature of private companies. It is precisely because of the large degree of government control in the energy sector that many Russian political elites see an increase in their international influence. It is for this reason that an analysis the political sphere’s response to energy resource is valuable in understanding the distortive nature and politicization of Russian natural resources.
The effects of Russian energy resources are complicated and intertwined with a number of other economic and political entities. The energy sector clearly has a very influential role in the domestic economy. Oil and natural gas affect the development of the Russian manufacturing industry, and have essentially driven the Russian business cycle since the U.S.S.R. dissolved. The Gravity model showed that Russian trade is skewed by energy exports, and without the products that fall under category 3 of the SITC; Russian trade would generally not be able to meet the estimates of the Gravity equations. The empirical results derived from the Gravity equation, however, also suggest that Russian trade is influenced by the geopolitics of the region, specifically the political rapport Russia has with its various trading partner. Russia has shown a clear tendency to trade more with EU members that are accommodating of Russian political objectives. These empirical results provide a quantitative foundation for the claim that Russian trade is politicized because of the active role the Kremlin plays in the Russian economy. The energy sector and the rise of the price of oil have been the focal points around which many Russian policy maneuvers have been made. It is due to Russian political tactics, with respect to energy resources, that an in-depth analysis of the domestic and international politicization of Russian oil and natural gas would greatly help expand on the claim that Russian trade is politicized, and illuminate the ways in which energy resources have also skewed the Russian political sphere.
Chapter 3:
Domestic Energy Resource Politics

“The strengthening of our statehood is, at times, deliberately interpreted as authoritarianism.” –Vladimir Putin

The larger political undercurrents at play in Russia’s energy sector have fluctuated from thinly veiled acts of corruption and criminal activity to difficult to track acts of bribery and cronyism. At the time when Putin became President, the oligarchs did not appreciate the momentous changes that would be implemented, with respect to big business in Russia. Putin’s central alteration to the interaction between the state and the oligarchs was simple, at least initially: he wanted the oligarchs to be under the Kremlin’s control, to reduce their political influence, and to make them pay taxes. In return, Putin would stay out of the business affairs of the oligarchs. Soon enough, however, the oligarchs started testing the limits of what was permitted, which brought about a severe response from the Kremlin. The clearest example of the Kremlin’s response to the actions of the oligarchs can be seen by the attack on the oil company Yukos, and its chairman: Mikhail Khodorkovsky.

Putin never fully kept his side of the new agreement between the state and the oligarchs. Putin has allegedly, directly and indirectly, helped Gennady Timchenko, and his international oil trading company, obtain both wealth and contracts from state-owned companies. Often times these allegations have sparked accusations that Putin is helping Timchenko at the cost of other oligarchs, directly breaching Putin’s assurance of “equidistance”. The connection between Putin and Timchenko became
more evident in the late 2000s. The Putin administration’s domestic actions, with respect to energy resources, have been predominantly motivated by a desire to separate oligarchs with threatening ideas from the political sphere, while simultaneously expanding its influence, and involving itself in the business affairs of the oligarchs.

*Mikhail Khodorkovsky and the Yukos Scandal*

The Yukos scandal started with Khodorkovsky’s ambitions to acquire an oil company during Russia’s privatization era. In 1988, Khodorkovsky co-founded a bank called Menatep. (Sakwa, 34) He soon saw the potential for profits in the energy sector, specifically oil. Khodorkovsky was particularly keen to acquire Yukos partly because at the time it was the second-largest oil company in the country in terms of output and reserves, and alternatively because Yukos’ management was weak and vulnerable to an external takeover. (Sim, 57) Khodorkovsky used his influence and government connections to gain control over Yukos through Yeltsin’s “Loans-for-Shares” program.

Khodorkovsky and Menatep gained ownership of Yukos through a series of legal loopholes and government connections. Menatep used its existing government connections to get itself appointed as the auction organizer for Yukos’ assets. (Sim, 58) Menatep was able to manipulate the auction’s regulations to exclude foreign companies, raise the minimum investment beyond what most banks could afford, and effectively make itself the only bidder. (Sim, 62) At the auction on 8 December 1995, there were only two bidders; both of which were Menatep-affiliated companies, as a
result Menatep purchased 33 percent of Yukos’ shares in exchange for US $159 million, and Khodorkovsky became the chairman and vice-president of Yukos. (Sim, 60) Over the next few years, Khodorkovsky consolidated his control over Yukos, and gained a majority share in the company. By 2002, Yukos had surpassed Gazprom as the most valuable Russian company, and in 2003 it became the leader in revenue and oil production. (Sim, 65) Khodorkovsky had become the wealthiest man in Russia, and began expanding into the Russian political sphere. This directly threatened Putin’s and the Kremlin’s policies, as well as their control over Russian oil.

The Kremlin deemed Khodorkovsky too dangerous because of his wealth and political aspirations. In 2003, Putin approved the arrest of Khodorkovsky, half-a-dozen other Yukos executives, and the dismemberment of Yukos. (Rutland, “Putin” 6) Khodorkovsky was arrested in October 2003 on charges that included personal income tax evasion, avoiding corporate taxes, falsifying documents, fraud, and theft; shortly thereafter 44 percent of Yukos’ assets, which belonged to various Menatep affiliates, were frozen. (Sakwa, 158) The Russian Tax Ministry claimed that Khodorkovsky and Yukos owed back taxes amounting to more than US$ 30 billion. (Sim, 66) In December 2004, through a court-mandated auction a large portion of Yukos’ assets was sold off. (Sim, 66) Originally, Gazprom, under the leadership of Pitersty Aleksei Miller, was supposed to absorb Yukos’ assets, and thereby create a massive oil and natural gas conglomerate; this plan fell through when Yukos’ minority shareholders filed a lawsuit in the U.S. that could have held Gazprom and its officers liable in the United States for the “illegal” dissolution of Yukos if they followed through with the absorption of the oil company’s assets. (Gustafson, 344) It
was because of the legal complications that Rosneft, another state-owned oil company, bought Yukos’ assets instead of Gazprom. At the time, Rosneft had much less exposure to international markets, and its assets were more limited than Gazprom’s. This reduced the potential repercussions the lawsuit could have had. With the selloff of Yukos’ assets, the company effectively ceased to exist, while Rosneft became the leading Russian oil producer. Khodorkovsky was eventually found guilty for nine out of eleven charges, and was sentenced to nine years in a penal colony (Sakwa, 211-212) Khodorkovsky’s sentence was later extended by another seven years, after a second trial in which he was said to have embezzled money and stolen oil from Yukos, while he was acting chairman. (Sakwa, 211-212) In the end, Khodorkovsky and a number of former Yukos executives were sentenced to varying lengths of imprisonment, and Yukos was sold for parts.

There are a number of ways to interpret the Yukos scandal, and the arrest of Mikhail Khodorkovsky. The Kremlin has claimed that the whole affair was purely perpetuated by violations of Russian law: mainly tax evasion and fraud, among other allegations. Many political scientists and journalists, however, have suggested that the whole matter was carried out because of Putin’s political concerns that Khodorkovsky was a powerful independent political agent, who could influence Duma representatives, and other oligarchs in a way that contradicted the Kremlin’s objectives. When both interpretations are analyzed, it becomes relatively clear that Khodorkovsky’s arrest, and the dissolution of Yukos, had clear political benefits for Putin, his political allies, and state-owned companies like Rosneft.
The tax-based explanation that the Kremlin and Putin support is plausible, but there are key inconsistencies that make it unlikely. Putin and the Tax Ministry claim that the central goal of the Yukos affair was to establish order in the country, and to show other corporations that taxes must be paid in their entirety. (Sim, 66) These claims are not consistent with the Yukos case, since all Russian corporations actively try to minimize the amount of taxes they have to pay; many achieve this by moving their operations abroad, like Yukos. Additionally, Yukos was neither the only Russian company to utilize offshore tax havens, nor the most egregious offender. (Sim, 67) At one time, even the Russian Central Bank kept gold and foreign currency reserves in a shell company in the British Channel Islands. (Nadmitov, 60) Furthermore, the tax minimization schemes used by Yukos were perfectly legal, Putin himself said “failings in Russian legislation” had allowed major corporations to take advantage of tax loopholes. (Sim, 67) Therefore, Yukos’ largest distinguishing characteristic was certainly not its tax record. Moreover, the Tax Ministry failed to respond to multiple requests by a group of investors who offered to bailout Yukos, and its shareholders, including Khodorkovsky. (Sim, 67) The Russian Tax Ministry’s lack of response to offers to keep the largest Russian corporation in business suggests that the charges of back owed taxes were not the real issue. Finally, the fact that Yukos was the only company against which legal action was taken discredits the idea that the charges were filed in order to curb tax evasion amongst all Russian companies. A more likely explanation for the Yukos scandal emanates from the political actions taken by Khodorkovsky.
Understanding the assault on Yukos and Khodorkovsky in light of the Kremlin’s political motivations gives the whole affair much more continuity and consistency. From the Kremlin’s perspective, Khodorkovsky’s political challenges were numerous and increasingly disquieting. The Kremlin was concerned that Khodorkovsky was trying to accrue enough political power to make fundamental changes in the Russian government. Therefore, when Khodorkovsky became able to use his power and wealth to buy influence in the Duma, allow western companies increased access to Russian oil, challenge the monopolies of state-owned companies, and eventually question the structure of the government itself, the Kremlin felt a need to act.

Khodorkovsky’s massive donations to various Russian politicians in the Duma, the Russian lower legislative house, concerned the Kremlin greatly. Khodorkovsky’s immense campaign contributions were seen as an attempt to translate his enormous personal wealth into a vast amount political influence. Khodorkovsky funded the campaigns of many Duma representatives, across the spectrum of Russian political parties. (Sakwa, 115) While Khodorkovsky was not the only Russian to fund the political campaigns of multiple Duma candidates in order to gain political influence, he donated substantially more than other oligarchs and major companies. The large donations worried the Kremlin because they were seen as more active attempts to manipulate legislation than the smaller donations of other companies. From the Kremlin’s perspective, the donations were a clear avenue through which Khodorkovsky could insert his opinions into the Duma, sway votes, and potentially create political allies if he were to run for office.
Yukos’ proposed merger with Sibneft was another focal point for conflict between Khodorkovsky and the Kremlin. In April 2003, Yukos announced a merger with Roman Abramovich’s Sibneft, which would have created a super-oil company. (Sakwa, 129) The proposed merger with Sibneft would have substantially increased the size of Yukos, which was already the most expansive oil company in Russia. While this in itself doesn’t politically challenge the Russian government; the Kremlin became alarmed when Khodorkovsky announced that he intended to sell 25-40 percent of the proposed super-company to ChevronTexaco, ExxonMobil, or another western oil company. (Sakwa, 130-131) This potential sale would have given western companies direct access to Russian natural resources, and diluted the control the Kremlin has over its natural gas and oil. An increased western presence in the Russian energy sector would have made any interaction between Putin and the western corporations an international matter, which would mean the involvement of international institutions that could further mitigate the Kremlin’s control over Russian natural resources. A significant shift in the uneasy equilibrium of the Russian energy sector could have been brought about if Khodorkovsky had sold a major portion of the proposed super-company to a western corporation.

While the Yukos affair was unfolding, the planned merger between Yukos and Sibneft collapsed, and Abramovich was left in an uncomfortable position. Abramovich’s ultimate goal in merging with Yukos was to cash out of the Russian oil business, and focus on his soccer club: Chelsea. (Gustafson, 285) Even a few weeks before Khodorkovsky’s arrest, Abramovich still pushed for the merger. (Gustafson, 307) Abramovich was relatively unscathed by the dissolution of Yukos, but he still
wanted to leave the Russian oil business. The Kremlin eventually granted him his wish. In 2005, Gazprom bought Sibneft for $13 billion. (Larrson, 30) This effectively allowed Abramovich to leave the oil industry, and Russia altogether. Undoubtedly, he recognized the dangers associated with the Russian oil industry, especially in light of the Yukos affair. Abramovich was most likely allowed to sell Sibneft for such a high price because he had been a cooperative oligarch since the Yeltsin years, and had never ventured into the political realm like Khodorkovsky.

Khodorkovsky further challenged the Kremlin by proposing the construction of a privately owned pipeline. This pipeline would have directly infringed on Transneft’s monopolistic control over domestic oil pipelines. Khodorkovsky made several attempts to build privately owned pipelines, the most prominent of which would have connected Russia and China; he claimed private pipelines were technically not against Russian law. (Sakwa, 135) Khodorkovsky’s proposed private pipeline would have severely mitigated the state’s control over the allocation of oil resources. Khodorkovsky’s pipeline directly contested the state’s control over the movement of oil, both domestically and internationally. For Putin, state-ownership of the pipeline network is one of the few remaining levers that allow him some measure of control over oil companies, particularly companies without a significant percentage of state-ownership. (Sim, 69) Khodorkovsky’s pipeline was another attempt to break free of the Kremlin’s control over the energy sector, and establish more open links to foreign markets.

Finally, and most importantly, Khodorkovsky made clear and public statements against the Russian government and its organization. Khodorkovsky was a
vocal supporter of transitioning Russia to a Parliamentary system, in the hopes of reducing the political risk for the business community. (Sakwa, 119) In mid-2003, there were reports of an “oligarchic coup” to remove the presidency in favor of a parliamentary system with Khodorkovsky as the prime minister. (Sim, 65) Given the importance of energy products, and the wealth of the oligarchs, a political coup led by Khodorkovsky was a legitimate threat to the Kremlin. Although this coup never came, Khodorkovsky earned a reputation as an adversary of the Kremlin. His open support for a transition to a parliamentary system, coupled with the rumors that he wanted to become the Prime Minister in such a system, not only threatened Putin’s source of power, but his position altogether.

Khodorkovsky’s list of politically charged business dealings, and well-documented desire to move Russia away from the presidential system coalesced to make Khodorkovsky a threat to the Kremlin’s source of power, and the Russian system of governance altogether. The actions of Khodorkovsky worried the Siloviki, especially Igor Sechin. Putin and the Siloviki saw Khodorkovsky and Yukos as liabilities. It is for this reason that Putin let Sechin take action against Yukos and Khodorkovsky. (Sixsmith, 57) Sechin set in motion the forces that would eventually lead to the downfall of Yukos and Khodorkovsky; he saw private enterprise in the energy sector as a direct threat to Russian state interests. (Sixsmith, 91) It was during the time when Yukos’ assets were being sold off that Putin appointed the Sechin to the board of directors of Rosneft. (Gustafson, 321) This appointment proved to be extremely profitable for Sechin, as Rosneft rapidly assimilated Yukos’ assets.
Support for the theory that Khodorkovsky’s arrest had political motivations can also be found in the trial itself. The allegations against Yukos were greatly facilitated by the support the prosecution received from Sergey Bogdanchikov, the president of Rosneft. (Sim, 68) Bogdanchikov’s testimony against Khodorkovsky was essential to the prosecution’s case. Bogdanchikov, Sechin, and Rosneft were not only central in assisting the prosecution in putting Khodorkovsky in prison, but also directly benefitted from the outcome of the trial, by forcing a major competitor out of business, and absorbing a large number of oil resources.

Sergey Bogdanchikov and Igor Sechin were not the only ones to benefit from the dissolution of Yukos, and the imprisonment of Khodorkovsky. It was been alleged that Gennady Timchenko, the founder of the energy trading company Gunvor, directly profited from Yukos’ fall. Timchenko played an integral role in the speedy auction of Yukos’ assets. (Sakwa, 186) Timchenko’s role was particularly pivotal because of the lawsuit filed in the U.S. against the dissolution of Yukos. As a result of Timchenko’s success in orchestrating a quick auction, it has been suspected that Timchenko and Gunvor were awarded massive oil-trading contracts from Rosneft. Once Yukos was dissolved, Petroval, Yukos’ international oil trading subsidiary went bankrupt, and its foreign trading activities were transferred to Gunvor through Rosneft, and its newly enlarged capacity to export oil. (Sakwa, 141) The contracts from Rosneft made Gunvor the world’s largest oil trader, only 5 years after its creation in 1999. (“History” and Sakwa, 141) The allegations of a close, mutually beneficial, friendship between Putin and Timchenko are extensive. The relationship between Putin and Timchenko, however, is much deeper and complex than
Timchenko’s involvement in the auction of Yukos’ assets. The interaction between Putin and Timchenko is representative of an entirely different type of dealings between the Kremlin and the oligarchs. For this reason, Timchenko’s supposed friendship with Putin will be analyzed more thoroughly in the following section.

On the whole, it seems highly unlikely that the case brought against Yukos and Khodorkovsky was motivated by the tax code as much as the political atmosphere. Even Amnesty International was unambiguous in its views that the Yukos case was politically motivated, publicly stating that the arrest of Khodorkovsky was due to the significant political context. (Sakwa, 216) The government’s control over oil and natural gas through state-owned companies, and the isolation of politically unfriendly oligarchs from the political sphere are the major ways in which Putin and the Siloviki maintain power and influence. Khodorkovsky directly challenged the government’s source of power. It was simply too politically dangerous for the Kremlin to allow Khodorkovsky to buy political influence, sell a major part of the proposed Yukos-Sibneft super-company to the West, build a private pipeline, or suggest the complete restructuring of the Russian state. While Yukos was accused of tax evasion, other major companies that practiced the same tax strategies never faced similar charges from the government. The selective ways in which the tax regulations were enforced suggest an extralegal motive.

Putin’s interactions with the oligarchs have always been difficult and centered on a struggle for power and influence. After Putin took the presidency, he tried to show the oligarchs that he would not accept the same level of oligarch involvement in the political sphere as Yeltsin had. In order to clearly illustrate this change in policy
Putin made an example of two oligarchs: Boris Berezovsky and Vladimir Gusinsky. Berezovsky and Gusinsky controlled the major television stations, and had regularly used their influence for political objectives. (Rutland, “Putin” 6) Even though Berezovsky had supported Putin’s 2000 campaign, Putin saw Berezovsky as a threat, and did not share his views on the role the oligarchs should play in Russian politics. (Cowell, 119) In August 2000, Berezovsky and Gusinsky used their television stations to televise public criticism of Putin’s administration, which was not taken lightly by the Kremlin. (Cowell, 180) Berezovsky and Gusinsky were exiled, and their telecommunications empires taken over by the state. (Rutland, “Putin” 6) Putin used Berezovsky and Gusinsky to demonstrate his new policy on oligarchs’ with political ambitions.

When Khodorkovsky tried to push the limits of his political ambitions, Putin reacted much like he had with Berezovsky and Gusinsky: by making an example of Khodorkovsky and taking over Yukos via a state-owned company. Putin’s handling of the Yukos case marked a clear break with any of Yeltsin’s old policies. (Rutland, “Putin” 6) Through the Yukos affair, Putin reminded the oligarchs that their wealth did not make them immune to the Kremlin’s policies. He also made it known that his administration would be even less lenient with the oligarchs than many initially believed, even after the exile of Berezovsky and Gusinsky. While the Kremlin was trying to curb the oligarchs’ political influence, Putin never kept his side of the “equidistance” agreement. For many years, Putin has been alleged to have indirectly supported Gennady Timchenko, a close political ally and oligarch, whose power and wealth have growth exponentially since Putin rose to power.
Gennady Timchenko and Vladimir Putin

Gennady Timchenko is an intriguing figure in Russian business as well as Russian politics. Since the fall of the Soviet Union, he has accrued an enormous amount of wealth, much of which has come while Putin was president. In 2013, Timchenko was ranked 62nd on Forbes’ list of richest billionaires with an estimated wealth of $14.1 billion. (Durgy) Timchenko’s wealth comes from a number of companies, the most prominent among which is Gunvor: the international oil trading company. The correlation between Timchenko’s massive profits and the Putin administration has given rise to the theory that Timchenko has been, and continues to be, directly assisted by Putin. Both Putin and Timchenko have vehemently denied these claims, and maintain that they barely know each other. In 2008, Timchenko said, “I don’t have time to meet with [Putin], and he doesn’t have time to meet with me.” (Kimer, 1) Less than a week later, however, both Putin and Timchenko attended a private banquet in St. Petersburg. (Kimer, 1) The allegations that Putin has supported Timchenko’s business ventures can be traced back to the late 1980s.

Putin and Timchenko first met in the late 1980s, long before Putin became president and Timchenko created Gunvor; even during their initial interactions, however, there were allegations of corruption and cronyism. In the late 1980s and early 1990s, Timchenko worked for Kinex: a petrochemical plant in Kirishi, outside of St. Petersburg; Timchenko led Kinex’s foreign trade division. (Rutland, “Timchenko” 1) The collapse of the Soviet Union in 1991 left many Russia cities in distress, and St. Petersburg was no exception. St. Petersburg was left dangerously short on food, and in an attempt to help the city, the government granted oil export
quotas through the “Oil-For-Food” program, the profits from which were to be used to buy food from Iceland. (Kimer, 3) Timchenko lobbied the St. Petersburg mayor’s office, and was awarded the contract to sell oil on the international market. The “Oil-For-Food” program was how Timchenko first met Putin, who headed the Committee for External Relations in the St. Petersburg mayor’s office. (Kimer, 2 and Rutland, “Timchenko” 1) From 1991-92, Kinex exported more than 150,000 tonnes of oil, but the food never reached St. Petersburg. Timchenko denied any involvement, and an investigation, led by city deputies, recommended that Putin be fired for his role in the missing food; Putin kept his job. (Rutland, “Timchenko” 1) During the time, it was suspected that the oil was rerouted through a series of intermediaries, and the profits hidden from the government. Even though Timchenko claimed to have not been involved, he was the head of the department of Kinex that would have dealt with all international affairs. Putin was in a similar position in the St. Petersburg mayor’s office, and also claimed to have not been involved. A full explanation was never provided, and the money was never found.

After the “Oil-For-Food” incident, Timchenko and Putin seem to have lost contact for a few years. Their interactions were renewed with the creation of the Yavara-Neva sports club. In 1998, Timchenko provided the funds to set up the Yavara-Neva sports club, which was managed by Arkady Rotenberg, Putin’s boyhood judo partner, Putin, a black-belt, later became the club’s honorary chairman. (Kimer, 3 and Rutland, “Timchenko” 1) During this time, the Russian oligarchy was rapidly accumulating control over formerly state-owned industries. The Russian oligarchs started out as individuals, but quickly created networks for the purpose of
collusion, these institutions usually took the form of saunas, sports clubs, or private restaurants. (Rutland, “Putin” 1) The director of the Yavara-Neva sporting club has previously stated that Putin and Timchenko regularly appeared together at the club, and have even travelled with the club’s players to competitions in Europe. (Buckley and Belton, 2) The internal affairs of the Yavara-Neva sports club provided the ideal pretense for meetings between Putin and Timchenko.

The most fascinating interaction between Putin and Timchenko came during the Yukos scandal, and the role Gunvor played in the aftermath of Yukos’ dissolution. Gunvor was originally founded in 1999 by Timchenko, Torbjorn Tornqvist, who is a Swedish businessman, and a third anonymous investor, who according to Tornqvist is a “private business man who has nothing to do with politics.” (Buckley and Belton, 3) The company’s convoluted ownership structure reveals little about Gunvor’s inner-workings. Gunvor is owned by a holding company in the Netherlands, Gunvor International BV, which is in turn owned by another holding company in Cyprus, Gunvor Cyprus Holdings Ltd. The ownership of the Cyprus entity ends at another postbox holdings structure in the British Virgin Islands called EIS Clearwater Advisors Corp. (Buckley and Belton, 3) As discussed in the previous section, once Yukos was dissolved, Gunvor was given most of the trading contracts from Rosneft, which acquired a vast majority of Yukos’ assets and capacity to export oil. A former member of the bankrupt Yukos oil-trading subsidiary said that Gunvor took over all operations, “virtually overnight”. (Kimer, 4) Additionally, Gunvor was given several oil contracts from Gazprom, when it bought Sibneft from Abramovich in 2005. (Kimer, 7) It seems that whenever Russian state-owned energy
companies have international trading contracts to issue, they often turn to Gunvor. While this could be attributed to simple chance, the central role Timchenko played in orchestrating the auction of Yukos’ assets after Khodorkovsky was imprisoned would suggest otherwise. Many attribute Timchenko’s rise after the fall of Yukos to cronyism within the Kremlin, and to the close friendship Timchenko has with Putin.

Regardless of whether or not Putin was directly responsible for the trading contracts going to Gunvor, it seems as though Gunvor has been able to consistently foresee, and profit from political incidents. Another key example of this trend can be observed when Russia and Estonia argued over the removal of a Soviet war-memorial in 2007. After Estonia removed a Soviet war memorial, Russia put pressure on Estonian diplomats, and also made threats of cyber-attacks. (Barysch, 3) Shortly after the Kremlin made its concerns known, Russian railway traffic into Estonia abruptly stopped. (Kimer, 4) The official reason for the stop of rail traffic to Estonia was “construction,” but the political motives were clear: the Kremlin wanted to punish Estonia, for what it felt was a disrespectful act. Many journalists at the time noted the politically convenient timing of the repairs that halted almost all Russian rail traffic into Estonia. As a result of the “construction,” oil deliveries from Russia to Estonia stopped almost completely, except for Gunvor’s. (Kimer, 4) Gunvor was able to make its shipments as expected, while competitors’ deliveries were stopped. It is largely because of this uncanny ability to avoid political fallout that Gunvor has grown so rapidly in recent years.

The allegations of cronyism and corruption, however, do not only come from outside the Kremlin. Ivan Rybkin, a presidential candidate in 2004 and the speaker of
the first Duma, named Timchenko as one of the three financial intermediaries Putin and the Kremlin regularly used. (Sakwa, 141) Rybkin claimed that Timchenko was the Kremlin’s banker in the 03/04 electoral cycle. (Sakwa, 141) These charges, which come from a government official, add more credibility to the theory that Timchenko and Putin assist one another when possible, and mutually beneficial.

Even with all of the evidence that Putin and Timchenko have had a series of shadowy dealings, many of these interactions could all be explained away as a series of coincidences, misinterpretations, or simply accidents without a clear rationale behind why it would be in Putin’s and Timchenko’s best interests to cooperate. In reality, there are a number of reasons why Putin and Timchenko would work together. Timchenko embodies the characteristics Putin wants in all oligarchs: competence, political deference, longstanding links to those in power and, above all, discretion. (Kimer, 2) These traits make Timchenko a trustworthy oligarch, and they allow for a mutually beneficial relationship between Putin and Timchenko. By ensuring that international oil trading contracts are in trusted hands, Putin is able to influence the transit of oil without having to take direct actions that would anger the oligarchs, and provide a rallying point for political enemies. Organizing energy trading in friendly hands also means greater economic security, as opposed to the pre-2003 years, when Yukos kept a large amount of its operations abroad and could use its billions of dollars in revenue for whatever it chose. (Buckley and Belton, 7) Putin has used indirect control over natural resources before, specifically when he appointed members of the Pitertsy as the presidents of key state-owned companies, like Gazprom. Maintaining indirect control over energy resources is a political move
that is completely in line with Putin’s views on the role of the state. Alexander Temerko, the former vice-president of Yukos, has stated that “If Putin needs help, [Timchenko] is always going to help him.” (Buckley and Belton, 4) At the same time, while Timchenko is ideally placed to act as Putin’s proxy, the state export contracts are making him and Gunvor exceedingly wealthy. Additionally, Timchenko’s friendship with Putin renders him untouchable by other oligarchs. It gives him assurances of political immunity that no other oligarch could have. Temerko has also stated, “Everyone knows whose friend [Timchenko] is, people like working with people who will never be messed with.” (Kimer, 2) Timchenko’s friendship with Putin makes him a more desirable business partner because of his political protection. Both Putin and Timchenko stand to gain a great deal by working together. For Putin the gains are political: namely using indirect actions that are difficult to trace back to the Kremlin. For Timchenko, the advantages are economic: he stands to make substantially higher profits by cooperating with the Kremlin than by rebelling against the government’s policies. The existence of a clear incentive for collaboration between Putin and Timchenko adds credence to the allegations that they cooperate on key issues.

The series of interactions between Putin and Timchenko, the repeated allegations of a close friendship between the two men by multiple sources, and the existence of clear incentives to collaborate suggests that Putin and Timchenko are cooperating to achieve mutually beneficial political and economic objectives. In 2008, Gunvor shipped 16 times as much crude oil from Russian ports as in 2002. (Kimer, 1) It seems highly unlikely that this type of massive increase in business is
only due to superior logistics, as Timchenko has repeatedly stated. Furthermore, using Timchenko as a proxy allows Putin to indirectly continue his campaign against oligarch defiance. It also allows Putin to maintain a higher level of control over Russian energy resources; a goal that has been the trademark of his presidency.

*Domestic Politicization of Energy Resources*

Natural resources like oil and natural gas have been the source of domestic power in Russia since the Soviet Union fell. This is largely due to the fact that energy resources have a high intrinsic value, and inelastic demand, while manufactured goods are more complicated to produce, and have a larger variety in quality. It is also due to the fact that there has always been a global demand for energy resources. The constant demand made energy resources a source of stability and profit even when Russia was in political and economic turmoil. Therefore, in a time of economic mayhem, Russian energy resources were seen as secure; the Kremlin, as well as many of the Russians who would become oligarchs, recognized this fact. The single source of security in the volatile time of liberalization and market reforms meant that political and economic power became one-dimensional, and distilled down to control over energy resources. This made the competition over control of these resources extremely hostile. The lack of effective governmental institutions allowed corruption and collusion to spread into the Kremlin, and become staples of the Russian state.

Putin acted relatively openly in the Yukos scandal in an attempt to maintain control over key energy resources, purge Khodorkovsky, who could have become an even more dangerous political figure, and send a clear message to the oligarchs. The
Siloviki and Pitertsy played integral roles in bringing up the charges against Khodorkovsky, and then absorbing Yukos’ assets. The Pitertsy Aleksei Miller and Gazprom would have played an even larger role, and concentrated state-control over Russian gas and oil more thoroughly if a lawsuit had not been filed before Gazprom could absorb Yukos’ assets. Putin’s friendship and relations with Timchenko, however, suggests that the Kremlin does not always view direct control over energy resources as a necessity, and that indirect influence can also be sufficient. By maintaining control over energy resources, the Kremlin is able to project more power abroad. Ultimately, if the Russian government wishes to use energy resources as a tool of foreign policy, the state must preserve some form of control over those resources. Originally, Putin was concerned with ensuring that Russia had an attractive investment climate for domestic and foreign capital, but this quickly gave way to the priority of national security. (Sakwa, 378) To the Kremlin, national security is connected with control over natural gas and oil. The Russian borders, however, do not confine the politicization of energy resources. Corruption, cronyism, and interpersonal relationships also play a large role in Russian foreign policy, especially in pipeline politics.
Chapter 4:

International Pipeline Politics

“Russia cannot dominate in any field other than energy.” – Vladimir Putin

The ideological Realism seen in Russia’s foreign relations can be observed in the Russian approach to pipeline politics; specifically the pipelines that run through Europe. Realists regard gas and oil pipelines as instruments of competitive nationalism, while their neoliberal critics treat pipelines as mechanisms that strengthen cooperation and perpetuate mutual gains. (Stulberg, 1) The Russian case heavily supports the realist perspective on both pipeline politics, and the international trade of energy products. Robert Larson, from the Swedish Defense Research Agency, has identified 55 instances between 1992 and 2006 when Russia has either cut off, or threatened to cut off, energy supplies; most happened when Russia wanted to achieve some political or economic goal. (Leonard and Popescu, 28) It has been claimed by many observers that the gas cutoffs often threatened by the Kremlin highlight the intertwined relations between Gazprom and the Russian government, and the use of Gazprom as an instrument of foreign policy. Russia’s willingness to use natural gas as an instrument of its foreign policy has been prominent in disputes with Ukraine and Belarus. From a strategic point of view, the impetus behind Russia’s pipeline politics over the last few decades has been dictated by two central objectives: the protection of its market share in foreign energy markets, and the drive for autonomy from other countries.
The disintegration of the Soviet Union segmented the transport of energy resources with many political borders; thereby making Russia dependent on foreign pipelines to reach Central and Western European markets. For example, the internal boundary between Russia and Ukraine became an international border. A map of Russian oil and gas pipelines can be seen as Map II in the Appendix. Efficient transport of natural gas or oil requires massively expensive pipelines. While shipping via tanker is possible, transport that utilizes pipelines is substantially more efficient, and less costly in the long run. As a result, pipelines are essential to the shipment of energy products across large distances. Pipelines, however, suffer from a lack of flexibility with respect to their routes and final destinations. The inflexibility of pipelines in a constantly shifting political sphere has been the focal point of a number of conflicts between Russia and the EU.

Russia’s pipelines mostly lead to Europe; this is predominantly due to the development of the Russian oil industry during the Soviet era, and the demand for energy resources by the then-satellite states in Eastern Europe. The transit countries, through which many of these pipelines run, have varying opinions on Russia, its energy resources, and its politics. Russia’s dependence on foreign nations, coupled with the Russian desire for increased autonomy, has created an unstable relationship between Russia and many of its neighbors. Russian reliance on politically unfriendly countries has been a constant concern of the Putin administration, and has often been addressed by large infrastructure projects that bypass unfriendly transit countries, as opposed to utilizing diplomacy to reach a mutually beneficial outcome. The clearest examples of these infrastructure projects are the South Stream and the Nord Stream.
pipelines. Both of these pipelines serve as ways for Russia to bypass Ukraine, Belarus, Poland, or the Baltic region, and more directly reach Central and Western Europe. The economic rationale behind many of these projects is weak at best, but the political benefits are undeniable from the perspective of a country that strives for autonomy. The development of the South Stream and Nord Stream has been largely motivated by political objectives, and the Russian trademarks of corruption, cronyism, and ethically questionable dealings have followed both pipeline projects.

Importance of Gazprom

Gazprom, Russia’s largest natural gas company, is a state-owned energy company, and has a near monopoly on natural gas in Russia. From 2006 until 2011, when Gazprom’s annual output is compared to the total Russian natural gas production, the volume produced by Gazprom never dropped below 80 percent, and has reached as high as 97 percent. (“Gazprom in Figures” and “BP Statistical Review”) Additionally, Gazprom has complete control over domestic Russian natural gas pipelines; it owns a majority stake in the Nord Stream, and would also have a majority stake in the South Stream, should it be built. The Russian government established control over Gazprom in 2005 by buying 10.7 percent of Gazprom’s shares, thereby raising the state’s holding to 50.002 percent. (“Shares”) This was accomplished under the Putin presidency. In 1999, Putin said, “The state has the right to regulate the process of the acquisition and the use of natural resources, and particularly mineral resources, independent of on whose property they are located; in this regard the state acts in the interests of society as a whole.” (Brugato, 3) Since
Putin took office, this statement has been representative of his actions with regard to energy resources. The state-owned nature of Gazprom gave the Kremlin a large degree of control over the development and sale of natural gas to domestic and international customers.

The fact that the Russian state has a majority stake in Gazprom means that the company has various noncommercial objectives, apart from profit-maximization. These additional objectives are not specific to Gazprom, but rather extend to all nationally owned energy companies. When compared to firms that do not face similar state control, it becomes clear that the national energy companies have different operational requirements. (Backer, 3) An example of Gazprom’s additional objectives can be seen in the subsidized prices it asks Russians to pay for natural gas. In 2008, Gazprom was allowed to charge $50 for 1,000 cubic meters of natural gas that was sold to Russian households, while the export price for the same volume of gas reached $370. (Rutland, “Putin” 7) Table 1 and Table 2, shown on the following page, illustrate the fact that while Gazprom has sold a large percentage of its total natural gas domestically, its largest profits come from selling to other countries; like the ones in Central and Western Europe. It is also important to note that while the total volume of gas shipped to former Soviet states has decreased from 2006 to 2010, the total profits from those transactions has increased by almost 100 percent. While most former Soviet countries have long enjoyed discounted gas from Russia, these markdowns are quickly disappearing. Many of the price increases implemented by Gazprom have been central to the multiple disputes between Russia and European states.
Table 1: Gazprom’s Volume of Sales of Natural Gas (in billion cubic meters)

<table>
<thead>
<tr>
<th></th>
<th>2006</th>
<th>2007</th>
<th>2008</th>
<th>2009</th>
<th>2010</th>
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</thead>
<tbody>
<tr>
<td>Russia</td>
<td>316.6</td>
<td>307.0</td>
<td>287.0</td>
<td>262.6</td>
<td>262.1</td>
</tr>
<tr>
<td>Former Soviet Union</td>
<td>101.0</td>
<td>100.9</td>
<td>96.5</td>
<td>67.7</td>
<td>70.2</td>
</tr>
<tr>
<td>Far abroad</td>
<td>161.5</td>
<td>168.5</td>
<td>167.6</td>
<td>148.3</td>
<td>148.1</td>
</tr>
<tr>
<td>Total</td>
<td>578.8</td>
<td>576.4</td>
<td>551.1</td>
<td>478.6</td>
<td>480.4</td>
</tr>
</tbody>
</table>

Source: Gazprom in Figures (2006-2010) page 57

Table 2: Gazprom’s Net Sales of Natural Gas (in millions of U.S. dollars)

<table>
<thead>
<tr>
<th></th>
<th>2006</th>
<th>2007</th>
<th>2008</th>
<th>2009</th>
<th>2010</th>
</tr>
</thead>
<tbody>
<tr>
<td>Russia</td>
<td>13,522</td>
<td>16,270</td>
<td>16,142</td>
<td>16,366</td>
<td>20,167</td>
</tr>
<tr>
<td>Former Soviet Union</td>
<td>7,965</td>
<td>10,984</td>
<td>12,135</td>
<td>12,274</td>
<td>14,768</td>
</tr>
<tr>
<td>Far abroad</td>
<td>32,126</td>
<td>35,577</td>
<td>42,908</td>
<td>35,556</td>
<td>36,064</td>
</tr>
<tr>
<td>Total</td>
<td>53,613</td>
<td>62,831</td>
<td>71,185</td>
<td>65,196</td>
<td>70,999</td>
</tr>
</tbody>
</table>

Source: Gazprom in Figures (2006-2010) page 56

On the whole, nationally owned energy companies are more sensitive to the politics of a region since they are essentially a part of the government. These political burdens are less onerous on privately owned oil and natural gas companies, which are usually owned by an international group of shareholders, and often develop resources located in various countries. Gazprom, however, has taken on a much more politically active role than most other state-owned energy companies. Some of the political liabilities and incentives Gazprom is asked to consider are clearly illustrated by the South and Nord Streams, and the politics that surround both pipelines.

**South Stream Pipeline**

The origin of the South Stream can be directly traced back to a political conflict: the series of disputes between Russia and Ukraine over natural gas. Since the collapse of the Soviet Union, Russian-Ukraine gas relations have been characterized
by Ukraine’s inability to fully pay for its natural gas imports, multiple reductions of Russian gas flows to Ukraine in an attempt to restore payment and stop the unauthorized diversion of the gas in transit to other European countries. (Stern, 87)

This relationship is best demonstrated by the gas crises between Russia and Ukraine in 2006 and 2009, both of these conflicts were centered on disputes over the price and volume of gas that would be shipped to Ukraine, as well as the tariffs Gazprom had to pay to utilize the existing pipelines that run through Ukraine. The 2006 Russia-Ukraine gas crisis has its roots in the failed gas negotiations of 2005; Gazprom wanted to increase the price at which gas was sold to Ukraine, but Ukraine resisted. (Abdelal, 11) When negotiations failed, and the old contract expired, Russia continued to ship gas to its European customers through Ukrainian pipelines, but excluded the gas intended for Ukraine. Not all of the gas sent to Europe reached its intended customers: the gas that reached Europe was 25 to 40 percent less than the expected volume, and Ukraine was accused of diverting gas for its own use. (Abdelal, 12) On January 4th, 2006, a new agreement was reached between Russia and Ukraine, in which Ukraine paid more for gas, and Russia paid higher transit fees. (Abdelal, 13) This dispute was relatively minor: the conflict was resolved quickly, gas supply was only interrupted for four days, but it set the stage for future disagreements between Russia and Ukraine over natural gas.

Over the next several years Ukraine proved consistently unable to pay for its gas. By December 2008, Ukraine had missed its payments for three consecutive months, and its debt had reach 2.4 billion dollars. (Abdelal, 13) On January 1st, 2009, Russia once again cut Ukraine’s share of gas, and again the amount of natural gas
coming out of Ukraine fell by a volume that was greater than the amount of gas Russia originally cut. (Abdelal, 14) Again, Russia claimed Ukraine was stealing gas that was supposed to flow to other European customers, and on January 7th Russia stopped all gas flow to Ukraine. (Abdelal, 14) The stoppage of gas flow was felt throughout Europe, as many countries saw a drastic drop in their gas imports. Eventually, another deal was struck between Russia and Ukraine, and gas started flowing again on January 20th. In the midst of both gas crises with Ukraine, Russia made numerous proposals to write off Ukrainian debt in exchange for equity in Ukraine’s gas pipelines; the Ukrainian government declined all offers. (Stern, 87) This was done in an attempt by Gazprom to gain more control over its export routes, reduce the rents it had to pay, and decrease its dependence on the Ukrainian government, which owned the pipelines.

One interpretation of these gas conflicts suggests that the gas stoppages were Russia’s way of retaliating against Ukraine’s Orange Revolution in 2004. During which, Viktor Yushchenko defeated the Kremlin supported candidate, Viktor Yanukovich, and reoriented Ukrainian foreign policy towards more pro-western objectives. (Abdelal, 13-14) This interpretation of the gas conflicts implies that Gazprom was directly used to send a political message to the Ukrainian government that the Kremlin was not pleased with the changes to Ukraine’s foreign policy. Whether or not this was the intent of the gas stoppage, Viktor Yanukovich won the 2010 presidential election against Yulia Tymoshenko, a major participant in the Orange Revolution, and again shifted Ukraine’s foreign policy, this time away from the pro-western leanings of Yushchenko and Tymoshenko. (Abdelal, 15) In many
ways, a pro-western Ukraine could have severely hurt Russian interests since a large number of natural gas pipelines run through Ukraine on their way to Central and Western Europe. Yanukovich has a much more pro-Russia view, and has worked against some of the pro-western policies of the Orange Revolution.

During both of these disputes, Ukraine maintained a key advantage over Russia and Gazprom: its massive gas storage facilities. Ukraine’s enormous gas storage capacity was constructed under the Soviet Union; it allowed Ukraine to mitigate the effects of both Russian gas stoppages, while many EU nations suffered the full effects. Ukraine’s gas storage capacity was estimated to be over 32 billion cubic meters, or bcm. (“Ukraine”) This storage capacity gave Ukraine the ability to draw out negotiations without forcing its citizens to survive without heating. In essence, the gas stoppages hurt Gazprom’s EU customers that relied on Russian gas that traveled through Ukraine the most.

Even though the 2006 gas dispute was relatively minor, many EU countries became concerned about the reliability of natural gas flows coming from Russia. Their concerns were confirmed by the 2009 gas crisis. The EU receives about a third of its fuel imports from Russia, and the potential for a future interruption of gas supply was the reason that the EU began seeking ways to diversify its energy providers. The European Union council responded to growing apprehension among its members by adopting a strongly worded statement favoring a diversification of energy suppliers, sources, and supply routes, notably in the gas sector. (Abdelal, 24) The European Union’s attempt to diversify energy imports began when it supported the Nabucco pipeline in 2006. The pipeline would run 3,300 kilometers, and have an
estimated cost of eight billion Euros; it would supply Western Europe with natural
gas from Central Asia, the Caspian Sea, and the Middle East. (Kanet, 281) The
Nabucco pipeline was designed to run from Turkey through Bulgaria, Romania,
Hungary, and end in Austria, it would reduce the Russian market share in EU energy
market, and reduce the European Union’s exposure to future Russian energy disputes.
A map of the proposed route of the Nabucco pipeline can be seen as Map III in the
Appendix. Following the 2009 gas dispute, the EU Commission put significantly
more importance on diversifying its natural gas imports, and gave the Nabucco
pipeline the full political support of the EU at the Budapest Summit. (“About Us”)
The attempt by the EU to diversify its energy imports, and move away from Russian
natural gas was not taken lightly by the Kremlin.

The Nabucco pipeline posed a major problem for the Russian government, as
well as its energy sector. As previously discussed, Gazprom gets most of its revenue
from European customers, and the success of the Russian energy sector has played a
major role in growing the Russian economy. Additionally, the Kremlin obtains a
significant percent of its annual revenue from the taxes Gazprom pays. It has been
estimated that Gazprom accounts for 12 percent to 25 percent of the Russian state
budget (Abdelal, 14 and Brugato, 3) Therefore, the possibility of reduced European
demand directly threatens Russia’s economic and political stability. It is primarily for
this reason that Russia proposed a competitor to the Nabucco pipeline: the South
Stream. In mid-2007, Russia surprised most European nations when it unveiled its
plans to build the South Stream pipeline with ENI, the Italian national oil company.
(Kanet, 281) The South Stream has a similar route to the Nabucco pipeline: it would
run from Russia, under the Black Sea, and into Italy and Austria via Bulgaria and Greece. A map that compares the route of the South Stream to that of the Nabucco pipeline can be seen as Map IV in the Appendix. The South Stream is designed to have a capacity of 63 billion cubic meters, or bcm, per year. (“Gazprom Agrees”) The major difference between the South Stream and the Nabucco pipelines is that all of the gas running through the South Stream would originate in Russia, and do nothing to diversify the European Union’s imports of natural gas.

Russia is actively pursuing the South Stream with bilateral offers to many would-be transit countries to make them “gas-hubs” for Gazprom, should the pipeline be completed. Becoming a gas-hub for Gazprom would entail the construction of gas storage facilities, and earn the respective federal governments additional tax-revenue from the Russian gas giant. (Leonard and Popescu, 36) The bilateral deals between Russia and separate EU nations have been essential in making the South Stream look more appealing than the Nabucco pipeline. The construction of the South Stream would directly undercut the European Union’s attempt to diversify gas imports through the Nabucco project; this, however, has not stopped many of the would-be transit states from siding with the Russian alternative.

The central risk the Nabucco pipeline faces is the possibility that it would not have a large enough source of natural gas to transport into Europe, and thereby be economically unsustainable. The capacity of the pipeline is expected to be approximately 30 bcm per year, and according to Nabucco executives, the project is economically viable if it transports more than 15 bcm of gas per year, though the Nabucco consortium is still having trouble securing sources of gas in excess of 7
bcm. (Abdelal, 25) Even though there are many potential sources for natural gas that could fill the Nabucco pipeline: among which are Iran, Turkmenistan and Azerbaijan, a variety of factors prevent these states from participating in the Nabucco project. (Abdelal, 25) Iranian gas would not be utilized for political reasons, Turkmen gas could not be connected to the Nabucco network without another pipeline that would need to be approved by the Russian government, and Azerbaijan would most likely not have the capacity to fill the pipeline by itself. Unfortunately for the proponents of the Nabucco pipeline, the project cannot proceed in any substantial way unless the minimum volume of natural gas is secured.

The South Stream pipeline has one final advantage over the Nabucco project: the close personal relationships Putin has with many of the heads of state through which the pipeline would run, specifically Putin’s friendship with Silvio Berlusconi, the former Italian Prime Minister. Journalists and politicians have cited Putin’s close friendship with Berlusconi as a source of corruption in Russia-Italy deals. Italy and Russia shared strong economic links, which were further enhanced by an extremely warm personal friendship between Berlusconi and Putin. (Leonard and Popescu, 32) The allegations of corruption in the South Stream agreement between ENI and Gazprom have caused heavy scrutiny from many Italian parliament members. These officials claim that elements of gas deal directly benefitted Berlusconi’s former business partners, Bruno Mentasti-Granelli, who owns a third of the Italian intermediary (Central Energy Italian Gas Holding) that would help bring the Russian gas from the South Stream into Italy. (Kazantsev, 309) It is also possible that Putin’s friendship with Berlusconi played an integral role in the approval of the pipeline.
altogether. This gas deal between Italy and Russia is a good example of the ways in which Gazprom and Putin cooperate towards the same goal; these types of personal relationships, and the possibility for personal gain, have often given Gazprom an advantage in many international deals, including the South Stream.

The reasoning behind the Nabucco pipeline and the South Stream is relatively clear. The Ukraine-Russia gas conflicts illustrated the high levels of European dependence on Russian energy resources, and therefore the EU Commission attempted to diversify its imports. This caused Russia to introduce a competing pipeline that would preserve Gazprom’s market share of the European energy market. Russia made the South Stream appear more favorable through the promise of tax revenue from gas storage facilities, and personal gains for foreign leaders and their associates. All of this was done in an attempt to gain an advantage over the Nabucco pipeline. Russia is determined to defeat the Nabucco pipeline because the Kremlin relies heavily on tax revenue from the energy sector, and a reduction in revenue for Gazprom would directly hurt the Russian economy, as well as the revenue of the central government. Russia could have avoided the competition from the Nabucco pipeline if it had not utilized such antagonistic measures against Ukraine during the gas crises. In essence, Gazprom’s actions were both the catalyst and solution for the Nabucco pipeline: the gas stoppages induced the EU to look for alternate sources of natural gas, and the South Stream was proposed to counter the European supported pipeline. The need for the South Stream illustrates Russia occasionally ineffective and overly aggressive foreign policy, especially with respect to energy resources. The South Stream is also a good example of the Kremlin’s reliance on Gazprom to apply
pressure on other countries through gas stoppages. The South Stream, however, is not the only pipeline that has aimed to circumvent multiple transit countries.

*Nord Stream Pipeline*

The Nord Stream is another example of a pipeline project that does not diversify the customer base for Russian energy resources, but instead allows Russia to avoid politically unfriendly transit states and establish long-term relationships that focus on energy products. The Nord Stream pipeline runs underneath the Baltic Sea, and connects Russia and Germany directly. This pipeline was originally conceived in the 1990s, but was only commissioned in 2005; the project was completed in late 2012. (Kanet, 279) The Nord Stream project incorporates two separate pipelines that run alongside one another, and can carry a combined volume of 55 bcm of natural gas per year. (“Pipeline Details”) The origins of the Nord Stream were not as clearly motivated by a single chain of events, as was the South Stream. The Nord Stream, however, clearly attempts to reduce the influence the Baltic region has over the transit of Russian natural gas into Europe. The decision to build the Nord Stream appears to have been heavily motivated by a series of disputes Russia has had with Belarus, Poland, Latvia, Lithuania, and Estonia over the past decades.

Political relations between Russia and Belarus, Poland, and the Baltic states have been exceedingly confrontational since the collapse of the Soviet Union. Russia, however, is dependent on the multitude of pipelines that run through these countries, and continue into Europe, or lead to major seaports. Whether it is the historical context that fuels the aggression, or the current political climate, it is clear that
Belarus, Poland, and the Baltics often vehemently oppose Russian objectives in Europe. Russia, however, has not made genuine attempts at convincing these politically aggressive nations to support its political and economic objectives.

Russia and Belarus engaged in a number of gas disputes similar to those between Russia and Ukraine in the years preceding the construction of the Nord Stream. Since the early 1990s, Russia and Belarus have been in conflict over natural gas pricing and quantities. Gazprom has cut the gas flow to Belarus on several occasions, specifically in 2003 and 2004. In November 2002, Belarus exceeded the gas imports that Russia allowed under a prior agreement; in retaliation, Russia cut supplies by 50%. (Hancock, 130) Several days passed before the prime ministers of Belarus and Russia met to discuss the dire situation. Following the meeting, the leaders announced a joint venture. The project would grant Gazprom ownership of 25-30% of Belarus’ national energy company as payment for the gas debts. (Hancock, 130) Belarusian officials refused to accept the joint venture. In response, Gazprom stopped supplying gas to Belarus on January 20, 2004; Gazprom offered to resume the flow if Belarus agreed to increase its payments from $30 to $80 per 1,000 cubic meters; the offer was refused. (Hancock, 131) On January 23, the gas again began to flow; Putin decreed that the Russian government would give Belarus gas credits. In mid-February, however, with temperatures plunging, Gazprom again stopped gas flows to Belarus. It promised to resume the fuel flows only if Belarus agreed to sell 50% of its national energy company, Beltransgaz, to Gazprom. Again, Belarus’ government held firm, refusing to relinquish ownership of its national energy company. (Hancock, 131) On February 20, Russia resumed exporting gas through
Beltransgaz’s pipelines, charging Belarus $46.68 per 1,000 cubic meters of natural gas, higher than the original $30, but lower than Gazprom’s initial demand of $80. (Hancock, 132) Russia’s handling of the gas dispute with Belarus was incredibly similar to its conduct during the crisis with Ukraine, except for a key difference.

Belarus’ conflict with Russia was further complicated because of Belarus’ capacity to refine crude oil, and its simultaneous demand for Russian oil at a discounted price. Belarus’ capacity to refine crude oil came from a pair of refineries: remnants of the Soviet Union’s oil industry. Even though the oil demands of Belarus created a different dimension to Belarus-Russia bilateral relations, the gas conflict is significant because of Russia’s handling of the disagreement. The gas dispute between Belarus and Russia almost identically mirrors the conflict with Ukraine. In both cases, Gazprom offered to forgive the gas debts in exchange for equity in the national energy company. Before the gas dispute, Belarus was believed to be very willing to yield to Russian demands, so a refusal of this magnitude was unexpected by the Kremlin. It showed the Russian government that even its perceived allies were not always willing to acquiesce to all of Gazprom’s demands.

Much like Belarus, Poland has not been afraid of conflict with Russia. Poland has previously blocked negotiations on a new treaty between the European Union and Russia after the Kremlin introduced a ban on Polish meat. (Leonard and Popescu, 50) Many reports at the time of the meat ban concluded that Russia’s actions were purely politically motivated. Poland, therefore, responded with an equally politically motivated action. The constant politically motivated disputes made the Baltics unfriendly to Russian objectives in the region.
Russia has also regularly used its energy resources as a way of gaining an advantage over the Baltic states. This was the case with the dispute between Russia and Estonia over the movement of a Soviet war memorial in 2007. As previously discussed, Russia was willing to stop rail traffic into Estonia to illustrate its displeasure. Similarly, Russia stopped oil flows to Lithuania in 2006, after Lithuania decided to sell a refinery to a Polish oil company instead of a Russian one. (Barysch, 3) Likewise, Russia interrupted oil supplies to Latvia in 2003. (Leonard and Popescu, 14) Russia and the Baltics have also regularly argued over access to Kaliningrad, the Russian enclave on the coast of the Baltic Sea. (Leonard and Popescu, 48) Leonard and Popescu categorized all EU countries based on their relations with Russia in their paper, “A Power Audit of EU-Russia Relations”. Poland and Lithuania were classified by Leonard and Popescu as “New Cold Warriors,” or countries with an overtly hostile relationship with Moscow that are willing to block EU negotiations with Russia; while Latvia and Estonia were labeled “Frosty Pragmatists,” or nations who are not afraid to speak out against Russian actions, but had slightly less hostile relations with Russia than the “New Cold Warriors”. (Leonard and Popescu, 2) The disagreements between Russia and Latvia, Lithuania, and Estonia are almost constant, and, for the most part, relate to oil or natural gas in some capacity.

According to the Kremlin’s political calculus, the liability of relying on politically unfriendly nations proved to be too costly for Russia, and thus the Nord Stream plans were reconsidered. While it is exceedingly expensive to build a new pipeline, especially one that runs underwater, the Russian political calculations concluded that relying on existing pipelines that run through Belarus, Poland, and the
Baltics would be more costly in the long term. The drivers behind the construction of the Nord Stream, therefore, seem to be more related to a general trend in relations between Russia and the Baltic region, as opposed to any single event. The Baltics did not take the agreement on the Nord Stream lightly, and reacted in a very negative way.

The Baltic states and Poland were outspoken about the Russian attempt to reduce their influence in the region via the Nord Stream. Pawel Zaleswski, a Polish representative in the European Parliament, insisted that the Nord Stream was designed “to cut off Baltic states from NATO and the EU.” (Hundley) The Polish government went a step further in their criticism of the Nord Stream. Polish then-defense minister, Radoslaw Sikorski, referred to Nord Stream as the “Molotov-Ribbentrop pipeline,” referencing the 1939 treaty in which a secret protocol divided Central and Eastern Europe into German and Soviet spheres of influence. (Abdelal, 21) These complaints, however, did little to stop the Nord Stream agreement between Germany and Russia. The route of the Nord Stream can be observed in the Appendix as Map V. The proposed route for the pipeline ran under international waters, and the Baltic states could do little to slow the project on territorial grounds.

The path of the Nord Stream was specifically designed to avoid the Baltic states’ offshore exclusive economic zones, even though going through those zones would have resulted in a shorter and less expensive project. While, the Nord Stream skirted the Baltics’ exclusive economic zones, Gazprom still needed the approval of Sweden and Finland in order to proceed with the pipeline. Both Sweden and Finland are vulnerable to Russian energy politics because of their heavy reliance on Russian
natural gas. In Sweden, the private sector has significantly increased gas usage, and
the Nord Stream would clearly provide another avenue through which to acquire
Russian natural gas. (Larsson, 55) Additionally, Finland is particularly dependent on
Russia as a source of gas imports. This gave Gazprom an advantage in its
negotiations over the route of the Nord Stream. Sweden and Finland eventually
agreed on the pipeline’s proposed path.

The Nord Stream was not the first time Russia tried to circumvent transit
nations by seeking a northern route. As tensions mounted between Russia and
Ukraine in mid-2000, before Russia’s gas disputes with Belarus, Gazprom proposed
the construction of a bypass gas pipeline that would run directly through Belarus into
Poland and South into Slovakia, effectively bypassing a large part of the Ukrainian
transit capacity. (Stern, 89) The Polish government opposed the project, citing that
the Ukrainians would interpret participation in the pipeline project as a hostile act.
(Stern, 89) It is important to note that the pipeline’s attempt to bypass Ukraine had a
similar motivation to that of the South Stream, and that Russia had previously
considered Ukraine as a liability. Poland’s refusal to the initial northern bypass
pipeline further illustrates the Polish opposition to Russian geopolitical objectives. It
is also interesting that Poland refused to approve the pipeline’s construction, while
Germany willingly accepted the Nord Stream agreement; further showing the wide-
range of bilateral relations between Russia and EU members. Additionally, Germany
did not consult with Poland before signing the Nord Stream agreement, which further
irritated the Polish government. The Germany-Russia agreement on the Nord Stream
had Russia’s trademark corruption allegations, much like the South Stream.
The allegations of corruption from the Nord Stream project were similar to those in Italy. The main difference, however, was that the former Chancellor of Germany appeared to be the main beneficiary of the corrupt dealings. Gerhard Schröder, the Chancellor of Germany from the late-1990s until 2005, was Putin’s close friend, much like Berlusconi. (Kazantsev, 309) Schröder had always supported the Nord Stream project. The agreement to build the Nord Stream was signed by him just before the 2005 German federal election; an election Schröder’s party, the Social Democratic Party, was expected to lose. (Kazantsev, 308-309) The corruption allegations that surround the Nord Stream arose from the fact that after losing the 2005 election, Schröder became the head of the shareholder’s committee of Nord Stream AG: a consortium of companies that would build and operate the Nord Stream. (Kazantsev, 309) Many of Schröder’s political opponents claimed that part of the reason Schröder signed the agreement with Gazprom was because he knew he stood to gain personally from the construction of the Nord Stream, and that the pipeline project might not have been approved by the following administration. A number of journalists, as well as some of Schröder’s political opponents, have pointed to the Putin-Schröder friendship as the catalyst for the corruption seen in the Nord Stream agreement, and a contributing factor to the pipeline’s construction altogether.

On the whole, the construction of the Nord Stream can be viewed as more of a politically motivated move than an economically prompted project. The Nord Stream, like the South Stream, does little to diversify the customer base for the Russian gas sector. It does, however, completely circumvent nations that have shown politically unfriendly tendencies towards Russia. The political sway the Baltics once held, with
respect to Russian energy exports, was severely mitigated within the European Union by the construction of the Nord Stream. The Nord Stream makes Russia much less dependent on the Baltic countries as transit states. It, therefore, frees Russia to continue its aggressive foreign policy towards Belarus, Poland, Latvia, Lithuania, and Estonia, without the fear of retaliation in the form of natural gas manipulation that would compromise Russian gas exports to Central Europe. Additionally, the Nord Stream gives Russia leverage over future negotiations and political deals with the Baltic states, since the Nord Stream provides flexibility with respect to natural gas export routes.

*Political and Economic Motives Behind the South and Nord Streams*

Russia has tried to gain more control over its export channels since the U.S.S.R. broke apart. In the midst of both gas crises with Ukraine and Belarus, Russia made multiple proposals to write off debt in exchange for equity in foreign gas pipelines. This illustrates Gazprom’s desire for more secure pipeline channels, but the consistent resistance from foreign governments rendered Russian ownership of these pipelines unlikely. Gazprom’s inability to gain control over these gas pipelines was partially due to the antagonistic approaches taken while trying to acquire them: coercion, gas stoppages, and ultimatums. These aggressive maneuvers only worked to reduce other countries’ desire to cooperate. The resistance from the transit states meant that if Russia were to have control over the pipelines that ran into Europe, it would have to construct them. Therefore, the South and Nord Streams were motivated by an inability of Gazprom to gain ownership of foreign natural gas pipelines that run
through key transit states, as well as the politically unfriendly atmosphere brought about by an aggressive foreign policy.

The political nature of the South and Nord Streams can be further observed in the capacities of the two pipelines, and the availability of Russian natural gas. If both the South and Nord Stream became operational, then the Russian capacity to export natural gas would increase by a total of 118 billion cubic meters of natural gas per year: with 63 bcm coming from the South Stream, and 55 bcm coming from the Nord Stream. (“Pipeline Details” and “Gazprom Agrees”) It has been estimated that before the Nord Stream was operational, Russia had an export capacity of approximately 245 bcm per year. (Kanet, 280) The additional 118 bcm per year from the Nord and South Streams would constitute an increase of approximately 48 percent of total export capacity. This type of increase is not warranted given Russia’s current gas production. Graph II in the Appendix illustrates the relatively slow growth in the volume of total gas produced by the Russian natural gas sector, and a difficulty producing more than a total of 600 bcm of gas per year. Table 1 and Table 2 in the beginning of this section show that in 2010, Gazprom exported a total of 218.3 bcm of natural gas into Central and Western Europe. This left roughly 27 bcm of existing export capacity unfilled, even before the Nord Stream was operational. The type of expansion to export capacity associated with the South and Nord Streams seems unsound when analyzed from a purely economic perspective. It is highly unlikely that the Russian gas sector will be able to produce enough natural gas to fill the additional 118 bcm from the Nord and South Stream and the 27 bcm that was originally left unused.
The South and Nord Streams do, however, give Russia flexibility in the delivery method of its natural gas to Europe. It is improbable that Russia will ever engage in a political dispute that indefinitely stops natural gas exports through a transit country. If history is any indication, however, Russia is likely to get involved in another gas dispute with a transit country at some point in the future. Should this occur, and certain pipelines become compromised, the South and Nord Streams would provide an adequate short-term solution for Russian gas exports to Central Europe. The rationale behind wanting to maintain gas exports during a conflict is driven by a desire to maintain a reputation of reliability amongst the importers of the gas in question. Appearing to be unreliable could have serious consequences for future business, as seen by the EU’s support for the Nabucco pipeline. Russia wants to avoid another perceived reduction in reliability from the European Union, and another effort to move away from Russian gas.

The similarities between the South Stream and Nord Stream, with respect to the corruption scandals also are worth noting. In both pipeline projects, allegations of corruption in the highest levels of government came to light. Both Berlusconi and Schröder were alleged to have had close friendships with Putin during the time both pipelines were either announced or approved. Even with the clear political benefits of these pipelines, however, the massive costs, and weak economic rationale should have severely reduced the chances of these pipelines ever being built. Therefore, it seems probable that the approval of these pipelines was facilitated by the personal profits Schröder and Berlusconi stood to make if the pipelines were to be completed. It is unlikely that the South and Nord Streams were proposed entirely because of
cronyism and corruption, but it is possible that the benefits from the corrupt dealings were just great enough to make the projects look appealing to the Italian and German government officials.

Russia has occasionally acted rashly in the international arena over the past few decades. As Brugato (2008) discussed, there has been a clear upswing in aggressive foreign policy moves by Russia in the 2000s. The strategic, sometimes seemingly accidental, gas shutoffs highlight the entangled nature of Gazprom, the Kremlin, and Russian foreign policy. In many occasions, it seems as if Russian antagonism may accomplish its short-term goals, but has negative effects for Russian foreign policy in the long-term. For example, the disputes between Russia and Ukraine and Belarus were effective in raising the price both countries paid for natural gas, but severely damaged Gazprom’s reputation as a reliable provider of gas, and created resentment towards Gazprom and Russia. This directly caused the EU to support the Nabucco pipeline, which in turn forced Russia to respond with the South Stream. While the South Stream clearly creates a more direct passage to Central Europe and bypasses key transit states, such a large investment may have never been necessary if Russia foreign policy was less antagonistic.

Russian foreign policy aggression often creates large amounts of political fallout in the process. Disagreements that are handled aggressively create a cycle of aggression, especially with regard to energy resources. This approach seems to often backfire, and only breed future conflicts over energy products. New pipeline projects have been the Russian response to the side effects of its own overtly aggressive foreign policy. Attempts by the European Union to involve Russia in more regulated
and predictable patterns of behavior through international institutions have been resisted by the Kremlin. Most notable, Russia has refused to ratify the Energy Charter Treaty, and has strongly opposed the “unbundling” of large energy companies.
Chapter 5:

The EU’s Response to Russian Energy Politics

“[The European Union’s energy law] is absolutely uncivilized.” –Vladimir Putin

Russia’s uncooperative nature in its foreign relations is by no means limited to bilateral deals and disputes over the price and quantity at which gas will be sold. Russia and the Kremlin have actively opposed international institutions that would directly limit Russian autonomy over natural gas and oil. The European Union has actively tried to engage Russia in institutions that would give EU-Russia relations more homogeneity. The EU Commission has also tried to pass legislation that would spur more competition and potentially diversify the European Union’s suppliers of natural gas. Russia has opposed all of these measures, and has even lobbied against the proposed legislation that it has perceived as potentially damaging. Gazprom has been particularly active in opposing EU legislation that would incentivize more competition in the European natural gas market. The main institutional body the European Union pursued with respect to Russian energy imports is the Energy Charter Treaty, while the domestic legislative attempt by the EU Commission to increase competition focused on the “unbundling” of energy suppliers. Russia has actively opposed both measures, and sees both acts as direct threats to the current and future profitability of its energy industry.
The Energy Charter Treaty is one of the most ambitious international agreements in international law. The Energy Charter Treaty is the first agreement to address all parts of energy cooperation, from the definitions of energy products to dispute settlement procedures. (Belyi, 2) The Energy Charter Treaty, or ECT, would create a complete set of rules and regulations for the trade of energy resources between Russia and the European Union. It would also entirely open Russia to international involvement due to the far-reaching nature of the treaty. Russia originally signed the ECT in 1994, but never ratified it. (Kazantsev, 306) The Kremlin has raised multiple concerns about certain articles of the treaty that would heavily mitigate the monopolies of many Russian state-owned companies, and restrict the ways in which Russia would be allowed to handle disputes with transit countries.

Russian officials have insisted that the European Union has made no attempts to understand Russian norms, but instead uses its own bureaucratic standards to control and dictate the interaction between the European Union and Russia. On the most general level, Russia sees institutions like the ECT as a central part of the European Union’s energy governance framework because of its breadth and depth. (Belyi, 2) It is because of these perceptions that Russian politicians have referred to the European Union as a “normative power”. (Kazantsev and Sakwa, 292) The European Union’s central concern is the security and reliability of the energy resources coming from Russia. The consistent gas disputes between Russia and various transit states illustrate the validity of this concern. The central issue for the Kremlin is that the ECT will directly disrupt the demand for Russian energy.
resources, and mitigate Russia’s control over the movement of gas and oil. This is a legitimate concern since energy exports are vital to the Russian economy and political equilibrium. The Kremlin has pointed to parts of the ECT, which it says would directly limit its autonomy.

The ECT would directly limit the ability of the Kremlin to deal with independent politically actors, like Khodorkovsky. Under article 45 of the ECT, investors are protected from the confiscation of their property by the state, violations of which could be addressed in international courts like the Permanent Court of Arbitration, or in the European Court of Human Rights. (Kazantsev, 306) Article 45 would create a direct way by which former Yukos officials could file lawsuits against Putin, Sechin, and the Kremlin. Article 45 would heavily constrain the Russian state’s power to exert control over the oligarchs, and the energy sector in general. In essence, this article would protect the oligarchs from the Siloviki through international courts. This would drastically change the power balance in domestic Russian politics in favor of the oligarchs, and challenge the Russian state’s source of political power.

Russia is also concerned that the guidelines for dispute settlement set forth in the ECT are too restrictive, and not always applicable to the energy disputes with transit states. The Kremlin and Gazprom have stated that the regulations of article 7(7) grant too much power to the third party mediator in disputes. Gazprom has additionally stated that the mechanisms of article 7(7) cannot be effectively applied to the current political situation between Russia and Ukraine. (Belyi, 4) In previous gas crises, Russia has enjoyed a great deal of freedom in handling energy disputes with countries like Ukraine and Belarus since the original contracts were bilateral. The
ECT would broaden the number of parties involved in future disputes, and outlaw the coercive measures Russia has utilized with many transit states. For a foreign policy that is based on energy resources, an institution that directly sets limits to the use of those resources would severely limit Russia’s ability to negotiate internationally, and influence the actions of other states.

The ECT would further limit Russian influence on the international stage, with respect to pipelines. The Energy Charter Treaty would require third-party access to Russia’s gas and oil pipelines. (Kazantsev, 306) As previously discussed, pipelines have played an enormous role in the geopolitics surrounding Russia, especially with respect to the Ukraine, Belarus, Poland, and the Baltic states. This provision of the ECT that would require Gazprom to relinquish its majority shares in key pipelines, including the Nord Stream and the South Stream, should it be built. Additionally, this stipulation would severely mitigate the political benefits Russia gained from building these pipelines in the first place. It would also diminish the effects Gazprom could have in international affairs in the future since its pipelines would be under the scrutiny of independent actors.

The ECT would drastically change the role the Kremlin has played in the energy sector. It would provide more security for the owners of oil and natural gas companies while also normalizing the energy market within the European Union. Consequently, these stipulations would also reduce the autonomy Russia currently has in its energy trade by requiring the Kremlin to act through established channels and open its energy sector to international regulation. These reasons are at the heart of why Russia opposes the ECT. The Kremlin consistently points to article 7(7) and
article 45 of the ECT as examples of the European Union trying to impose European-style bureaucratic standards on Russia. (Belyi, 4) The desire of the Russian state to keep the energy sector outside of the regulation and scrutiny of international entities is directly linked with the desire to stay in power and be able to hold influence in the region. It is, therefore, against the Putin administration’s objectives to ratify the Energy Charter Treaty, as long as the provisions described above remain in the agreement.

The European Union’s Attempt to Unbundle Energy Companies

The European Union has tried to work through its domestic legislative process to increase competition within its energy import market. Most recently, these legislative attempts have taken the form of a push to “unbundle” energy imports. In effect, unbundling would prohibit any single company from both importing and selling energy resources within EU countries. Unbundling is the separation of the production and distribution of energy products by a single energy company. (Gilbert, 128) This type of legislation would effectively halt the vertical integration of large energy companies and result in greater competition, both within the production of energy products and their distribution. These efforts would directly hurt Gazprom’s revenues within the European energy market.

Increasing competition within the European energy import market, and the dilution of ownership of pipelines, directly go against the objectives of Gazprom and the Kremlin. An increase in competition would drive down prices and jeopardize the profits Russian energy companies would earn from European customers. The increase
in competition would also mean an increase in short-term contracts between Russian energy companies and EU member states. This would directly threaten the long-term security of the revenues the Kremlin has come to rely on from main Russian energy companies. The relatively undiversified Russian pipeline network, would add to the uncertainty unbundling energy imports could cause in the Russian political and economic spheres. Stringent unbundling regulations would force Gazprom to sell its controlling stakes in the gas pipelines. (Leonard and Popescu, 54) Losing control over energy pipelines would be crippling to Russian foreign policy, as well as Russia’s leverage in international negotiations. The increased competition in the European energy market, and less concentrated nature of control over transit routes would directly reduce Russia’s influence, the majority of which comes from energy resources.

A central part of Gazprom’s plan to further expand into Europe was vertical integration that decreases Russia’s dependence on transit countries; unbundling, however, directly challenges this objective. The very concept of unbundling is antithetical to Gazprom’s fundamental vision; the company strives to be a “global vertically integrated energy company.” (Gilbert, 128) Gazprom and the Kremlin see security in vertical integration because of the limited exposure to other companies. The rationale for vertical integration and the decrease in dependence on other countries are one in the same: the pursuit of autonomy. The European Union’s unbundling legislation could force Gazprom to bring natural gas to the EU’s external border, where the gas would be bought by EU partners that would then distribute it within Europe. (Gilbert, 128) A restructuring of the European energy market in this
manner would completely eliminate the use of bilateral deals in relation to natural
gas. Gazprom has heavily relied on using various rewards, or bonuses within bilateral
agreements to make them more appealing, such as the construction of gas storage
facilities. These types of incentives have given Russia leverage in negotiations, such
as the ones concerning the construction of the South Stream. A legislative move
against vertical integration, however, could render these types of bilateral agreements
and rewards useless. The potential for unbundling to limit Gazprom’s business in
Europe, and Russian influence in the region are the essential reasons behind the
Kremlin’s heavy lobbying against the unbundling of energy companies in the
European Union.

Russian Energy Resources and European Institutionalization

Russian opposition to the Energy Charter Treaty and the unbundling
legislation of the EU Commission should be expected, given the importance of the
energy sector to the Russian state. Europe has often been accused of being a
“normative” power towards Russia. (Kazantsev, 307) The success of European
institutions, however, has been mixed at best. This is due to the fact that the EU
encompasses 27 different countries, each with a different endowment of natural
resources, a distinctive opinion on Russia, and a unique view on the European Union
itself. This makes it exceedingly difficult to present a united front on issues of vital
importance like energy imports. Even with respect to the legislation on unbundling
energy companies, nine EU member states have signed a letter to the Commission
condemning the efforts to expand unbundling. (Gilbert, 130) A general consensus is
almost impossible to obtain since every nation has its own set of incentives and objectives, both within the European Union, and on the international stage.

Some political scientists have said that Russia is unwilling to ratify the Energy Charter Treaty based on ideological grounds that fundamentally differ from the EU’s. In reality, the political ideology behind the ECT is not as important as the provisions in the agreement itself. There are a number of articles in the ECT that would cripple Gazprom and wreak havoc on the uneasy equilibrium Putin has obtained with the oligarchs. The Kremlin’s refusal to ratify the ECT is most likely not based on ideological grounds, but on practical ones. If the ECT were ratified, Russian state-owned energy companies would lose their monopolistic privileges, and their profits would quickly decline. Furthermore, the oligarchs would be able to more openly challenge the Kremlin because of the jurisdiction of the Permanent Court of Arbitration and the European Court of Human Rights. Additionally, Khodorkovsky’s case could be re-examined. Finally, Russian pipelines would be opened to third parties, which would directly undo a majority of the advantages Russia has accumulated through the use of pipeline politics over the last 20 years. Ratifying the ECT would compromise many of the political objectives Putin, the Siloviki, and the Pitertsy have worked towards since Putin became president. The same can be argued for the unbundling of energy companies. The unbundling of Gazprom, or any other major state-owned energy company, would have similar effects to passing the Energy Charter Treaty; this is why the Kremlin opposes both proposals. Vertical integration is absolutely necessary for a country, or company that does not wish to be dependent on any other entities.
Chapter 6:

Conclusion

“Like in the past, Russia remains interested in developing ties with the European Union.” –Vladimir Putin

Russia’s relationship with oil and natural gas is convoluted and driven by a number of economic and political incentives. Oil and natural gas play an exceedingly essential role in the Russian economy as well as the political sphere. Oil and natural gas dominate Russian international trade. As illustrated by Graph IV in the Appendix, Russian trade generally has difficulties meeting the estimated economically optimal values. The exclusion of SITC 3 products in Graph V in the Appendix shows the extent to which Russian trade is reliant on energy products. Oil and natural gas grew to dominate Russian trade because of their high global demand and the near homogeneity between oil and natural gas that came from other parts of the world. By contrast, the demand for Russian manufacturing was never able to compete because of the variance in quality relative to the products of other countries on the international market, and the massive negative shock Russian manufacturing suffered after the dissolution of the Soviet Union.

Russian manufacturing, however, remained relevant through the scope of the energy sector. The unique positive correlation between the growth of the energy sector and the growth of the manufacturing sector described by the Russian disease created another layer of dependence of the Russian economy on oil and natural gas. The effects of the Russian disease over the last several decades have meant that the
Russian business cycle is almost entirely described by the performance of its domestic energy companies. This dependence is even more extensive because of the lack of diversity of Russian pipelines: the Russian economy is almost completely reliant on the performance of Russian energy companies in Europe.

From a purely political perspective, oil and natural gas have been a source of stability and safety in Russia. During the Privatization era, little could be relied on except for the intrinsic value of energy resources. Oil and natural gas were essentially the only reliable and profitable assets within Russia during this time. Their stability made them a source of power; this security was vital during the tumultuous transition from a centrally planned economy to a market economy. As a result of the undiversified source of power in Russia, control over energy resources deteriorated domestic politics into a belligerent zero-sum game, particularly under the Putin regime.

During the Putin presidency, the Kremlin began to view Russian energy exports to Europe as a means of gaining an advantage in international negotiations. Oil and natural gas have essentially allowed Russia to act like a superpower, since so many countries are dependent on its resources. Under Putin, the state began consolidating control over oil and natural gas within Russia because privately owned energy companies, with differing political views, could mitigate Russia’s ability to use oil and natural gas as tool of foreign policy on the international stage. This was most evident in the ways the state took control of Yukos’ assets; Khodorkovsky’s control over oil gave him political clout that directly threatened the Kremlin’s policies and influence. Many Kremlin officials, particularly the Siloviki, disliked the oligarchs,
because they believed that the oligarchs had weakened the government’s standing on the international stage. (Sixsmith, 56) The hostile nature and zero-sum mentality of Russia’s undiversified sources of political power echo in its foreign policy.

Russian foreign policy in recent decades has been predominantly driven by a desire for self-sufficiency. From the Kremlin’s perspective, dependence on transit states is a liability that should be mitigated. This perspective is evident in the pipelines politics Russia employed with the South and Nord Streams. Both pipelines make clear attempts to more directly connect Russia to its major energy customers in Europe. The desire to act independently is also evident in Russia’s opposition to international institutions and legislation that could affect Russia’s ability to vertically integrate within the European energy market. Russia’s zero-sum mentality in domestic politics has clearly permeated into its foreign affairs. This is to be expected since oil and natural gas are vitally important on the international markets, as they are within Russia. Russian foreign policy’s antagonistic nature and resource-centric character has led many political scientists to describe Russia’s foreign relations as Realist or even Neo-Mercantilist.

Russia’s relationship with its energy resources seems almost paradoxical at times. Russian international political power is heavily weighted towards using oil and natural gas as a tool of its foreign policy. Simultaneously, the Russian economy is profoundly reliant on the uninterrupted success of the energy sector. Furthermore, Russian political and economic objectives are often at odds with one another. Many of the inherently political objectives are mutually exclusive with the business goals of corporations. Even state-owned companies, like Gazprom, cannot achieve the broad
set of objectives delegated by the state. Some of the political objectives include the
requirement that Gazprom provide subsidized natural gas for the domestic Russian
population, maximize tax revenue for the government, and act as a tool of Russian
foreign policy when needed. These goals directly clash with the fiduciary
responsibility companies have to maximize profits for their shareholders. Russia’s
domestic and foreign policy aspirations directly impede Gazprom from maximizing
its profits by requiring subsidized natural gas within Russia, and either threatening to
stop or actually stopping gas flows to countries in order to achieve political
objectives. By subsidizing gas sales in Russia, Gazprom is directly hurting its
revenues, and the stoppage of gas flows almost never makes business sense.
Paradoxically, the Kremlin needs Gazprom to maximize profits because the Russian
state heavily relies on Gazprom for tax revenue. Previously discussed estimates
suggest that the taxes Gazprom pays range from 12 to 25 percent of total tax revenue.
(Abdelal, 14 and Brugato, 3) In essence, the Kremlin needs Gazprom to make the
largest revenue possible, while simultaneously forgoing profits when it is assisting the
Russian population to pay for heating, or it is needed to send a political message.
Gazprom has been placed in a contradictory position because of the demands placed
on it by the Kremlin.

The often shortsighted nature of Russian foreign affairs also adds to the
contradictions between the political and economic objectives. The most prominent
eexample of ineffective Russian foreign policy came during the gas conflicts with
Ukraine. The perpetual brinksmanship, constant ultimatums, and two gas stoppages
severely damaged Russia’s reputation as a reliable supplier of natural gas to the EU.
This directly caused the EU to look for alternative sources of natural gas and begin plans for a new pipeline. Gazprom was then forced to react in kind with the massively expensive South Stream pipeline, in an attempt to maintain its share in the EU energy market. In this case, Russia’s aggressive foreign policy directly hurt Gazprom’s profits by forcing it to invest in the South Stream. Russia is forced to use energy resources whenever it wants to leverage its position on the international stage, and this often creates contradictory demands on the energy sector. Russia’s often mutually exclusive and conflicting economic and political goals are mostly due to the undiversified sources of economic and political power within Russia.

It is intriguing that Russia should have any success in the use of energy products as leverage in Europe, given that Russia’s economic stability and political power is heavily reliant on the continued European demand for Russian gas and oil. If European demand for Russian oil and gas were to destabilize, Russia’s ability to export its energy products would be severely mitigated because of its undiversified infrastructure, and its geopolitical influence would rapidly deteriorate. It is therefore interesting that European countries often yield to Russian demands even though Russia stands to suffer significant economic consequences from its energy companies’ foregone revenue during gas stoppages, or other perceived reductions in reliability. European countries, however, often acquiesce to Russian demands because of the structure of the interactions themselves. Dealing with the whole EU at once would give the European countries a size advantage over Russia; this is an outcome the Kremlin has vigorously tried to avoid. This is also why Russia actively opposed institutions like the Energy Charter Treaty. By dealing with EU member states
individually, Russia can offer more specialized deals, while also maintaining the ability to apply exact political pressure on key countries. These, usually bilateral, types of interactions are directly in line with Russian foreign policy, which also does not treat the European Union as a single entity.

All too often, many of the bilateral deals struck by Russia and EU members are done so at the cost of the EU as a whole, or other specific EU member states. An example of this occurred when various EU states agreed to the South Stream, at the cost of the Nabucco pipeline, which would have given the whole European Union more energy security, and diversified its energy imports. EU states either chose to support the South Stream, or keep both pipeline projects active concurrently, because Gazprom offered to make multiple EU members gas hubs. The tax benefits of being a gas hub attracted many European governments. In another prominent example, Germany’s agreement to build the Nord Stream directly mitigated the influence Belarus, Poland, and the Baltic states had, with respect to Russia. The South and Nord Streams illustrate the ways in which individual EU members are willing to sacrifice the collective goals of the European Union for individual benefits.

These types of bilateral deals create a “beggar thy neighbor” scenario, which can be traced back to a collective action problem. Currently, the EU has a wide spectrum of political beliefs on almost every issue, especially Russia. The central problem, however, is that the European Union does not see itself as a single entity. This allows Russia to exploit the various differences between states. Graph VIII in the Appendix illustrates the feelings of European unity relative to the nationalistic sentiment in individual EU member state. The trend observed in Graph VIII is
relatively clear: the people of the European Union see themselves as citizens of their respective countries more than the citizens of a single entity. EU citizens simply do not feel loyalty to the European Union in the way they feel it for their country. Under these conditions, the incentives to accept Russian bilateral deals are evident. A broad sense of European nationalism has not yet permeated the European Union, and so Russia is able to continue using bilateral deals with EU member states that are often signed at the expense of the European Union as a whole.

Russia’s relationship with Europe has often been described as neo-mercantilist or characterized by an asymmetrical dependence, but these representations of the interaction between Russia and the EU do not completely capture the fragility of the Russian economy and political system. Russia’s economic and political dependence on the continued sale of energy resources is extreme, and Europe is Russia’s largest export market, due to a number of infrastructural constraints. Even though Russia has been attempting to diversify its markets, it is still heavily reliant on EU consumers. Therefore, while the EU clearly needs Russian gas and oil to meet its energy needs, the Russian economy and government need the profits the energy companies are making in Europe in order to continue developing. The geopolitics between Russia and the European Union are often framed in a one-sided manner, which stresses the asymmetric dependence of the European Union on Russian energy resources. The true nature of the interaction between the EU and Russia, however, is more intricate than an ephemeral analysis would suggest.
Reference:


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Appendix:

Due to margin constraints, several figures had to be rotated in order to both fit, and display all relevant data.

Graph 1:


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Graph II:

Graph III:

Natural Log of Trade

Austria
Belgium
Bulgaria
China
Cyprus
Czech Republic
Denmark
Estonia
Finland
France
Germany
Greece
Hungary
India
Ireland
Italy
Japan
Korea
Latvia
Lithuania
Luxembourg
Malta
Netherlands
Poland
Portugal
Romania
Slovakia
Slovenia
Spain
Sweden
Thailand
Ukraine
United Kingdom

Actual vs. Predicted Trade
- Average Predicted
- Average Actual
Graph IV:

Trade Ratio with Russia
Graph V:

Trade Ratio

- Slovenia
- Cyprus
- Malta
- Luxembourg
- Finland
- Belgium
- Austria
- Netherlands
- Greece
- Portugal
- Denmark
- Ireland
- Italy
- Sweden
- Estonia
- Bulgaria
- Germany
- Spain
- United Kingdom
- France
- Lithuania
- Latvia
- Hungary
- Slovakia
- Czech Republic
- Romania
- Poland

Effects of SITC 3 Products on Trade

- Including SITC 3
- Excluding SITC 3
Graph VI:

Trade Ratio

New Cold Warriors
Friendly Pragmatists
Strategic Partners
Trojan Horses
Graph VII:

![Spot Oil Price - Aggression Relationship](image)


Graph VIII:

![Do you ever think of yourself as not only (nationality), but also European? Does this happen often, sometimes or never?](image)

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Table I:
(output from Stata)

<table>
<thead>
<tr>
<th></th>
<th>(b)</th>
<th>(B)</th>
<th>(b-B)</th>
<th>sqrt(diag(V_b-V_B))</th>
</tr>
</thead>
<tbody>
<tr>
<td>ln_country-p</td>
<td>1.820262</td>
<td>1.043967</td>
<td>.7762945</td>
<td>.0448299</td>
</tr>
<tr>
<td>ln_partner-p</td>
<td>1.665737</td>
<td>.9887114</td>
<td>.6760261</td>
<td>.0566351</td>
</tr>
<tr>
<td>ln_gdp_per-q</td>
<td>.0016498</td>
<td>.0066801</td>
<td>-.0020303</td>
<td>.0030561</td>
</tr>
<tr>
<td>e</td>
<td>.2514477</td>
<td>.24035934</td>
<td>.0108544</td>
<td>.000843</td>
</tr>
<tr>
<td>year</td>
<td>.0583115</td>
<td>.0777529</td>
<td>-.0194415</td>
<td>.000843</td>
</tr>
</tbody>
</table>

b = consistent under H0 and Ha; obtained from xtreg
B = inconsistent under H0, efficient under H0; obtained from xtreg

Test: H0: difference in coefficients not systematic

\[
\text{ch}2(5) = (b-B)'(V_b-V_B)^{-1}(b-B) = 481.85
\]

Prob>ch2 = 0.0000
(V_b-V_B is not positive definite)

Table II:
(output from Stata)

Test of overidentifying restrictions:
Cross-section time-series model: xhtaylor haylor robust
Sargan-Hansen statistic 0.615 Chi-sq(1) P-value = 0.4331
<table>
<thead>
<tr>
<th>Variables</th>
<th>Basic Pooled</th>
<th>Auxiliary Pooled</th>
<th>Auxiliary Random Effects</th>
<th>Basic Random Effects</th>
<th>Auxiliary Fixed Effects</th>
<th>Basic Fixed Effects</th>
</tr>
</thead>
<tbody>
<tr>
<td>Country GDP</td>
<td>0.092**</td>
<td>0.092**</td>
<td>0.092**</td>
<td>0.092**</td>
<td>0.092**</td>
<td>0.092**</td>
</tr>
<tr>
<td>Partner GDP</td>
<td>0.092**</td>
<td>0.092**</td>
<td>0.092**</td>
<td>0.092**</td>
<td>0.092**</td>
<td>0.092**</td>
</tr>
<tr>
<td>Finance</td>
<td>0.092**</td>
<td>0.092**</td>
<td>0.092**</td>
<td>0.092**</td>
<td>0.092**</td>
<td>0.092**</td>
</tr>
<tr>
<td>Exchange Rate</td>
<td>0.092**</td>
<td>0.092**</td>
<td>0.092**</td>
<td>0.092**</td>
<td>0.092**</td>
<td>0.092**</td>
</tr>
<tr>
<td>Domestic Credit</td>
<td>0.092**</td>
<td>0.092**</td>
<td>0.092**</td>
<td>0.092**</td>
<td>0.092**</td>
<td>0.092**</td>
</tr>
<tr>
<td>Real GDP</td>
<td>0.092**</td>
<td>0.092**</td>
<td>0.092**</td>
<td>0.092**</td>
<td>0.092**</td>
<td>0.092**</td>
</tr>
<tr>
<td>Personal Income</td>
<td>0.092**</td>
<td>0.092**</td>
<td>0.092**</td>
<td>0.092**</td>
<td>0.092**</td>
<td>0.092**</td>
</tr>
<tr>
<td>Consumer Credit</td>
<td>0.092**</td>
<td>0.092**</td>
<td>0.092**</td>
<td>0.092**</td>
<td>0.092**</td>
<td>0.092**</td>
</tr>
<tr>
<td>household</td>
<td>0.092**</td>
<td>0.092**</td>
<td>0.092**</td>
<td>0.092**</td>
<td>0.092**</td>
<td>0.092**</td>
</tr>
</tbody>
</table>

(-statistics are in parentheses)
Table IV:
(t-statistics are in parentheses)

<table>
<thead>
<tr>
<th>Variables</th>
<th>Fixed Effects Full Sample</th>
<th>Fixed Effects OECD</th>
<th>Hausman-Taylor Full Sample</th>
</tr>
</thead>
<tbody>
<tr>
<td>Country GDP</td>
<td>1.820** (16.48)</td>
<td>1.912** (5.05)</td>
<td>1.820** (35.46)</td>
</tr>
<tr>
<td>Partner GDP</td>
<td>1.666** (13.79)</td>
<td>1.760** (7.72)</td>
<td>1.664** (27.04)</td>
</tr>
<tr>
<td>Distance</td>
<td></td>
<td></td>
<td>-1.338* (-2.43)</td>
</tr>
<tr>
<td>Per Capita GDP Difference</td>
<td>0.004 (0.31)</td>
<td>-0.000 (-0.01)</td>
<td>0.004 (0.53)</td>
</tr>
<tr>
<td>EU</td>
<td>0.251** (8.09)</td>
<td>0.356 (6.83)</td>
<td>0.251** (16.27)</td>
</tr>
<tr>
<td>Year</td>
<td>0.058** (21.96)</td>
<td>0.062 (16.11)</td>
<td>0.058** (39.72)</td>
</tr>
<tr>
<td>Adjacency</td>
<td></td>
<td></td>
<td>-2.732 (-1.14)</td>
</tr>
<tr>
<td>Language</td>
<td></td>
<td></td>
<td>10.990 (0.39)</td>
</tr>
<tr>
<td>USSR</td>
<td></td>
<td></td>
<td>5.781* (2.14)</td>
</tr>
<tr>
<td>Constant</td>
<td>-185.674** (-31.52)</td>
<td>-199.814** (-10.84)</td>
<td>-176.062** (-33.21)</td>
</tr>
<tr>
<td>R-squared</td>
<td>0.67</td>
<td>0.67</td>
<td>0.71</td>
</tr>
<tr>
<td>N</td>
<td>7152</td>
<td>2654</td>
<td>7152</td>
</tr>
</tbody>
</table>

* p<0.05  ** p<0.01

Table V:
(output from Stata)

<table>
<thead>
<tr>
<th>politics trade_~o</th>
</tr>
</thead>
<tbody>
<tr>
<td>politics</td>
</tr>
<tr>
<td>trade_ratio</td>
</tr>
<tr>
<td></td>
</tr>
</tbody>
</table>
Map I:


Map II:

Map III:


Map IV:

Source: "France Looks to Secure More Russian Gas via Nord Stream Pipeline."