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BEHOLDEN TO THE BEAR: THE POLITICAL ECONOMY OF EUROPEAN NATURAL GAS TRADE WITH RUSSIA

Jessica Miltenberger

BACKGROUND & EXISTING LITERATURE

While oil has been perceived as political since the oil shocks of the 1970s, natural gas is a relatively new political commodity¹. In fact, it had almost no role in the European energy market until large domestic reserves were discovered in the United Kingdom and the Netherlands in the 1950s and 1960s². Since then, natural gas has burgeoned into what is arguably the most important energy commodity in Europe. In the EU, where 62.8% of natural gas is used for personal and home use³, electricity and heat are almost synonymous with gas. As the dozen people who froze to death as a result of the January 2009 gas dispute⁴ learned, electricity and heat—and by inference natural gas—mean life.

The January 2009 incident was an almost-perfect echo of what occurred in January of 2006, and again in March of 2008, when Russian-administered gas company Gazprom drastically cut natural gas supplies to the Ukraine—through which all but one of the gas pipelines to Europe must pass—as the result of a dispute over payment of a contract. In the case of 2008, this action caused natural gas exports to parts of the EU to drop by as much as 40%⁵. That August, following the Russian invasion of Georgia, the European Union admitted that it could not realistically impose economic sanctions on Russia since the EU is dependent upon the former for approximately 30% of its oil and almost 50% of its natural

1 Delvaux, B., Hunt, M., & Talus, K. (2008). *EU Energy Law and Policy Issues: The Energy Law Research Forum Collection*. Lanham, MD: Bernan Press(Pa). pp 131

2 Eurostat. *Gas and Electricity Market Statistics with CD-ROM*. 2007 ed. Belgium: European Communities, 2007. pp 36

3 Eurostat. *Gas and Electricity Market Statistics with CD-ROM*. 2007 ed. Belgium: European Communities, 2007. pp 37

4 Kramer, A. E.. (2009, January 18). Russia and Ukraine Reach Deal on Gas. *The New York Times*. Retrieved November 5, 2009, from <http://www.nytimes.com/2009/01/19/world/europe/19gazprom.html>.

5 Gazprom restores Ukraine gas flow. (2008, March 5). *BBC NEWS*. Retrieved September 28, 2008, from <http://news.bbc.co.uk/2/hi/business/7276589.stm>

gas⁶ 7. This political ramification of a seemingly economic discrepancy begins to illustrate why a purely economic approach to EU energy security is insufficient to explain the puzzle.

If states truly were unitary actors driven to maximize utility through trade, one would expect to see EU member states choosing their primary gas supplier based on whatever source has the cheapest price. While it is true that much of the EU remains dependent on Russia due to their ability to supply the cheapest natural gas, this does not explain why we see some states making the pointed choice to adopt more expensive energy sources in an effort to diversify away from Russia. That is because a simple supply and demand model fails to take into account the basic drive of states to maximize security through trade. Gowa and Mansfield's model of power politics and international trade points out that trade "enhances the potential military power of any country that engages in it," and moreover, "trade with an adversary produces a security diseconomy; trade with an ally produces a positive externality."⁸

This idea may better explain why states like Lithuania⁹ and Hungary¹⁰ are willing to pay a higher price for diversification despite the economic hardship it would create, in order to balance their security through trade. However, it is a mistake to think that natural gas is a purely economic commodity with a security dimension—rather, it should be considered a security commodity with an economic dimension. The necessity of natural gas in maintaining the civilized world is such that a break in its supply is enough to cause chaos and even threaten lives, as it did during the gas cutoffs in the winters of 2006, 2008 and 2009.

Some authors argue that European energy security can only be successfully addressed from the supranational level of the European Union. Indeed, it is on this proposed solution that the EU itself focuses. However, the EU-centric option has shown its ineffectiveness time and again when it comes to addressing Russia's energy dominance, and simple domestic discrepancies in energy policy have served to stall the entire dialogue, such as the unwillingness of states to invest in a shared energy infrastructure. By choosing instead to unilaterally make deals with Russia (as Germany has) or protect domestic energy industry from supranational regulation (as France has) the greatest players within the European Union are demonstrating that energy security is an issue firmly in the domestic political domain, as well as the economic.

Moreover, in order to engage the cumbersome gears of the EU, every move by the

6 Russia Cool on EU Energy Deregulation. (2007, October 25). *The Moscow News*. Retrieved November 23, 2008 from <http://www.mnweekly.ru/business/20071025/55285360.html>.

7 See also: Roberts, pg. 49, Hadfield, pg. 232

8 Gowa, J. and Mansfield, E. D. (1993, June) "Power Politics and International Trade," *American Political Science Review*, 87(2), pp. 408.

9 The closing of the Ignalina Nuclear Power Plant (INPP) on Dec. 31st, 2009 (per Lithuania's accession agreement with the European Union in 2004) means a more than doubling of electricity prices, and an energy deficit forcing it to look at using gas bought from Russia. Energy imports from Russia are expected to rise to 45% of total consumption over the next year. (<http://www.baltictimes.com/news/articles/21908/>) Lithuania's government is currently appealing to the EU for funding to build thousands of wind turbines in an effort to stave off a more permanent dependence on Russia.

10 Hungary relies on imports for over half of its primary energy requirements. Domestic natural gas reserves are almost gone, and demand for natural gas in Hungary is expected to increase by about 20% over the next 10 years, over which period domestic production will fall by some 30%. (<http://www.ecee.org/pubs/hungary.htm#energy>) In March of 2009, a Russian energy group purchased an Austrian company's share of Hungary's largest energy company—MOL—for its twice market value, thus securing a large voice in Hungarian energy production and imports. (<http://ftalphaville.ft.com/blog/2009/03/30/54170/russia-invades-the-hungarian-energy-sector/>)

European Union must be extensively vetted and debated on national, intergovernmental, and supranational levels. For this reason, Russia has consistently been able to head off attempts by the EU to distance itself from the former. For example, in the late 1990s, the US and the European Union were engaged in a joint project to fund a new gas line from Turkmenistan across the Caspian Sea through Turkey and into Europe. Perceiving the consequences of this, Russia rushed to build their Blue Stream gas pipeline under the Black Sea into Turkey, whose gas market was not large enough to support both pipelines. The Blue Stream pipeline was completed in 2002, leaving the EU's slow and unwieldy bureaucratic effort to crumble, the project defunct before construction even began¹¹.

These and other failures to form a cohesive energy policy have demonstrated that cooperation on energy in Europe remains an intergovernmental process rather than a supranational one. Consequently, while a secure supply of natural gas is of paramount concern to many, a united EU energy policy cannot come about without understanding the motivations behind its members' choices with regard to Russia as an energy supplier.

METHODS

This research will assess the fit of a new domestic political economy model and discuss the relative stances of four case studies within the larger sample based on their position within the model's framework. To do this, a nested research design was used, which involves establishing patterns among a small sample size (in this case, the 27 EU member states), and choosing case studies from the sample that exemplify the comparative points of research and thus better assess the observed relationships between variables.

By limiting the sphere of research to countries within the European Union, the present research is controlling for as many otherwise confounding variables as possible. States within the EU are all bound by the same internal and external trade policies, thus limiting the confounding variable of interstate trade regulations. Limiting the scope to EU member states also controls for monetary policy due to the Union's single currency policies, so trade values are consistent throughout the measured countries. Alliance is also controlled for, since states within the EU have all formally recognized the legitimacy of one another's governments and seemingly reached a positive peace. Moreover, all EU member states—with the exception of Austria—are part of NATO, which controls for much of their foreign security policy.

Additionally, for the purpose of limiting variables, natural gas will be the sole energy resource examined in this research. Natural gas was chosen over oil (and over a combination of the two) as the most pertinent energy variable for several reasons. First, natural gas pipelines have been at the center of the recent energy disputes that have brought the EU's energy dependence to the forefront of the European political stage. Second, natural gas is the most consistent source of electricity and heat throughout the EU, thus impacting the survival and wellbeing of most of the European population¹².

11 Baran, Zyeno (2007, 1 October) EU Energy Security: Time to End Russian Leverage *Washington Quarterly*, 30(4), pp. 138.

12 Delvaux, B., Hunt, M., & Talus, K. (2008). *EU Energy Law and Policy Issues: The Energy Law Research Forum Collection*. Lanham, MD: Bernan Press(Pa).

Economic Factors

There is no doubt that price plays an important role in EU member states' decisions regarding gas suppliers. For some states it is simply not economically feasible to attempt to diversify away from Russia should they wish to do so. The best measure of a state's ability to move away from Russia as their primary supplier of natural gas is to determine the flexibility of demand for natural gas in that state. If very flexible—i.e. a sharp rise in price would mean a sharp decline in the purchase of natural gas—then one can logically extrapolate that such a state could more easily substitute away from Russia and shoulder the burden of extra cost in order to gain a steady supply elsewhere. It also implies that Russia's use of the "energy weapon" against such a state would have less of a coercive effect, since that state can more easily accommodate a drop in supply.

To measure this, the present research divided the percent change in quantity of natural gas demanded by the percent change in price of natural gas between 2005 and 2008. The year 2005 was chosen as a starting point since the first Russia-Ukraine pipeline dispute and subsequent disruption did not take place until the following year. This means the data is current, but unskewed by the aftershocks of the gas crisis. The year 2008 was chosen as its comparison because it is the most recent data available at present. As a robustness check, this data will be compared to the broader findings of the United States' Energy Information Administration's 2006 European gas dependence statistics, which were measured based on the percentage of Russian natural gas composing total domestic consumption in each state.

Political Factors

The primary political factor utilized in the present research was Eric Gartzke's Affinity of Nations data set, which utilizes Erik Voeten and Adis Merdzanovic's UN General Assembly Voting data to establish voting trends between state dyads¹³. Gartzke's research argues that because the gains to be had from voting in the General Assembly are few—many view the action as largely symbolic—there is a higher level of honesty in expressing preference. The extent of the General Assembly voting records also makes it possible to get broad longitudinal measures that minimize the effects of short-term variation in political leadership, focusing instead on long-term political affinity.

For the present research, voting affinity was averaged for the dyads of each EU member state and Russia from 1990 through 2002. 1990 was chosen as an obvious starting point because of the impact of the collapse of the Soviet Union on the shaping of Europe and the European Union, while 2002 was the most recent data available at present.

As a robustness check and to underscore the political affinity findings based in the Affinity of Nations dataset, this research will examine the information collected by the 2009 *Transatlantic Trends* group. Previous generations of research have shown public opinion to be a well-established link to public policy in democracies^{14 15}. For this reason, the information collected by the 2009 *Transatlantic Trends* group is both interesting and pertinent. *Transatlantic Trends* surveyed over 11,000 people in eleven European countries—Bulgaria,

13 Voeten, E. and Merdzanovic, A. (2006) United Nations General Assembly Voting Data. Accessed October 29, 2009 from <http://www9.georgetown.edu/faculty/ev42/UNVoting.htm>.

14 Erikson, R.S. (1976) The Relationship between Public Opinion and State Policy: A New Look Based on Some Forgotten Data. *American Journal of Political Science*, 20(1), pp. 25–36.

15 Page, B. I. and Shapiro, R.Y. (1983) Effects of Public Opinion on Policy. *The American Political Science Review*, 77(1) pp. 175–190.

France, Germany, Italy, The Netherlands, Poland, Portugal, Romania, Slovakia, Spain, and The United Kingdom—collecting individual views on their states’ foreign policy, global leadership, and other international issues¹⁶.

In analyzing the reasoning behind EU member states’ choice of Russia as an energy supplier, the present research will assess the fit of a political economy model and discuss the relative position of four case studies within the larger sample based on their positions within the model’s framework. In a large-*n* statistical world, we would generate a large dataset and statistically test for correlations among variables. However, the small number of member states in the European Union precludes this possibility. Instead, a variation on Lieberman’s synergistic “nested research design” was used. This research and analysis method involves using statistical analysis to establish patterns among a small sample size (in this case, the 27 EU member states). The nested research design process provides direction for case study selection, allowing the researcher to choose case studies from the sample that exemplify the comparative points of research and thus better assess the observed relationships between variables.

Initially, it was anticipated that there might be a direct relationship between the chosen political and economic variables. However, a pair-wise correlation test showed only a statistically insignificant weak negative correlation (Pearson’s $r = -0.22243$). This weak correlation result turned out to be a good thing, since it ensured that the two variables move independently of one another. Therefore, changes in one factor or the other, or both, would affect states in different ways, creating a variety of situations to be examined. See pages 48 and 49 for the scatter plots of the results, with the median of each dataset delineated.

As previously discussed, the reasons for an EU member state choosing Russia as an energy trading partner can be divided into two broad categories: politically- and economically-motivated. Looking at the scatter plots, one can see that member states can be divided into four quadrants based on their levels of political affinity and economic flexibility. In trying to determine which force would prevail given individual circumstances, states’ political tendencies were subdivided into either Russophobe or Russophile, and their economic dependence was classified based on high versus low price sensitivity. The result was the following table:

		Political orientation	
		Russophile	Russophobe
Price Sensitivity	Elastic	Ally	Enemy
	Inelastic	Friend	Customer

16 The survey results “can say with 95% confidence that the margin of error attributable to sampling and other random effects is plus or minus three percentage points... Europe-wide figures are weighted on the basis of the size of the adult population in each country.”

Chart 1: Relationship between Price Elasticity of Demand and UN Voting Affinity

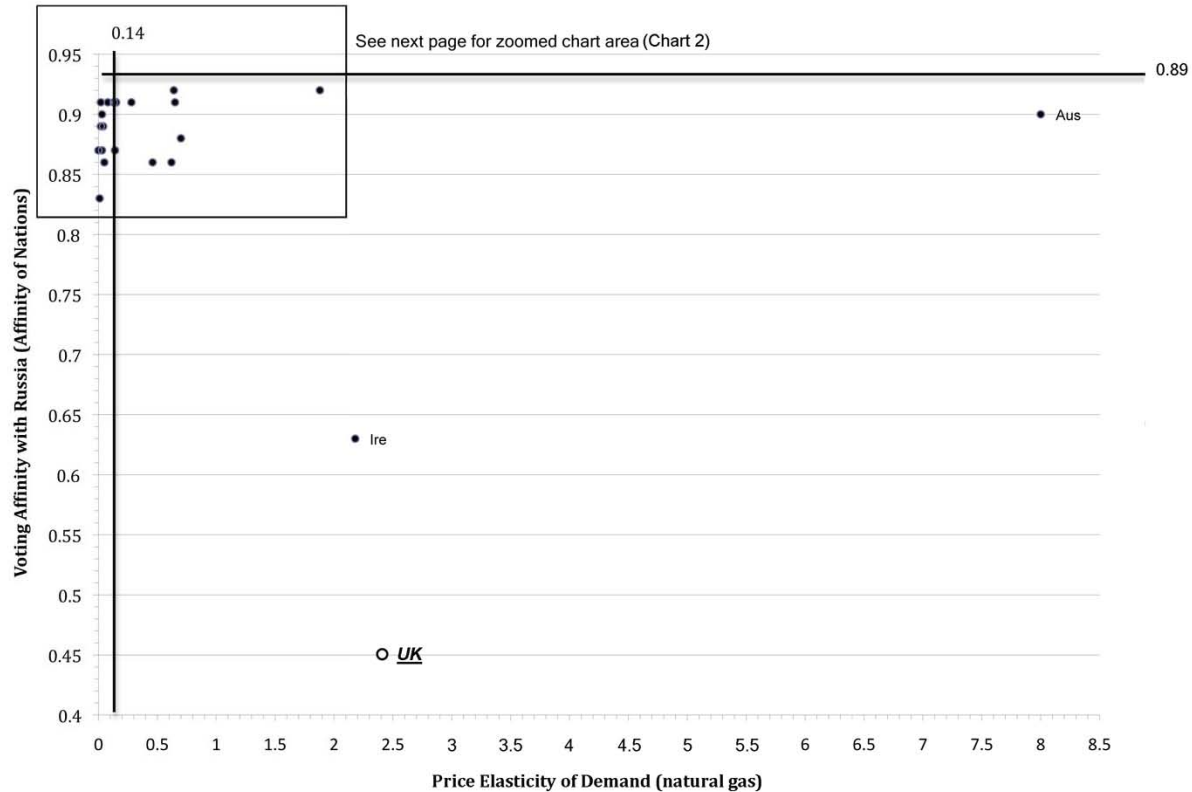
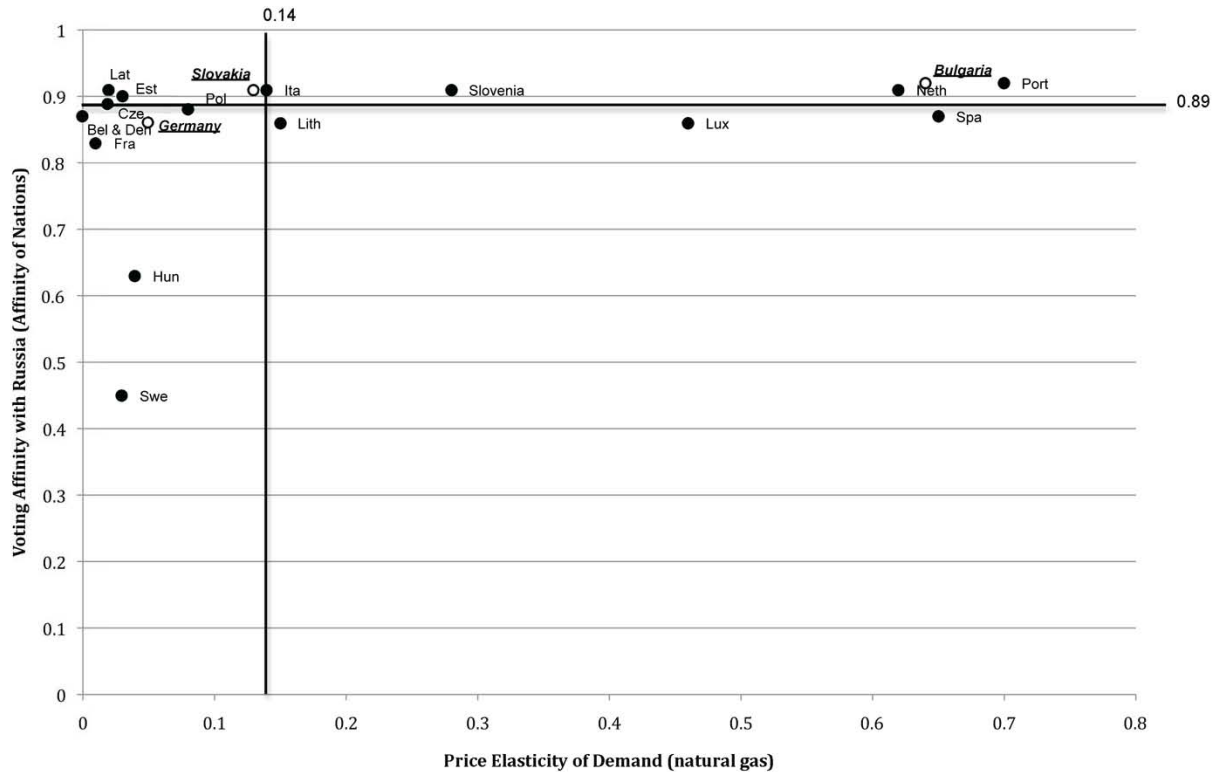


Chart 2: Relationship between Price Elasticity of Demand and UN Voting Affinity (Zoomed area of Chart 1)



This table was utilized in choosing case studies, with efforts toward examining four states who exemplify each of the four classifications above (Ally, Friend, Customer, and Enemy). The present research will endeavor to describe the theoretical reasoning behind the choice of each case study, and thereafter give examples of recent instances where these economic and political drives have been displayed.

RESULTS

As you can see more closely in Table 1 (page 51), price elasticity of demand was calculated for each EU member state, with the exception of Cyprus, Finland, Greece and Malta, for whom some or all of the required data was unavailable. The overall mean price elasticity of demand was 0.805. However, this is misleadingly high, as one state—Austria—constituted an extreme outlier with an elasticity of 8. This is due to the fact that Austria's gas imports—which are quite low—go mainly to industrial, rather than residential, sectors. Over 60 percent of Austria's electricity is produced with hydropower, and 36 percent by thermal power production¹⁷. Therefore, any drop in natural gas supply causes minimal effect, while any rise in price causes a drastic drop in demand. If one removes Austria from the equation, the new mean European Union price elasticity of demand becomes 0.479, a far less flexible rate.

Erik Voeten and Adis Merdzanovic's Affinity of Nations data was coded as follows: 1 = "yes" or approval for an issue; 2 = abstain, 3 = "no" or disapproval for an issue¹⁸. The result is a number that codes values for the data range from -1 (least similar interests) to 1 (most similar interests). Looking at the data in Table 1, one can see that no dyad falls below 0.4, but this is to be expected when one takes into account the geographic, economic, and historical commonalities and relationships among this group of states. Nevertheless, there is still a large degree of variation between EU members with regard to their political affinity toward Russia, with some states scoring as high as 0.93 and others as low as 0.45.

To underscore these findings, public survey data from the 2009 *Transatlantic Trends* survey was examined. Though the common perception tends to be of a Russophobic Central and Eastern Europe—worried about the bear on their doorstep—and a complacent, unconcerned Western Europe that freely trades with its former enemy since capitalism bears no grudges¹⁹, the most recent popular opinion survey data in the EU contradicts this assumption. When asked "[t]o what extent are you concerned or not about Russia's role as an energy supplier?" 2009 *Transatlantic Trends* data showed that majorities in all states in the EU are "concerned." While Central and Eastern Europeans were more concerned over Russian energy dependence than their Western counterparts—73 percent versus 67 percent, respectively—the data showed that citizens in Western states were more upset over their increased dependence on Russia as an energy supplier. Overall, Western Europe also saw a higher level of anxiety over Russia's treatment of its neighbors than did the Central and Eastern European states that make up Russia's backyard. These high levels of public alarm indicate just how uneasy it makes citizens of the EU to see their own growing dependence on Russia, and their fear over the situation's political implications.

Within these broad geographic trends, there was even more variation among individ-

17 Energy Use in Austria. *Umwelt Bundesamt* (Environmental Agency of Austria). Retrieved February 9, 2010, from http://www.umweltbundesamt.at/umweltschutz/energie/energie_austria/ [translated by Google]

18 Gartzke, E. (2006). Codebook: *THE AFFINITY OF NATIONS INDEX, 1946-2002, Version 4.0*, pp. 3.

19 Transatlantic Trends. (2009) "Key Findings 2009." *Transatlantic Trends* No. 5, pp 11.

Table 1

State ¹	(Classification)	Price Elasticity of Demand	% Domestic Consumption that is Russian Gas	Pipeline ⁴	Mean Affinity '90-'02	Transatlantic Trends Mean Concern Level (%)
Austria		8 ²	74	1	0.9	
Belgium		0	8	0	0.87	
Bulgaria	(Ally)	0.64	89	1	0.92	50.66666
Czech Rep.		0.02	84	0	0.89 ⁷	
Denmark		0	0	0	0.87	
Estonia		0.03	105	0	0.9 ⁵	
France		0.01	26	0	0.83	
Germany	(Customer)	0.05	43	1	0.86	77
Greece		N/A	72	0	0.93	
Hungary		0.04	62	0	0.89	
Ireland		2.18	0	0	0.63	
Italy		0.14	30	0	0.87	
Latvia		0.02	112	1	0.91 ⁵	
Lithuania		0.15	88	1	0.91 ⁵	
Luxembourg		0.46	N/A	0	0.86	
Netherlands		0.62	9	0	0.86	
Poland		0.08	52	1	0.91	
Portugal		0.7	0	0	0.88	
Romania		1.88 ³	23	1	0.92	
Slovakia	(Friend)	0.13	108	1	0.91⁷	66
Slovenia		0.28	57	0	0.91 ⁶	
Spain		0.65	0	0	0.91	
Sweden		0.03	0	0	0.87	
UK	(Enemy)	2.42	0	0	0.45	77.33333

¹ Insufficient data for Cyprus, Finland and Malta

² Austria's gas goes mainly to non-private sectors. In Austria electricity is produced with hydro-power (59%), followed by thermal power production (36%).

The share of wind energy is around 3%. <http://www.umweltbundesamt.at/en/umweltschutz/energie/energie_austria/>

³ This is a misleadingly high PEoD due to a substantial shift caused by the opening of a second nuclear reactor in Romania in 2007, which doubled the amount of electricity supplied by nuclear power generation to 18%, resulting in a sudden and dramatic drop in natural gas consumption. <<http://www.aec.ca/NewsRoom/News/Press-2007/071005.htm>>

⁴ Russian-owned or dominated gas pipeline. Coded as follows: 1 = has a pipeline passing through or terminating in; 0 = does not have a pipeline passing through. See EIA pipeline map [Attachment 1]

⁵ UN General Assembly Votes only available from 1991 to 2002.

⁶ UN General Assembly Votes only available from 1992 to 2002.

⁷ UN General Assembly Votes only available from 1993 to 2002.

ual member states. Averaged levels of concern about energy security with regard to Russia were calculated using the responses to the three questions asked in the survey: 1) “To what extent are you concerned or not about Russia’s role as an energy supplier?” 2) “To what extent are you concerned or not about Russia’s behavior toward its neighbors?” 3) “To what extent you approve or disapprove of [the idea that] we should reduce our energy dependence on Russia, even if this requires additional investments to acquire different energy sources?” As anticipated, the mean levels of concern over energy security with regard to Russia appear inversely related to the affinity of nations scores.

CASE STUDIES

The Ally: Bulgaria

The archetypal “Ally” primarily trades with Russia despite the fact that it could afford to diversify natural gas suppliers due to elastic price sensitivity. In addition, the Ally has Russophilic policies and positive public opinion toward Russia. Based on the data collected in Table 1 and seen more closely in Table 1.1, one can see that Bulgaria fits both of these criteria.

Table 1.1

State	Price Elasticity of Demand	% Domestic Consumption that is Russian Gas	Pipeline	Mean Affinity '90-'02	Transatlantic Trends Mean Concern Level (%)
Bulgaria	0.64	89	1	0.92	50.66666

Economically, Bulgaria has a far more elastic demand than most of the European Union at 0.64, despite the fact that they get at least 89 percent of their natural gas from Russia²⁰. Despite this comparatively high potential for diversification without severe economic damage, Bulgaria has chosen to undertake numerous co-sponsored projects with Russian gas companies, some of which undermine their European neighbors’ efforts at diversification.

In addition to the 92 percent alignment with Russia that can be seen in United Nations General Assembly voting patterns, public survey data has served to underline the observed affinity between Bulgaria and Russia. In the 2009 *Transatlantic Trends* survey, when asked, “To what extent are you concerned or not about Russia’s role as an energy provider?” Bulgarians answered with the second-highest rate of “not concerned” responses, at 36 percent. Furthermore, when posed the question, “To what extent are you concerned or not about Russia’s behavior toward its neighbors?” 47 percent of Bulgarians responded that they were “not concerned”—the highest number of unconcerned responses of any country in Europe—with only 40 percent expressing any concern at all (the lowest rate in Europe). Finally, when asked “To what extent you approve or disapprove of [the idea that] we should reduce our energy dependence on Russia, even if this requires additional investments to acquire different energy sources?” only 56 percent of Bulgarian citizens approved of the idea, marking the lowest rate of approval in Europe by a large margin²¹.

The Bulgarian responses to the above questions serve to underscore its placement firmly in the camp of “Ally,” which was chosen based on its price elasticity of demand and its United Nations Affinity of Nations scores in Table 1. Based on this theoretical classifica-

20 International Energy Data and Analysis for Bulgaria. (2010, January 6). *U.S. Energy Information Administration*. Retrieved January 9, 2010, from http://tonto.eia.doe.gov/country/country_energy_data.cfm?fips=BG&Go=Go

21 Romania had the next lowest approval rating at 71 percent.

tion, one would expect to see Bulgaria acting as an Ally by participating in further Russian energy projects, despite the availability of other options for diversification, and perhaps even to the detriment of other EU member states.

In keeping with these expectations, Bulgaria is currently jointly developing several projects with Russia, including the Burgas–Alexandroupolis pipeline, which will transport Russian oil overland from the Bulgarian Black Sea to the Aegean Sea, bypassing Turkey²². On the alternative fuels front, Bulgaria has hired *Gazprombank*-owned *Atomstroyexport* to build a second nuclear power plan in Belene, Bulgaria, in which the Russian company is expected to maintain a majority share²³.

With regard to natural gas, though Bulgaria is a signatory on the proposed Nabucco pipeline project—which is being subsidized by the EU specifically to relieve dependence on Russian gas, and involves importing Iranian, Azerbaijani, and Georgian gas via Turkey into Europe—it has also signed on to the Russian South Stream pipeline project. The South Stream Pipeline was proposed by Russian gas company Gazprom in 2006 and is set to directly compete with the EU-funded Nabucco Pipeline.

Despite the fact that Nabucco was proposed much earlier, in 2002, Bulgaria elected to sign the preliminary agreement with Russia for the South Stream pipeline in January of 2008, five months before the Nabucco project came to the table for its transit states. By signing on to Russian-backed South Stream, Bulgaria is sending a clear message that regardless of its economic ability to substitute away in favor of the EU-sponsored Nabucco, it will make the political choice to increase ties with Russia as an energy supplier.

THE FRIEND: SLOVAKIA

The characteristic “Friend” has inelastic price sensitivity that makes diversification away from Russian gas supplies difficult, and maintains Russophilic policies and positive public opinion toward Russia. Slovakia fits this mold with very inelastic price elasticity of demand at 0.13 and a 108 percent dependence²⁴ on Russia for their natural gas supply, yet a 0.91 affinity of nations score—one of the highest.

Table 1.2

State	Price Elasticity of Demand	% Domestic Consumption that is Russian Gas	Pipeline	Mean Affinity '90-'02	Transatlantic Trends Mean Concern Level (%)
Slovakia	0.13	108	1	0.91 ⁷	66

Interestingly, data from *Transatlantic Trends* presents a somewhat conflicted picture of Slovakian public opinion toward Russia with regard to energy security. Though the majority of responses indicated a positive public opinion toward close ties with Russia, when the Transatlantic Trends Group asked Slovaks, “To what extent are you concerned or not about Russia’s role as an energy provider?” 72 percent expressed “concern”—a rate higher than the mean European score of 66 percent. The theoretical model presented by

22 Russia, Bulgaria to discuss joint energy projects in Sophia. (2009, 11 December). *EU-Russia Centre*. Retrieved March 1, 2010 from <http://www.eu-russiacentre.org/news/russia-bulgaria-discuss-joint-energy-projects-sophia.html>.

23 Bulgaria May Extend Contract with Russia’s Atomstroyexport. (2010, 23 March). *Novinite Sophia News Agency*. Retrieved March 30, 2010, from http://www.novinite.com/view_news.php?id=114578.ft.

24 Slovakia consistently imports more natural gas than it can consume and alternatively either sells the surplus to neighboring states or stores it in anticipation of shortages.

the present research would anticipate a lower than average score for this question. However, looking at the other survey questions before returning to this one provided context for interpreting its meaning.

In answer to the following question: “To what extent are you concerned or not about Russia’s behavior toward its neighbors?” Slovaks had the third-lowest rate of concern at 52 percent, and the second-highest number of “not concerned” responses, at 43 percent (the highest being Bulgaria). This seems to indicate that, whatever their concerns about Russian gas supplies, Slovaks do not feel threatened by Russia in a more general security sense.

Furthermore, when asked, “To what extent you approve or disapprove of [the idea that] we should reduce our energy dependence on Russia, even if this requires additional investments to acquire different energy sources?” only 74 percent of citizens in Slovakia “approve[d].” This was the third-lowest score in Europe, after Bulgaria and Romania, and four percent below the European Union average of 78 percent. Still, it did not miss the average mark by much, perhaps marking the balancing point between feeling minimal threat from Russia in a general sense while still favoring a more secure supply source of natural gas.

To further understand and underscore Slovakia’s political inclination toward Russia, it is helpful to look at questions regarding two other security topics from the 2009 *Transatlantic Trends* survey. First, when asked, “To what extent you approve or disapprove that the European Union provide security assistance for emerging democracies like Ukraine and Georgia?” Slovaks had the second lowest number of “approve” responses at only 55 percent (the lowest approval rating coming from Bulgaria). Furthermore, when asked the same question but substituting North Atlantic Treaty Organization (NATO) security assistance for EU assistance, Slovakia once again had the second-lowest approval rating at only 45 percent—despite Slovakia being a NATO member. While these two questions are not gas-related, they deal with another struggle between the European and Russian spheres of influence—and, tellingly, Slovakia sides with Russia on both counts.

To return to the topic of energy, when asked, “To what extent you approve or disapprove of [the idea that] we should increase energy cooperation with Russia even if its government is undemocratic?” 65 percent of Slovaks responded that they “approve[d]”—the third highest response level and over 10 percent higher than the European average of 52 percent.

In keeping with the theoretical model, one would expect to see Slovakia willing to increase energy cooperation with any low-cost supplier due to its heavy dependence on natural gas and inflexible price elasticity, while perhaps trying to avoid projects which might upset Russia. Along these lines, November of 2009 saw Slovakia’s proposal to the Russian Energy Ministry for jointly developing a network of underground gas storage facilities in Slovakia, for the purpose of securing natural gas supplies for Slovakian citizens in the event of another cut in gas supply via Ukraine²⁵. In the same meeting, Slovakia agreed to a change in government policy to allow Russia a stake in Slovakia’s domestic gas distribution network. In exchange, Russia agreed to update and extend the Soviet-era Druzhba oil pipeline, which runs from Russia into Bratislava, and remains Slovakia’s single largest artery for oil in

25 Slovakia asks Russia to guarantee uninterrupted gas supplies. (2009, 13 November). *EU-Russia Centre*. Retrieved December 2, 2009, from <http://www.eu-russiacentre.org/news/slovakia-asks-russia-guarantee-uninterrupted-gas-supplies.html>.

a country 100 percent dependent on Russia for its primary energy.^{26 27}

With regard to Nabucco, Slovakia has petitioned for the addition of two pipeline interconnectors on the Nabucco project—a connection between Slovakia and Poland, and one between Slovakia and Hungary—which would simplify interstate gas transfers and make the Nabucco project far more beneficial to Slovakia, despite it not being on the direct route of the proposed pipeline²⁸.

Collectively, all of these actions demonstrate both the political willingness of Slovakia to work with Russia as well as its economic concern with regard to Russia’s dependability as a supplier. Slovakia has made it clear that it will pursue the least expensive and most reliable gas option, while trying to balance its domestic political ties with both Russia and the EU.

The Customer: Germany

The model “Customer” would prefer not to trade with Russia for political reasons, but economics trump these concerns due to the inelastic price sensitivity. The Customer represents those states trying to break free of Russian monopoly of their natural gas market.

Table 1.3

State	Price Elasticity of Demand	% Domestic Consumption that is Russian Gas	Pipeline	Mean Affinity '90-'02	Transatlantic Trends Mean Concern Level (%)
Germany	0.05	43	1	0.86	77

Looking at Table 1.3, one can see that Germany fits well into the Customer mold. Despite generating a large percentage of their electricity from domestic coal sources, Germany is the fourth largest natural gas consumer in the world and the second largest importer²⁹. As a result of this dependence, Germany has very inelastic price sensitivity of natural gas at 0.05 and receives an estimated 43 percent of its natural gas from Russia.

In alignment with the theoretical model, we can see that Germany’s affinity with Russia in the UN General Assembly voting records only extends as far as 86 percent. This is particularly interesting given the internal dynamic of Germany as a former Soviet state, where tensions still exist between those who favor the old Russian-imposed system and those who prefer the present-day liberal democracy³⁰. Despite this, Germany’s affinity hovers below that of the other former Soviet states, and even below that of some of its Western neighbors, including France, Austria and Belgium.

In the 2009 *Transatlantic Trends* survey, when asked “To what extent are you concerned or not about Russia’s role as an energy provider?” 73 percent of those surveyed in Germany said that they were “concerned,” and 31 percent said they were additionally “very concerned.” In answer to the question: “To what extent are you concerned or not

26 OMV May Open Bratislava Link in 2010 to Tap Russia. (2009, 28 May). *EU-Russia Centre*. Retrieved January 14, 2010, from <http://www.eu-russiacentre.org/news/omv-open-bratislava-link-2010-tap-russia.html>.

27 Russia Today. (2009, 17 November). PM meeting cements Russia Slovakia energy ties - RT. *RT: Business*. Retrieved February 20, 2010, from <http://rt.com/Business/2009-11-16/pm-meeting-cements-russia.html>.

28 Socor, V. (2009, 27 January). A Window of Opportunity for the Nabucco Project at Budapest Meeting. *Eurasia Daily Monitor*, 6(17). Retrieved March 31, 2010, from [http://www.jamestown.org/programs/edm/single/?tx_ttnews\[tt_news\]=34417&tx_ttnews\[backPid\]=485&no_cache=1](http://www.jamestown.org/programs/edm/single/?tx_ttnews[tt_news]=34417&tx_ttnews[backPid]=485&no_cache=1).

29 International Energy Data and Analysis for Germany. (2010, January 6). *U.S. Energy Information Administration*. Retrieved January 9, 2010, from http://tonto.eia.doe.gov/country/country_energy_data.cfm?fips=GM&Go=Go

30 Jupille, J. (2009, October 23). Cleavages, Party System and Governing Coalitions: Germany, 1. *Western European Politics*. Lecture conducted from University of Colorado at Boulder, Boulder, CO. pp. 15.

about Russia's behavior toward its neighbors?" 74 percent of German citizens replied that they were "concerned"—the second highest rate in Europe, and significantly above the European average of 65 percent. Additionally, when asked "To what extent you approve or disapprove of [the idea that] we should reduce our energy dependence on Russia, even if this requires additional investments to acquire different energy sources?" 84 percent of Germans responded that they "approve"—the highest approval rating for this idea in Europe. Arguably, these answers belie the level of Germany's political dissatisfaction with their energy dependence, marking them once more as a customer beholden to Russia.

Despite these popular views, Germany's growing economy demands a great deal of energy resources, which is consequentially placing more of the electricity burden on natural gas as domestic coal resources are depleted. Caught between a commitment to cut carbon emissions by phasing out coal as a primary electrical source and a mandate to shut down all nuclear reactors by 2020, Germany may have no choice but to break one of these promises or become even more beholden to Russian natural gas until other renewable technologies can catch up.

Based on its position in the theoretical framework, one would expect to see Germany trying to diversify away from Russian gas with difficulty, while openly supporting projects that would aid in divorcing itself and the EU from Russian gas dependence. At present, Germany's growing economy demands a great deal of energy resources, which is consequentially placing more of the electricity burden on natural gas as domestic coal reserves are depleted. Caught between a commitment to cut carbon emissions by phasing out coal as a primary electricity source and a mandate to shut down all nuclear reactors by 2020, Germany may have no choice but to break one of these promises or become even more beholden to Russian natural gas until other renewable technologies can catch up.

Heavy investment in renewables over the last five years has resulted in an increase in the amount of electricity coming from renewable energy in Germany from 6.3 percent in 2000 to about 15 percent in 2008. But while Germany has made great strides in its renewable energy sector—it is the world's largest wind power generator and the world's largest generator of electricity from non-hydroelectric renewables³¹—fossil fuels overwhelmingly remain the primary source of electricity and broader energy generation, and with that comes Russia's 40 percent and growing role in Germany's natural gas imports.

In order to meet the ever-increasing demand of its citizens, Germany has flexed its sovereignty and signed on to several Russian pipeline endeavors, including Nord Stream, an offshore natural gas pipeline that will transport Russian gas from Vyborg, Russia through the Baltic Sea to Greifswald, Germany—bypassing Ukraine and also states like Poland and Belarus that would otherwise receive a portion of any gas passing through their states at discounted cost—thus securing a continuous gas supply for the Germans. Germany's weight in the European arena, as well as its central geographic positioning, makes these moves even more damaging to its less influential neighbors, which depend on Germany and other allies for support in negotiating energy contracts with Russian gas companies.

Despite these unilateral endeavors to secure its domestic energy supply, Germany remains one of the most vocal proponents of alternatives to Russian gas. Though outspokenly supportive of the Nabucco plan, Chancellor Angela Merkel recently asked the EU not to collectively fund the project, since Germany—as the largest economy on the continent—

31 Non-hydro Renewables Data. (2006, 27 September). *U.S. Energy Information Administration*. Retrieved November 28, 2009, from www.eia.doe.gov/pub/international/iealf/table17.xls.

would be asked to foot the lion’s share of the bill³². Instead, the Chancellor has suggested that the endeavor remain privately funded, citing no lack of corporate investment. Germany’s own RWE, the second-largest domestic gas and electric company in the country, has joined five other energy companies in the Nabucco pipeline consortium. (RWE recently announced that it is on the verge of securing a 10 billion cubic meter per year gas contract with Turkmenistan, equivalent to one-third of Nabucco’s capacity³³). Though not a transit country and therefore not a signatory to the project, Germany was represented as an observer for the signing of the intergovernmental transport agreement between Turkey and the four EU transit countries—Austria, Bulgaria, Hungary and Romania—in Ankara, Turkey³⁴.

The Enemy: the United Kingdom

The representative “Enemy” has elastic price sensitivity, making diversification much easier, coupled with Russophobic policies and a low public regard for Russia. The Enemy represents those states trying to remain completely free from Russian monopoly of their energy market. Looking at Table 1.4, one can see that the UK fits this mold precisely, with very elastic demand and no Russian gas consumption, coupled with the lowest political affinity score in the EU and the highest level of concern in the public opinion survey.

Table 1.4

State	Price Elasticity of Demand	% Domestic Consumption that is Russian Gas	Pipeline	Mean Affinity '90-'02	Transatlantic Trends Mean Concern Level (%)
UK	2.42	0	0	0.45	77.33333

According to the 2009 *Transatlantic Trends* survey, when asked, “To what extent are you concerned or not about Russia’s role as an energy provider?” 76 percent of those surveyed in the UK said that they were “concerned,” and 40 percent moreover identified as “very concerned.” This was the second highest level of general concern expressed in Europe³⁵, and the highest number of “very concerned” responses. Additionally, when posed the question, “To what extent are you concerned or not about Russia’s behavior toward its neighbors?” citizens in the UK expressed the second-highest level of concern at 74 percent, compared to a European mean of 65 percent, with 30 percent of those surveyed adding that they were “very concerned.” Finally, when asked, “To what extent you approve or disapprove of [the idea that] we should reduce our energy dependence on Russia, even if this requires additional investments to acquire different energy sources?” an overwhelming 82 percent of UK residents responded that they “approve,” with 53 percent adding that they “approve very much” (the highest rate expressed in Europe).

Historically, the UK has utilized its extensive coal reserves for electricity and heating. However, large leaps in extracting oil and natural gas from its Atlantic Margin gas and oil fields led to the “Dash for Gas” in the 1980s and 1990s—in which the UK’s electricity

32 No EU funding for Nabucco, says Merkel. (2010, 29 January). *Euractiv*. Retrieved April 1, 2010, from <http://www.euractiv.com/en/energy/eu-funding-nabucco-merkel/article-179883>.

33 Turkmen gas deal for Nabucco seen in months-RWE exec. (2010, 5 March). *Reuters UK*. Retrieved March 31, 2010 from <http://uk.reuters.com/article/idUKLDE6241WB20100305?sp=true>.

34 Nabucco gas pipeline: new impetus through agreement between transit countries. (2009, 22 July). *Wien International*. Retrieved March 31, 2010, from <http://www.wieninternational.at/en/node/15135>.

35 After Poland, who was directly affected by one of the recent energy cutoffs.

companies invested heavily in natural gas power plants due to the speed at which they could be built relative to coal or nuclear power plants³⁶. Natural gas' share of electricity production rose dramatically, and by 2004 it had overtaken coal as the primary source of electricity generation. Despite currently being the thirteenth largest producer of natural gas in the world, the UK faces a growing energy gap as its coal power plants and nuclear stations are becoming increasingly outdated.

Within the present research model's framework, one would expect to see the United Kingdom heavily favor any programs that reduce European dependence on Russian natural gas, despite its total lack of dependence on Russia for energy resources. Though geographically separate from the European continent and largely an unaffected bystander, the UK has vocally backed Nabucco. Even so—like Germany—it would prefer not to foot the bill. As a coal-rich state, the UK has pushed heavily for increased coal production and consumption both domestically and within the EU, touting the fact that coal is an abundant alternative to imported natural gas. However, strict EU carbon emissions laws have prevented enthusiasm for the idea, despite the UK's commitment to introducing new carbon capture and storage technologies on their domestic power plants. Approximately one-third of the UK's coal plants are expected to close in the next decade due to their inability to meet the standards of the European Large Combustion Plant Directive, while many of the nuclear generation stations are applying for life-extensions, since their contracts are expected to run out in the next decade. In anticipation of this, the UK has begun investing heavily in Liquefied Natural Gas (LNG) transport and storage facilities, since unlike pipeline gas, LNG can be shipped anywhere, meaning supplier choices are not as limited by proximity and pipeline transit capability. While not decreasing overall natural gas dependence, the flexibility of LNG transport would make it easier to move away from Russian gas in favor of farther-flung suppliers. In light of these developments, the UK faces the possibility of needing to import natural gas within the next decade if it cannot move toward renewables, and it wants to ensure that said gas doesn't come primarily from Russia.

The UK's resolve to act in a sovereignty-driven manner when it comes to energy resources was perfectly summed up by Great Britain's energy minister, Malcolm Wicks, on a recent visit to Turkmenistan and Azerbaijan, where he discussed the building of a trans-Caspian pipeline to carry gas to the EU: "Oil and gas issues are not just energy issues; they are national security issues for many countries. The EU's cooperation with countries in the [Caspian] region should be seen through the prism of the energy security and national security of all states involved in these projects."³⁷

CONCLUSION

The initial hypothesis that states' choices would depend on a combination of economic and domestic political factors—namely the price sensitivity of natural gas in each state and its domestic political sentiment with regard to Russia—proved correct based on the model presented herein. The European Union, while having proven a successful economic tool for its members thus far, has demonstrated time and again its inability to adequately address the

36 Wheeler, B. (2004, April 22). The politics of power. *BBC NEWS*. Retrieved October 20, 2009, from http://news.bbc.co.uk/2/hi/uk_news/politics/3581637.stm

37 Socor, V. (2007, 25 September). Analysis: Gas discussions in Turkmenistan, Azerbaijan after the Budapest Nabucco conference. *Eurasia Daily Monitor*. Retrieved April 1, 2010, from <http://politicom.moldova.org/news/analysis-gas-discussions-in-turkmenistan-azerbaijan-after-the-budapest-nabucco-conference-72989-eng.html>.

issue of energy security, leaving its member states to act in their own self-interest at detriment to the whole.

In the past, the complex issue of EU energy security had been addressed on both purely economic and supranational levels, but it had not hitherto been studied as a combination of domestic economic and political factors. In classifying member states based on their individual situations with regard to Russia, the present research was able to construct a framework for clearly identifying their present energy relationship with Russia—a tool that is essential if the EU ever does want to form a coherent policy toward their primary natural gas supplier.

Recognizing the obstacles facing the European experiment—including the desires of each member to retain its sovereignty and build individual power and security—it is necessary for the EU to understand the underlying motivations for its member states' varying degrees of natural gas trade with Russia. Looking to the price sensitivity of natural gas in each state and their domestic political sentiment with regard to Russia, one can find compelling evidence that these factors play a primary role in determining states' choices in this arena, with the domestic political aspect perhaps even trumping economic considerations. In classifying member states based on their individual situations with regard to Russia, the present research was able to construct a framework for clearly identifying their present energy relationships with Russia—a tool that is essential if the EU ever does want to form a coherent policy toward its primary natural gas supplier.

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