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The Effect of Prices and Political Unity on the Efficacy of Inter-state Gas Bargaining

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An abstract of
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## Abstract

### The Effect of Prices and Political Unity on the Efficacy of Inter-state Gas Bargaining
By Carson M. Dimick

While a great deal of research has gone into the determinants of inter-state bargaining efficacy, current explanations often fail to predict the success of a bargaining episode. To fill the theoretical gap, two elements need to be considered. Often, asymmetrical interdependence is thought of as a source of bargaining power. But, the nature of the good that creates the asymmetrical interdependence has not been examined. I test whether the price of the good affects bargaining power. Additionally, I test the relevance of the separation of purpose literature in the context of inter-state bargaining. Does the level of domestic political unity in the target state affect bargaining outcomes? The findings suggest that the price of the good leveraged in an instance of inter-state bargaining and the level of domestic political unity affect the bargaining result. As the price of the leveraged good rises, bargaining power increases. And, higher levels of domestic unity in the target state increase the sender state's bargaining efficacy. I also use the findings to develop a framework to explain the efficacy of Russia's post-2000 inter-state gas bargaining with energy dependent CIS members.

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All conflicting issues arising between global energy players can be settled by negotiating. This should be retained from now on! I hope this will last forever!

-- Alexei Miller, CEO of Gazprom, December 12, 2008

## INTRODUCTION

Scholars have accumulated a great deal of research on the determinants of inter-state bargaining efficacy. Yet the current explanations of effectiveness often fail to accurately predict the success of specific categories of bargaining episodes. The fluctuation in the efficacy of Russia's natural gas disputes with Ukraine and Belarus has occurred even though all of the established explanatory variables explaining bargaining success remained unchanged. The variation in Russia's bargaining results suggests that the accepted explanations are inadequate and that an in-depth analysis of the effects of gas price and internal political unity on inter-state bargaining over gas is overdue. When and how can the market price of gas be leveraged in a bargaining episode to affect the outcome? Under what conditions are bargaining results shaped by the level of internal political unity of the countries involved? Specifically, how do these factors uniquely apply to Russia's natural gas bargaining after 2000 with the import dependent Commonwealth of Independent States (CIS) members that share a common history and pipeline network? The answers to these questions are increasingly pertinent because natural gas is in ever greater demand.[1] As supplies continue to dwindle, Russian resources will garner more and more leverage over importers. Developing a framework to understand and predict the outcomes of Russia's inter-state gas bargaining with

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[1] Eurogas, "Natural Gas Demand and Supply – Long Term Outlook to 2030," *Eurogas* (2007): 1, 5. http://www.eurogas.org/uploaded/Eurogas%20long%20term%20outlook%20to%202030%20-%20final.pdf (Accessed Apr. 6, 2010).

members of the CIS can help determine the conditions under which leverage can be used effectively.

The paper proceeds as follows. The theory section lays out the theoretical literature base and the rationale behind my arguments. It also addresses potential objections to the arguments. The research design section explains why Russian bargaining episodes with Ukraine and Belarus are an ideal test case, defines the explanatory, dependent, and control variables used in the study, and outlines the difficulties of the study.

## THEORY

I attempt to explain how the price of the good being leveraged and the domestic political unity of the import country affect Russia's bargaining efficacy. Using gas prices and domestic political unity to explain bargaining outcomes will bolster the existing literature on gas studies and help predict Russia's success more accurately than current bargaining theory. In order to get an accurate picture of what affects Russian bargaining efficacy, I first observe the relevant points of the existing literature on Russian use of energy for political aims, gas markets, and trade negotiations that consistently weigh on all the cases. Then I examine the literature on international bargaining theory and the importance of domestic politics to analyze the elements that vary across the disputes.

### Russian Political Motives

A well researched body of literature examines Russian use of gas for political aims.[2] This literature studies the Russian gas disputes in an attempt to determine whether Russia is indeed using its bargaining leverage to impose a neo-imperialist influence in the region. It explores when disputes are likely to occur and the motives behind Russian actions, but does not look at the conditions that determine bargaining effectiveness. A theory that takes the disputes as a given and provides criteria to predict the bargaining outcome is the complementary topic that has been overlooked.

Though it may superficially seem relevant, the literature on Russian political motives has very little impact on my study. Whether Russia's political or economic ambitions caused the dispute does not affect my observations. Determination of Russia's bargaining goals is the only situation in which political motivations might matter. However, political motivations make very little difference in terms of Russia's bargaining goals. The three primary assumptions of Russian goals are to punish the import state or exert control over states in the region,[3] maximize economic return,[4] and ensure security of gas flows to Europe.[5] Each of these aims is accomplished by two goals – higher prices and control over the pipeline infrastructure.

The bargaining that occurs between the two states is a zero-sum game. If Russia wins economically, then Ukraine or Belarus loses economically. Even if Russia's intent is to inflict punishment, economic calculations are an effective means to evaluate the

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[2] See Robert L. Larsson, "Russia's Energy Policy: Security Dimensions and Russia's Reliability as an Energy Supplier," *FOI – Swedish Defense Research Agency Defence Analysis SE-164 90 Stockholm* (2006)., Julie Steinberg 2009, Keith Smith 2005, Adam Stulberg 2008.
[3] "Factbox: Russian oil and gas as a political weapon?," *Reuters*, May, 2, 2007.
[4] Simon Pirani, "Political and Economic Factors in the Russian and CIS Gas Trade," in *Russian and CIS Gas Markets and Their Impact on Europe*, ed. Simon Pirani (Oxford: Oxford University Press, 2009), 8.
[5] Katja Yafimava and Jonathan Stern, "The 2007 Russia-Belarus Gas Agreement," *Oxford Institute for Energy Studies* (2009): 5-6.

success. If Russia attempts to punish a particular political leader, a similar logic applies. The economic consequences of a dispute are often blamed on the leader in power. The conflict also gives political opponents a tool to oust an incumbent and his or her party. In sum, Russia would make the same demands regardless of the motivation behind the dispute. The Russian motivations behind the dispute are irrelevant.

**Gas**

Natural gas, hereafter referred to simply as gas, is a fossil fuel that functions as a major fuel source for much of the world. Gas supplies are prone to shocks caused by weather or a number of other factors, and demand for gas is price inelastic, at least in the short term.[6] Gas companies thus have little incentive to ensure stable prices for gas. As a result, gas markets are subject to drastic price fluctuations.[7] Gas price fluctuations are similar to fluctuations for oil or other commodity goods, but important differences also exist.

Russia holds a strong monopoly on the production, 76%, and supply, 70%, of CIS gas. And, Russian gas company Gazprom accounts for 84% of Russian production.[8] The level of monopolistic control affects the trade of gas, differentiating it from other commodity markets. Russia's ability to cut off the supply of gas only matters when the importer has no alternative to Russian gas. In the oil market, one fewer supplier would have very little impact on importing countries. However, the loss of Russian supplies is a

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[6] I explain the significance of price elasticity of demand in the discussion of international trade theory. Angus Deaton and Guy Laroque, "On the Behaviour of Commodity Prices," *The Review of Economic Studies* 59 (1992): 3.
[7] Ibid.
[8] Jonathan Stern, "The Russian Gas Balance to 2015: Difficult Years Ahead," in *Russian and CIS Gas Markets and Their Impact on Europe*, ed. Simon Pirani (Oxford: Oxford University Press, 2009), 56.

serious economic threat to CIS gas importers. The transit pipeline network further enhances Russia's monopoly.

Natural gas is shipped to its destination through a series of pipelines. The use of pipelines significantly increases Gazprom's monopoly on gas.[9] Unlike oil, which can be shipped to ports anywhere in the world, significant prior investment must be made to be able to ship gas through a pipeline. Pipelines also increase the power of transit states, a topic that I address in the discussion of bargaining theory. The Russian monopolistic control coupled with the necessity to ship gas via pipelines affects the form of the gas markets.

The gas trade, specifically between Russia and other members of the CIS, is distinct from oil or other commodities in the structure of its markets. "Throughout the 1990s and to some degree into the 2000s," the idea of gas trade within the CIS was an oxymoronic misnomer.[10] "Prices were charged and not paid; barter flourished long after disappearing from other economic sectors; swaps and quasi-market deals persist to this day."[11] The prevalence of nonpayment, barter systems, and political calculations make gas markets starkly different from the idea of free commodity pricing that is used for oil.[12] Russian monopolistic control over CIS gas markets also allows it to unilaterally change the price of gas.

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[9] Robert L. Larsson, "Russia's Energy Policy: Security Dimensions and Russia's Reliability as an Energy Supplier," *FOI – Swedish Defense Research Agency Defence Analysis SE-164 90 Stockholm* (2006): 44.
[10] Simon Pirani, "Political and Economic Factors in the Russian and CIS Gas Trade," in *Russian and CIS Gas Markets and Their Impact on Europe*, ed. Simon Pirani (Oxford: Oxford University Press, 2009), 3.
[11] Ibid.
[12] Ibid.

Until 2005, it had been a matter of Russian government policy to keep domestic and CIS prices very low.[13] But, the gas trade has recently started to undergo a fundamental reform. Gazprom has begun transitioning away from the practice of subsidizing intra-CIS gas.[14] Gazprom hopes to bring CIS gas prices into line with the "market" prices prevalent in Europe. In European gas contracts, the price of gas is determined by an equation that takes into account the world price of oil and the cost of shipment.[15] Basing the price of gas on the price of oil incorporates short-term price fluctuations into gas contracts that are set for the medium- to long-term. For the CIS members, Gazprom's goal is to charge "a balanced level (adjusted to the transportation distance) with gas prices charted from its European customers," known as European netback prices, for all gas sold.[16] Netback prices are "equivalent to those [prices] in Europe when taxes and transportation costs have been taken into account."[17] The disputes I observe occur because of Gazprom's efforts to, among other things, make Ukraine and Belarus pay more for gas.

The original intergovernmental gas agreements between Russia and the importers subsidized gas and kept the prices low. Perhaps more importantly, it kept them almost completely static. When gas price in Europe that were tethered to oil continue to rise, Ukrainian and Belarusian prices did not follow. Oil price trends and shocks created a

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[13] Ibid., 8.
[14] Tatiana Mitrova, Simon Pirani, and Jonathan Stern, "Russia, the CIS and Europe: Gas Trade and Transit," in *Russian and CIS Gas Markets and Their Impact on Europe*, ed. Simon Pirani (Oxford: Oxford University Press, 2009), 411.
[15] Energy Information Administration, "The Relationship Between Crude Oil and Natural Gas Prices," *This Week in Petroleum*, Apr. 23, 2008. http://www.freerepublic.com/focus/f-news/2005893/posts (Accessed Apr. 6, 2010).
[16] Gazprom Annual Report, "Gas Sales in CIS and Baltic States Markets," *Annual Report* (2005): 55.
[17] Tatiana Mitrova, Simon Pirani, and Jonathan Stern, "Russia, the CIS and Europe: Gas Trade and Transit," in *Russian and CIS Gas Markets and Their Impact on Europe*, ed. Simon Pirani (Oxford: Oxford University Press, 2009), 395.

large disparity between the pre-negotiated CIS contract prices and the fluctuating market price paid in Europe. The increasingly stark price differences increased Gazprom's claim to higher returns and catalyzed the attempt at the transition to European prices.[18]

From the perspective of the importer, a similar logic applies. It is more reasonable to agree to pay a given value for gas if it is 50% of market price than if it is 90%, because the importer is still getting a better deal. Empirical evidence for this claim can be seen in negotiations, where analysts have noted Ukrainian attempts to delay agreements until gas prices fell and Russia's bargaining position decreased.[19] In short, the commodity price fluctuations encouraged a Russian policy transition towards higher CIS prices and gave Gazprom the credibility to increase prices.

**International Trade**

Much of the international trade theory literature fails to adequately explain the CIS gas markets. Indeed, because the disputes are in part an attempt to transition to market prices, the application of market principles seems premature. The concept of gains from trade and the Ricardian model of comparative advantage are not tremendously applicable. For example, Russia's economic gain from trade with Ukraine and Belarus comes in large part from continued access to transit pipelines to Europe. The specific factors model also misses the mark – it observes capital and labor, but the gas disputes focus on importer and exporter. The two topics in trade literature that are the most applicable to the gas markets are monopoly power and price elasticity of demand.

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[18] Simon Pirani, "Political and Economic Factors in the Russian and CIS Gas Trade," in *Russian and CIS Gas Markets and Their Impact on Europe*, ed. Simon Pirani (Oxford: Oxford University Press, 2009), 8.
[19] Simon Pirani, Jonathan Stern, and Katja Yafimava, "The Russo-Ukrainian Gas Dispute of January 2009: A Comprehensive Assessment," *Oxford Institute for Energy Studies* (2009): 39.

Monopoly power gives the monopolist, in this case Gazprom, the power "to decide the price of the commodity, leaving it to buyers to decide how much they will buy at that price."[20] Normally, a monopoly is assumed to fix the price at the level that generates the biggest profit.[21] In the disputes, Gazprom attempts to set the price to the market level. A monopoly setting prices to market level seems like a contradiction in terms, since the monopoly price is by definition the market price. However, Gazprom has chosen to set its European gas prices in relation to other commodity goods. Accordingly, increasing CIS gas prices to market level still uses monopoly power.

Price elasticity of demand for gas "measures the responsiveness or sensitivity of [gas] demand to changes in price."[22] Price elasticity is determined by dividing the percentage change in quantity demanded by the percentage change in price. Price inelasticity means that, even if the price of gas increases, demand does not significantly decrease. Because the price elasticity of demand for gas is low, Gazprom does not need to artificially stabilize prices. In the short term, the cost of gas can drastically shift without affecting Gazprom's sales. Low price elasticity explains why gas prices can fluctuate without affecting demand, but why would Gazprom choose to link its prices to oil instead of having a set price?

Price elasticity of demand also explains Gazprom's choice to link its prices to oil. Because the demand for gas is very inelastic and no short-term alternatives for gas

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[20] A. P. Lerner, "The Concept of Monopoly and the Measurement of Monopoly Power," *The Review of Economic Studies* 1 (1934): 157.
[21] Ibid.
[22] John C.B. Cooper, "Price elasticity of demand for crude oil: estimates for 23 countries," *OPEC Review* (2003): 3.

exist,[23] Gazprom makes huge profits when gas prices increase. However, if gas prices were consistently high, Gazprom would alienate its customer base. Over the medium- to long-term, energy saving and diversification measures would become more attractive.[24] CIS and European energy diversification would undercut Gazprom's monopoly. Keeping prices high would eventually damage Gazprom's market.

**International Bargaining**

Much of this paper builds on international bargaining theory. A basic tenet of international bargaining theory is that states exist in anarchy. Because states are not under the control of any international institution, no arbiter of agreements exists. As a result, states "must bargain to decide which of many agreements to implement."[25]

It is appropriate to define Russia's gas entanglements with Ukraine and Belarus as international bargaining because both the importer, either Ukraine or Belarus, and the exporter, Russia, attempt to negotiate the terms of an agreement in the world of international anarchy. The companies have an important role in the disputes. They help negotiate the terms of any deals much like routine commercial bargaining. But, enough of the bargaining involves state actors to discount these disputes as purely corporate negotiations. The Kremlin owns 50% of Russian gas giant Gazprom,[26] and the Ukrainian

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[23] Angus Deaton and Guy Laroque, "On the Behaviour of Commodity Prices," *The Review of Economic Studies* 59 (1992): 3.
[24] Simon Pirani, "Political and Economic Factors in the Russian and CIS Gas Trade," in *Russian and CIS Gas Markets and Their Impact on Europe*, ed. Simon Pirani (Oxford: Oxford University Press, 2009), 40.
[25] James D Fearon, "Bargaining, Enforcement, and International Cooperation," *International Organization* 52 (1998): 296.
[26] Russia Profile, "Gazprom," *Russia Profile.org Unwrapping the Mystery Inside the Enigma*, June 27, 2008. http://www.russiaprofile.org/page.php?pageid=resources-business-russiancompanies-gazprom.wbp (Accessed Apr 6, 2010).

and Belarusian governments completely own gas import companies Naftogaz[27] and Beltransgaz (before the 2006-2007 dispute),[28] respectively. State ownership of the companies makes the governments negotiators. And, in Ukraine and Belarus, the government must also agree to any deal. Because all of the companies involved in the bargaining process are majority-owned by the states in which they reside, and most of the transactions require or at least customarily involve political signatures and ratification, international bargaining theory should apply to the negotiations.

The effect of economic interdependence on bargaining power is a subset of bargaining theory that applies particularly well to Russia's gas disputes with Ukraine and Belarus. The literature indicates that, at least in some instances, "asymmetrical interdependence is a source of power."[29] The arguments about power and interdependence are more applicable to the gas disputes than other mutual dependence bargaining literature because Russia and the importers already have a consistent energy relationship. For example, Schelling's concept of mutual dependence sets up a 2x2 game that determines the theory behind cooperation.[30] In the cases I observe cooperation already exists, so the interdependence theory provides better insight into the bargaining disputes.

The literature on power and interdependence provides a framework to explain the results of a specific instance of bargaining. The theory argues that determining the

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[27] "Ukraine president halts Naftogaz ownership change," *Reuters UK*, Sept. 4, 2007. http://uk.reuters.com/article/idUKL0416587020070904 (Accessed Apr. 6, 2010).
[28] "Beltransgaz, Gazprom sign supplementary contract to define this year's gas price for Belarus," *Belarusian Telegraph Agency*, Feb 2, 2009. http://www.belta.by/en/news/econom/?id=328811 (Accessed Apr. 6, 2010).
[29] R. Harrison Wagner, "Economic Interdependence, Bargaining Power, and Political Influence," *International Organization* 42 (1988): 461. See also: Keohane and Nye (1977).
[30] Thomas C. Schelling, "The Strategy of Conflict Prospectus for a Reorientation of Game Theory," *The Journal of conflict Resolution* (1958): 203.

efficacy of a potential bargaining episode cannot simply take into account the costs a sender (Russia) can impose on a target (Ukraine or Belarus); the target's ability to impose reciprocal costs must also be noted. I use the term sender to designate the state that imposes a cost on the target to achieve its bargaining goals. In the cases I examine, Russia is the sender state and it imposes costs by shutting off the flow of gas through a pipeline to the target country. The target states I examine are Ukraine and Belarus, and they impose reciprocal costs by stopping the flow of a pipeline full of Russian gas destined for Europe.[31] They can also mitigate the costs Russia imposes by siphoning off gas meant for Europe.

The reciprocal costs imposed by target states are distinct from the "costs to sender state" concept that merely takes into account Russia's loss of revenue during a shut-off because, in effect, it is a counter cost imposed by the target. If the target has little or no ability to harm the sender and the sender is willing to accept the costs of imposing the punishment,[32] it is forced to choose to either resist or acquiesce to the proposed agreement. But, if the target can credibly hurt the sender, the target has more bargaining leverage.[33]

An understanding of interdependence is crucial to a clear understanding of how costs are imposed in Russian gas bargaining with Ukraine and Belarus. Ukraine and Belarus are dependent upon Russia because they both need to import Russian gas to run their economies and heat their homes. But, the import countries have control over the

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[31] Michael Fredholm, "The Russian Energy Strategy & Energy Policy: Pipeline Diplomacy or Mutual Dependence?," *Conflict Studies Research Centre* (2005): 6-7.
[32] If the sender is unwilling, the threat falls prey to the Blackmailer's fallacy. See Wagner 1988.
[33] R. Harrison Wagner, "Economic Interdependence, Bargaining Power, and Political Influence," *International Organization* 42 (1988): 481.

pipelines that transport Russian gas to Europe, giving them the ability to siphon gas or cut off flows to Europe. The pipelines create a measure of mutual dependence that provides counter-bargaining leverage for the gas disputes and has the potential to mitigate Russia's ability to inflict economic costs by cutting off gas flows during negotiations. Despite the applicability of the arguments about interdependence and power, the existing bargaining literature does not sufficiently explain the efficacy of Russian energy bargaining.

What the current bargaining literature lacks is an in depth analysis of when and under what conditions gas leverage fluctuates in disputes. Until now, the bargaining literature has approached the importance of goods only generally, without an in-depth effort to explain variable bargaining power of one good under different conditions. The broad theoretical analysis is a valuable starting point, but more work needs to be done to hone the applicability of bargaining theory.

Whether the bargaining power generated by a particular good can fluctuate is a question that has been largely unexplored. When commodity goods are the bargaining tool of the sender state, the fluctuations could be important. Because commodity prices change drastically over time, the effect of varying leverage might be significant. The inelastic demand for gas further augments the potential importance of drastic price changes in Russia's ability to take advantage of its importers. Russia should be more effective at achieving its bargaining goals when gas prices are high.

Commodity price fluctuations make gas prices a powerful explanation of Russia's ability to credibly threaten and impose cut offs. Russia "loses" more revenue from cut offs when the market price is higher, but the higher prices gives it more leeway to bargain. This inverse relationship occurs because revenue outstrips the cost of cut offs as

prices increase, inflating the exporter's profits.[34] The increased revenue allows Gazprom to withstand the economic costs of a shutoff – the glut of income decreases Russia's day-to-day dependence on gas payments. It has enough money left over from before the dispute to cover the short-term loss of a portion of its income, even though it may not be able to ship gas to or through Ukraine or Belarus. It should be noted that, even when Russia has been unable to transport gas to and through one transit country, other pipelines have remained open and domestic profits were unaffected.[35] Russia has never been faced with a position in which its gas revenue stream is completely cut off. Russia's ability to endure short periods of financial drought when gas prices are high increases its ability to credibly threaten cut offs. The increase in perceived resolve may also increase the efficacy of each threat. A change in the market price for gas thus brings about an important shift in the relative bargaining power of importers and exporters.

The demand of higher priced Ukrainian and Belarusian gas contracts can also be used as a bargaining chip to achieve other strategic aims. Putin has offered to keep gas prices stationary in return for a controlling share of the transport pipeline network – a vitally important mechanism to secure supplies to Europe and avoid transit country disruptions. Although the offer to delay price hikes never worked with Ukraine, Belarus provides empirical evidence of the positive effect of high gas prices on bargaining power. In Russia's 2006-2007 gas dispute with Belarus, Lukashenko agreed to sell half of the

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[34] "Russia's Gazprom Profits Rocket," *BBC News*, July 7, 2006. http://news.bbc.co.uk/2/hi/business/5159042.stm (Accessed Apr 6, 2010).
[35] In no instance has Russia engaged in gas disputes between Ukraine and Belarus at the same time.

Beltransgaz pipeline network to Gazprom in exchange for a delay on gas price increases.[36]

*Hypothesis 1: If the price of natural gas is high, sender states will be more successful at attaining bargaining goals.*

**Domestic Politics**

In addition to changes in the bargaining power of a good over time, it is important to know when and how the domestic institutions affect policy outcomes. Whether the level of domestic political unity affects bargaining power in international bargaining also needs more exploration. Since Haggard and McCubbins introduced the concept of separation of purpose in 2001, several of its applications have been explored. However, most of the research has focused on the domestic political implications of separation of purpose. I test the political implications of separation of purpose as it relates to Russian gas bargaining with CIS importers.

Some explanations of the importance of the level of domestic political unity fall under the state level of analysis. The state level of analysis argues that a different form of government may react differently to the same set of political constraints. "Its most obvious advantage is that it permits significant differentiation among our actors in the international system."[37] Defenders of the state-level analysis argue that the internal processes of a state impact international relations.

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[36] For a full discussion of the 2006-2007 Russia-Belarus gas dispute, see the case studies.
[37] J. David Singer, "The Level-of-Analysis Problem in International Relations," *World Politics* 14 (1961): 82.

A different approach to international politics is the system-level of analysis. The system-level argues that states are unitary rational actors. Its adherents discount the relevance of internal state processes, arguing that "if the same effects follow from different causes, then constraints must be operating on the independent variables in ways that affect outcomes."[38] They contend that domestic politics and the form of government do not affect international relations or bargaining.[39] Behavioral tendencies may in some instances make states act in reasonably predictable ways. However, Waltz has admitted that the aims of states are "endlessly varied," lending credibility to the relevance of domestic factors.[40]

Others have attempted to synthesize the two disparate levels of analysis.[41] They recognize that both levels of analysis impact international relations generally and bargaining specifically and view international relations as a two-level game. While studying the two-level game, researchers have developed theories about what domestic political institutions and formations are more likely to result in effective bargaining.

Allen has found that resource cut offs do increase domestic pressure on target governments, but that the effectiveness can be tempered by a more autocratic regime.[42] In cases where the target is a dictator, for instance, pressure to assent to an agreement

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[38] Kenneth Waltz, *Theory of International Politics* (New York: McGraw-Hill Humanities/Social Sciences/Languages, 1979), 68.
[39] J. David Singer, "The Level-of-Analysis Problem in International Relations," *World Politics* 14 (1961): 89-90.
[40] Andrew Moravcsik, "Introduction: Integrating International and Domestic Theories of International Bargaining," In *Double Edged Diplomacy*, Ed. Peter B. Evans, Harold K. Jacobson, and Robert D. Putnam (Berkeley: University of California Press, 1993), 8.
[41] Robert Putnam, "Diplomacy and Domestic Politics: The Logic of Two-Level Games," *International Organization 42* (1988): 459-460. And, Leonard J. Schoppa, "Two-Level Games and Bargaining Outcomes: Why Gaiatsu Succeeds in Japan in Some Cases but not Others," *International Organization 47* (1993): 383-384.
[42] Susan H. Allen, "The Domestic Political Costs of Economic Sanctions," *Journal of conflict Resolution 52* (2008): 924-925.

must come from abroad. Others qualify Allen's argument, arguing that autocratic regimes are only able to withstand the domestic political costs of resource cut offs when the elites who support the dictators are not hurt.[43] They contend that if the elites are affected and the government cannot reallocate governmental resources to support the elites, a dictator can feel domestic pressure.

The situation is even more complex in countries with democratic institutions. Some argue that democratic governments are generally less able to suffer from cut offs because they will be voted out of power in the next elections.[44] Others argue that looking simply at the form of government is too simplistic, and that the bargaining potential of democratic states is based on a number of factors.[45] Haggard and McCubbins argue that the separation of powers inherent in democracies does not sufficiently explain how policy is handled. The "number of . . . actors [that] have to agree to the proposed change"[46] in order for the change to occur, veto players, is "only half the story."[47] If "power is separated, but purpose is unified, then the effective number of vetoes may be near one, as each separate institution is working toward a common goal."[48] In other words, in a separation of power system, if the executive and legislative branches are controlled by opposing political camps, both power and purpose are separate.

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[43] Kimberly Ann Elliott, "The Sanctions Glass," *International Security 23* (1998): 56-57.
[44] Gary Clyde Hufbauer et al., *Economic Sanctions Reconsidered, 3rd Edition* (Washington D.C.: Peterson Institute, 2007), 67.
[45] Stephen Haggard and Mathew D. McCubbins, "Political Institutions and the Determinants of Public Policy," in *Presidents, Parliaments, and Policy*, ed. Stephen Haggard and Mathew D. McCubbins (Cambridge: Cambridge University Press), 4.
[46] Robert Putnam, "Diplomacy and Domestic Politics: The Logic of Two-Level Games," *International Organization 42* (1988): 437-439. And George Tsebelis, *Veto Players: How Political Institutions Work* (Princeton: Princeton University Press, 2002), 2-3.
[47] Stephen Haggard and Mathew D. McCubbins, "Political Institutions and the Determinants of Public Policy," in *Presidents, Parliaments, and Policy*, ed. Stephen Haggard and Mathew D. McCubbins (Cambridge: Cambridge University Press), 5.
[48] Ibid.

For authoritarian Belarus, the lack of separation of powers circumvents the possibility of a separation of purpose.[49] Belarus is a republic in name, but in reality it is a dictatorship. The leader, Alexander Lukashenko, has been president since 1994. Belarus continues to hold presidential elections, but they have been marred by electoral fraud. The prime minister and deputy prime ministers are all appointed by Lukashenko.[50] Belarus does not have separation of powers and thus cannot have a separation of purpose. The Belarusian domestic political unity in each of the bargaining disputes is high.

For relatively democratic Ukraine, the separation of purpose is a possibility.[51] Ukraine has separate legislative, executive, and judicial branches. The semi-presidential republic elects a president to a five-year term by popular vote. The president is the guarantor of state sovereignty and formally appoints the prime minister, but the choice of candidate and final approval is the responsibility of the parliament.[52] Because the composition of parliament determines the prime minister, the semi-presidential system ensures the separation of powers and allows for separation of purpose. In theory, if the head of the party or coalition of parties in parliament and the president are political opponents, the head of state and the head of government are likely to work towards differing ends. In practice, the bargaining disputes occur amidst political infighting when the president and the prime minister are political opponents.

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[49] Lucan A. Way, "Authoritarian State Building and the Sources of Regime Competitiveness in the Fourth Wave The Cases of Belarus, Moldova, Russia, and Ukraine." *World Politics 57*, (2005): 254.
[50] Central Intelligence Agency, "Europe: Belarus," The World Factbook, https://www.cia.gov/library/publications/the-world-factbook/geos/bo.html (Accessed Apr. 2, 2010).
[51] Lucan A. Way, "Authoritarian State Building and the Sources of Regime Competitiveness in the Fourth Wave The Cases of Belarus, Moldova, Russia, and Ukraine." *World Politics 57*, (2005): 255-6.
[52] "General Articles about Ukraine," Web-Portal of the Ukrainian Government, http://www.kmu.gov.ua/control/en/publish/article%3fart_id=235995&cat_id=32672 (Accessed Apr. 2, 2010).

The implications for separation of purpose in Ukraine are broad. The level of domestic political unity potentially affects the bargaining clout of Ukraine in the gas disputes with Russia. It is intuitively plausible that domestic political unity of the import country increases the ability to resist bargaining demands because, like an authoritarian state, a united resistance will not be undermined by political opposition. Another possibility is that Russia might be able to take advantage of domestic infighting to maximize its bargaining leverage. In this scenario, Russia could play the two sides against each other in order to garner a better deal. A third possibility is that a more unified government might have, in perception or actuality, more resolve. The unified Ukrainian government might discourage Russia from continuing the dispute – Russia might calculate that the marginal benefit from a shutoff would not be worth the time and effort. But, one or more of these reasons may not apply.

The contention that domestic political unity increases the ability to resist because of the lack of undermining opposition argument applies less to democracies than dictatorships. While it may be true that leaders face no opposition at the instant the bargaining occurs, united governments who make unpopular decisions are still voted out of power. It seems equally likely that politically unified governments will feel pressure to capitulate in order to avoid being blamed for causing resource cut offs. In other words, the government would face "high costs" to not making an agreement.[53] The acute impact of gas shortages swings this argument in favor of disunity. Being the government responsible for the loss of gas supplies would be politically damning. Even Belarusian

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[53] Robert Putnam, "Diplomacy and Domestic Politics: The Logic of Two-Level Games," *International Organization 42* (1988): 442.

dictator Lukashenko might feel domestic pressure to give in, since gas cutoffs are likely to affect the business interests of the Belarusian elite.

The contention that Russia can take advantage of domestic infighting is equally likely to cut both ways. The Schelling conjecture argues that Ukraine may gain a political advantage of infighting if the opposing veto player can be used as a bargaining chip.[54] For example, a bargainer may be able to obtain more concessions by "tying her hands" and claiming "I cannot get the opposition to sign an agreement, unless X provision is included."[55]

The contention that unity increases resolve might also backfire. Ukrainian internal political discord can make striking a deal more difficult logistically. This is Haggard and McCubbins' concept of decisiveness, "[the government's] ability to make policy decisions".[56] In practice, governments become less decisive because the opposing political forces create hurdles to the successful conclusion of a dispute. The roadblocks are based primarily on domestic political gains – neither side wants to appear weak by giving a sweet deal away, but neither side wants the opposition party to successfully broker a deal and claim credit for resolving the dispute.

The two biggest reasons that domestic political unity in Ukraine should increase Russia's ability to achieve its bargaining goals are the acute impact of gas on unified governments' ability to avoid political backlash and the inability for unified governments to "tie their hands." First, unified governments might have the ability to resist during the

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[54] Ahmer Tarar, "International Bargaining with Two-Sided Domestic Constraints," *The Journal of Conflict Resolution 45* (2001): 320.
[55] Andrew Moravcsik, "Introduction: Integrating International and Domestic Theories of International Bargaining," In *Double Edged Diplomacy*, Ed. Peter B. Evans, Harold K. Jacobson, and Robert D. Putnam (Berkeley: University of California Press, 1993), 28. Note: Not an exact quote, just a citation.
[56] Ibid., 6.

dispute, but the prospect of frozen citizens heading to the polls would still make them agree to Russian demands. Second, Ukraine's ability to tie its hands completely neutralizes Russia's ability to take advantage of infighting. There is only a risk that Ukraine tying its hands has some positive effect on its ability to resist Russian demands. The arguments that domestic political unity increases resolve and decisiveness are both sound arguments that negate the effect of the other.

*Hypothesis 2: If the target state has a high level of domestic political unity, the sender state will be more successful at attaining bargaining goals.*

**RESEARCH DESIGN**

I attempt to explain how the price of gas and the domestic political unity of the import country affect the efficacy of international bargaining over gas by drawing on the theories of international bargaining and the importance of domestic politics via separation of purpose and the two-level game. I hypothesize that high natural gas prices and high levels of domestic political unity in the target state both allow sender states to be more successful at attaining bargaining goals. To test the effects of price levels and political unity on bargaining, I observe Russia's bargaining over gas with Ukraine and Belarus.

I analyze five separate disputes, three between Russia and Ukraine and two between Russia and Belarus. Russia's use of gas as a tool to gain leverage over these two countries is an excellent case for study because the gas relationships are riddled with conflicts. I do not attempt to explain the causes or motivations of conflict. Rather, I take the disputes as a given and examine the bargaining leverage that exists when conflicts do

occur. Taking conflict as given and selecting cases based on the dispute and not on the result avoids selection on the dependent variable.

Importantly, the conflicts are comparable and easy to observe. The same countries are observed multiple times in distinct bargaining disputes and the two target countries have very similar historical and gas relationships to the sender country. The conflicts also occur over a relatively short period of time. As a result, most of the potential explanatory variables are held constant. The two terms that do vary are gas price and domestic political unity.

I compare success rates across the five bargaining instances in two distinct ways. The first approach compares cases in which the level of domestic political unity is the same. Doing so isolates the gas price variable as the sole determinant of bargaining success. The second approach compares cases in which the gas price level is the same, isolating domestic politics as the sole determinant of bargaining success. Although the exact prices are not the same in any two disputes, I divide the prices into three levels to make comparison simple. Looking at Russia's relative efficacy across varying price levels and levels of governmental unity provides a convenient natural test of how each variable affects a Russian bargaining power.

The paper's findings are generalizable to other CIS members that import Russian gas because the same determinants of bargaining success, i.e. interdependence,[57] price changes over time, consistent Russian leadership, and domestic politics, are applicable for many instances of Russia's gas relationships. As of 2008, three CIS members outside

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[57] "Pipelineistan: TAP(I)C or IP(I)C Pakistan wins," *Rupee News*, May 13, 2009. http://moinansari.files.wordpress.com/2009/02/worl-existing-and-planned-pipelines-corrected.jpg (Accessed Apr. 6, 2010).

of Ukraine and Belarus are dependent upon Russian supplies:, Moldova, Armenia, and Georgia. Azerbaijan fell off the list in 2006 when it switched from a net importer to a net exporter of gas. Georgia may fall off this list if Azerbaijan can help it reduce its dependence on Russian imports,[58] but the findings potentially apply to gas disputes between Russia and any country that is dependent on gas at the time of the dispute. All of the CIS importers receive gas price subsidies.[59] Although the disputes include specific details, each one is easily explained within a common framework. The unique facets of each case simply help determine causal connections and explain how a general principle applied in the dispute. Yet, the cases I study are fairly specialized. Several conditions decrease the applicability of the findings beyond Russia's post-2000 gas relationships with CIS states. The bargaining episodes are specific to gas markets, use a common system of gas transit, and involve both sovereign and quasi-commercial actors.

The gas markets differ from oil or other commodity markets because they are not based on a world market price. The discrepancies in price paid by different countries add a political element to the terms of trade and continue to fuel disputes about supply. Price subsidies have been used to gain political alliances or in exchange for other strategic gains. Gas is also fairly unique insofar as it is shipped to its destination via a system of transit pipelines.

The current natural gas pipeline transit system was constructed when Ukraine and Belarus were still part of the USSR. As a result, the Russian pipelines to Europe were

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[58] Simon Pirani, "Political and Economic Factors in the Russian and CIS Gas Trade," in *Russian and CIS Gas Markets and Their Impact on Europe*, ed. Simon Pirani (Oxford: Oxford University Press, 2009), 3.
[59] Tatiana Mitrova, Simon Pirani, and Jonathan Stern, "Russia, the CIS and Europe: Gas Trade and Transit," in *Russian and CIS Gas Markets and Their Impact on Europe*, ed. Simon Pirani (Oxford: Oxford University Press, 2009), 396.

built domestically on geographically centralized principles.[60] There was no need to strategically build the pipelines in order to ensure a diversity of transit routes. After the USSR collapse in 1991, the common pipeline network vastly increased the importance of transit countries. The ability of Ukraine and Belarus to obstruct Gazprom's supply flows weighs importantly on many of the disputes.

The bargaining episodes also involve the interaction of both sovereign countries and quasi-commercial actors. Gazprom is 50% owned by the Russian government, but it is also 50% private. The combination of owners may affect whether Gazprom's clout is used for political ends or to maximize profit. The disputes also deal with the Ukrainian and Belarusian governments. Naftogaz Ukrainy, the Ukrainian gas giant that purchases and transports Russian gas, is a state run company. Beltransgaz, the Belarusian equivalent to Naftogaz, was state run until Gazprom purchased 50% of the shares. As a result, all deals and disputes with these transit countries have to go through sovereign political channels.

Because of the unique formation of the Russian gas trade with CIS members, it may be difficult to generalize beyond instances of Russian bargaining over gas with CIS impoters. The distinctive features of the inter-state gas trade, use of a common pipeline transit system, and the inclusion of both sovereign and quasi-commercial actors separates Russia's bargaining instances with Ukraine and Belarus from many other instances of international bargaining. I further explain the details of the Russian-Ukrainian and Russian-Belarusian gas relationships here.

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[60] Simon Pirani, "Political and Economic Factors in the Russian and CIS Gas Trade," in *Russian and CIS Gas Markets and Their Impact on Europe*, ed. Simon Pirani (Oxford: Oxford University Press, 2009), 1.

**Why Russia?**

Russia is the world's largest producer and the largest exporter of natural gas. It also contains 60 billion barrels of proven oil reserves.[61] These exports flow westward to the CIS states and to Europe, making up a significant portion of the transit countries' imports. Specifically, imports from Russia make up 66% of the gas consumed in Ukraine and 98% of the gas consumed in Belarus.[62] The sheer volume of output has led some to call Russia an energy superpower. But the Russian gas sector is not without its problems. Russia's largest gas company, Gazprom, has been plagued by aging fields that are declining in production, insufficient export pipelines, and the lack of market competition to spur innovation and investment. These difficulties have resulted in lagging production and a lack of external investment that may hurt the prospects for future growth as a credible supplier of gas. Concerns about long term strength aside, the present production and export capacities of natural gas guarantee the Russia's relevance for the foreseeable future. And, European reliance on Russian supply makes studying the utility of Russian gas policy imperative.

Ukraine and Belarus are committed to their gas relationships with Russia. Both countries are very energy inefficient. Ukraine uses more than three times more energy to create the same amount of GDP as Germany. Belarus uses 2.5 times more.[63] Each country's energy inefficiency began before independence, when the USSR supplied

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[61] Energy Information Administration, "Russia Profile." http://www.eia.doe.gov/emeu/cabs/Russia/Profile.html (Accessed Apr. 2, 2010).
[62] Energy Information Administration, "Russia Natural Gas." http://www.eia.doe.gov/emeu/cabs/Russia/NaturalGas.html (Accessed Apr. 2, 2010).
[63] World Bank, International Finance Corporation, "Energy Efficiency: A new Resource for Sustainable Growth Researching Energy Efficiency Practices among Belarusian Companies," *Energy Efficiency Survey Program* (2008): 5. http://www.ifc.org/ifcext/ueep.nsf/AttachmentsByTitle/BelarusEEsurvey/$FILE/BelarusEEsurveyEN.pdf (Accessed Apr. 2, 2010).

cheap gas to both areas. Even after the fall of the USSR in 1991, Russia continued to supply Ukraine and Belarus cheap gas. The relative abundance of cheap gas made investment in its efficient use a low priority.

The huge demand for gas creates a dependence on imports. Ukraine is only capable of meeting ¼ of its nearly 80 bcm annual demand with gas produced domestically.[64] Belarus produces even less of its own domestic supply, only approximately 0.23 bcm of its nearly 20 bcm demand.[65] These imports have to come from Russia. Ukraine, despite its seaports on the Black Sea, has very limited capacity for diversifying its gas imports.[66] Landlocked Belarus is even less able to diversify its imports. It would be very expensive and time consuming to build a new network of pipelines to supply the region.

Increasing energy efficiency in Ukraine and Belarus is viable,[67] but significant strides still need to be made. State bureaucracy is only slowing the progress down. "Ukraine's efficiency has improved at a rate of 4-6 percent per year,"[68] but attempts to energy efficiency have been hampered by "cumbersome administrative and regulatory procedures."[69] Despite the prospect of significant strides in energy efficiency, "the

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[64] Katja Yafimava, "Belarus: the domestic gas market and relations with Russia," in *Russian and CIS Gas Markets and their Impact on Europe*, ed. Simon Pirani (Oxford: Oxford University Press, 2009), 93.
[65] Ibid., 133.
[66] Margarita M. Balmaceda, "Ukriane's Persistent Energy Crisis," *Problems of Post-Communism 51* (2004): 41.
[67] European Bank for Reconstruction and Development, "Energy Efficiency in Ukraine," *Energy Efficiency* Projects (2008): 1-2. http://ebrd.org/pubs/factsh/themes/eeukr.pdf (Accessed Apr. 2, 2010).
[68] Mark Flanagan et al, "Ukraine: Selected Issues," *IMF Country Report No. 07/47* (2007): 7.
[69] World Bank, International Finance Corporation, "Energy Efficiency: A new Resource for Sustainable Growth Researching Energy Efficiency Practices among Belarusian Companies," *Energy Efficiency Survey Program* (2008): 7.
http://www.ifc.org/ifcext/ueep.nsf/AttachmentsByTitle/BelarusEEsurvey/$FILE/BelarusEEsurveyEN.pdf (Accessed Apr. 2, 2010).

reliance on Russian imports is not likely to be replaced in the medium term".[70] In short, the two countries need Russian gas.

Russia has proven willing to use its gas monopoly as a bargaining chip. Gas reserves are a tool that Gazprom uses to gain bargaining leverage over importers. The use of Russian resources in international bargaining includes using gas to "coerce political concessions in ongoing negotiations, commandeer infrastructure take-over, execute economically favorable deals, and make a political statement".[71] Russia's use of gas in international bargaining is a prerequisite for observation. This does not necessarily mean that the gas is used for purely or even primarily political purposes. Each one of the uses cited above has market implications.

Russia wants control of infrastructure because its pipelines to the West run through the CIS transit countries that retain control over them. Because Russia does not control the pipelines, it pays rents to use the pipeline. The delivery of its supply is also at the mercy of the intermediate country. Owners of the pipeline not only take a cut of the gas sales; they can also siphon off gas or completely cut off the gas flow. While the transit country faces significant political costs to cutting off gas supplies to Western Europe, the threat hurts Russia's bargaining power in negotiations. Gaining control over these pipelines would help boost Russia's bargaining position and European supply credibility immensely.

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[70] R-A Business staff, "Ukraine: energy report," *Russian-American Business magazine*, July, 5, 2009. http://russianamericanbusiness.org/web_CURRENT/articles/460/1/Ukraine:-energy-report/print/460 (Accessed Apr. 2, 2010).

[71] Robert L. Larsson, "Russia's Energy Policy: Security Dimensions and Russia's Reliability as an Energy Supplier," *FOI – Swedish Defense Research Agency Defence Analysis SE-164 90 Stockholm* (2006): 266.

Russia wants economically favorable deals because it boosts Gazprom's profits. Since July 2005, Gazprom has attempted to receive European market prices for all gas sales, including those to Ukraine and Belarus.[72] But when gas prices were low, the subsidized contracts are strategic. An example of the strategy is a 2002 agreement between Gazprom and Belarus that supplied the latter with gas at Russian domestic prices in return for the opportunity to buy a controlling share of the pipeline infrastructure. In each situation, Gazprom attempted to maximize profit for each "level" of relations. In the gas disputes, Gazprom maximized profit by using gas to execute economically favorable deals.

Ukrainian and Belarusian dependence on Russian gas in conjunction with Russia's use of its reserves as a bargaining chip have created several gas disputes. I treat each gas dispute as an independent, one year observation and I study the gas prices and the government for each year. The gas conflicts often occur near the end of a calendar year and into the next calendar year. The disputes usually peak at the end of December and into January because the contracts usually expire at the end of each calendar year. The timing of the disputes may also have to do with Gazprom's recognition that gas is particularly important in the winter and that "almost half of the primary energy supply in Ukraine is derived from gas."[73] In either event, to clearly delineate between conflicts and years, I observe each conflict from June 1 to May 31 the following year.

The number of covert threats and disputes that have occurred behind closed doors is, of course, unknown. It is therefore impossible to compare the utility of open vs.

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[72] Jonathan Stern, "The Russian-Ukrainian gas crisis of January 2006," *Oxford Institute for Energy Studies* (2006): 5. Cites: "Duma proposes gas price change for neighbouring countries," *Interfax Oil and Gas Report, July 7-13*, 2005, 9.
[73] Mark Flanagan et al, "Ukraine: Selected Issues," *IMF Country Report No. 07/47* (2007): 7.

covert threats or to include the covert threats in any analysis of the politics of Russian gas. However, the number of covert disputes may not be very large. First, we know that no covert dispute has ever resulted in a shut off of gas, because Europe would have felt the repercussions. Second, Russia has an incentive to make disputes public. Showing the willingness to follow through on threats, especially at an economic loss, informs third parties of Russian credibility. This deters future countries from challenging Russia, either by initiating a dispute or calling their bluff. It also creates the inverse effect of making covert threats less credible. If the Kremlin were willing to follow through on the threat, it would behoove them to make it public. As a result, the use of covert threats may reveal an unwillingness to follow through, resulting in Russia's bluff being called. In either case, this paper only examines public gas disputes. I explain the variables that determine the efficacy of gas disputes here.

**Measuring the Explanatory Variables**

***Gas Price.*** Until recently (2009 for Ukraine and 2007 for Belarus), Ukraine and Belarus have paid a set amount that is outlined in the sales contract. In European gas contracts, the price of gas is determined by an equation that takes into account the world price of oil and the cost of shipment. Basing the price of gas on the price of oil incorporates short-term price fluctuations into gas contracts that are set for the medium- to long-term. I take the price that Germany pays at the border for its natural gas as the European market price for gas.

To operationalize the gas price level variable, I divide the European gas prices into three levels: high, medium, and low. I determine the cut off points for each price

level as follows. First, I look at the monthly European market gas prices over the duration of all the disputes I study, from June 2003 to May 2009. Then, I subtract the lowest from the highest gas price and divide the difference by three. Next, I use that number to break up the gas price range into three equal categories. The lowest and highest prices are $122.04/thousand cubic meters (mcm) and $576.72/mcm, respectively. The price ranges are: Low, ($122.04/mcm-$273.6/mcm); Medium, ($273.6/mcm-$425.16/mcm); and High, ($425.16/mcm-$576.72/mcm).

Three of the conflicts I observe fall within one of the three price level categories for the entire year of the conflict. The prices during two of the conflicts, observed from June 1-May 31 of the following year, span two categories. In these instances, I look at the price during the height of the conflict. The height of each dispute is usually in December and provides a clear delineation of how much bargaining power the gas price gave Russia at the time of the negotiations.

In addition to the absolute price of gas, I look at the gas price differential. The gas price differential is simply the European border price of gas minus the average price paid by the importer. I include both the price differential from the average European border price and the European border price in December. Although it makes more sense that the bargainers would look at the December price while negotiating in December, some residual effect of the price differential in the months leading up to the negotiations may still matter. There is only one dispute in which the numbers were significantly different, the 2008-2009 dispute with Ukraine.

I use the average and December European border prices for the former year (the average 2005 price for the 2005-2006 conflict) because the data for the latter year had not

occurred at the time of the dispute and thus would not be taken into account by the parties involved.

***Level of Domestic Political Unity.*** To measure the level of domestic political unity, I look at the level of separation of purpose in the import country's government. Ukraine's governmental form may remain static over time, but the extent to which the power and purpose of the President and Prime Minister are unified varies significantly from year to year. If the Ukrainian President and Prime Minister are members of the same party, I code the level of domestic political unity as high. If the two posts are not controlled by the same party, I code the level of domestic political unity as low. For authoritarian Belarus, no fluctuation exists across this variable. Its domestic political unity is always high. Still, the ability to use Belarus as a control provides an important test for the validity of the hypotheses.

**Measuring the Dependent Variable: Bargaining Success**

To measure bargaining success, I use three categories of policy results: negative, neutral, and positive. In order to determine the actual level of success, I look at expert opinions about Russia's goals for each bargaining instance and the extent to which they are met. Because Russia's true political aims are never officially revealed, this paper has to make assumptions about what the goals most probably are for each dispute. In cases where multiple possibilities for Russia's aims are given, I discuss those alternatives in order to address any issues with the credibility of my assumptions.

A positive policy result requires either a significant financial gain caused by increasing gas prices or a significant strategic gain such as gaining control over the transit pipelines. I determine the financial impact of the deal in three steps. First, I multiply the gas price increase by the amount of gas imported by Ukraine or Belarus. Second, I multiply the increased cost of pipeline transit tariffs (if any) by the amount of gas Russia ships. Third, I subtract the loss created by higher transit tariffs from the profit created by increased prices. The outcome is the net financial impact of the negotiation. In the table, this variable is called Russian Profit Increase ($bn).

A neutral policy outcome can occur in three ways. The first scenario requires a significant financial gain coupled with a significant strategic loss. The second scenario inverts the first, requiring a significant strategic gain coupled with a significant financial loss. The third scenario for a neutral policy outcome is neither a significant financial gain nor a significant strategic gain. A negative policy outcome results from a significant strategic or financial loss that is not coupled with any significant gain.

It should be noted that although a significant literature exists on the potential impact of cut offs on Russian credibility as supplier of gas as a result of each conflict, I only weigh this potential strategic loss as a tiebreaker. Even though Russian supply credibility is very important to Europe and a complete loss of Russian supply credibility would create a huge financial impact, it is difficult to know how much each bargaining instance impacts credibility. Additionally, Gazprom's steps to control transit infrastructure and build new pipelines may counteract the negative effects of gas cut offs. Russia may be hampered by problems resulting from supply credibility issues in the medium- to long-term, but the short-term impacts are slim. Monopoly control over

European gas markets makes any quick European transitions away from Gazprom unlikely.

**Control Variables**

In addition to the similarities across the explanatory variables that occur in some of the cases, Ukraine and Belarus have several common traits. These help eliminate possible alternative explanations for the findings.

***Former Soviet Union (FSU) Status.*** Both Ukraine and Belarus are FSU states that gained their independence in 1991. This connection colors the relationship that each country has with Russia. If only one of the target states was an FSU-state, it could potentially complicate the results. Because both of the states are, any unique political linkage to Russia will be shared equally by Ukraine and Belarus.

***Pipeline Control.*** Ukraine and Belarus' control over the gas pipelines provides a tool to counter Russia's ability to inflict economic costs. The dependence on pipelines for natural gas transportation also makes Russia somewhat beholden to Ukrainian and Belarusian interests. Either country, if backed in to a political corner, could shut off the tap to Western Europe and cripple Russia's exports. Even without the extreme step of cutting off gas supplies, the pipeline holds strategic value as a check on aggressive Russian policies. For example, when Russia cut off gas exports to Ukraine, the Ukrainians simply drew off gas meant for Europe. But, control over the gas channels has

not changed, while Russia's bargaining success has fluctuated. Something else must affect Russia's bargaining success.

***Relationship with Europe.*** A third relationship that Ukraine and Belarus share as FSU countries is their relationship with Europe. Neither are members of the EU.[74] Ukraine has somewhat closer ties to the EU because it is a democracy, but this distinction should have no material effect on the findings. Both target countries have developed ties with the west that affect their relationship with Russia, making European concerns in any dispute an important calculation. Ukrainian and Belarusian decisions, especially with gas supply cut offs, affect trade with EU member states and potential entry into the EU. European influence on political calculations is noticeable, especially when the security of the European gas supplies was in question.

***Russian Demands.*** The Russian demands of higher gas prices and control over domestic transport pipeline infrastructure remain nearly static across the disputes.[75] The demanded price increases are variable, but the price fluctuation is taken into account by the explanatory variable "gas price." The loss of heat and economic productivity that the target states feel as a result of gas cutoffs also remained fairly stationary. While some temperature fluctuations might have slightly increased or decreased the absolute necessity of gas, it is never considered a luxury good. Excluding "gas price", the costs of Ukrainian and Belarusian disputes over time are remarkably comparable.

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[74] Europa, "Member states of the EU," *The EU at a glance*. http://europa.eu/abc/european_countries/eu_members/index_n.htm (Accessed Apr. 6, 2010).
[75] For an in-depth discussion of the Russian demands, see the case studies.

***Russian Political Unity.*** Russian political unity is constant across the bargaining instances. Each of the selected cases occurred while Putin was in control of Russia. For four of the disputes, Putin was President. For the 2008-2009 dispute, Putin was the Prime minister. The change in title did not loosen his control over the Kremlin, so every dispute can be correctly categorized as under the Putin-era.

Although Putin did not consolidate control until the implementation of an all-PR style Duma in December 2007,[76] the political will of the Kremlin was behind 50% state owned Gazprom for each of the disputes.[77] Because of the Kremlin's efforts to mobilize political support, the 4th Duma in 2004 was "a large and subservient majority."[78] An illustrative example of the political support Gazprom receives from the Kremlin includes a law that grants Gazprom an export monopoly.[79] In addition to policies favoring the gas giant, Putin has helped Gazprom negotiate with Ukraine and Belarus. The Kremlin's support might also increase Gazprom's bargaining credibility.

***Other Controls.*** The extent of intervention by international institutions and the presence of offsetting international assistance to the target are two other potential explanatory variables. Intervention by international institutions such as the EU or UN is almost

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[76] Thomas F. Remington, "Presidential Support in the Russian State Duma," *Legislative Studies Quarterly.* 31 (2006): 25-26.
[77] Simon Pirani, "Political and Economic Factors in the Russian and CIS Gas Trade," in *Russian and CIS Gas Markets and Their Impact on Europe*, ed. Simon Pirani (Oxford: Oxford University Press, 2009), 6.
[78] Thomas F. Remington, "Presidential Support in the Russian State Duma," *Legislative Studies Quarterly.* 31 (2006): 24-25. For quote, cites Gary W. Cox and Scott Morgenstern, "Epilogue: Latin America's Reactive Assemblies and Proactive Presidents," in *Legislative Politics in Latin America*, ed. Scott Morgenstern and Benito Nacif (Cambridge: Cambridge University Press, 2002), 451.
[79] "Duma Backs Gazprom Export Monopoly," *Radio Free Europe Radio Liberty*, July 5, 2006. http://www.rferl.org/content/article/1069658.html (Accessed Apr. 2, 2010).

nonexistent in the bargaining instances. With the exception of a few EU calls to end the disputes and the deployment of ineffective gas pressure monitors, no international institution took any meaningful action.

The presence of offsetting international assistance to the target was also negligible. This most often occurs when the target state is not friendly with the sender and the target's allies attempt to help. Intervention on behalf of a target state by a "black knight" country, usually in order to decrease the cost a sender is imposing on the target state, did not happen. Even if Europe had wanted to help Ukraine and Belarus by supplying gas during the shut offs, they would not have had the supplies to do so.

**Difficulties**

The level of control the Kremlin has over Gazprom is difficult to determine. Although it owns a controlling share of the company and Putin's voice weighs on decision making, how much say the company has in the use of gas as a tool of state is unclear. Fortunately, the importance of the level of governmental control over Gazprom is marginal. It might matter in an instance where Gazprom could resist efforts to cut supply if it stood to lose a lot of money, but in practice that is not how the disputes occur. Even if Gazprom is state run and is used as a political weapon, it is not as if the disputes on net cost the company money. Although a short term loss of revenue occurs, Gazprom benefits financially from each bargaining agreement.[80] The only other potential worry would be that, without governmental support, Gazprom's threats would be less credible.

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[80] See Table 2.

But, barring a highly unlikely public schism between Gazprom and Putin, governmental support for the gas giant should remain high.

## CASE STUDIES

This paper tests the hypotheses by observing the bargaining that occurred during five gas crises. Three of the bargaining instances are between Russia and Ukraine, while the remaining two are between Russia and Belarus. I compare the cases to determine whether the gas price level and level of domestic political unity affect Russia's bargaining efficacy.

I compare each country's bargaining episodes over time to control for a host of complicating variables, including EU influence and historical relationship. Multi-shot bargaining episodes with the same country provide a unique ability to hold many potentially obfuscating variables constant, isolating gas prices and domestic politics as two crucial determinants of bargaining efficacy.

I also compare the two states' bargaining episodes to control for gas price and political unity separately. Comparing Ukraine and Belarus controls for EU influence, economic relationship with Russia, and historical relationship. When domestic political unity is constant, gas prices are isolated as the explanatory variable. Likewise, when gas prices are at the same level, the only crucial difference between the two states is the level of domestic political unity. Although gas prices are not identical between the two cases, they are similar enough to determine generalizable results. After the conclusion, I include Table 1, Table 2, and Chart 1, which compare each of the bargaining instances numerically.

**Russia-Ukraine 2005-6**

The gas price was low at the time of the 2005-2006 Russia-Ukraine gas conflict. The average and December European border price in 2005 were $212.94/mcm and $250.56/mcm, respectively. Both are below the $273.60/mcm threshold for the medium price level. The Ukrainian domestic politics were united. Although earlier in the year Yuschenko dismissed his entire government,[81] the president and prime minister were both from the same party[82] and the "Our Ukraine" party had the most seats in Parliament.[83] Because the gas price level was low, it should not have a significant impact on the negotiations. The low level of gas price disparity decreases Russia's relative bargaining power, so I expect Russia to be relatively less successful at achieving its bargaining goals despite the fact that it is dealing with a unified government.

In April 2005, newly elected Ukrainian President Yushchenko spoke out in favor of increasing gas transit tariffs to the higher European levels.[84] In a July 2005 response, the Russian Duma voted that Ukraine, among other CIS countries, should pay European prices of gas.[85] In addition to the prospect of a gas price hike, with all the attendant dangers of destabilizing trade and transit, several other elements of the Russian-Ukrainian energy relationship were in doubt.

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[81] Freedom House, "Ukraine (2006) Overview," *Map of Freedom in the World 2006 Edition*. http://www.freedomhouse.org/template.cfm?page=363&year=2006 (Accessed Apr. 6, 2010).
[82] Yekhanurov was only Prime Minister after September 8, 2005. "Yuriy Yekhanurov," *Forum*, Sept. 9, 2005. http://en.for-ua.com/profiles/2005/09/09/101306.html (Accessed Apr. 6, 2010).
[83] "Ukraine Announces Preliminary Results for Parliamentary Elections," *Election Guide*, Apr. 2, 2002. http://www.electionguide.org/country-news.php?ID=223 (Accessed Apr. 6, 2010).
[84] "On Alexey Miller's meeting with Ivan Plachkov and Alexey Ivchenko," *Gazprom Press Release*, Mar. 28, 2005. http://www.gazprom.com/press/news/2005/march/article63040/ (Accessed Apr. 2, 2010).
[85] Jonathan Stern, "The Russian-Ukrainian gas crisis of January 2006," *Oxford Institute for Energy Studies* (2006): 5. Cites: "Duma proposes gas price change for neighbouring countries," *Interfax Oil and Gas Report*, July 7-13, 2005, 9.

The Ukrainian purchase of Turkmen gas and its subsequent transit by 50% Gazprom owned transit company RosUkrEnergo had stalled because of a Russian dispute with Turkmenistan and a Ukrainian criminal investigation into RosUkrEnergo. The security of Russian gas storage in Ukraine had been undercut by Ukrainian inability to safely hold the gas.[86] The price Gazprom intended to charge in 2006 was also in doubt. Gazprom demanded that Ukraine must increase payment for gas from $44/mcm to the $230/mcm dictated to Europe by the pricing formula unless Gazprom received an equity stake in the Ukrainian pipeline network.[87] Ukraine agreed to the transition to market prices, but wanted them to be implemented over time.[88] Ukraine hinted that if Gazprom were to enforce the more than 400% price increase, Ukraine would siphon off gas meant for Europe, raise transit tariffs, and increase port charges for the Russian Black Sea Fleet.[89]

During the last three months of 2005, the two sides made little headway towards a resolution. In a late move to increase its bargaining position, Gazprom bought 30 Bcm of Turkmen gas for 2006, with half of the volume delivered in the first quarter.[90] The 15 Bcm Gazprom had purchased for the first quarter exhausted Turkmen supply, leaving no gas for Ukraine to use as an alternative to Russian supply. Putin, in an attempt to avoid a gas shutoff, made a final offer to suspend the price hike for three months in return for

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[86] Ibid. 4-5.
[87] Robert L. Larsson, "Russia's Energy Policy: Security Dimensions and Russia's Reliability as an Energy Supplier," *FOI – Swedish Defense Research Agency Defence Analysis SE-164 90 Stockholm* (2006): 204.
[88] Jonathan Stern, "The Russian-Ukrainian gas crisis of January 2006," *Oxford Institute for Energy Studies* (2006): 6. Cites: "Interview on NTV," *Interfax Oil and Gas Report, December 8-14*, 2005, 9.
[89] Ibid. 7.
[90] Ibid. Cites: "Gazprom and Turkmenistan update Turkmen gas supply conditions for 2006," *Gazprom Press Release*, Dec. 29, 2005.

Ukrainian acceptance of market prices.[91] Ukraine rejected the offer and Gazprom publicly cut off gas supplies to Ukraine on January 1, 2006.

For the next three days, gas supplies in Europe fell precipitously. Russia accused Ukraine of siphoning off gas meant for Europe and using it domestically. Ukraine denied the accusation and accused Russia of sending inadequate supplies. On January 4, Gazprom and Ukrainian gas importer Naftogaz signed a five year contract to end the dispute. The contract stated that Gazprom would be paid $230/tcm for Russian gas, but that Ukraine would only pay $95/tcm because the Russian gas would be mixed with cheaper central Asian gas. The price of gas was only set for the next six months.[92] Additionally, Russia agreed to increase transit payments from $1.09 to $1.60/tcm/100km for the next five years.

Russia's level of bargaining success in the dispute was neutral, but face saving for both sides. Ukraine agreed to a 90% increase in gas prices for the first half of 2006, far less than the $230/tcm Gazprom wanted them to pay. Russia also was unable to get Ukraine to agree to the concept of European netback pricing. In addition, Russia agreed to pay higher transit tariffs and was unable to acquire a controlling share of the pipelines. As a net result of the deal, Gazprom made $1.29 billion more off of Ukraine in 2006 than 2005. This figure accounts for the increase in gas prices and transit tariffs. Importantly, the transit and supply contracts were separated. Transit payments were set for five years, whereas the gas prices were set only for six months, allowing for the possibility of higher prices in the future.

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[91] "Russia offers delay on gas hike," *BBC News*, Dec. 31, 2005. http://news.bbc.co.uk/2/hi/europe/4571726.stm (Accessed Apr. 2, 2010).
[92] Jonathan Stern, "The Russian-Ukrainian gas crisis of January 2006," *Oxford Institute for Energy Studies* (2006): 9.

The last factor that tempers Russia's bargaining success is the potential loss of credibility as a gas supplier to Europe. The cutoff hurt the perception of Gazprom as a reliable supplier of gas, but the separation of transit and supply contracts probably mitigated that effect.[93] The bottom line is Russia was unable to overcome Ukraine's pipeline monopoly at the low price level, and as a result was not able to obtain serious gains.

The political unity of President Yuschenko's party, which helped win a majority of the seats in the 2002 parliamentary elections and that after the Orange Revolution made "Our Ukraine" representative Yuriy Yekhanurov Prime Minister, did not help Russia enough to make its demands successful. It may be that because the gas price level was so low, Russia did not have the bargaining power it needed to succeed.

The dispute did illustrate the domestic political utility of resisting any agreement with Russia. The Ukrainian government was dismissed by a no confidence vote on January 10, following arguments that the gas agreement was bad for the country.[94] Additionally, Yushchenko's "Our Ukraine" party lost 31 seats in the March 2006 elections.[95]

Although some of the backlash can undoubtedly be attributed to Yuschenko's difficulties prior to the new gas agreement, it is hard to completely discount the political

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[93] Ibid., 9.
[94] "Ukrainian Cabined in Gas Crisis," *BBC News*, Jan. 10, 2006. http://news.bbc.co.uk/2/hi/europe/4599096.stm (Accessed Apr. 2, 2010).
[95] Central Intelligence Agency, "Ukraine," The World Factbook 2002, http://www.faqs.org/docs/factbook/print/up.html (Accessed Apr 3, 2010). And "Election Officials Release Final Results In Ukraine Poll," *Radio Free Europe/Radio Liberty*, Apr. 10, 2006. http://www.rferl.org/content/article/1067562.html (Accessed Apr 3, 2010).

significance of Yushchenko's gas agreement on the election results.[96] The unpopularity of making deals with Russia would have been exploited by a prime minister that was not from the same party as Yushchenko. The next two gas disputes between Russia and Ukraine provide empirical support for this assertion. And, as a result, domestic political disunity in Ukraine would have made reaching this agreement even more difficult.

**Russia-Ukraine 2007-8**

The gas price was medium at the time of the 2007-2008 Russia-Ukraine gas conflict. The average and December European border price in 2007 were $293.13/mcm and $308.16/mcm, respectively. Both are between $273.60/mcm and $425.16/mcm, the range for the medium price level. The Ukrainian domestic politics were disunited. "Disagreements between Prime Minister Viktor Yanukovych and President Viktor Yushchenko over their respective powers led to a showdown in 2007 . . . The year's political conflicts revealed a lack of respect for the division of power."[97] Raising gas prices was not a Russian goal in this dispute, making the disparity between European market prices and Ukrainian gas prices irrelevant. The irrelevance of gas prices increases the importance of domestic politics and makes a clear determination of bargaining success more difficult. In this case, I have to make assumptions on the relative importance of each issue for the parties involved. Because of the low level of political unity, I expect a low level of Russian bargaining success.

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[96] Jonathan Stern, "The Russian-Ukrainian gas crisis of January 2006," *Oxford Institute for Energy Studies* (2006): 12-13.
[97] Freedom House, "Ukraine (2008) Overview," *Map of Freedom in the World 2008 Edition*. http://www.freedomhouse.org/template.cfm?page=363&year=2008 (Accessed Apr. 6, 2010).

On October 2, 2007, Gazprom threatened to cut off supplies because Ukraine had failed to pay for more than $1.3 billion in gas consumed in 2007.[98] A week later, Gazprom and Ukraine set up a payment schedule that was meant to eliminate the debt.[99] However, by early-February 2008, the debt had ballooned up to $1.5 billion. As a result, Gazprom once again threatened to cut supplies.

Part of the reason the debt increased despite the payment plan was a change in the price of gas. The agreed upon price for mixed Russian and Central Asian gas in 2008 was $179.5/tcm. However, in January and February, weather conditions caused the percentage of the more expensive Russian extracted gas exported to Ukraine to be much higher. As a result, Gazprom demanded $315/tcm for the gas.[100]

On February 12, Putin and Yushchenko came to another agreement. The deal specified that Ukraine would pay its debts and RosUkrEnergo would be replaced by two new joint ventures. These new companies would both be half owned by Gazprom and Naftogaz, giving Gazprom control over 50% of the Ukrainian gas imports market. [101] This was a sweet deal for Gazprom, which was to receive $315/tcm for all gas shipped in January and February plus a significant foothold in the Ukrainian economy. Unfortunately for the Russian gas giant, the agreement was never implemented.

The gas deal was blocked by Ukrainian Prime Minister Yulia Tymoshenko. Since her return as Prime Minister in November, she had caused state owned company

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[98] "Gazprom May Cut Gas to Ukraine," *BBC News,* Oct. 3, 2007. http://news.bbc.co.uk/2/hi/business/7024294.stm (Accessed Apr. 2, 2010).
[99] "Ukraine Settles Russian Gas Row," *BBC News,* Oct. 8, 2007. http://news.bbc.co.uk/2/hi/business/7034849.stm (Accessed Apr. 2, 2010).
[100] "Outside View: Gazprom, Ukraine Price Rows," *UPI.com,* Mar. 19, 2008. http://www.upi.com/Science_News/ Resource-Wars/2008/03/19/ Outside-View-Gazprom-Ukraine-price-rows/UPI-34761205968145/ (Accessed 2 Apr. 2010).
[101] Ibid.

Naftogaz Ukrainy to void contracts with Gazprom's intermediaries and had killed Yushchenko's agreement with Putin.[102] The two Ukrainian leaders were at odds about the direction Russian negotiations should take. In this instance, the dissent helped derail a pro-Russian agreement. Gazprom threatened to cut off gas supplies on March 3 unless the 2008 gas had been pre-paid and a new agreement had not been reached.[103] It also assured the European Commission that supplies would not be affected in an effort to maintain credibility as a gas supplier.[104]

Gazprom cut shipments to Ukraine by 25% on March 3, and reduced shipments by up to a total 45% by the next day.[105] Gas supplies were restored on March 5 after Gazprom and Naftogaz agreed to settle the dispute. The final terms of the new agreement were much less beneficial for Gazprom. Ukraine agreed to pay the $1.5 billion in debt, but was allowed to pay a large part of its debt with unused gas that was held in Ukrainian storage facilities.[106] RosUkrEnergo was replaced, but no longer with new joint ventures that would have given Gazprom control of 50% of the Ukrainian gas imports market. Instead, Gazprom was allowed to sell 7.5 bcm of gas directly to industrial consumers in Ukraine – a mere 15% of the market.[107]

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[102] Ibid.
[103] Simon Pirani, Jonathan Stern, and Katja Yafimava, "The Russo-Ukrainian Gas Dispute of January 2009: A Comprehensive Assessment," *Oxford Institute for Energy Studies* (2009): 12.
[104] "Gazprom Restarts Row with Ukraine," *BBC News*, Feb. 26, 2008. http://news.bbc.co.uk/2/hi/business/7265377.stm (Accessed Apr. 2, 2010).
[105] "Gazprom cuts Ukraine gas supply," *BBC News*, Mar. 3, 2008. http://news.bbc.co.uk/2/hi/business/7274380.stm (Accessed Apr. 3, 2010). And "Gazprom Cuts Gas Supplies to Ukraine by Another 10 Percent," *Radio Free Europe/Radio Liberty*, Mar. 4, 2008. http://www.rferl.org/content/article/1144064.html (Accessed Apr. 3, 2010).
[106] "Ukraine, Russia Sign Agreement on Direct Gas Supplies," *Radio Free Europe/Radio Liberty*, Mar. 14, 2008. http://www.rferl.org/content/article/1144072.html (Accessed Apr. 2, 2010).
[107] "Outside View: Gazprom, Ukraine Price Rows." *UPI.com.* 19 Mar. 2008. http://www.upi.com/Science_News/ Resource-Wars/2008/03/19/ Outside-View-Gazprom-Ukraine-price-rows/UPI-34761205968145/ (Accessed Apr. 2, 2010).

As a net financial result of the deal, Gazprom made $3.21 billion more from Ukraine in 2008 than 2007. But, Gazprom was not able to get Ukraine to agree to netback pricing or able to secure 50% of the domestic Ukrainian gas market. Gazprom also lost the issue of RosUkrEnergo, as the company was disbanded. The opaqueness of the gas intermediary makes it difficult to determine with any accuracy the benefits Gazprom gleaned from RosUkrEnergo's existence, but dissolving this entity was a blow to Russia. Perhaps the most disappointing aspect of Russia's bargaining efficacy in this dispute is the fact that Gazprom was close to achieving so much more. Had Tymoshenko not been able to block Yushchenko's original deal, Gazprom would have been much more successful.

Russia's mediocre gains are directly attributable to Tymoshenko's efforts to derail Yushchenko's deal. Had Ukraine been more politically unified, two possibilities could have occurred. The first possibility is that the united leadership passes Yushchenko's deal, helping Russia significantly. The second possibility is that the united leadership takes Tymoshenko's antagonistic stance to negotiations, creating a deal similar to the one that actually occurred. The chances of a unified government selecting the first path may well be more likely because of the risk of backlash resulting from shutoffs. But, even if the odds of each scenario are theoretically 50/50, Russia's chances of success are better with political unity than political disunity. Indeed, this example seems to illustrate that political disunity guarantees a tougher fight during negotiations.

**Russia-Ukraine 2008-9**

The gas price level was high at the time of the 2008-2009 Russia-Ukraine gas conflict. The average and December European border price in 2008 were $472.95/mcm and $576.72/mcm, respectively. Both are above the $425.16/mcm threshold for the high price level. The Ukrainian domestic politics were disunited. "President Viktor Yushchenko and Prime Minister Yulia Tymoshenko continued their political infighting in 2008, and after Tymoshenko joined the opposition in trying to reduce the president's powers, Yushchenko in October sought to disband the parliament and hold new elections. The parliament refused to fund the voting, however, forcing Yushchenko to postpone the elections indefinitely."[108] The high gas price should have a significant and positive impact on negotiations. Because of the level of gas price disparity, I expect a high level of Russian bargaining success despite the low level of domestic political unity in Ukraine.

The gas dispute occurred because Gazprom refused to sign a new supply contract for 2009 until Naftogaz paid its debts. In October 2008, Tymoshenko and Putin signed a memorandum with the following provisions: Naftogaz will pay its debts and buy directly from Gazprom, Gazprom will continue to have access to 7.5 bcm of Ukraine's gas import market, gas and transit prices will rise to market levels within three years, Ukraine will allow uninterrupted transit of gas to Europe, and Naftogaz would be able to export some gas to Europe.[109] Three weeks later, Gazprom and Naftogaz clarified that the debts would be paid by the end of October, added details to few other points, and signed the memorandum.

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[108] Freedom House, "Ukraine (2009) Overview," *Map of Freedom in the World 2009 Edition*. http://www.freedomhouse.org/template.cfm?page=363&year=2009 (Accessed Apr. 6, 2010).
[109] Simon Pirani, Jonathan Stern, and Katja Yafimava, "The Russo-Ukrainian Gas Dispute of January 2009: A Comprehensive Assessment," *Oxford Institute for Energy Studies* (2009): 12-13.

The October deadline passed without Naftogaz clearing its debt. On December 2, it admitted owing more than $1 billion (Gazprom contended significantly more), but that it was unable to pay. By mid-December, Gazprom offered to make an upfront payment of transit fees at the 2008 rate to provide money to pay the debt, but Naftogaz refused. Gazprom reiterated its November threat to hike prices even higher if no agreement was reached by the end of the year and Putin added that if supplies to Europe were disrupted, Ukrainian supplies would be shut off entirely.[110]

Before the end of the year, Naftogaz made a payment of $1.52 billion. Yet, Gazprom insisted that $614 million in fines and penalties were still outstanding. It was too little too late.[111] The outstanding debts, in conjunction with a Naftogaz letter warning that any gas going through Ukraine would be confiscated, caused Gazprom to cut off gas supplies for Ukrainian consumption.[112] Gazprom shut the pumps off at midnight on January 1, 2009.

On January 5, Gazprom claimed that Ukraine had stolen 65.3 mmcm of gas and called on Ukraine to replace the loss of Russian gas.[113] By January 7, deliveries to Europe had been cut off as the flow of gas through Ukrainian pipelines was eliminated completely. Countries in south-eastern Europe lost 100% of their gas, and several other countries were partially cut off. Shipment of gas supplies had never been completely cut off since the inception of the gas transit system. On January 11, the EU sent monitors to

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[110] Ibid. 16. Cites: *Interfax*, November 20–26, 2008, p. 6 and December 4–18, p.6.
[111] "Russia fully cuts gas to Ukraine, ups supplies to Europe," *Ria Novosti*, Jan. 1, 2009. http://en.rian.ru/world/20090101/119302144.html (Accessed Apr 2, 2010).
[112] Simon Pirani, Jonathan Stern, and Katja Yafimava, "The Russo-Ukrainian Gas Dispute of January 2009: A Comprehensive Assessment," *Oxford Institute for Energy Studies* (2009): 19.
[113] "Gazprom reduces the volume of gas supply to the Ukrainian gas transportation system," *Ukrainefacts*, Jan. 5, 2009. http://www.gazpromukrainefacts.com/content/gazprom-reduces-volume-gas-supply-ukrainian-gas-transportation-system-0 (Accessed Apr. 2, 2010).

the pipelines in an attempt to determine which country was responsible for gas flows not reaching Europe.

The monitors were unable to restart the flow of gas. Over the next few days, accusations continued to mount as gas remained stagnant. The relative merits of the recriminations on both sides are not particularly important because I take conflict as a given, but the blame might matter as it relates to Russian supply credibility. The gas shutoff was devastating for the image of reliable deliveries of Russian gas. If the shutoff was generated solely by Ukraine and could be credibly threatened in the future, the leverage of transit shutoffs might be increased. Because of the uncertainty surrounding the causes of the supply cut offs and future leverage does not affect the 2008-2009 dispute, I simply treat the damage to Russia's reputation as collateral and weigh it against the positive outcomes.

On January 19, the two sides finally reached an agreement. Gas started to flow westward on January 20 and all European customers were receiving normal levels by the January 22. The contract, signed by Putin and Tymoshenko, covered the ten year period between 2009 and 2019 and contained the following provisions. Gazprom will directly deliver 40 bcm of gas to Naftogaz in 2009 and 52 bcm annually from 2010-2019. Prices will be 80% of European market price in 2009 and 100% from 2010-2019. Strict rules for payment and taking extra gas were included. Gazprom's Ukrainian trading subsidiary, Gazprom-Sbyt, will market at least 25% of imported gas, up from 13%. Importantly, the Ukrainian gas pricing methodology changes with this contract. Instead of projecting prices based on Central Asian purchase prices, netting forward, the new

contracts are netbacks from European market prices. The transit tariff will be $1.7/mcm/100km and be linked to prices from 2010 to 2019.

As a net financial result of the deal, Gazprom made an estimated $4.11 billion more from gas sales to Ukraine in 2009 than 2008. In addition, Ukraine agreed to the principle of netback pricing, fundamentally changing the bargaining landscape. Gazprom no longer has to subsidize Ukrainian gas. As a third crucial outcome of the deal, Gazprom increased its monopoly over Ukrainian domestic gas markets. Control over domestic markets further increases the profits Gazprom can expect in future years. Russia also codified strict rules for stealing gas, helping to allay European concerns about another gas shutoff. In sum, Russia received everything it asked for in the 2008-2009 dispute.

The political disunity of Ukrainian politics significantly contributed to the exacerbation of the conflict, but still did not mitigate Russia's success. On December 31, Tymoshenko and Naftogaz accepted an agreement that included a price of $250/mcm and a transit tariff of $1.7/mcm/100km. However, President Yushchenko blocked the flight to Moscow to sign the deal in an attempt to score domestic political points with the electorate.[114] A Ukrainian political analyst has since argued that the president schemed to keep the prime minister out of negotiations because he feared that she would resolve them successfully and take credit, and encouraged Naftogaz CEO Dubyna to send his disruption letter to make resolution more difficult.[115] Another Ukrainian political goal that supports the hypothesis was to delay negotiations because of lower oil prices in

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[114] Simon Pirani, Jonathan Stern, and Katja Yafimava, "The Russo-Ukrainian Gas Dispute of January 2009: A Comprehensive Assessment," *Oxford Institute for Energy Studies* (2009): 24. Cites: Interfax, 30 December 2008–14 January 2009, p.10.
[115] Ibid., 37. Cites: Vasilii Stoiakin. "Kto sorval gazovye peregovory?" *Ukrainska Pravda*. 12 Jan. 2009.

Europe, as "falling gas prices [would] weaken Gazprom's bargaining position."[116] They calculated that the ability to run on reserves would allow them to strike a better deal when gas imports resumed. Despite all the political resistance, Russia achieved its bargaining goals because the high gas prices put Gazprom in a stronger bargaining position.

**Russia-Belarus 2003-4**

The gas price level was low at the time of the 2003-2004 Russia-Belarus gas conflict. The average and December European border price in 2003 were $125.51/mcm and $129.6/mcm, respectively. Both are below the $273.60/mcm threshold for the low price level. The Belarusian domestic politics were united.[117] Because the gas price level was low, it should not have a significant impact on the negotiations. The low level of gas price disparity decreases Russia's relative bargaining power, so I expect Russia to be relatively less successful at achieving its bargaining goals. Russia should be less successful despite the fact that it is dealing with a unified government.

The seeds of the dispute were sown in April 2002, when Gazprom reached an agreement to supply Belarus with cheap gas in return for a joint gas transport venture based on Beltransgaz. In return for selling gas to Belarus at Russian domestic prices, Gazprom would gain a controlling share of the Belarusian energy company Beltransgaz. Because Beltransgaz controls the Belarusian pipeline system, this purchase would allow Gazprom unfettered access to the European markets.

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[116] Ibid., 39.
[117] Lucan A. Way, "Authoritarian State Building and the Sources of Regime Competitiveness in the Fourth Wave The Cases of Belarus, Moldova, Russia, and Ukraine." *World Politics 57*, (2005): 254.

Despite the accord, Belarus amassed a large gas debt over the course of 2002 and continued to delay privatization of Beltransgaz. The Belarusian delays were so great that, in April 2003, Russia had to threaten to suspend gas deliveries to coerce Belarus into removing Beltransgaz from the national list of strategic companies that could not be privatized.[118] Despite these hurdles, Gazprom held up its end of the bargain and continued to sell gas at Russian domestic rates well into 2003.

Even after Beltransgaz became a joint stock company, the little progress was made. The inability to determine a mutually acceptable price for Beltransgaz finally derailed the 2002 agreement. Gazprom estimated the company was worth $600 million, while Belarus suggested $5 billion. Later, Lukashenko offered $2.5 billion as a lower limit, but Gazprom rejected the offer. The two sides were unable to strike a deal, so Gazprom no longer had any incentive to supply Belarus with discounted gas. Gazprom finally spoke out against the worsening economic relationship by demanding a gas price increase from $28/mcm to $50/mcm in 2004. Belarus refused to negotiate.[119]

On January 1, Gazprom cut off gas supplies to Belarus via the Northern Lights pipeline. At the time of the shutoff, Gazprom was only supplying 10.2 bcm of Belarus' 18 bcm of annual imports (57%). The other two suppliers of gas, Russian exporters Itera and Transnafta, stepped in with short term contracts to meet demand. Although at $42/mcm this gas was nominally more expensive than the gas Belarus purchased from Gazprom in 2003, the ability to diversify supply allowed Belarus to resist Russian

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[118] Katja Yafimava and Jonathan Stern, "The 2007 Russia-Belarus Gas Agreement," *Oxford Institute for Energy Studies* (2009): 2.
[119] Katja Yafimava, "Belarus: the domestic gas market and relations with Russia," in *Russian and CIS Gas Markets and their Impact on Europe*, ed. Simon Pirani (Oxford: Oxford University Press, 2009), 155.

demands. But, in February, both suppliers reduced shipments because of a failure to agree on the terms of a new, short term contract.[120]

To compensate for the loss of gas, Belarus siphoned off gas meant for Europe via the Yamal-Europe pipeline. Gazprom responded by completely cutting off gas flows through Belarus. Belarus was able to sign a short term deal with Transnafta the next day, allowing Gazprom to restart supply flows to Europe. A string of similar short term contracts continue to supply Belarus until June, when it finally agreed to a new contract with Gazprom. The contract price was set at $46.68/mcm.[121]

Russia's bargaining success for the 2003-2004 gas conflict was relatively low. Gazprom did not gain control over Belarusian pipelines because it was unable to purchase Beltransgaz. As a result, it lost the opportunity to ameliorate Europe's security of energy supply concerns. Additionally, the gas cutoffs were only marginally successful. Part of the explanation was Belarus' ability to purchase replacement gas in the short term, but the other important factor is the level of price disparity. Had the private gas from Itera and Transnafta been priced significantly higher than the subsidized gas from Gazprom, replacing Gazprom's gas would have been less economically viable.

**Russia-Belarus 2006-7**

The gas price level was medium at the time of the 2006-2007 Russia-Belarus gas conflict. The average and December European border price in 2006 were $295.65/mcm and $311.40/mcm, respectively. Both are between $273.60/mcm and $425.16/mcm, the

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[120] Chloe Bruce, "Fraternal Friction of Fraternal Fiction? The Gas Factor in Russian-Belarusian Relations," *Oxford Institute for Energy Studies* (2009): 17.
[121] Katja Yafimava, "Belarus: the domestic gas market and relations with Russia," in *Russian and CIS Gas Markets and their Impact on Europe*, ed. Simon Pirani (Oxford: Oxford University Press, 2009), 155.

range for the medium price level. The Belarusian domestic politics were united.[122] Because the gas price level was medium, it should have a positive but not overwhelming impact on the negotiations. The level of gas price disparity will help Russia's relative bargaining power, but it should be amplified by Belarus' domestic political unity. I expect Russia to be successful at achieving its bargaining goals.

The 2006-2007 dispute is largely a continuation of the same fundamental issues that created the 2003-2004 crisis. First, the prospective Beltransgaz purchase still needed to be resolved. In order to determine a purchase price, the two sides brought in a neutral party, ABN Amro, to determine the value of Beltransgaz's assets. ABN Amro proposed four potential valuations, the highest of which was $5 billion. Gazprom accepted this figure and agreed to pay $2.5 billion for 50% of Beltransgaz.[123]

The second important issue continued to be the price of gas. In 2006, Gazprom, in an ongoing effort to transition CIS importers to European prices, suggested that Belarus pay $200/mcm for gas. In subsequent negotiations, Gazprom lowered its asking price to $105/mcm. But, Lukashenko was not satisfied. In a retort, he demanded that a fair price for Beltransgaz was $17 billion and that raising gas prices to this height violated the 2002 Customs Union Agreement guaranteeing Belarus Russian domestic prices for gas in exchange for a controlling share of Beltransgaz. Russia, in November of 2006, declared that domestic gas prices would be raised to European levels by 2011. As

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[122] Lucan A. Way, "Authoritarian State Building and the Sources of Regime Competitiveness in the Fourth Wave The Cases of Belarus, Moldova, Russia, and Ukraine." *World Politics 57*, (2005): 254.
[123] Katja Yafimava and Jonathan Stern, "The 2007 Russia-Belarus Gas Agreement," *Oxford Institute for Energy Studies* (2009): 3.

a result, Gazprom's demand for higher prices in Belarus no longer violated the Customs Union Agreement. [124]

Until the very end of 2006, Belarus refused to sign the supply contract. It also refused to sign a 2007 transit contract until the supply contract was signed and threatened to steal any gas meant for Europe. Gazprom responded by saying it would completely cut off gas supplies to Belarus on January 1, 2007. The gas giant also made plans to divert gas transported through Ukraine to help alleviate any shortfalls felt by European customers.[125]

At 11:58pm on December 31, 2006, Belarus and Gazprom agreed to terms on a 5 year gas contract that immediately increased the 2007 price of gas from $46.68/mcm to $100/mcm. The agreement further stipulated that Belarusian gas prices would correlate to a percentage of the European market price – 67%, 80%, 90%, and 100% for 2008, 2009, 2010, and 2011 respectively.[126] In return, Gazprom agreed to increase transit payments from $0.75/mcm/100km to $1.45/mcm/100km for the Northern Lights pipelines, with a minimum shipment quantity of 21.2 Bcm of gas for 2007.[127] The agreement also stipulated that Gazprom would buy 50% of Beltransgaz for $2.5 billion. Gazprom planned to make four payments of $625 million, with the final payment coming on June 1, 2010. After that date, Gazprom will own a controlling share of Beltransgaz.[128]

Russia's bargaining success for the 2006-2007 gas conflict was high. The price Belarus paid for gas more than doubled overnight, and will continue to rise to match

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[124] Ibid.
[125] Ibid.
[126] Ibid., 1.
[127] Ibid. Cites: "Belarus to receive Russian gas at $100 in 2007," *Interfax Oil and Gas Weekly*, Dec. 28, 2006- Jan. 10, 2007, 6.
[128] Ibid.

European market prices by 2011. The fundamental shift from net forward to netback prices was a big win for Gazprom. As a net financial result of the deal, Gazprom made $1.03 billion more off of Belarus in 2007 than 2006. Even more importantly, Gazprom gained a controlling share of the Belarusian pipeline network via its purchase of Beltransgaz. The Beltransgaz purchase improves Russia's credibility as a consistent energy supplier to Europe and at the same time guts Belarus' ability to resist future Russian demands. Although gas transit payments went up nearly 70% and Belarus received $2.5 billion for Beltransgaz, the agreement benefited Gazprom, both in the immediate financial impact and in the future of energy in Europe.

Part of the reason for Gazprom's success was a 2006 Russian law awarding monopoly export rights to Gazprom.[129] This law undercut Belarus' ability to diversify, because the Russian gas companies Itera and Transnafta were unable to sell gas to Belarus. The only other prospective suppliers were RosUkrEnergo and UkrGazEnergo, the Russian and Ukrainian gas supply intermediaries. However, because all the gas that these companies control was originally supplied by Gazprom, the re-export would have had to have been approved by Gazprom. In effect, the Russian Duma's policy isolated Belarus.

Belarus was also less able to resist because of a medium gas price level and a lack of heterogeneity in domestic politics. Lukashenko could not hope to gain politically by continuing to resist negotiations. He would neither have had an opposition leader to blame for caving into Russian negotiations, nor would he gain any material benefit from taking a strong stance against Russia. Additionally, a complete gas shutoff would have

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[129] "Russian Lawmakers Approve Gazprom export monopoly law," *Turkish Press*, June 16, 2006. http://www.turkishpress.com/news.asp?id=128845 (Accessed Apr. 2, 2010).

put pressure on elites to force a deal. The financial impact of a complete loss of gas on the elites' companies in a gas dependent state would have been significant. In short, the Belarusian domestic political unity eliminated the political gains of resisting. Plus, the 2005-2006 gas dispute between Russia and Ukraine showed Lukashenko that Gazprom would not hesitate to carry out its threat to suspend gas shipments through Belarus. Continuing to resist would have just delayed the inevitable at the expense of the Belarusian economy.

## CONCLUSION

This paper has examined the impact of gas price levels and domestic political unity on Russia's gas disputes with Ukraine and Belarus. The multi-shot bargaining with each importer and with the two similar importers over time controlled for several other potential determinants of efficacy, creating a natural experiment that lent itself to examination. Even though differences existed across each of the conflicts, the implications of the findings are still generalizable to Russia's natural gas bargaining after 2000 with the import dependent CIS members.

There are three main implications to be drawn from this analysis. First, gas price levels are a crucial determinant of bargaining efficacy. The findings indicated that, as gas prices increased, Russia's bargaining position improved. The efficacy of Russia's bargaining became more successful as the market price for gas rose. It did not succeed regardless of domestic political unity, but in some instances was able to overcome disunity. For low prices, no Russian bargains were successful. For medium prices, bargains were successful except when domestic politics blocked favorable agreements.

This result is not simply a correlation – Ukrainian Prime Minister Tymoshenko actually blocked the agreement that President Yushchenko had signed in the 2007-2008 dispute. For high prices, bargains were successful despite low levels of political unity.

Further, it seems that the higher the level of price disparity that existed between the European market and the import price for gas, the more effective Russia was at achieving financial gains. Table 2 indicates that Russian profits from new deals with Belarus nearly tripled from the 2003-2004 dispute to the 2006-2007 dispute, over which time the gas price disparity also nearly tripled. The results are even more favorable for Russia's negotiations with Ukraine, but only when gas price levels were the primary issue. This implication is also substantiated by analysis of the actions of Ukrainian politicians, who hoped to delay negotiations until the gas price disparity was reduced.

Second, a high level of domestic political unity in the target countries increased Russia's ability to generate favorable bargaining results. The greater the separation of governmental purpose, the more difficulty Russia had getting all parties to come to an agreement. The only instance in which a low level of political unity correlated with high bargaining success was Russia's 2008-2009 dispute with Ukraine. Even then, when the end result was successful, the domestic politics created roadblocks and lengthened negotiations – Ukrainian President Yushchenko grounded a flight that would have taken Prime Minister Tymoshenko and Naftogaz CEO Dubyna to Russia to sign a contract that would have ended the dispute. In the cases of Russian bargaining over gas, domestic political disunity of import states has serious implications for the obstruction of bargaining agreements.

Third, the results indicate trends that can be used to develop framework to explain the efficacy of Russia's post-2000 inter-state gas bargaining with energy dependent CIS members. Gas price is the most important variable. As the European market price increases, so does the relative bargaining power of Gazprom. Secondarily important is the level of domestic political unity within the CIS importer. Domestic politics can affect the outcome of negotiations, but only in cases where gas prices have not given Russia overwhelming bargaining power. High levels of political unity reduce the target states ability to reduce Gazprom's demands. The framework can be explained as follows.

When gas prices are low, Russia has very little bargaining success. Low bargaining efficacy holds even if target state domestic political unity is high. When gas price levels are medium, Russia is relatively successful at achieving its bargaining goals. In these intermediate cases, strong levels of domestic political disunity in the target state can impair Russia's bargaining efficacy. However, higher levels of domestic unity hurt the importer's position and allow for Russian bargaining success. When gas price levels are high, Russia is very successful at achieving its bargaining goals. High bargaining efficacy holds even if target state domestic political unity is low.

One important potential weakness of the findings is the necessity to make assumptions about Russia's bargaining goals. Although the financial and strategic gains of each dispute are clearly discernable, it is considerably more difficult to know if the results satisfied Russia. In order to mitigate the risk of making unnecessary assumptions, I tried to explain in detail what Russia's goals most probably were, how each issue was weighted, and how the issues might apply to each potential set of Russian goals.

Further research on the importance of the type of good and the separation of purpose in international bargaining could look to generalize the findings about the importance of gas price and domestic political unity beyond the Russia and CIS specific cases. Because of the unique market, transit, and control structures for gas, my results are not *prima facie* generalizable to other commodity goods such as oil or minerals. Whether the same political dynamic exists in other commodity markets is a question worth exploring.

Two other areas for further research are testing the framework for bargaining efficacy and determining the relative importance of percentage vs. absolute price increases. An application of the framework to other instances of Russian bargaining with energy dependent CIS states would test the framework's generalizability. Determining whether it is the European price level or the price differential that affects Russia's bargaining leverage would advance and clarify my findings. My results do not effectively delineate between the two possibilities clearly enough to answer the question.

## APPENDIX

### Table 1

| Conflict | 1: Belarus 2003-4[130] | | 2: Ukraine 2005-6[131] | |
|---|---|---|---|---|
| Year | 2003 | 2004 | 2005 | 2006 |
| Average European Border Price ($/mcm)[132] | 125.51 | 135.18 | 212.94 | 295.65 |
| December & January Border Price ($/mcm) | 129.6 | 122.04 | 250.56 | 275.76 |
| Import Price ($/mcm) | 28 | 46.68 | 57.35[133] | 95 |
| **Price Differential (Avg. Price)**[134] | 97.51 | | 155.59 | |
| **Price Differential (Dec. Price)** | 101.6 | | 170.56[135] | |
| Percentage Price Differential | 448.25% | | 371.30% | |
| Total Volume Transported (bcm/yr) | 33.1 | 25.3 | 136.4 | 128.5 |
| Cost of Transit ($/100km/mcm)[136] | 0.53, 0.36 | 0.75, 0.43[137] | 1.09 | 1.6 |
| Value of Transit Services ($bn)[138] | 0.140 | 0.191 | 1.49 | 2.06 |
| Belarus/Ukraine Imports (bcm/yr) | 18.1 | 19.7 | 55.8 | 53.3 |
| Total Value of Imports ($bn)[139] | 0.51 | 0.92 | 3.20 | 5.06 |

[130] Belarusian figures are from: Katja Yafimava, "Belarus: the domestic gas market and relations with Russia," in *Russian and CIS Gas Markets and their Impact on Europe*, ed. Simon Pirani (Oxford: Oxford University Press, 2009), 141.

[131] Ukrainian figures are from: Simon Pirani, Jonathan Stern, and Katja Yafimava, "The Russo-Ukrainian Gas Dispute of January 2009: A Comprehensive Assessment," *Oxford Institute for Energy Studies* (2009): 6.

[132] European Border Price Data are from: IndexMundi, "Russian Natural Gas Monthly Price." http://www.indexmundi.com/commodities/?commodity=russian-natural-gas&months=240 (Accessed Nov. 18, 2009).

[133] The price in 2005 fluctuated between 44 and 80. Working backwards from the volume and total value of imports, I calculate that the average price was 57.35.

[134] Price Differential is the difference between European border price and Import Price. All price differentials are for the former year, found for example in Belarus in 2003 by subtracting 125.51 – 28.

[135] By December 2005, Ukraine was paying was $80/mcm, so I use that value instead of $57.35/mcm to determine the December price differential.

[136] For Belarus, the first price is the Northern Lights Pipeline. The second price is the Yamal Europe pipeline.

[137] Belarusian figures are from: Katja Yafimava, "Belarus: the domestic gas market and relations with Russia," in *Russian and CIS Gas Markets and their Impact on Europe*, ed. Simon Pirani (Oxford: Oxford University Press, 2009), 155.

[138] Because Belarus charges different transit fees for Yamal Europe and Northern Lights, I factor that in. The price listed is based on the average revenue per 100/km/mcm based on the percentage of gas that goes through each pipeline. The price data is on Belarusian figures are from: Katja Yafimava, "Belarus: the domestic gas market and relations with Russia," in *Russian and CIS Gas Markets and their Impact on Europe*, ed. Simon Pirani (Oxford: Oxford University Press, 2009), 155.

[139] Total Value of Imports is a calculation. I find it by multiplying the imports * import price / 1000. For example, in the case of Ukraine in 2006, I take: (53.3*95)/1000.

**Table 1 Continued**

| Conflict | 3: Belarus 2006-7[140] | | 4: Ukraine 2007-8 | | 5: Ukraine 2008-9 | |
|---|---|---|---|---|---|---|
| Year | 2006 | 2007 | 2007 | 2008 | 2008 | 2009[141] |
| Average European Border Price | 295.65 | 293.13 | 293.13 | 472.95 | 472.95 | 318.78 |
| December & January Border Price | 311.4 | 302.04 | 308.16 | 369.72 | 576.72 | 576.72 |
| Import Price ($/mcm) | 46.68 | 100 | 130 | 179.5 | 179.5 | 255.02[142] |
| **Price Differential (Avg. Price)** | **248.97** | | 163.13 | | **293.45** | |
| **Price Differential (Dec. Price)** | **264.72** | | 178.16 | | **397.22** | |
| Percentage Price Differential | 633.35% | | 225.48% | | 263.48% | |
| Total Volume Transported (bcm/yr) | 44 | 45.7 | 115.2 | 119.6 | 119.6 | 120 |
| Cost of Transit ($/100km/mcm)[143] | 0.75, 0.43 | 1.45, 0.43 | 1.6 | 1.7 | 1.7 | 1.7 |
| Value of Transit Services ($bn) | 0.236 | 0.357 | 1.84 | 2.03 | 2.03 | 2.04 |
| Belarus/Ukraine Imports (bcm/yr) | 20.8 | 21.2 | 49.1 | 54.5 | 54.5 | 54.5 |
| Total Value of Imports ($bn) | 0.97 | 2.12 | 6.38 | 9.78 | 9.78 | 13.9 |

[140] The price data for this dispute comes from: Katja Yafimava, "Belarus: the domestic gas market and relations with Russia," in *Russian and CIS Gas Markets and their Impact on Europe*, ed. Simon Pirani (Oxford: Oxford University Press, 2009), 151, 157.

[141] Every figure but the Border prices in 2009 is estimated. Calculated values use the estimated values as inputs.

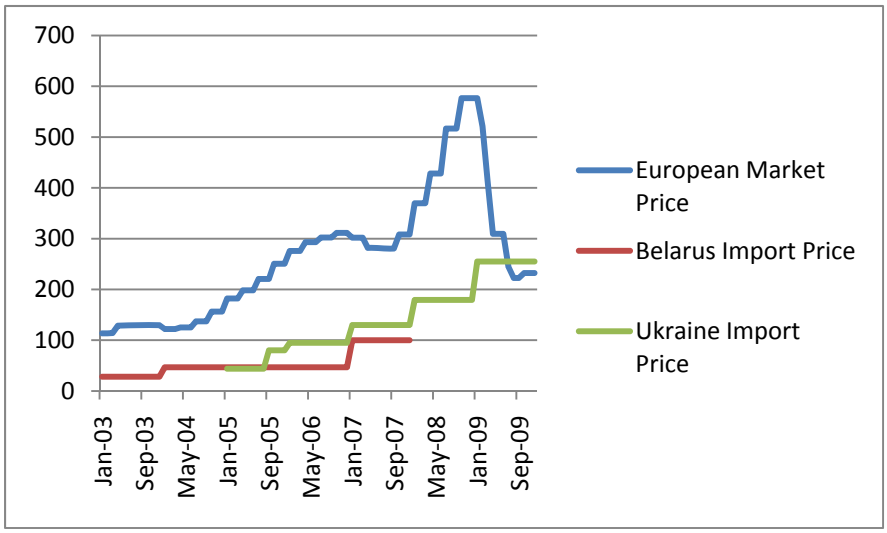
[142] Per the terms of the contract, this number is equal to 80% of the European border price for gas. I calculate this figure based on average 2009 price. Contract data from: Simon Pirani, Jonathan Stern, and Katja Yafimava, "The Russo-Ukrainian Gas Dispute of January 2009: A Comprehensive Assessment," *Oxford Institute for Energy Studies* (2009): 10.

[143] For Belarus, the first price is the Northern Lights Pipeline. The second price is the Yamal Europe pipeline.

**Table 2**

| Conflict | Belarus 2003-4 | Ukraine 2005-6 | Belarus 2006-7[144] | Ukraine 2007-8 | Ukraine 2008-9 |
|---|---|---|---|---|---|
| Percentage Price Differential between Average European Border Price and Import Price | 448.25% | 371.30% | 633.35% | 225.48% | 263.48% |
| **Russian Profit Increase from 1st to 2nd year of the conflict ($bn)[145]** | **0.36** | **1.29** | **1.03** | **1.96** | **4.11** |
| Political Unity for Importer | High | High | High | Low | Low |
| European Border Price Level (high/med/low)[146] | Low | Low[147] | Medium | Medium[148] | High |
| Expected Result for Russia | Neutral | Neutral | Positive | Neutral | Positive |
| Result for Russia | Neutral | Neutral | Positive | Neutral | Positive |

**Chart 1**




[144] The price data for this dispute comes from: Katja Yafimava, "Belarus: the domestic gas market and relations with Russia," in *Russian and CIS Gas Markets and their Impact on Europe*, ed. Simon Pirani (Oxford: Oxford University Press, 2009), 151, 157.

[145] Russian Profit Increase is a calculation. I find it by subtracting the increase in the Value of Transit Services from the increase in Total Value of Imports. For example, in the 2005-6 Ukraine case, I take: (5.06-3.2)-(2.06-1.49)

[146] To determine the border price level, I use the lowest and highest border prices between June 2003 and May 2009 to determine my upper and lower bounds. Then I divide the price range into three equal sections, which I term low, medium, and high.

[147] Price levels for Russia's disputes with Ukraine in 2005-6 fluctuated between two price levels over the 12 year span. Here, I measure the price at the height of the conflict.

[148] Price levels for Russia's disputes with Ukraine in 2007-8 fluctuated between two price levels over the 12 year span. Here, I measure the price at the height of the conflict.