The Effect of Economic Statecraft on Public Opinion: the case of the Russia-Ukraine gas disputes

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Abstract

Economic sanctions often fail to achieve their stated ends, and at times can even be counter-productive. The mechanisms that lead to these negative outcomes remain unclear in the literature on economic sanctions however. One prominent theory holds that sanctions lead to a rally-around-the-flag effect, which generates greater support for the targeted regime or policy than would otherwise arise, but testing this view at the individual level has not generally been possible due to data availability. This study takes advantage of an individual-level panel survey in Ukraine that covers the period during which a political dispute in 2005-2006 between Ukraine and the Russian Federation led to a cut in gas exports to Ukraine, and subsequently, dramatically increasing gas prices. The findings show that individuals directly affected by the gas supply issues were significantly more likely to change their views in a "pro-Western" direction following the dispute, and to support more liberal economic policies than individuals who were not directly affected. This effect was more pronounced for Ukrainian than Russian language speakers, suggesting that dimensions of both identity and economic harm can channel the impact of sanction policies on public opinion following the use of economic sanctions.

Keywords: Sanctions, Economic Statecraft, Ukraine, Russia, Gas Dispute

I – Introduction

Economic sanctions often fail to achieve their stated ends, and at times can even be counter-productive. The mechanisms that lead to these negative outcomes remain unclear in the literature on economic sanctions however. One prominent theory holds that sanctions lead to a rally-around-the-flag effect, which generates greater support for the targeted regime or policy than would otherwise arise. The role of identity and economic harm has also arisen in this arena, reflecting the broader disagreement in the literature on "economics vs. grievances" explanations for political views and actions.

Testing competing views regarding the mechanisms at play for individuals in a country targeted by sanctions has generally not been possible, however, mostly due to problems of data availability. The Ukrainian Longitudinal Monitoring Survey (ULMS) offers a unique opportunity to fill this gap. The survey was conducted over three waves between 2003 and 2007, and was administered to a nationally-representative sample of Ukrainian households in a panel design. In addition to gathering information on household infrastructure, the labor force, and consumption of some specific goods, the survey included political and economic opinion questions for individual household members, and gathered information on preferences regarding the future of Ukraine with respect to integration in regional political and economic bodies.

As one of the most import-dependent countries in the word for natural gas; trade restrictions, agreements, and negotiated prices in the gas industry are politically sensitive in Ukraine. Deeply integrated into the legacy Soviet gas distribution system, Ukraine has undergone several rounds of bitter dispute over gas pricing and transport with the Russian Federation and Gazprom, a gas extraction and sales company majority-owned by the Russian government. These escalating confrontations took place during a politically volatile period in Ukraine. Protests have twice led to the overthrow of Ukrainian governments since independence, and corruption allegations relating to negotiations over gas pricing have played a pivotal role in several national elections.

The disputes between Ukraine and Russia over gas supplies occurred alongside the expansion of Association Agreements (AA) between several Eastern European countries and the European Union (EU). As for other former-Soviet countries, the Russian government strongly discouraged Ukraine from signing an AA with the EU, and instead promoted membership in the Eurasian Customs Union it championed, alongside other former members of the Soviet Union. In treaty negotiations, low gas prices were offered by the Russian side to incentivize Ukraine and other countries to opt for the Eurasian Customs Union over EU membership or continued non-membership in either organization (Dragneva & Wolczuk, 2012).

One high-profile dispute eventually led Ukraine being cut off from Russian natural gas exports in January, 2006, and dramatic increases in gas prices throughout Ukraine began immediately thereafter. This case offers a unique opportunity to quantify the effect of aggressive trade policies on political opinions in a targeted country. Using a difference-in-differences approach, we analyze the changes in political opinion before and after Russia used its economic leverage in the gas market to affect political opinions in Ukraine. To anticipate the results, we find that individuals living in households which were connected to central heating and gas systems – and could therefore not easily substitute fuels or reduce consumption during disputes – were significantly more likely to change their opinions in support of Western-style political and economic systems.

In the following section, we briefly describe the recent political history of the two countries as it relates to the dispute, as well as the relationship between the national political climate in Ukraine and the gas industry. In section III, we describe gas consumption in Ukraine, and define subpopulations for which we may expect differential impacts of trade restrictions. Section IV reviews the literature on economic sanctions and highlights some of the open debates in the literature on which the results may shed additional light. Section V describes the data. Section VI describes the empirical approach and results, and section VII concludes.

II – Political Instability and Natural Gas in Ukraine

The breakup of the Soviet Union set the stage for resource confrontations between Russia and Ukraine. Because the gas system in the region was organized to accommodate the heating, industrial, and export needs of the Soviet Union as a whole, considerations were not taken to enable the straightforward parceling out of the system for the smaller economic units of the independent CIS countries. After separating in 1991, Ukraine remained reliant on gas imports from Russia, while Russia became dependent on Ukraine to transport gas to Europe for export.

There are two main players in the gas production, trade, and transport landscape in Russia and Ukraine, both of which are successors of the Soviet Ministry of Gas Industry, the largest gas extractor in the world in the early 1990s.[1] In 1989, the Ministry was converted into a corporation called Gazprom, though it remained under majority-government control. With independence in 1991, the Ukrainian government gained control of the company's assets in Ukraine, and created Ukrgazprom, a national oil and gas company. Ukrgazprom was reorganized and changed its name to Naftogaz in 1998, and, while remaining state-owned, was given a mandate to operate both gas distribution and transit in Ukraine. In 2013, about three

[1] A title the Russian firm still holds in 2015.

trillion cubic feet (Tcf) of natural gas flowed through Ukraine, about 16 percent of consumption in Europe that year.

The Russian branch of Gazprom was privatized in 1993, and shares were largely allocated to Russian citizens, though the Russian state maintained its ownership of about 40 percent of the company. In 2000, Vladimir Putin began reasserting government control over Gazprom, replacing the company's previous leadership with Dmitry Medvedev, then Putin's political campaign manager, and Alexei Miller, another past associate. In 2005, the Russian government further solidified its control over Gazprom by taking controlling positions in several of the company's subsidiaries. This overt control over the company is often used as evidence that Gazprom's actions can be interpreted as government policy.

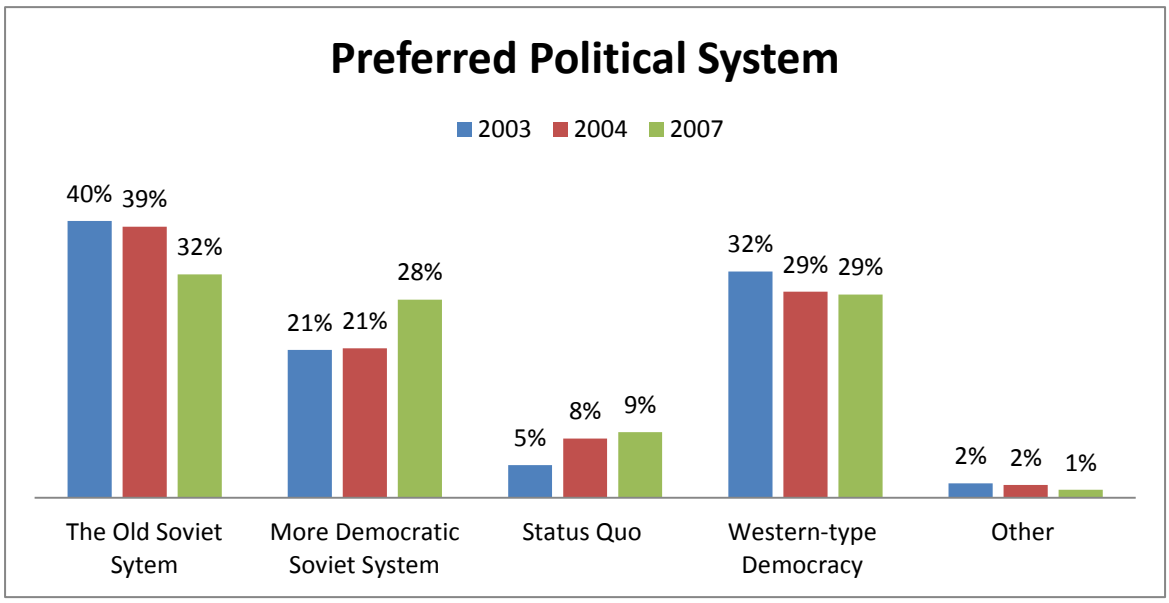
The Ukrainian-Russian relationship rapidly evolved in the early 2000s, but the stakes remained high in trade negotiations. The gas industry is economically significant for both Russia and Ukraine: Gazprom is Russia's largest company, and in 2012, the IMF estimated that direct budgetary and quasi-fiscal subsidies for natural gas alone accounted for nearly 5 percent of Ukraine's GDP on average. According to more recent analysis from the World Bank, this figure has since risen to about 7 percent of GDP.[2]

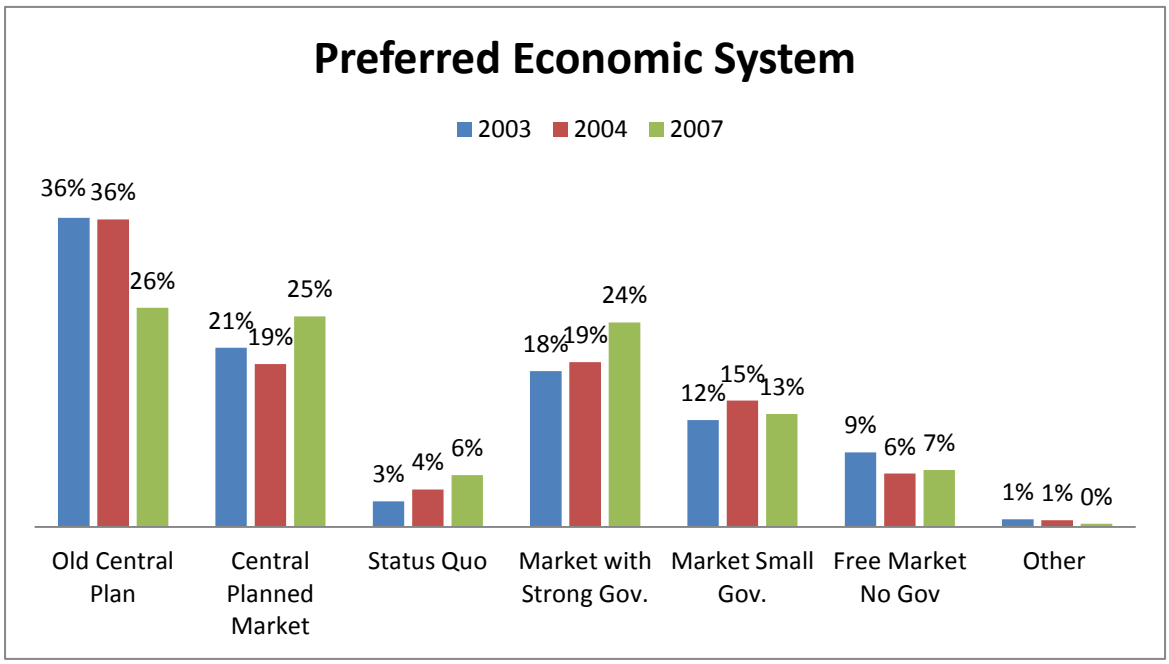
The Ukrainian political system was fractured from the outset, and as in Russia, the gas industry intersected with national politics from an early stage. Unlike in Russia however, Ukraine had no single dominant political party, and lacked national unity on issues such as language and foreign policy. A multi-party presidential system was formalized in 1996, and competitive elections often brought clashes between Western-oriented political parties (largely drawing support from the Western part of Ukraine) and Russian-oriented political parties (largely drawing support from the Eastern part of the country).

In 2004, a constitutional crisis erupted in Ukraine during an election which pitted opposition leader Viktor Yushchenko, viewed as supported by European and US officials, against the incumbent Prime Minister Viktor Yanukovych, who was openly supported by Russian President Vladimir Putin. Initial results indicated a victory for Yanukovych, drawing mostly from supporters in east, and especially in provinces such as Donetsk and Luhansk. The election was widely viewed as flawed, however, and popular protests, referred to as the "Orange

[2] WB Note: In 2012, residential subsidies amounted to about US$8.1 billion (UAH 65 billion), or 4.6 percent of GDP. Naftogaz provided a US$422 (UAH 3,378) subsidy for every tcm of gas used for residential district heat. In 2012, this subsidy amounted to about US$3.75 billion (UAH 30 billion), or 2.1 percent of GDP. The Government also provides direct budget support to district heating companies for the difference between their costs and revenues. The estimated size of this support has been about US$0.6 billion (5 UAH billion) annually, or over 0.3 percent of GDP.

Revolution," broke out in Kiev and other cities, ultimately forcing a rerun election. Viktor Yushchenko was declared the winner of the rerun election, and elected president, alongside Yulia Tymoshenko as Prime Minister.[3]





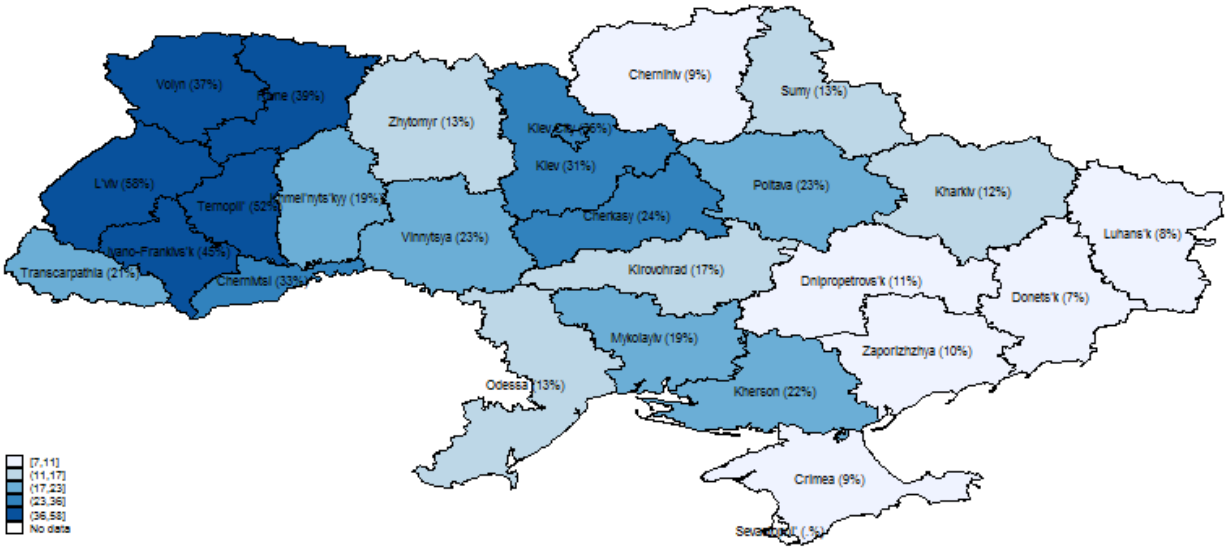
Supporters of each of the two leaders held strongly contrasting views on international agreements and several salient identity issues. President Yanukovych advocated for Russian

[3] In 2011, Tymoshenko was charged and found guilty of abuse of power and embezzlement relating to her 2009 gas imports contract negotiated with Putin. She was cleared of these charges in 2014.

language becoming a state language in Ukraine for instance, in contrast to pro-Yushchenko groups among whom this was generally deemed unacceptable at the time (Russian was spoken by about 30 percent in 2001, according to the national Census).

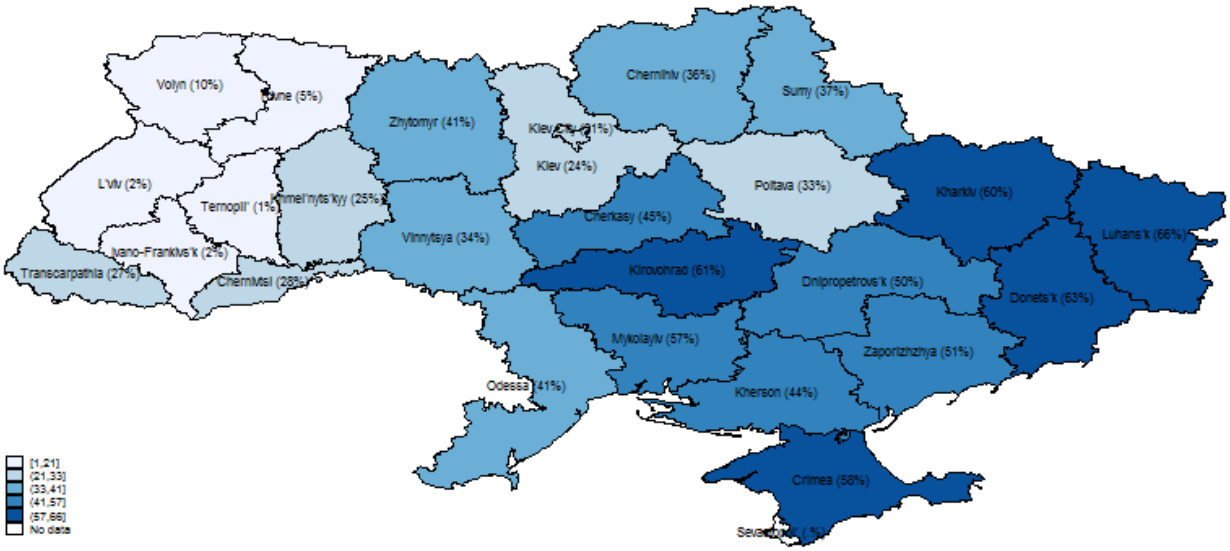
The large political parties in Ukraine were perhaps most deeply divided on the issue of market integration in the EU, potential NATO membership, and membership in the Eurasian Customs Union (EACU). In particular, signing on to an AA with the EU was seen as crucially polarizing issue (Figures 1 and 2).[4]

Figure 1 - Share of Respondents Preferring to Enter EU



[4] Indeed, the government's refusal to sign the AA in 2013 set off the Euromaidan protests that overthrew the government, and culminated in the larger Russian-Ukrainian conflict.

Figure 2 - Share of Respondents Preferring to Enter Union with Russia

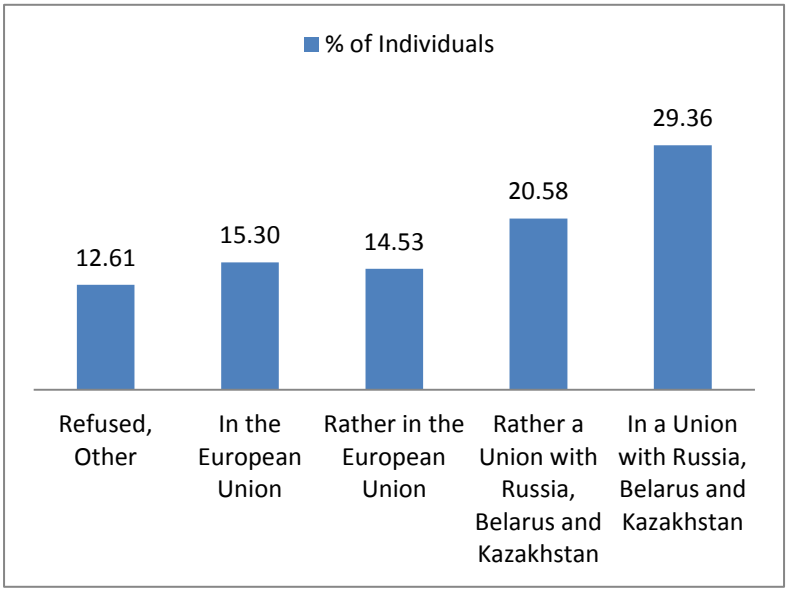


Negotiations with the EU had been conducted in an on-again off-again fashion since independence, but the broad outline of the AA was expected to include several controversial components. The most notable were Ukrainian convergence with the EU's Common Security and Defense Policy (CSDP), and an agreement on establishing a Deep and Comprehensive Free Trade Area, which would open up Ukrainian and European markets, in addition to harmonizing Ukrainian regulations with those of the EU over time. In contrast, the EACU was designed as an intermediate step on the path to creating the Eurasian Economic Union (EEU). As the ultimate objective of the EEU was deeper economic integration and political cooperation between former Soviet states following an alternative model to the EU system, joining either the EACU or agreeing to the AA precluded the other.

The electorate, like the parties, was divided on the issue of economic integration. However, according to the nationally representative data used in this study as summarized in figure 2, in 2007 the majority preferred a union with other former Soviet countries.[5]

[5] According to the EDB Integration Barometer, conducted by the Eurasian Development Bank of the Eurasian Customs Union, support in 2015 for joining the EAEU stood at just 19% in Ukraine

Figure 3: Preference of State Union, Source: ULMS 2007



Despite some popular support however, no political party in Ukraine in the early 2000s was prepared to join the EACU without reservations. As negotiations proceeded, Russia offered subsidized gas prices and other benefits to draw Ukraine (among others) onto the side of the EACU.

At that time, Ukraine had two main foreign sources of natural gas: Russia and Turkmenistan.[6] In early 2004 (before the Orange Revolution), Ukraine arranged for debt consolidation through a loan from Gazprom, and a stable supply and price for gas supplies from Turkmenistan. It was agreed that, through a third-party company, the Turkmen gas would transit through the Russian network. These agreements were put into jeopardy after the events surrounding the Orange Revolution in December 2004. Soon thereafter, Turkmenistan surprised both countries by cutting supplies and demanding new price negotiations affecting both Russia and Ukraine. Ukraine made a new agreement on quantity and price with Turkmenistan in early 2005, but by early that year, the Ukrainian-Russian trade relationship had soured dramatically (Stern, 2006).

A major point of contention between Gazprom and Naftogaz (and by extension, the Russian and Ukrainian governments) was the alleged theft of 7.8 Bcm of gas which Gazprom had deposited in Ukrainian storage the previous year (2004). Due to this, and several other open items of dispute, spoken agreements that had previously appeared to have resolved the many differences between the two countries were taken off the table (Stern, 2006). Negotiations began to further break down in 2005, and Gazprom moved to put pressure on Ukraine by

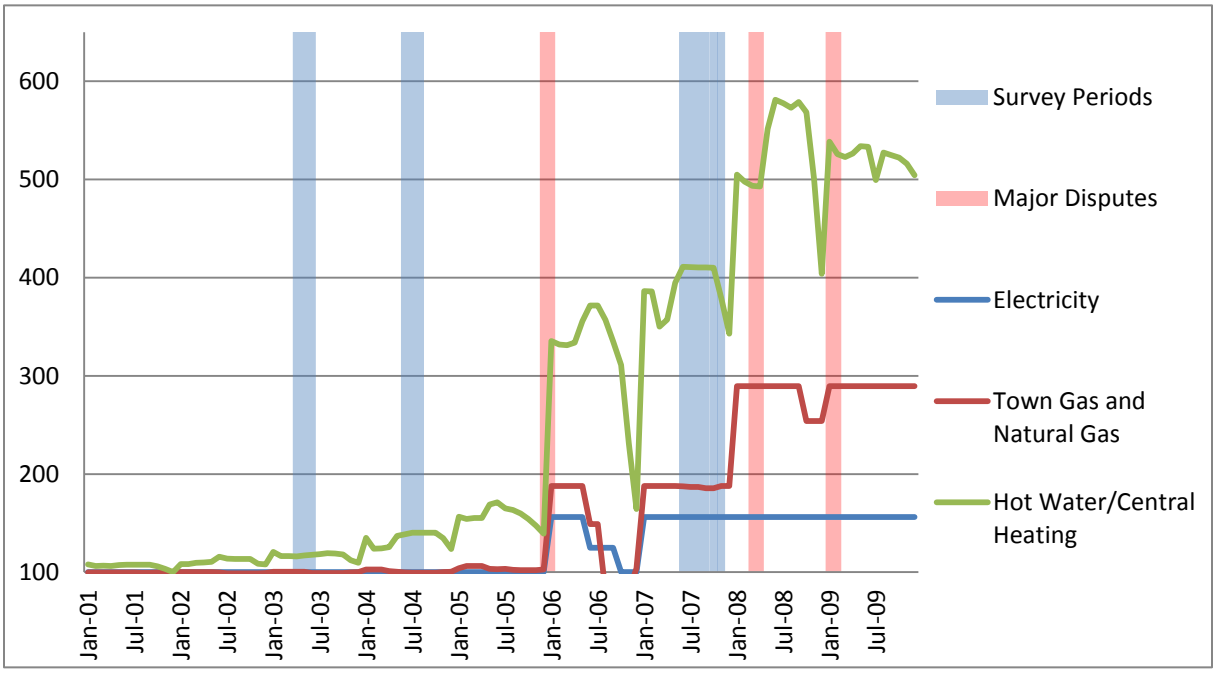
[6] Ukraine produces about 20% of its gas needs domestically.

demanding complete up-front payment for gas (rather than a system of in-kind hybrid payments with large rolling debts that prevailed before). During this time, Gazprom announced a broad objective to charge "market" or "European" prices throughout the system, including for Moldova, Ukraine and Georgia.[7] As the company's position in negotiations consolidated and a contract deadline at the end of December 2005 loomed, Gazprom also moved to corner the foreign gas supply to Ukraine in 2005. Citing a late-December announcement from the company, Stern (2006) recounts:

> Gazprom['s] press release revealed that the company had contracted for 30 Bcm of Turkmen gas in 2006 at a price of $65/mcm, with half of that volume to be delivered in the first quarter of the year. Given the capacity of the Central Asian gas network, this meant that Gazprom had purchased all available gas from Turkmenistan for the first quarter of 2006, leaving nothing for Ukraine.

By late December, the dispute had come to a head, and when Ukraine refused the Russian offer on the table in the last week of 2005, Gazprom cut supplies to Ukraine on January 1, 2006. Gas prices jumped dramatically in Ukraine, and despite a temporary resolution to the crisis several days later, prices continued to climb rapidly (though erratically) through 2007 (figure 4).

Figure 4: Prices for Heating, Electricity, and Gas in Ukraine: January 2001 = 100



[7] More leeway was given to countries that subsequently sold greater control of the gas transportation system to Gazprom, including Armenia and Belarus.

III – Gas Consumption in Ukraine

During the Russian-Ukrainian gas dispute, much of the gas exported to Ukraine was (and continues to be) used for heating. As the 2005-2006 crisis came to a head over the winter months, both the gas price increases and the dramatic-but-short-lived supply cut had particular salience for consumers in Ukraine.

Not all consumers were affected in the same way however. There are several common types of heating systems used by consumers in Ukraine, but for the purposes of the analysis that follows, the important distinction is whether a household uses a centralized or a distributed system. On central systems, substitution for gas heating (often provided by district heating companies) is either difficult or impossible. Households are charged for their connection regardless of individual use, and because such systems often do not meter individual households, in most cases there it is no simple way to reduce consumption when prices rise. In such cases, substituting for other fuels is also usually impractical.

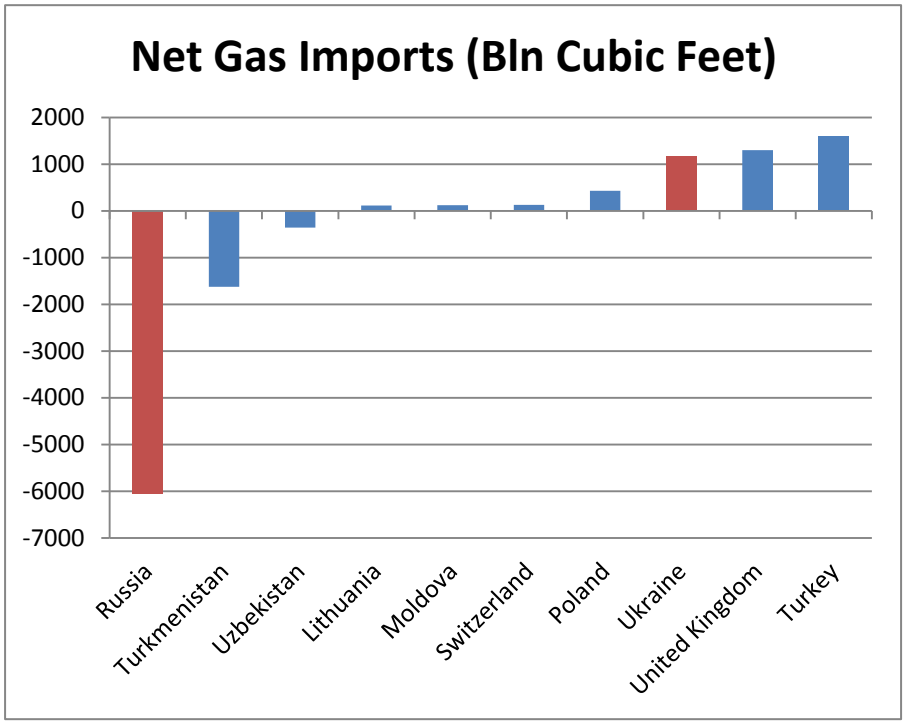
Households using non-centralized heating systems have a great deal more autonomy with respect to their consumption decisions however, particularly in terms of responses to price increases. For households that use primarily wood, electricity, coal, or liquefied gas that is purchased outside of the centralized system, options were available to cope with sudden cost increases. Indeed, for many such households, the gas crisis may have had little direct impact on their consumption at all.

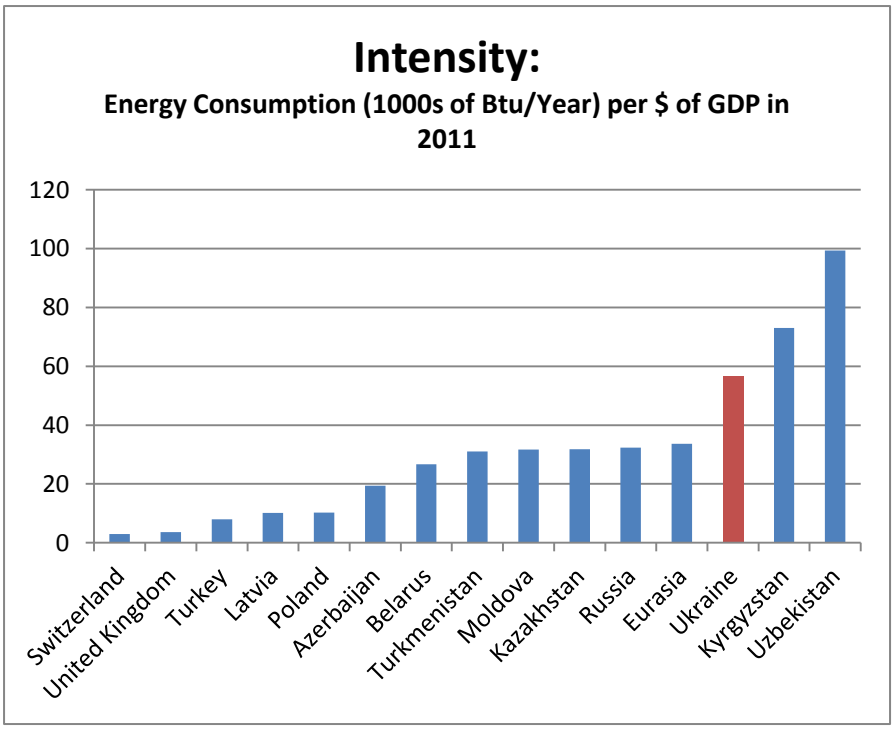
In the empirical section of this paper, we show that exposure to price increases (proxied by a connection to a centralized heating and/or gas system) had a substantial impact on the political opinions held by Ukrainians regarding regional economic integration and their preferred economic system. Households that were tied into a centralized heating system were significantly more likely to shift their opinions in a more pro-Europe, pro-market direction.

In light of these findings, it is interesting to note that, even in the midst of the dispute with Gazprom in 2005-2006, consumers paid remarkably low rates for gas in Ukraine. These low rates were the result of large direct and indirect government subsidies to consumers. But while the country's long history of government-managed prices on gas had led consumers to expect and adapt to low prices indefinitely, Ukraine was saddled with an increasingly large imbalance in receipts from, and outflows to, consumers.

Thus, despite high import dependence, cost, and inefficient infrastructure, Ukraine’s heating tariffs for consumers were 50 percent of those in Poland and 40 percent of those of Baltic

countries in 2012. On average, Ukrainian households paid around 20 percent of the full import price of gas in 2012 (WB Note) (Figures 1, 3 and 4).





Additional subsidies were also made directly to individual consumers. Several categories of people – particular professions, age groups, level of income, and exposure to the effects of Chernobyl, among others – received either subsidies or did not pay for their use of natural gas. These differences lead to additional variety in the level of exposure to the cost of gas across households.

The magnitude and prevalence of subsidies in Ukraine provides a partial explanation for the widespread use of gas for heating, despite the vulnerability to price volatility seen in the 2000s. In addition to legacy infrastructure and ease of use, government policy on subsidies hindered the transition to alternative heating options that would have led to greater resilience to the price shock by artificially encouraging the use of gas for heating and industry. However, given the large shifts in public opinion found in this study following the dispute, it is also clear that cutting gas subsidies to households was a move fraught with political risk.

IV – Trade as a Foreign Policy Tool

Trade relationships are often used as diplomatic leverage to influence foreign governments and actors. In extreme cases, countries break economic relationships, using economic sanctions[8] to bring about desired policy outcomes. The Soviet Union regularly used economic sanctions as foreign policy tools, and Russia has followed in those steps since the early 1990s.[9] For instance, the Soviet Union used economic sanctions in the hopes of bringing Yugoslavia closer to Soviet policy between 1948-1955, and followed a similar strategy with Finland (Hufbauer et al., 1990). One trait that these experiences share in common, however, is their lack of effectiveness. Both Yugoslavia and Finland did not prove amenable to Soviet trade pressure, and the Soviet sanctions were ultimately dropped before any warming of relations between those countries.

Indeed, an enduring finding in the empirical literature on such foreign policy instruments is the relative ineffectiveness of aggressive trade measures in general, and sanctions in particular, to bring about the policy preferences of the sender (Drezner, Schott, etc). Gary Hufbauer, Schott and Elliot (hereafter HSE) provide the largest and most-cited study promoting this view, which

[8] Sanctions are often defined as "deliberate, government-inspired withdrawal or threat of withdrawal, of customary trade or financial relations" (Hufbauer et. al., 1990). Though the Russian Government has never, to our knowledge, referred to the events in 2005 and 2006 as sanctions, the suspension of customary trade with Ukraine certainly took place. Given government control over Gazprom, there is also little doubt that the policy was government induced. In any case, whether the events can be categorizes as sanctions in this case is not central to the argument. The mechanisms are sufficiently similar to be illustrative of the potential effects of assertive trade policy.

[9] During the Cold War, the Soviet Union was second only to the United States in the number of times the country used sanctions against a foreign target.

has subsequently been replicated in various iterations (Hufbauer et. al., 1990). They show that although there are some specific contexts in which effectiveness increases, sanctions do not often bring about the desired outcomes of the sender.

Indeed, Pape (1997) argues that economic sanctions are basically not effective under any circumstances. He describes the HSE data in 1990, which contained 115 examples of sanction events. Of these, the original authors identified 40 cases as could be called "successful" on the part of the sending country. In contrast, Pape finds only 8 unequivocally successful cases identified in his re-analysis of the HSE data.

In the case of the Russia-Ukraine gas disputes however, some of the characteristics that have been shown to predict comparatively effective sanctions were present. For instance, economic sanctions are thought to be most effective when aimed against erstwhile "friends" and closest trading partners (Hufbauer et al., 1990). This undoubtedly characterizes the relationship between Russia and Ukraine leading up to the crisis.

Hufbauer et al., (1990) also argue that for countries to justify even a remote hope for success in cases of major political change, sender countries should form a near monopoly over trading relations with the target country (Hufbauer et al., 1990). Indeed, some of the actions taken by Russia suggest that policy makers were acting in just such a strategic fashion, in hopes of create a situation under which sanctions would be most effective. Gazprom's late 2005 move to corner the market on gas exports to Ukraine by purchasing all exports from Turkmenistan lines up particularly well with this reading of events.

And finally, sanctions are thought to be most effective when they incur significant costs on the target (Dashti-Gibson, Davis & Radcliff 1997; Drezner 1999). Given the size and importance of the gas industry in Ukraine, there can be no doubt that Russian trade policies would be felt.

IV.I – The Rally around the Flag Effect

The fundamentals of the Russian-Ukrainian bilateral relationship may provide and explanation for why, given the historical lack of effectiveness of sanctions for changing policies in targeted countries, Russia pursued the more aggressive route in its relationship with Ukraine. However, even given these apparent tailwinds, there were several reasons to expect that sanctions would not bring about the policy changes in Ukraine desired by the Kremlin, and indeed, should have been expected to push the country in the opposite direction.

There are several proposed explanations for this tendency towards a backlash from the target. One influential theory is that sanctions and other politically motivated trade policies lead to a "rally around the flag" effect: that sanctions lead to increased domestic support for embattled

leaders that are able to channel the fight against foreign sanctions into greater patriotism, nationalism, or general support for the political party in leadership.

According to this view, sanctions lead to stronger popular opposition to the sending country's policies, which in turn lowers the incentives for targeted policy elites to agree to the demands of the sender. Galtung (1967) for instance suggested that sanctions would be less effective in changing the behavior of the government of Rhodesia because sanctions would encourage a nationalistic sentiment. HSE similarly note that League of Nations sanctions against pre-World War II Italy encouraged national pride, and undermined the policy goals of the participating counties. Nooruddin (2002) argues that the rally around the flag effect is one of the principal reasons for the relative lack of success of sanctions to affect the policies of foreign governments. In sum, this dynamic is seen to ultimately embolden the leaders and policies that foreign governments seek to contain.

However, the mechanisms by which the rally around the flag effect operates have, to our knowledge, never been demonstrated at the individual level. Sanctions are rare, and data on the effects of sanctions are not often available at the individual or household-level. The Ukraine-Russia gas dispute offers a unique opportunity to identify changes in political and economic policy views at the individual level due to the impact of trade policies.

IV.II – Grievance or Economic Harm?

Another important question is whether the motivation for changing political and economic viewpoints following the use of sanctions is rooted in economic considerations, or in some other line of reasoning. One theory, following the reasoning of Nooruddin (2002), Galtung (1967) and Hufbauer et. al. (1990), is that the rally around the flag effect is primarily driven by patriotism and nationalism, that in turn drives political opinion in the target country away from the position of the sender, perhaps in spite of individual economic interest.

Alternatively, one could imagine that political opinions in such an environment are primarily the result of material "economic" harms suffered by individuals in the targeted country, rather than primarily via grievances that feed into greater nationalism. Western sanctions against Saddam Hussein's Iraq were broadly criticized along these lines, for instance. Rather than targeting the upper echelons of Iraq's elite policy makers, in that instance, senders launched sanctions across a wide spectrum of trade goods that directly harmed the wellbeing of the population at large.[10] Pape (1997) argues that the backlash to these policies empowered Saddam Hussein more than hindered him.

[10] For more examples of the direct effect of sanctions on wellbeing, see Barry (2000); Garfield, Devin & Fausey (1995); Dursun (2011)

These views yield predictions that can be tested directly. In a divided environment such as Ukraine in 2004-2007, there are two communities that, on average, perceived the questions of national and political identity differently. Russian speakers predominantly voted for Yanukovych in the 2004 elections and were comparatively more supportive of ties to Russia and the Eurasian Customs Union. Under the government that followed the Orange Revolution, agreements negotiated under the Yanukovych government fell apart, and were only replaced after the crisis in 2005 and lasting into 2006. Were perceptions of nationalism and grievance primarily driving political perspectives in this case, we would anticipate that Russian speakers would, on average, be less likely to change their political views in a pro-Western direction in light of the assertive trade policies applied by Russia. Indeed, in an extreme interpretation of the "nationalism" argument of Nooruddin () and (citation), one may even anticipate greater support for the integration with the Eurasian Customs Union, and related political views.

In contrast, Ukrainian speakers predominantly voted for Yushchenko and Tymoshenko, and were comparatively more supportive of an Association Agreement with the EU and for joining NATO before the gas dispute. Were perceptions of nationalism and grievance driving political perspectives in this case, one would expect that a political views that are more strongly anti-Russian, and more enthusiastically pro-Western.

In this study, we take advantage of individual survey data to investigate this question. We show that the Russia's politically significant trade policies affected household budgets in Ukraine, and in turn cause changes in policy preferences at the individual level. The results are consistent with theories of the rally around the flag effect, in this case, operating through the economic costs borne by individual households. However, national ties appear to either support or moderate these changes.

IV.III – Sanctions Targeting

The gas dispute between Russian and Ukraine also speaks to a broader debate in the literature on the targeting of economic sanctions. Especially following sanction programs in the 1990s, Sanctions that cut large swaths of the population off to trade came under increasing criticism on humanitarian and effectiveness grounds. Drezner (2003) goes so far as to say that the "comprehensive trade sanctions against Iraq have hung like a millstone around the practice of economic statecraft." Many scholars have since advocated for targeted or "smart" sanctions (Weiss 1999; Cortright and Lopez 2002, Brzoska 2003; Wallensteen and Staibano 2005). These views are largely due to the widely acknowledged failure of sanctions to materially change the course of political events in Iraq, despite depriving the country of between $175 billion and $250 billion in oil revenue (O'Sullivan, 2003) and leading to a 250-fold increase in food prices over the first five years of the sanctions regime (Drezner, 2011; Hoskins, 1997).

In contrast, the goal of using smart sanctions is to apply pressure on particular power brokers in a targeted society – raising the target's costs of noncompliance with the sender's objectives – while leaving the majority untouched. The most prominent country-wide examples of smart sanction initiatives include financial sanctions, asset freezes, travel bans, restrictions on luxury goods, and arms embargoes (Drezner, 2011).

However, targeted sanctions have attracted pushback and criticism as well. Cortright and Lopez (2002) for instance, argue that "comprehensive sanctions are more effective than targeted or selective measures." Drezner (2011) also notes that "there is no systematic evidence that smart sanctions yield better policy results vis-a-vis the targeted country." Left unsaid, is that no systematic evidence exists that broad and untargeted sanctions will push views in the target country in the desired direction.

In the case of the gas dispute between Ukraine and Russia, we have an example of something akin to a "dumb" or comprehensive trade restriction: trade policies in the gas market applied by Russia indiscriminately impacted households in Ukraine. While the effects were in some cases moderated by the structure of the gas market and individual differences in exposure of to the policy action, there was no targeting mechanism employed during the gas dispute.

This case thus provides an opportunity to study the effect of comprehensive trade restrictions on the views of the general population. Were outside economic pressure expected to push individuals to moderate or reverse their previous political opinions, this would indeed support the observations of Cortright and Lopez (2002) and Drezner (2011), among others, that smart sanctions leave potential levers of influence unexploited. If, on the contrary, the comprehensive gas trade restrictions on Ukraine produced a rally around the flag effect, greater evidence would be added in support of smart sanction approaches, and call into greater question the use of potentially counterproductive comprehensive trade restrictions for political ends.

IV.IV – Summary of Expected Effects

The results of this study speak to several debates drawn from the literature on economic sanctions. The following summarize a set of hypotheses that are empirically tested in the following section.

Hypothesis A: *If comprehensive trade restrictions were to generate a rally around the flag effect, one should expect that political views of those affected would, on average, move against the sender's policy preferences following the dispute.*

Hypothesis B: *If political views were expected to change in light of views on identity or grievances, and to manifest through nationalist or patriotic responses, Russian speakers would*

be expected to have more moderate or even opposite changes in views compared to Ukrainian speakers.

Hypothesis C: *If the economic harm of the trade restriction were to generate changes in political views, one should expect that respondents that experience direct economic harm would change political views more than those that experience less/indirect economic harm.*

Hypothesis D: *If comprehensive trade restrictions were expected to support the preferred policy objectives of the sender via "pressure from the ground-up" on the target government, one should expect that political views should move in support of the sending country's policy goals following the dispute.*

V – Data

The data used in the empirical section of this study are drawn from the Ukrainian Longitudinal Monitoring Survey. The survey sample was nationally representative of households in Ukraine, and primarily intended to assess working conditions in the country. The survey was implemented by the Institute for the Study of Labor (IZA), and included 4055 households, representing a total population in Ukraine of approximately 46.51 million in 2007. The results described in the empirical section of this paper are weighted for representativeness of the national population of Ukraine. In the following analysis, information from the 2003, 2004, and 2007 waves is used in a panel design.

Responses were gathered at two levels using separate instruments: (i) a household-level questionnaire, and (ii) an individual-level questionnaire, completed by respondents of working age. Each of the modules was available in Ukrainian and Russian Languages. The questionnaire included a module on political views in each round, though the 2007 round contains more detail, and subset of the uniquely 2007 questions is analyzed in the following analysis for that year only. Appendix A provides the questions used for the analysis that follows.

The first round of the survey in 2003 included 8641 respondents. Of that total, 6412 respondents were subsequently interviewed in 2004 (though the total number of respondents was 6953, reflecting growth in the sample as individuals aged into the individual response section of the survey). Appendix B reports the reasons for non-response described in the accompanying materials for the ULMS 2004 wave. Among the original sample, 5,109 were interviewed in both 2003 and 2007, and 4921 were interviewed in both 2004 and 2007. For the analysis of changes over the period from 2004-2007, it is essential that the respondent was interviewed at least once in 2003 or 2004, and again in 2007. The number of individuals meeting these criteria total 5,470. However, to ensure comparability, responses from only one

previous round can be used for any single comparison (either 2003 or 2004). A total of 4,892 respondents were available in both 2004 and 2007, and provided valid responses. A robustness analysis taking attrition into account is conducted in subsection VI.III.

On questions regarding political topics, the survey experienced non-trivial item non-response. To investigate the impact of non-response on the estimates that follow, additional analysis is conducted (i) removing cases of non-response in either 2007 or previously, and (ii) investigating the effect of changes from non-response to response. The results of these analyses are also reported in subsection VI.III.

VI – Empirical Approach and Results

Because only a subset of the questions are available for all years, questions that compare one's own response in the past to responses at a later date are limited to those questions that were maintained from 2004 to 2007. These questions focus on views of the respondent's preferred political and economic systems for Ukraine, ranging on a spectrum from "Western-style" views on one end to "old Soviet-style" on the other.

There are three primary variables of interest in the analysis that follows: (i) whether the respondent resides in a household connected to a centralized heating system (or, alternatively, a centralized gas system), (ii) whether the respondent prefers to speak Russian or Ukrainian, and (iii) whether the household receives government subsidies for gas consumption.

VI.I – Panel Variation

The central objective of the following estimations is to explain the extent to which respondents change their political opinions given information on their individual characteristics and exposure to trade restrictions. Some individuals were more directly affected by Russian Gas cuts than others, either due to residing in a household connected to central heating or gas system, or due to a lack of access to government subsidies.

Certain political views are also more dominant among Ukrainian-speaking individuals than Russian-speaking ones. Insofar as grievances or national ties inform the views of individual respondents, these should be apparent by including the respondent's language as a proxy. In all cases however, insofar as economic harms of sanctions drive change in political views, one would expect that those household most directly affected by sanctions to be those with the strongest change in political opinions.

This question can be understood as a statistical classification problem: given previously observed characteristics, which viewpoint will the respondent hold in the present? To measure

this relation, we condition on a respondent's previous response $(t-1)$ and estimate the likelihood the respondent to provide any of the different responses available to the same question in 2007 (t). More precisely, we employ a multinomial logistic regression of the type:

$$f(k,i) = \beta_{0,k} + \beta_{1,k_{t-1}} x_{1,i} + \beta_{2,Russian} x_{2,i} + \beta_{3,Cent\_Heat} x_{3,i} + \cdots + \epsilon_k \qquad Eq.1$$

Where k refers to the response outcome, i refers to the individual, $x_{1,i}$ refers to the view recorded in the previous round of the survey (2004), $x_{2,i}$ refers to a dummy variable equal to one if the respondent i claims Russian ethnicity, and $x_{3,i}$ refers to a dummy variable equal to one if respondent i is a resident of a household served by a centralized heating system.

Regressions of this type are interpreted by comparisons across groups. As such, one category of response is needed as a base against which comparisons are made. In all cases described, use the most popular "old soviet" response as the base category, for ease of interpretation. Because selection in survey participation took place at the household level, rather than the individual level, standard errors are clustered by household.

For robustness, an alternative variable of interest – a connection to a centralized gas system – is also substituted into $Eq\ 1$ in the place of the centralized heating dummy variable.

The results of these estimations are reported in tables 1 - 4. They suggest that respondents residing in a household connected to either a central gas or a central heating system were significantly more likely to change their preference towards "Western" style systems, in comparison to preferences for the Soviet-style system. This was more strongly the case for Ukrainian speakers than for Russian speakers. For instance, Russian speakers were less likely to support a market-style economy with a small government than Ukrainian speakers, but even among Russian speakers, those connected to a centralized system were significantly more likely to support a reformed and more market-oriented system. Those connected to a centralized system were also more likely to change their views in support of Western-style democracy, as well as other more democratic alternatives.

Although not statistically significant in most cases analyzed, the coefficient for receiving subsidies for gas consumption was uniformly negative.

Table 1 - Preference of Economic System (Controlling for Past Response)

	Base Category = Prefer Old Soviet System					
	Modern Form of Central Planning	Free Market and no Gov. Intervention	Market Economy with Small Gov.	Market with Strong Gov.	The Econ. System Today	No Response
Central Gas System (2004)	0.552***	0.604***	0.662***	0.732***	0.400**	0.434***
	(0.131)	(0.207)	(0.178)	(0.142)	(0.204)	(0.131)
Speak Russian	0.212	-0.266	-0.313*	-0.014	0.230	-0.362***
	(0.131)	(0.197)	(0.167)	(0.140)	(0.211)	(0.131)
Receive Gas Subsidy	-0.182	-0.207	-0.069	-0.085	-0.451*	-0.183
	(0.143)	(0.254)	(0.197)	(0.160)	(0.274)	(0.153)
Per Capita HH Income	-0.000	0.000	0.000	0.000	0.000	-0.001***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Male == 1	0.109	0.171	0.303**	0.120	-0.119	-0.169*
	(0.096)	(0.153)	(0.120)	(0.101)	(0.148)	(0.101)
Household Size	0.068	0.258***	0.159**	0.122***	0.148**	0.090*
	(0.045)	(0.066)	(0.066)	(0.047)	(0.068)	(0.047)
Age	-0.013***	-0.028***	-0.027***	-0.022***	-0.025***	-0.025***
	(0.005)	(0.008)	(0.007)	(0.005)	(0.008)	(0.005)
Past Response (t-1)						
Modern Central Planning	0.769***	0.994***	1.232***	1.069***	0.631**	0.905***
	(0.153)	(0.351)	(0.231)	(0.184)	(0.289)	(0.175)
Market/ No Gov. Intervention	1.121***	3.417***	2.798***	2.108***	2.454***	1.535***
	(0.356)	(0.410)	(0.378)	(0.343)	(0.433)	(0.351)
Market with Small Gov.	1.084***	2.873***	3.040***	2.305***	1.818***	1.614***
	(0.255)	(0.353)	(0.312)	(0.260)	(0.359)	(0.264)
Market with Strong Gov.	0.758***	2.231***	2.225***	1.577***	0.848***	0.962***
	(0.180)	(0.302)	(0.234)	(0.190)	(0.307)	(0.191)
The Econ. System Today	0.346	1.184**	1.842***	1.326***	1.184***	1.013***
	(0.318)	(0.529)	(0.366)	(0.322)	(0.458)	(0.333)
Other Economic System	0.792	1.457	2.765***	1.262	0.298	0.809
	(1.018)	(1.250)	(0.878)	(0.867)	(1.099)	(0.888)
No Response	0.726***	1.681***	1.729***	1.454***	1.360***	1.511***
	(0.148)	(0.297)	(0.227)	(0.171)	(0.245)	(0.148)
Number of observations	4,877	4,877	4,877	4,877	4,877	4,877
Adjusted R2	0.074	0.074	0.074	0.074	0.074	0.074

notes: .01 - ***; .05 - **; .1 - *; Standard Errors Clustered at the household level; Settlement Size (groupings 1-6) and constant not shown

Table 2 - Preference of Political System (Controlling for Past Response)

Base Category = Prefer Old Soviet System

	System which exists today	A More Democratic Soviet System	Western-Type Democracy	Other	No response
Central Gas System (2004)	0.124	0.246**	0.641***	0.168	0.401***
	(0.176)	(0.118)	(0.133)	(0.448)	(0.127)
Speak Russian	0.064	0.145	-0.698***	-0.490	-0.249**
	(0.177)	(0.118)	(0.132)	(0.481)	(0.125)
Receive Gas Subsidy	-0.351	-0.079	-0.096	-0.113	-0.097
	(0.234)	(0.132)	(0.152)	(0.467)	(0.151)
Per Capita HH Income	0.000	0.000	-0.000	-0.000	-0.000**
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Male == 1	0.092	0.103	0.315***	1.045***	0.002
	(0.128)	(0.088)	(0.095)	(0.344)	(0.095)
Household Size	0.131**	0.015	0.113**	0.084	0.098**
	(0.062)	(0.040)	(0.044)	(0.138)	(0.043)
Age	-0.026***	-0.014***	-0.029***	-0.017	-0.027***
	(0.007)	(0.005)	(0.005)	(0.021)	(0.005)
Past Response (t-1)					
System which exists today	-1.906***	-0.623***	-2.045***	-0.329	-1.179***
	(0.282)	(0.226)	(0.238)	(1.141)	(0.219)
A More Democratic Soviet System	-1.035***	0.163	-0.802***	0.667	-0.309
	(0.280)	(0.235)	(0.240)	(1.146)	(0.235)
Western-Type Democracy	0.325	0.425	0.872***	2.510**	0.533**
	(0.289)	(0.260)	(0.246)	(1.049)	(0.247)
Other	-0.483	0.471	0.083	2.486*	0.401
	(0.658)	(0.524)	(0.498)	(1.314)	(0.496)
No response	-0.690**	-0.139	-0.573**	1.298	0.140
	(0.277)	(0.245)	(0.237)	(1.060)	(0.231)
Number of observations	4,892	4,892	4,892	4,892	4,892
Adjusted R2	0.095	0.095	0.095	0.095	0.095

notes: .01 - ***; .05 - **; .1 - *; Standard Errors Clustered at the household level; Settlement Size (groupings 1-6) and constant not shown

The panel dimension also allows for an investigation into the individual level characteristics that predict changing one's opinion at all. In tables 5 and 6, results from a probit regression on a dummy variable that takes a value of one if the respondent changed their view, and is equal to zero otherwise. A connection to the central gas or heating system is positively correlated the changing one's view regarding the best economic system for Ukraine (figure..). A connection

was not a statistically significant predictor for changing one's view in general regarding political systems, however, except perhaps among Russian-speakers (figure.., columns 5-8).

	Change View on Econ. Sys.				Change View on Econ. Sys. (Russian)			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Central Gas	0.171***	0.180***	0.179***	0.177***	0.124*	0.137**	0.138**	0.137**
2004	(0.050)	(0.050)	(0.050)	(0.050)	(0.068)	(0.069)	(0.068)	(0.069)
Russian	0.074	0.077	0.076	0.073				
Speaking	(0.049)	(0.049)	(0.049)	(0.050)				
Age	-0.009***	-0.008***	-0.008***	-0.008***	-0.013***	-0.012***	-0.012***	-0.012***
	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)
Receive		-0.090	-0.087	-0.085		-0.111	-0.107	-0.107
Subsidy		(0.057)	(0.057)	(0.057)		(0.079)	(0.079)	(0.079)
Male			0.070	0.068			0.084	0.081
			(0.043)	(0.043)			(0.057)	(0.056)
PC Income				0.000				0.000
				(0.000)				(0.000)
Obs.	4,898	4,898	4,898	4,892	2,573	2,573	2,573	2,570

notes: .01 - ***; .05 - **; .1 - *; Standard Errors Clustered at the household level; Constant, and Settlement Size (groupings 1-6) not shown

	Change View on Polit. Sys.				Change View on Polit. Sys. (Russian)			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Central	0.062	0.071	0.071	0.069	0.104	0.120*	0.120*	0.118*
Gas 2004	(0.048)	(0.049)	(0.049)	(0.049)	(0.066)	(0.066)	(0.066)	(0.066)
Russian	0.047	0.050	0.050	0.055				
Speaking	(0.049)	(0.049)	(0.049)	(0.049)				
Age	-0.007***	-0.006***	-0.006***	-0.006***	-0.008***	-0.007***	-0.007***	-0.007***
	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)
Receive		-0.092*	-0.091*	-0.092*		-0.140*	-0.138*	-0.140*
Subsidy		(0.055)	(0.055)	(0.055)		(0.074)	(0.074)	(0.074)
Male			0.018	0.018			0.038	0.040
			(0.041)	(0.041)			(0.056)	(0.056)
PC				-0.000				-0.000
Income				(0.000)				(0.000)
Obs.	4,898	4,898	4,898	4,892	2,573	2,573	2,573	2,570

notes: .01 - ***; .05 - **; .1 - *; Standard Errors Clustered at the household level; Constant, and Settlement Size (groupings 1-6) not shown

VI.I – Cross-Sectional Variation

The 2007 questionnaire included a richer module on political views. The questions allow descriptive cross-sectional analyses to be undertaken. We estimate the following regression model using simple probit on a positive outcome in the response, including a dummy for

linguistic group and the type of gas or heating connection the household reported using in 2004. Estimates are first reported for the entire sample (columns 1-4) and subsequently for the Russian-speaking subgroup only (columns 5-8).

Though these relationships should not be interpreted as causal (the analysis could easily suffer from missing variable bias, or other problems) the results are broadly consistent with the panel estimates, and suggest that individuals residing in households that are connected to a central gas or heating system are significantly more likely to support joining the EU. Speaking Russian is negatively associated with preferring entry into the EU, though even among the Russian-speaking subsample, respondents connected to a central gas or heating system are substantially more likely to support EU membership than the alternatives. Individuals that received subsidies for gas consumption were significantly less likely to support entering the EU than those without subsidies.

	Prefer to Enter EU				**Prefer to Enter EU (Russian)**			
	(1)	**(2)**	**(3)**	**(4)**	**(5)**	**(6)**	**(7)**	**(8)**
Central Gas 2004	0.461***	0.478***	0.494***	0.492***	0.317***	0.356***	0.370***	0.369***
	(0.062)	(0.063)	(0.064)	(0.064)	(0.096)	(0.097)	(0.098)	(0.098)
Russian Speaking	-0.760***	-0.756***	-0.778***	-0.782***	.	.	.	.
	(0.060)	(0.059)	(0.060)	(0.060)	.	.	.	.
Receive Subsidy		-0.163**	-0.142**	-0.140**		-0.287***	-0.270**	-0.270**
		(0.068)	(0.068)	(0.068)		(0.109)	(0.109)	(0.109)
Male			0.386***	0.382***			0.318***	0.311***
			(0.040)	(0.040)			(0.055)	(0.055)
PC Income				0.000				0.000
				(0.000)				(0.000)
Obs.	5,220	5,220	5,220	5,213	2,788	2,788	2,788	2,784

notes: .01 - ***; .05 - **; .1 - *; Standard Errors Clustered at the household level; Constant, and Settlement Size (groupings 1-6) not shown

	Prefer to Enter EU				**Prefer to Enter EU (Only Russian)**			
	(1)	**(2)**	**(3)**	**(4)**	**(5)**	**(6)**	**(7)**	**(8)**
Central Heat 2004	0.246***	0.250***	0.258***	0.254***	0.287***	0.301***	0.311***	0.307***
	(0.061)	(0.061)	(0.061)	(0.061)	(0.096)	(0.095)	(0.096)	(0.096)
Russian Speaking	-0.796***	-0.794***	-0.816***	-0.821***	.	.	.	.
	(0.060)	(0.060)	(0.060)	(0.060)	.	.	.	.
Receive Subsidy		-0.116*	-0.096	-0.093		-0.255**	-0.237**	-0.236**
		(0.067)	(0.067)	(0.067)		(0.107)	(0.107)	(0.107)

Male			0.375***	0.371***			0.313***	0.306***
			(0.040)	(0.040)			(0.055)	(0.055)
PC Income				0.000				0.000
				(0.000)				(0.000)
Obs.	5,220	5,220	5,220	5,213	2,788	2,788	2,788	2,784

notes: .01 - ***; .05 - **; .1 - *; Standard Errors Clustered at the household level; Constant, and Settlement Size (groupings 1-6) not shown

In some sense, entry into an economic union including Russia is the mirror image of the results for the supporting closer integration with the EU. Individuals residing in households that were connected to the central gas and/or heating system were substantially less likely to support joining Russia in an economic union. Russian-speakers were substantially more likely to support economic integration with Russia in general, but even among Russian-speakers, a connection to the central heating or gas system was negatively associated with such a union. Individuals that received subsidies for gas consumption were significantly more likely to support entering a union with Russia than those without subsidies.

	Prefer Enter Eurasian Union				**Prefer Enter Eurasian Union (Russian)**			
	(1)	**(2)**	**(3)**	**(4)**	**(5)**	**(6)**	**(7)**	**(8)**
Central Gas 2004	-0.436***	-0.448***	-0.447***	-0.447***	-0.305***	-0.326***	-0.322***	-0.321***
	(0.055)	(0.055)	(0.056)	(0.056)	(0.075)	(0.075)	(0.076)	(0.076)
Russian Speaking	0.835***	0.831***	0.832***	0.835***	.	.	.	.
	(0.053)	(0.053)	(0.053)	(0.053)	.	.	.	.
Receive Subsidy		0.102*	0.120**	0.118**		0.151*	0.176**	0.175**
		(0.060)	(0.060)	(0.060)		(0.082)	(0.083)	(0.082)
Male			0.287***	0.289***			0.351***	0.357***
			(0.038)	(0.038)			(0.051)	(0.052)
PC Income				-0.000				-0.000
				(0.000)				(0.000)
Obs.	5,220	5,220	5,220	5,213	2,788	2,788	2,788	2,784

notes: .01 - ***; .05 - **; .1 - *; Standard Errors Clustered at the household level; Constant, and Settlement Size (groupings 1-6) not shown

	Prefer Enter Eurasian Union				**Prefer Enter Eurasian Union (Russian)**			
	(1)	**(2)**	**(3)**	**(4)**	**(5)**	**(6)**	**(7)**	**(8)**
Central Heat 2004	-0.198***	-0.200***	-0.199***	-0.198***	-0.224***	-0.230***	-0.229***	-0.226***
	(0.054)	(0.054)	(0.054)	(0.055)	(0.074)	(0.074)	(0.074)	(0.075)
Russian	0.869***	0.867***	0.868***	0.871***	.	.	.	.

Speaking	(0.053)	(0.053)	(0.054)	(0.054)	.	.	.	.
Receive Subsidy		0.051	0.069	0.068		0.112	0.138*	0.137*
		(0.060)	(0.060)	(0.060)		(0.084)	(0.083)	(0.083)
Male			0.288***	0.290***			0.353***	0.359***
			(0.038)	(0.038)			(0.052)	(0.052)
PC Income				-0.000				-0.000
				(0.000)				(0.000)
Obs.	5,220	5,220	5,220	5,213	2,788	2,788	2,788	2,784

notes: .01 - ***; .05 - **; .1 - *; Standard Errors Clustered at the household level; Constant, and Settlement Size (groupings 1-6) not shown

Interestingly, the patterns extend to the interest respondents reported in participating in elections. Among the general population, Russian-speakers were significantly more likely to indicate that they would participate in upcoming elections. For the entire sample, a connection to a central gas or heating system was not associated with a remarkable preference in participating in elections. However, interest in participating in elections was remarkably lower among the Russian speakers that were connected to central gas or heating systems, in comparison to other Russian-speakers.

	Participate in Elections				**Participate in Elections (Russian)**			
	(1)	**(2)**	**(3)**	**(4)**	**(5)**	**(6)**	**(7)**	**(8)**
Central Gas 2004	-0.013	-0.020	-0.020	-0.031	-0.291***	-0.294***	-0.295***	-0.306***
	(0.052)	(0.052)	(0.052)	(0.052)	(0.072)	(0.074)	(0.074)	(0.073)
Russian Speaking	0.186***	0.183***	0.178***	0.157***	.	.	.	.
	(0.052)	(0.052)	(0.052)	(0.052)	.	.	.	.
Receive Subsidy		0.062	0.076	0.083		0.026	0.042	0.042
		(0.060)	(0.060)	(0.060)		(0.083)	(0.083)	(0.084)
Male			0.316***	0.309***			0.310***	0.303***
			(0.036)	(0.036)			(0.046)	(0.047)
Per Capita Income				0.000***				0.000***
				(0.000)				(0.000)
Obs.	5,882	5,882	5,882	5,875	3,045	3,045	3,045	3,041

notes: .01 - ***; .05 - **; .1 - *; Standard Errors Clustered at the household level; Constant, and Settlement Size (groupings 1-6) not shown

	Participate in Elections				**Participate in Elections (Russian)**			
	(1)	**(2)**	**(3)**	**(4)**	**(5)**	**(6)**	**(7)**	**(8)**
Central Heat 2004	-0.013	-0.016	-0.015	-0.030	-0.155**	-0.155**	-0.152**	-0.170**
	(0.051)	(0.052)	(0.052)	(0.052)	(0.071)	(0.071)	(0.072)	(0.071)
Russian Speaking	0.186***	0.185***	0.179***	0.158***	.	.	.	.
	(0.053)	(0.053)	(0.053)	(0.053)	.	.	.	.

Receive Subsidy		0.060	0.074	0.081		-0.012	0.004	0.003
		(0.059)	(0.059)	(0.060)		(0.082)	(0.082)	(0.083)
Male			0.316***	0.309***			0.309***	0.301***
			(0.036)	(0.036)			(0.046)	(0.047)
Per Capita Income				0.000***				0.000***
				(0.000)				(0.000)
Obs.	5,882	5,882	5,882	5,875	3,045	3,045	3,045	3,041

notes: .01 - ***; .05 - **; .1 - *; Standard Errors Clustered at the household level; Constant, and Settlement Size (groupings 1-6) not shown

VI.III – Robustness

Base Category = Prefer Old Soviet System

	Modern Form of Central Planning	Free Market and no Government Intervention	Market Economy with Small Government	Market with Strong Government	The Economic System Today
Central Heating System (2004)	0.460***	0.229	0.652***	0.686***	0.354
	(0.146)	(0.262)	(0.186)	(0.159)	(0.216)
Speak Russian	0.196	-0.209	-0.181	-0.029	0.279
	(0.144)	(0.228)	(0.184)	(0.156)	(0.255)
Receive Gas Subsidy	-0.291*	-0.449	-0.352*	-0.211	-0.471
	(0.149)	(0.278)	(0.205)	(0.172)	(0.292)
Per Capita HH Income	-0.000	0.000	0.000	0.000	0.000*
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Male == 1	0.064	0.156	0.327**	0.166	-0.184
	(0.108)	(0.174)	(0.141)	(0.115)	(0.168)
Household Size	0.126**	0.325***	0.190***	0.150***	0.292***
	(0.050)	(0.077)	(0.067)	(0.054)	(0.081)
Past Response (t-1)					
Modern Form of Central Planning	0.812***	1.082***	1.314***	1.151***	0.702**
	(0.154)	(0.355)	(0.234)	(0.187)	(0.293)
Free Market/ No Gov. Intervention	1.248***	3.646***	2.990***	2.313***	2.640***
	(0.362)	(0.411)	(0.386)	(0.351)	(0.427)
Market with Small Government	1.188***	3.106***	3.248***	2.493***	2.058***
	(0.256)	(0.352)	(0.313)	(0.264)	(0.356)
Market with Strong Government	0.797***	2.349***	2.315***	1.679***	0.984***
	(0.181)	(0.305)	(0.233)	(0.190)	(0.309)
The Economic System Today	0.428	1.342***	2.004***	1.471***	1.272***
	(0.314)	(0.520)	(0.361)	(0.316)	(0.457)
Other Economic System	0.792	1.317	2.759***	1.372*	0.284
	(0.965)	(1.238)	(0.813)	(0.815)	(1.068)
Number of observations	3,004	3,004	3,004	3,004	3,004
Adjusted R2	0.093	0.093	0.093	0.093	0.093

notes: .01 - ***; .05 - **; .1 - *; Standard Errors Clustered at the household level; Settlement Size (groupings 1-6) and constant not shown

VII – Conclusion

The results provide suggestive evidence that shed light on the hypotheses posed in section IV.

Hypothesis A: *If comprehensive trade restrictions were to generate a rally around the flag effect, one should expect that political views would move against the sender's policy preferences following the dispute.*

The results appear to support the view that trade restrictions provoked a rally around the flag effect in this case. Individuals that were more exposed to the effect of trade restrictions were significantly more likely to change their view regarding more "Western-oriented" institutions, including both economic and political systems. Suggestive, but less conclusive evidence points to an association between experience of (or vulnerability to) adverse impacts from the trade policies of Russia were more likely to support joining the EU, and less likely to support joining an economic union with Russia. This reading of the evidence is bolstered by the negative relationship between subsidies for gas consumption and views on reforms for more Western-style institutions.

Hypothesis B: *If political views were expected to change in light of views on identity or grievances, and to manifest through nationalist or patriotic responses, Russian speakers would be expected to have more moderate or even opposite changes in views compared to Ukrainian speakers*

The results also provide support for the view that identity or grievance considerations can impact the extent to which the direct economic effect is expressed in political views. Russian speakers were less likely to change their views in support of Western-style institutions than Ukrainian speakers. However, even among Russian speakers, the economic effect appears to have led to sentiments for more Western-style institutions. Cross-sectional regressions suggest that support for joining the EU was greater among those more affected by Russian gas trade policy. Intriguingly, Russian-speakers that were more affected economically were less likely to report that they would participate in upcoming elections, in comparison to other Russian-speakers. This may indicate that events that had affected Russian-speakers in a personal way reduced political engagement among this subsample.

Hypothesis C: *If the economic harm of the trade restriction were to generate changes in political views, one should expect that respondents that experience direct economic harm would change political views more than those that experience less/indirect economic harm*

The results suggest a strong relationship between direct economic harm and changes in views, in this case, against those of those of the sender. Greater exposure to an economic shock (after

gas was cut off, and as prices rose dramatically) was associated with significant changes in opinion regarding political and economic systems, in the direction of pro-Western institutions. Cross-sectional analysis likewise suggest that individuals that were personally exposed to the economic consequences of Russia's trade policy actions were more likely to support greater integration with the EU and were less likely to support greater economic integration with Russia.

Hypothesis D: *If comprehensive trade restrictions were expected to support the preferred policy objectives of the sender via "pressure from the ground-up" on the target government, one should expect that political views should move in support of the sending country's policy goals following the dispute.*

There is no evidence to support the view that Russian trade restrictions brought about changes in political views that would be consistent with policy preferences of the Russian government. On the contrary, the effects of the price increases and trade policies appear to have provoked a backlash against Russian policy positions, among both Russian-speakers and Ukrainian speakers.

References

Barry, Michele. "Effect of the US embargo and economic decline on health in Cuba." *Annals of internal medicine 132.2* (2000): 151-154.

Brzoska, Michael. "From Dumb to Smart-Recent Reforms of UN Sanctions."*Global Governance* 9 (2003): 519.

Cortright, David, and George A. Lopez. *Smart sanctions: targeting economic statecraft*. Rowman & Littlefield, 2002.

Dashti-Gibson, Jaleh, Patricia Davis, and Benjamin Radcliff. "On the determinants of the success of economic sanctions: An empirical analysis." *American Journal of Political Science* (1997): 608-618.

Dragneva, Rilka, and Kataryna Wolczuk. "Russia, the Eurasian Customs Union and the EU: cooperation, stagnation or rivalry?." *Chatham House Briefing Paper REP BP* 1 (2012).

Drezner, Daniel W. *The sanctions paradox: Economic statecraft and international relations*. No. 65. Cambridge University Press, 1999.

Drezner, Daniel W. (2003). How smart are smart sanctions?. *International Studies Review*, 5(1), 107-110.

Drezner, Daniel W. "The hidden hand of economic coercion." *International Organization* 57.03 (2003): 643-659.

Drezner, Daniel W. "Sanctions sometimes smart: targeted sanctions in theory and practice." *International Studies Review* 13.1 (2011): 96-108.

Galtung, Johan. "On the effects of international economic sanctions, with examples from the case of Rhodesia." *World politics* 19.03 (1967): 378-416.

Garfield, Richard, Julia Devin, and Joy Fausey. "The health impact of economic sanctions." *Bulletin of the New York academy of medicine* 72.2 (1995): 454.

Hoskins, Eric, and Samantha Nutt. *The humanitarian impacts of economic sanctions on Burundi*. Thomas J. Watson Jr. Institute for International Studies, 1997.

Hufbauer, G. C., & Oegg, B. (2000). Targeted sanctions: A policy alternative. *Law & Pol'y Int'l Bus.*, 32, 11

Hufbauer, Gary Clyde, Jeffrey J. Schott, and Kimberly Ann Elliott. *Economic sanctions reconsidered: History and current policy*. Vol. 1. Peterson Institute, 1990.

Nooruddin, Irfan. "Modeling selection bias in studies of sanctions efficacy." *International Interactions* 28.1 (2002): 59-75.

O'Sullivan, Meghan L. *Shrewd sanctions: statecraft and state sponsors of terrorism*. Brookings Institution Press, 2003.

Pape, Robert A. "Why economic sanctions do not work." *International Security* 22.2 (1997): 90-136.

Peksen, Dursun. "Economic Sanctions and Human Security: The Public Health Effect of Economic Sanctions." *Foreign Policy Analysis* 7.3 (2011): 237-251.

Pirani, Simon, Jonathan P. Stern, and Katja Yafimava. *The Russo-Ukrainian gas dispute of January 2009: a comprehensive assessment*. Oxford: Oxford Institute for Energy Studies, 2009.

Seiglie, Carlos. "The Political Economy of Trade Sanctions: The Case of Cuba." *Cuba in Transition* 7 (1997): 232-237.

Stern, Jonathan. "The Russian-Ukrainian gas crisis of January 2006." *Oxford Institute for Energy Studies* 16 (2006): 5-12.

Stern, Jonathan. "Natural gas security problems in Europe: the Russian–Ukrainian crisis of 2006." *Asia-Pacific Review* 13.1 (2006): 32-59.

Wallensteen, Peter, and Carina Staibano. "International sanctions." *Between Wars und* (2005).

Weiss, Thomas G. "Sanctions as a foreign policy tool: Weighing humanitarian impulses." *Journal of Peace Research* 36.5 (1999): 499-509.

Appendix A - Survey Questions Used

2004 - SECTION I. ATTITUDES, HEALTH, AND ECOLOGY

Subsection 1 "Attitudes"

I01	**If the parliamentary election were held this coming Sunday, for which political party would you vote?** **CHART I01** DS…97 RA…99 |__|__| 620
I02	**What kind of political system would you like your children to live under?** **CHART I02** 1 The Soviet system which was in our country until perestroika 2 The Soviet system, but in a different, more democratic form 3 The political system which exists today |__| 621 4 Western-type democracy 5 Other DS…7 RA…9
I03	**What kind of economic system, in your opinion, is most suitable for Ukraine?** **CHART I03** 1 Centrally-planned economy which was in our country until perestroika 2 Centrally-planned economy, but with elements of a market economy 3 The economic system which exists today 4 Market economy with strong government regulation |__| 622 5 Market economy with relatively small government interventions 6 Free market economy without government regulation 7 Other DS…97 RA…99

I04	**To what extent are you satisfied with your life in general at the present time?** **CHART I04** 1 Fully satisfied 2 Satisfied 3 Rather satisfied |__| 623 4 Less than satisfied 5 Not satisfied at all DS…7 RA…9
I05	**What religion/confession do you practice?** **CHART I05** 1 I don't follow any religion 9 Baptism/Evangelism 2 Ukrainian Orthodox (Kyiv Patriarchy) 10 Islam 3 Ukrainian Orthodox (Moscow Patriarchy) 11 Hinduism 4 Russian Orthodox 12 Judaism |__|__| 624 5 Orthodox without any partition 13 Buddhism, Lamaism 6 Catholicism (Rome) 14 Krishnaism 7 Greek Catholicism 15 Jehovah's witnesses 8 Protestantism 16 I believe in God by don't belong to any confession DS…97 RA…99 17 OTHER]RECORD].....

2007 - Subsection 1 "Attitudes and Expectations"

I01	**In the following questions I would like you to give me a number from 1 to 5, where you are supposed to grade from the most negative (1) to the most positive (5) outcome.** ***Generally speaking, how was Ukraine doing two years ago?*** Very poorly Very well 1.……..…2..……..…3.……..…4..……..…5 **1602**|__| DS…7 RA…9
I02	***Generally speaking, how is Ukraine doing today?*** Very poorly Very well 1.……..…2..……..…3.……..…4..……..…5 **1603**|__| DS…7 RA…9
I03	***Generally speaking, how were you doing two years ago?*** Very poorly Very well 1.……..…2..……..…3.……..…4..……..…5 **1604**|__| DS…7 RA…9

I04	***Generally speaking, how are you doing today?*** Very poorly Very well 1.……..…2..……..…3.……..…4..……..…5 **1605**|__| DS…7 RA…9
I05	***Generally speaking, how much do you care about politics?*** Not at all Very much 1.……..…2..……..…3.……..…4..……..…5 **1606**|__| DS…7 RA…9
I06	**If the parliamentary election were held this coming Sunday, for which political party would you vote?** **CHART I06** DS…97 RA…99 **1607**|__|__|
I07	**What kind of political system, in your opinion, is most suitable for Ukraine?** **CHART I07** 1 The Soviet system which was in our country until perestroika 2 The Soviet system, but in a different, more democratic form 3 The political system which exists today **1608**|__| 4 Western-type democracy 5 OTHER [RECORD]……. DS…7 RA…9

I08	**What kind of economic system, in your opinion, is most suitable for Ukraine?** **CHART I08** 1 Centrally-planned economy which was in our country until perestroika 2 Centrally-planned economy, but with elements of a market economy 3 The economic system which exists today 4 Market economy with strong government regulation **1609**|__|__| 5 Market economy with relatively small government interventions 6 Free market economy without government regulation 7 OTHER [RECORD]…… DS…97 RA…99
I09	**What sort of relationship would you like to see between Ukraine and Russia?** **CHART I09** 1 They should be the same as with other states, with closed borders, visas and customs. 2 Ukraine and Russia should further develop their independent but friendly relationship, with open borders and no visas or customs. **1610**|__| 3 Ukraine and Russia should unite in one state. DS…7 RA…9
I10	**In your opinion, which state union would be better for Ukrainian people to live in, the European Union or in the union with Russia, Belarus and Kazakhstan (Single Economic Space)?** **CHART I10** 1 In the European Union 2 Rather in the European Union 3 Rather in the union with Russia, Belarus and Kazakhstan **1611**|__| 4 In the union with Russia, Belarus and Kazakhstan 5 No union with any other country DS…7 RA…9

I11 **Tell me, please, if your rights are outraged, are you ready to defend them by participation in:**

CHART I11

	Yes	**No**	**DS**	**RA**	
1 Election campaigns	1	2	7	9	**1612**|__|
2 Collecting signatures	1	2	7	9	**1613**|__|
3 Legal meetings and marches	1	2	7	9	**1614**|__|
4 Legal strikes	1	2	7	9	**1615**|__|
5 Boycotts	1	2	7	9	**1616**|__|
6 Illegal meetings and marches	1	2	7	9	**1617**|__|
7 Illegal strikes	1	2	7	9	**1618**|__|
8 Hunger strikes	1	2	7	9	**1619**|__|
9 Picketing government offices	1	2	7	9	**1620**|__|
10 Seizure of buildings	1	2	7	9	**1621**|__|
11 Military units creation	1	2	7	9	**1622**|__|

Appendix B - Reasons for household not taking part in 2004

Households questioned in 2003	**4056**
1 Questioning members of panel households in 2004	3394
2 Questioning household members, but getting refusal to fill in the household questionnaire	3
3 Questioning household formed as a result of separation	55
4 Data removed as a checkup result	16
Total	*3468*
5 Household moved house	101
6 Long absence of household members	49
7 Household refused to take part in the survey	186
8 No people aged 15-73 in the household	27
9 Household members are seriously ill (stroke, blindness etc) or deceased	28
10 Other reason of not taking the interview	252
Total	*643*
Sum total	**4111**

Individuals questioned in 2003	8641
1 Respondent questioned in 2004	6889
2 Individual data removed as a checkup result	86
3 Respondent questioned as a result of expanding household or reaching the working age	311
Total	*7286*
4 Respondent moved house	269
5 Respondent's long absence	225
6 Refusal to take part in the survey	410
7 Respondent deceased	52
8 Respondent being ill, drunk etc.	43
9 Respondent exceeded the working age	106
10 Other reason for not taking the interview	561
Total	*1666*
Sum total	**8952**