

The Political Consequences of Resource Dependence - How Natural Gas Export Can Affect Policy Outcomes: A Quantitative Analysis

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Abstract

With the use of a liberal/rational framework as a baseline, this article examines whether economic asymmetric interdependence can yield political influence. More specifically, it examines exogenous gas supply to the EU and develops a theory that provides testable hypotheses aiming to answer whether the export of gas provides political advantages for the sender state. The outlined hypotheses, and more, are tested in a cross sectional time series dataset, where votes in the United Nations (UN) Assembly are used as the dependent variable, as a measurement for the policy preferences of states. The empirical findings support the prediction made in the theory section. Gas dependence has a conditional effect on policy behaviour. The sender government has to be a sizeable international power, whilst the recipient government should have low military capabilities and be dependent on foreign support.

Keywords

Resource dependence; Natural gas; European Union, Russia

IN RECENT YEARS, SEVERAL COMMENTATORS HAVE WARNED ABOUT THE INCREASED dependency of the European Union (EU) on Russian gas. Dependency, they claim, in the worst-case scenario, can result in a dramatic shortage of fuel, caused by a shut-down in Russian gas export to the European energy market (Financial Times 2009). This line of argument usually draws inspiration from a few sources such as the Russian security strategy paper from 2003 and President Vladimir Putin's PhD dissertation, both of which state that Russia should use gas politically. However, a full stop in gas export from Russia to Europe could hurt Russia as much as it would hurt Europe¹. According to Stern (2006) exogenous energy supply is as safe as endogenous. One can thus argue that it is in Russia's interest to be perceived as a reliable exporter of energy. A shut-down could possibly ignite an increase in cooperation in Europe, resulting in a common external energy policy between EU member states². Consequently, Russia could find it considerably more difficult to dictate the terms of future gas contracts. On the other hand, Russia has on several

¹ The growth in the energy sector accounted for around 20 percent of Russia's GDP growth between 1998-2004 (Milov, Coburn and Danchenko 2006).

² This argument follows Milward (1992) who sees European integration as a response to different types of crisis.

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occasions disrupted energy supply to Ukraine which could suggest that Russia can and will stop the flow of gas as an instrument in order to achieve a political objective (Fredholm 2008). These interruptions in Russian gas to Ukraine and consequently to the European market suggest that being too reliant on Russian gas supply can be problematic.

Thus, the main question this article raises is whether or not dependence on imported natural resources allows the sending country to exert political influence on the recipient country. As highlighted by Chloë (2005:9): "Natural gas has helped it [Russia] to receive military concessions and political loyalty at a time when most CIS states were engaged in asserting their independence". The question is thus important, because it helps determine whether or not European states relying on Russian gas are more likely to support Russian policy choices. In order to examine this question, the article develops a theoretical argument about the political consequences of resource dependence. It integrates elements from bargaining theory and will be outlined on two levels. On the domestic level, the article investigates why the Russian government seeks to affect policy in European countries, while on the international level a condition seeking argument is outlined.

Thus, the contribution of the article, compared with previous literature, is twofold. It refines previous arguments about resource dependence by, amongst other things, considering and theorising the relative importance of trading commodities. Furthermore, it provides much needed empirical evidence on whether or not Russian gas export to the EU has political effects.

The remainder of the article is structured as follows. First, the article will briefly present some general arguments about the political consequences of resource dependence. The literature review will, like the theory presented in this article, focus on studies consistent with the liberal paradigm. This is because, in addition to the word limit requirements for this article, a recent study done by Maoz (2009) has shown that realist inspired hypotheses about dependence and interdependence are not supported by empirical evidence. Then, the theoretical argument will be presented. The following part will develop the research design. Finally, the outlined hypotheses will be tested and the results will be discussed, before conclusions will be drawn.

Literature review

A widely discussed question in the field of political economy is whether or not resource dependence (trade dependence) can be a source of political influence (Hirschman 1948, Caporaso 1978, Duvall 1978, Abdelal and Kirshner 1999, Wagner 1998). Some scholars have seen a natural connection between influence and resource dependence, and concluded that resource dependent governments are more likely to give in to political coercion (Hirschman 1948, Caporaso 1978, Duvall 1978, Abdelal and Kirshner 1999). Others have argued against too a simplistic link between resource dependence and political influence (Armstrong 1981, Wagner 1998). They hold that governments can only use asymmetric trade relations politically under specific circumstances. Both the 'simplistic' and sophisticated arguments will be discussed in turn.

Hirschman (1948) claimed there was a natural connection between unbalanced trade relations and political coercion, that is, 'larger' states were able to exploit their favourable trade relations with 'smaller' countries in order to increase their influence and consequently their power (ibid). This argument has been refined and expanded by scholars pointing to two 'primary links' between dependence and power (Caporaso 1978, Duvall 1978, Abdelal and Kirshner 1999), dependence either as 'absence of autonomy' or as 'highly asymmetric interdependence' (Caporaso 1978). They provided theories on the long-term implications of unbalanced trade relations (Caporaso 1978, Duvall 1978). The

trade dependence of a government may lead the dependent state to 'shift or change' its national interests in favour of the state that it relies upon (ibid). However, a value shift may be hard to identify, as this is a gradual process. A model that takes into account changes over time is therefore needed. Duvall points out that, in order to appropriately measure dependence, one requires time-series or change data (Duvall 1978).

In contrast, some scholars (Armstrong 1981, Wagner 1988) have argued that one should be careful not to overstate the political effects of trade dependence. By taking more of a conditional approach, they have shown that only under certain circumstances can trade dependence actually yield political influence. In order for economic asymmetric interdependence to become a political instrument, the cost of punishment has to exceed the cost of compliance. According to Armstrong, three conditions need to be met. First, a large part of a state's investment should be controlled by another state (links to Hirschman). Gazprom investments in the European gas market serve as a good example (Aalto 2008, Light 2008). Gazprom has been able to purchase EU based companies, while Russian law prohibits European companies in doing the same in Russia. The second condition is the inability of a resource dependent state to find other sources for a certain commodity (diversification). This problem becomes evident when we look at the gas dependent Europe, who is currently unable to diversify its gas import. Finally, the last condition deals with the relative intensity of the demand for a specific commodity, and is slightly more complicated to evaluate because when the issue is of high policy concern to both parties, the dominant part will try to use the commodity as way to control the dependent parties' behaviour, simultaneously as the dependent states will try to resist pressure in every way (Armstrong 1981).

In another study, Wagner (1988) applies bargaining theory in order to study resource dependence. First, he questions the assumption that market power is the same as bargaining power, and points out how scholars like Hirschman made that connection too hastily. Second, he outlines several conditions that should be considered and met in order for an asymmetric trade relationship to result in political influence. According to Wagner, political concessions from one government over another must be compensated either politically or economically. However this argument has a missing link, because it fails to consider the relative importance of the traded commodity in question. When the commodity is of the highest importance to a country, and when the commodity in question is extremely rigid like gas then compensation is not a necessary condition because the fear of a shutting off is an important factor to decision makers in recipient states. As follows, this article will show that gas has the ability to do precisely that.

Finally, an important term that can shed some light upon the EU-Russian energy debate is asymmetric interdependence. Asymmetric interdependence is defined as a relationship where one party is more dependent on another for a certain commodity (Keohane and Nye 2001). This definition provides a useful and accurate description of the Russia-EU energy relationship. Russia exports a substantial part of its gas to Europe. EU countries on the other hand, imports about the same per cent of its total gas consumption from Russia, thus making both parties dependent on each other (interdependence). However, even though Russia is dependent on the European market, a shut-down in gas supply would hurt certain European countries harder (asymmetric). Mainly because gas is a highly important commodity, which states rely upon in order to fulfil some of the most basic needs in a society (e.g. heating, cooking and so forth) (Cameron 2007).

A political theory of resource dependence

Many commentators and scholars have in their warning about EU's increased dependence on exogenous supply of natural resources (e.g. oil and gas) neglected to explain why it is

problematic that Russia is the most important supplier of gas to the European market. Why could Russia with its vast gas and oil reserves pose a threat to certain European Union member states? And, why would Russia want influence in Europe? Moravcsik (1997) notes that unless we are aware of actors' preferences, it becomes impossible to: 'assess claims linking variation in the particular means available to states on interstates conflict or cooperation' (Moravcsik 1997: 542). However, he is careful to note that preferences should not be confused with strategies. While the latter have a firm link to bargaining theories and interstate relations, the former is independently determined within a state, and should therefore be investigated first.

In this section, the article explains why and under which circumstances resource dependence can be an instrument for political coercion. The argument is based on a rational framework, and it is being assumed that Russian leaders (as all politicians) are office seeking and therefore opportunistic. How a leader seeks to stay in office is dependent on the political institutions in the country in question (Bueno De Mesquita et al. 2005). The article considers Russia to be more an autocracy than a democracy.³ Autocratic regimes tend to be dominated by a small winning coalition where group loyalty is the key. Therefore, government officials should seek to please the relative small group of elites that dominates the country's political arena. And Russian power politics, after the Cold War, is full of evidence to support the claim that loyalty is the key to political survival in autocratic regimes. When Yeltsin was in power, Putin gradually became part of Yeltsin's inner circle, and when Yeltsin stepped down, Putin – at that time Russia's Prime Minister –, ended up succeeding Yeltsin. When Putin had to step down, due to the fact that Russian Presidents can only serve two consecutive terms, one of his closest and most trusted allies (Medvedev) succeeded him. Putin then stayed in the political arena, as leaders are protected as long as they manage to 'bribe' their most trusted supporters (Bueno De Mesquita et al. 2005), before becoming President again in 2012. However, as pointed out by Plümpner and Neumeyer (2009), autocratic regimes cannot afford to neglect the general population altogether. Pleasing the general population tends to be important in the beginning of an incumbent's period in charge in autocratic regimes (Bueno De Mesquita et al. 2005). Putin, in the beginning of his presidency, managed to gather support by invading Chechnya. This provided him with sufficient political capital to go after people that challenged the Kremlin's power.

As we assume that decision makers seek to maximize their utility in order to stay in office, Russian decision makers 'should' advocate a set of beliefs on how the country should behave internationally, as this is needed to please the strong and influential group, which Allison, Light and White (2006) call pragmatic nationalists. The governing elite (with a few exceptions) has dominated Russian foreign policy since the early 1990s. They acknowledge market liberal principles, but at the same time want the Russian government to be in control of vital national resources. The pragmatic nationalists argue that the international community should recognize Russia's right to ensure the stability of the former geopolitical space of the Soviet Union (*ibid.*).

This article advances the argument that the export of gas serves as a valuable means to two ends for Russian decision makers: a) to raise revenues for the state, and b) to ensure that Russian geopolitical interests are being accounted for. Both aspects may be obvious, but they are nonetheless important to highlight because there are few other trading commodities that could serve the same purpose. By exporting gas, leaders are able to please their most trusted allies economically (pay off key political supporters) and geopolitically.

In order to ensure that the state generates sufficient revenues, Russian leaders want

³ According to the widely used polity data, Russia scored 4-5 between 2007 and 2009.

continued access to the European energy market, a market that Russia is heavily dependent on for its export of gas (Finon and Locatelli 2007). Gazprom, owned by the Russian government has bought up several European companies that are involved in energy import, in an effort to control both the supply and demand side of the gas market (Aalto 2008). The European market is not only the largest in the world, but also consists of states that are able to pay a good price for Russian gas. Politically, Russian leaders fear that an expanding European Union will be able to ignore Russian interests. The export of gas can either be a tool for coercion or a trading commodity that enables Russian decision makers to act independently from the criticisms of recipient countries, which could otherwise be inclined to publicly condemn Russian foreign policy actions (Hughes 2006). The ongoing Russian-Chechnyan conflict serves as a good example. Some argue that Schroeder (former Chancellor in Germany) hesitated to criticise Russia due to the fact that the new north stream pipeline was being planned, ensuring German supply of gas directly from Russia (Aalto 2008).

A case example: Ukraine-Russia

Even though Ukraine is heavily dependent on Russian gas (according to Stern (2009) Ukraine imports around 47-57 bcm each year), the Ukraine-Russian gas trade can not be characterised as a pure form of dependence (Keohane and Nye 2001). This is because Russia is: a) in need of Ukrainian transit pipelines (Fredholm 2008), and b) relies upon Ukraine as the largest single importer of Russian gas (Stern 2009). The relationship may therefore be characterised as being closer to a form of interdependence (Keohane and Nye 2001). Furthermore, as pointed out by Fredholm (2008), Russia (through the state owned company of Gazprom) has since 2002 aimed to introduce a more professional and businesslike trade relationship between the two countries in question. On the other hand, even in trade relationships where both parties are mutually dependent on each other, political coercion is not out of the realm of possibilities. The Ukrainian-Russian gas trade has, for example, been surrounded by numerous crises, disrupting gas flows to Ukraine and consequently its east European neighbours. However, in order to fully understand the complexity of the Russian-Ukraine gas relationship it is important to consider domestic decision makers incentives and motives. While Viktor Yushchenko where more hostile to Russian efforts to control and own Ukrainian pipelines, the new President of 2010 Viktor Yanukovich is thought to be more pursue a more pro Russian line (Woehrel 2010). Yanukovich has been critical of the current Ukraine-Russian trade agreement, and wants Russia to give Ukraine a price reduction in exchange for Russia to get a larger stake in Ukrainian pipeline systems (ibid). Russia, on the other hand, might to be willing to reduce the price. Political influence, as so often, must be compensated and whether or not Russia values political influence in Ukraine more than increased revenues is difficult to predict. And it should be noted that as Gazprom is not in the same financial situation as they where a few years back, also, the Ukrainian parliament must pass a law permitting such a deal. (ibid.). Political influence, as demonstrated in the Ukrainian-Russian example, must most likely be purchased, or compensated for. Whether or not Russia aims (and manages) to gain political influence over Ukraine or any other country that is heavily dependent on Russian energy supply will therefore vary. However, as this article will demonstrate, there are general cases where Russia could use the export of gas as a political instrument more effectively than in other places.

Separating gas from oil: the importance of the trading commodity

By moving in to how states develop strategies and tactics in order to maximise utility in interaction with other states, it is fruitful to look at bargaining theories, because it enables us to determine under what circumstances asymmetric interdependence can yield

political influence.

One of the main arguments of this article is that the relative importance of a trading commodity determines whether or not governments will make political concessions, and moreover give in to coercion. The basic assumption is that political concessions do not come automatic, but must be compensated in some form. By looking at a theoretical example it becomes clearer why this is the case. Imagine a situation where government *i* is dependent on government *j* for commodity *c*. Political concession(s) from government *i*, as a consequence of the asymmetric trade relationship, must be compensated economically by *k* from government *j*, in order to increase the utility for both governments *i* and *j*. Political influence is not an automatic cause of an asymmetric trade relationship. For that to be true, one important condition must be fulfilled, which is that the trade dependent government must augment its utility function. Without compensation from *j*, there is little reason to believe that *i* should make costly political concessions that suit *j*. Moreover, government *j* should weigh the political concessions as most valuable, at the same time as *i* considers the political concessions to be lower than the economical benefits, which were part of the compensation from *j*. Hence, government *i* prefers $c > k$, and government *j* prefers $k > c$. In order to change political behaviour, the dependent government should be compensated economically; if not, there is little reason to believe that asymmetric interdependence can yield political influence.

However, this hypothetical situation has not taken into account the relative importance of the traded commodity, and therefore cannot be easily applied to the export of gas. Because, without considering a specific commodity, it is easy to believe that ceasing supply of *c* from *j* to *i* could be compensated by an inflow of *c* from another government *l*. With most commodities, one assumes that the market will reallocate new resources. But when the role of the market disappears, decision makers in recipient government *i* will have to consider the possible affect of a shut-down in the country's gas supply. This possible, but unlikely, fear of a shut-down makes economic compensation superfluous in order for government *i* to make political concessions to government *j*. Thus augmenting the possibility that government *i* would be more willing to comply with *j*, and give in to coercion. And precisely because gas is a highly rigid commodity, Russian state officials have highlighted gas as an important foreign policy tool. In 2003, a Russian strategy paper stated that one way for Russia to be an influential and important actor in the near abroad is by the use of gas exports (Stern 2006).

Furthermore, gas cannot easily be diversified. Oil, in comparison, is sold on the world market, and has a number of ways in which it can be transported in numerous different ways. Gas runs mainly through pipelines, though liquefied natural gas is being used to some extent. However, liquefied natural gas is considerably more expensive and therefore less favoured by importing states (Stern 2006, Cameroon 2007). European gas importing states cannot for the time being diversify their gas supply by other energy forms or alternative suppliers. There are only a limited number of pipelines that provide Europe with gas⁴, and it is with only a few exceptions transported by pipelines. Furthermore, oil cannot easily substitute gas, as machines operating on natural gas cannot function on oil (Cameron 2007). As Noel (2008) argues, OPEC, contrary to what people believed after the oil crisis in 73, has not become a significant political actor on the world stage because the oil market is globally integrated, where it is impossible for single exporters to threaten importers with reduced supply.

⁴ See Van der Linde 2007.

Conditional effects

The power of the sender government

Even though gas is a highly rigid commodity, it is very unlikely that government officials can use gas by itself as a way to gain political concessions from other governments. If gas would on average yield political influence to be exploited by the exporting state, we would have to treat all gas exporting countries equally. Providing that decision makers in Norway and Algeria would be interested in influencing a gas recipient country, we could expect that Norway and Algeria (whose combined exports amount to around 40 per cent of Europe's total import of gas, see Noel 2008) would gain the same political concessions as Russia from recipient governments. Even though this might be possible in some cases, it is far more unlikely that Norway and Algeria would be in the same position as Russia - the relative (political and military) power of Russia is much greater than that of Norway and Algeria, even combined.

In order to distinguish Russia from gas exporters like Algeria and Norway, one important condition has to be met, and that is that the sender country has to be a sizable international power. The power of the sender state matters for two main reasons. First of all, the greater the relative material power a state possesses, the more likely it is that the decision makers have a broader range of tools to use if they seek to gain political concessions from a particular target state. If the export of gas can be used in combination with economical sanctions, or the threat of military force, the more likely it is that the targeted state is willing to make political concessions that suit the sender state. Secondly, the relative power of the sender state has an effect on the expectations of the target state's political leaders. When decision makers of a target state are aware of the possibility that a coercive government has the ability to hurt the target state in numerous different ways, the more careful they will be when dealing with the sender state. The expectations of the recipient state are also a function of previous experiences in dealing with the sender government. 'In a future conflict, foreign policy leaders will consider the history of prior bilateral negotiations in developing conjectures about the other state's behaviour' (Drezner 1999:32).

On average, gas export is conditioned on a state's material capabilities. More specifically Russia is a substantial military power (according to national capacity measurement it ranks only behind the US), with one of the world's largest arsenals of nuclear weapons. In contrast, the size of the Norwegian and Algerian military is at a bare minimum. On the basis of the first argued condition, the first hypothesis is as follows, and applies when the sender country and the recipient country have conflictual interests:

H1 – High relative power of the exporting state increases the probability that gas recipient governments will make political concessions in favour of a coercive sender state.

A crucial part of liberal theory is that it does not treat government preferences as fixed, but rather as something that varies and changes over time, and across issues. On this basis, this article does not assume that Russia seek to influence and penetrate every single European country to the same degree. On average it seeks influence, but the degree in which it pursues its ability to coerce and affect policy varies a great deal. Where the strategic utility is high and the political costs are low, the more likely we are to witness Russian involvement. But Russia's ability to influence and change foreign policy behavior is not solely determined by the strength of Russia. The relative strength of the recipient country must be taken in to account. A big difference in the relative power ratio between

the sender and the target governments augments the possibility that weaker states must give in to coercion, and thus make political concessions to the sender government.

With the recipient country in mind, this article advances two arguments that enhance the ability of gas export to become an effective foreign policy instrument. If the recipient country is: a) in close proximity to the exporting country (Russia), and b) vulnerable to external pressure and shocks, gas dependence is believed to have an increased effect on the recipient governments willingness to give in to political coercion. The first argument is explained with Russian preferences and the relative gas dependent situation in Europe. The second argument deals with the vulnerability of the recipient government, where it is being argued that dependence on foreign support has a significant effect on whether or not the target/recipient government is likely to make policy concessions to the sender government.

Geographical proximity

In order to keep the geographical proximity argument parsimonious, the former Russian satellite states (e.g. East-European countries) will be treated in the same way. I acknowledge that each country has its unique relationship with Russia, but nevertheless there are important similarities. First, there are substantial Russian minorities in the east European countries; therefore Russian leaders have an incentive to make sure that these people's rights are not being infringed upon. This is partly because Russian minorities are valued both by the general population and the governing elite, thus making sure that these people are being taken care of becomes important for Russian leaders wanting to stay in office. Second, Russia sees East-European countries as part of their sphere of influence. Russia's involvement in Eastern Europe is not evenly distributed. The degree to which it pursues its interests will thus depend on the amount of Russian minorities living in a certain country, and how Russian decision makers evaluate the strategic importance of the country in question. Overall, however, it is more likely that Russia is going to be more involved, and more interested, in influence in the eastern parts of Europe compared to Western Europe.

Also, the degree to which European countries rely on import of gas is different across regions, with the East-European countries as the most dependent ones on Russian gas (Noel 2008). This increases the likelihood that gas will be a more contested trading commodity in Eastern Europe in comparison with West-Europe. The geographical proximity argument only applies if the supplying country is a substantial political power. Sweden is not likely to suffer from the fact that it imports gas from its neighbouring country Norway, because the latter country is not a substantial military power.

Furthermore, the closer the supplier country (of gas) is to the importing country, the more viable is the threat to stop the inflow of gas, because it narrows the amount of affected countries down to a minimum. However, I acknowledge that this is more likely to hold true if the importing country is not also a transit country, but in order to keep the model parsimonious, I treat European gas importing countries as purely recipient countries and not as transit countries.

H2 – Geographical proximity between the recipient and the supply country increases the effectiveness of gas being a viable political instrument for decision makers in a gas exporting state.

The 'vulnerability' of the recipient country

A second factor, which arguably will coincide with the effect of gas dependency, deals with the relative economic vulnerability of the recipient country. 'Weak' countries are arguably more vulnerable and sensitive to external pressure, and therefore more likely to accept certain demands from the supply country. The article defines weak countries as states that are in need of foreign support, which is defined as states with high inflation and high external debt (Dreher and Sturm 2006). Their vulnerability leaves them with few alternatives, and the possible threat of an interruption in the supply of gas from Russia may seem far more dangerous, compared to a country like France, which is partly self-supplied with nuclear power. This means that countries relying on Russian gas supply, in addition to being relatively 'weak' states, are more vulnerable to external pressure, and thus more likely to give in to Russian foreign policy demands. In practise this could imply that those countries are; a) more likely to ensure (e.g. support) that Russia is guaranteed market access in their country and overall in the EU, and b) more likely to make sure that its Russian minority is treated in a way that is satisfactory to Russia. To sum up, the last hypothesis goes as follow:

H3: Governments that are more dependent on foreign support are more likely to support policy choices of a coercive gas exporting state.

Research design

In order to test the outlined hypothesis, pooled cross sectional time series data is used. In comparison to a detailed examination of a specific bargaining situation (e.g. a case study) involving Russia and an EU country, panel data enables us to see the effect of gas export across countries and over time. The data spans from 1991 to 2002, and contains every European Union member⁵, and the three major suppliers of gas to Europe: Russia, Norway and Algeria in order to avoid selection bias. The time period was chosen to see if gas export had an effect on foreign policy behaviour over time (Abdelal and Kirshner 1999, Caporaso 1978, Beck and Katz 2001). In addition the dyadic dataset measuring voting correlation in the UN council between importing and exporting countries only goes as far as 2002. Furthermore, it makes little sense to go further back than 1991 as most of the East-European nations were under Soviet rule up until that time. There is also no urgent need to go beyond 2002 because Europe's gas dependence has been fairly stable (see Noel 2008) since the Cold War up until today. If anything has changed since 2002, it is the fact that those countries have been forced to import increasingly more gas from Russia due to the fact that they have no other alternatives (Stern 2006). On the other hand, Russian oil and gas policies have changed since 2002, meaning Russia nationalised most of its energy sector in 2005 (Moe and Rowe 2009). This implies that the ability of Russian decision-makers to use the export of gas as a political instrument has potentially increased since 2005. Accordingly, significant findings from the period 1991-2002 can suggest that gas export is a very real and effective political instrument, which moreover implies that in the period from 2002 until today the political effect of Russian gas export is increasing. As data is not available for every country, the data set is unbalanced, and therefore the number of observations is determined by the selected variables.

⁵ Except Malta and Cyprus, as adequate data was not available.

Dependent variable

In order to measure European Union member states' compliance with gas exporting countries' policy preferences, aggregated dyadic data from the UN Assembly provided by Gartzke (2002) is used as the dependent variable. It ranges between -1 and 1, where the former signifies complete disagreement between two countries and, the latter complete compliance between country pairs. The article looks at the directed sender-recipient dyads, where the three gas exporting countries serve as the sender states, while the 25 European Union members make up the recipient countries. The data set includes all votes in UN Assembly in the given time frame, and not only key votes as some scholars have used. As Wittkopf (1973) shows, and as Dreher and Sturm (2006) also point out, there is little difference between including all votes compared to only focus on the most important ones in the UN Assembly. According to Voeten (2000), country position is independent from the importance of the issue that is being voted on at the UN Assembly. One could also question the UN Assembly's relative importance, and therefore argue that countries do not put much time and effort in the issues that are voted on. However, there is little reason to believe that votes in the Assembly do not on average reflect state interests and preferences.

Explanatory variables

The main explanatory variables that are used to test the predictions made in the theory section are measurements for the export of gas, military power, and several economic performance indicators. The gas export variable is obtained from Eurostat, and is an aggregated measure of the amount of gas that is exported from Norway, Algeria and Russia to the 25 European Union countries. The variable is logged in order to reduce skewness. In line with other scholars, this article uses the Composite Index of National Capacity (CINC) as a measurement of a states' relative military power. The national capabilities variable (CINC) is a measure of how powerful materially speaking, a state is, and ranges between 0 and 1. It includes the size of the exporting country's economy, population, geography, and military capabilities, and a country's score is the combination of all these indicators. For example, Russia's score in 2001 was 0.0549, while Norway's score was 0.005 based on the national capacity measurement. The CINC scores are included in the model as sender-recipient dyad. In order to appropriately examine the first hypothesis laid out in the previous section, an interaction variable was created, as recommended by Brambor, Clark and Golder (2005) as a desirable way to test a conditional hypothesis. The interaction variable combines the amount of gas export with the obtained CINC scores.

In line with the geographical proximity argument data provided by Gleditsch and Ward (2001) is being used to create a variable that includes the distance in miles between the capitals of the sender and recipient governments. The last part of the outlined theory predicts that governments that are more dependent on foreign support are more likely to give in to political pressure and support the policy choices, of a coercive gas exporting state. In order to empirically test that argument yearly data from the World Bank is obtained. It includes variables that measure a state's external debt and rate of inflation.

Finally, certain control variables are included that have been shown to have a significant effect on the UN Assembly voting. Voeten (2000) shows that an economical measurement for the size of the economy has a significant effect on voting in the UN Assembly after the Cold War ended. As follows, the model includes the variable GNI per capita in order to control for economical effects on voting coincidence in the UN Assembly. Foreign Direct Investment from the gas exporting countries to the recipient countries, is the second and last control variable used in this article. It is included in order to make sure that gas export

does not pick up the effect of foreign direct investment from the exporting country to the recipient country. Data for the control variables are obtained from the World Bank.

Model specifications

As the article uses cross sectional time series data, commonly referred to as panel data, a linear OLS model would not be sufficient in order to obtain the most unbiased and efficient results, because panel data will most likely have properties that violate the OLS assumptions. Plümper, Troeger and Manow (2005) and Plümper and Troeger (2007) point to heteroscedasticity, serial correlation and unit heterogeneity as reasons for why OLS is an inadequate tool in panel data. Accordingly, this article uses a model specification that will try to solve for some of these problems. First, as there is evidence of panel specific heteroskedasticity, this article employs panel corrected standard errors, as recommended by Beck and Katz (1995). However, as Beck and Katz (1995) point out, this model does not control for autocorrelation. One commonly used tool among political scientists is adding a lagged dependent variable to the right side of the model. But the interpretation of the other right hand-side variables becomes more difficult, because the beta's tend to be biased downwards (Plümper, Troeger and Manow 2005). This article uses a Prais-Winsten transformation to control for autocorrelation. The Prais-Winsten transformation (AR1) integrates an autoregressive structure of order one into the model. It eliminates autocorrelation by manipulating the original model by reducing the disturbance term to pure innovation (Dougherty 2007). Generally 'AR1 error models tend to absorb less time-series dynamics (than a lagged dependent variable) and may therefore be the method of choice for applied researchers seeking to explain not only cross-sectional variance and cross-sectional differences in changes, but also average changes in level' (Plümper, Troeger and Manow 2005: 343). Finally, as a 'Hausman test' (Wooldridge 2007) provides evidence of correlated unit specific effects, one econometric solution would be to use a fixed effects model. However, fixed effects models are inefficient if the variables change little over time, which is present in this model. Fixed effects take out the variance across units and not time. Plümper and Troeger (2007) point to the fact that if a variable has very little within variance, the estimate will not yield inefficiency that will result in unreliable point estimates, but will also create biased estimators. Also worth mentioning is the fact that the Hausman test has shown to have low power (Troeger 2008), so the reliability of the results of the test is questionable. As this article has outlined a theoretical argument that does not investigate variation within units (e.g. countries), but rather across countries, a fixed effects model, overall, is not an adequate tool.

Results

In this part, the hypotheses derived above are tested. The main theoretical expectation in this article was that gas-export should under certain circumstances have an effect on the policy outcome of recipient states. It was argued in this article that gas export does not have an unconditional effect on policy outcomes, which the results in this model support. It indicates that one should be careful to draw causal inferences about trade dependence and political power.

Now, turning to the main variables of interest, there is evidence to suggest that the relative strength of the gas exporting state is important for decision makers that are willing to use the export of gas politically. By looking at the relative difference in strength between the sender and the recipient countries (CINC), there is a positive significant effect. This means that the greater the difference is in the relative power ratio between a sender and a recipient state, the more likely it is that the recipient state will vote alongside the

sender state in the UN Assembly. The 'weaker' the recipient country is, the more vulnerable it is to political coercion from the sender state.

In order to study the conditional effect of gas export on voting in the UN Assembly, we focus on the created interaction variable. Combined with a measurement for relative power, gas export does turn out to have a significant effect on policy behaviour. However, seen as we are dealing with an interaction variable, it makes little sense to look simply at the outlined coefficient, because as the theory argues, only strong exporters of gas should be able to affect policy choices to decision makers in recipient states. Therefore, we must study the gas export effect on the votes in the UN Assembly on different levels of state power. As we can see in table II in the appendix, gas export does only have a significant positive effect if the sender country has 'high' national capability values. The created interaction variable is not significant at medium or lower values of the CINC variable. In practise this means that gas export does not have an effect on the recipient country's behaviour in the UN Assembly if the country has low or mean values, which applies both to Norway and Algeria. However, a 'strong' exporter of gas (like Russia) will on average have a significant positive effect on the recipient countries foreign policy outcome, as measured in voting coincidence in the UN Assembly. The same conclusion can be drawn by studying the marginal effect of gas export on UN voting on different values of national capabilities (see table I in the appendix). The effect of gas export becomes stronger as the power of the sender country increases. This gives leeway to those scholars that have argued that only under specific circumstances can asymmetric interdependence yield political influence (Armstrong 1981). It also shows that political and economical compensation is not a necessary condition for all commodities in order to affect policy outcomes.

Looking at the predicted effect of the geographical distance measure, the results are quite clear. On average, gas recipient countries that are farther away from the sender state are less likely to vote alongside the sender state in the UN Assembly. The greater the distance between governments the harder it becomes for the sender state to influence policy in the recipient government. However, for this particular variable we are more interested in what happens when the recipient country is closer to the sender state. The counterfactual is the smaller the distance between capitals, the more likely it is that a coercive sender state can affect policy in a recipient state. Combined with the first hypothesis this implies that when the a sender country possesses enough material capabilities, and have incentives to coerce, we should on average expect recipient countries in close proximity to the sender state to be more likely to give in to coercion, and change their policy in a direction, which is more favourable to the sender state.

The effect is predicted to become even stronger when we add another variable to our analysis, and that is the relative vulnerability of the recipient country. With regards to the final hypothesis the results presented in the model lend some support to the argument that states that are more dependent on foreign support are more likely to vote in line with the gas exporting country in the UN Assembly. Decision makers that are left with few options, and have few political tools in their arsenal, should be less willing to risk open confrontation with a stronger coercive state, and therefore more likely to give in to political pressure. However, as we can witness only one of the two measures for foreign support is found to have a statistical significant effect. The amount of external debt that a government possesses matters, but the rate of inflation does not, statistically speaking. One could argue that the former variable alone is a good description of how much a government must rely on foreign support, seen as it directly measures how much revenues a particular government needs to borrow from other countries or international institutions. But overall one should be careful not to overstate the effect of the third outlined hypothesis.

Finally, the results confirm Voeten's (2000) findings that a measurement for economic size has a substantial effect on voting in the UN Assembly. The last control variable, namely foreign direct investment, is not found to have any significant effect on voting in the UN Assembly.

Conclusion

In this article, it has been argued that, under special circumstances, dependence on natural resources can have political consequences. Overall, the empirical findings lend support to the three outlined hypotheses. In practice, this gives leeway to two main arguments. First, that Russian gas export to Europe can be a political instrument, which enhances the ability of the country to influence European decision makers' policy choices. Second, east-European countries are more vulnerable to Russian political pressure compared to west-European countries. This is because: a) they are in close proximity to Russia, b) they are economically weaker than the west European states, and c) they import a larger proportion of their gas from Russia. A relatively weaker recipient country is significantly more vulnerable to Russian coercion, and more likely to make political concessions in order to ensure continued supply of natural gas.

As results suggest, even in a period where the Russian energy sector became partly privatised, the long time political effect of Russian gas export was significant in the period from 1991 until 2002. Consequently, one could argue that the potential political effect of gas export has increased during the last decade. However, it is also important to bear in mind that Russia is heavily dependent on the European market. In addition, even though the EU lacks a common energy policy, it has managed to coordinate and back the east European countries in their different disputes with Russia over gas supply. These two factors combined pose interesting questions that ought to be examined in future studies. How are future gas contracts between Russia and EU countries going to be negotiated? Are joint energy statements by the EU affecting Russian decision makers' willingness to use gas as a political instrument? And finally, how will new pipelines affect the gas market and Russia's ability to use gas as a political instrument? One interesting project that surely will add a new element to the EU-Russian gas dialogue is the North stream pipeline going directly from Russia to Germany, bypassing Eastern Europe.

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Data Sources:

- World bank data:
<http://web.worldbank.org/WBSITE/EXTERNAL/DATASTATISTICS/0,,contentMDK:20535285~menuPK:1192694~pagePK:64133150~piPK:64133175~theSitePK:239419~isCURL:Y~isCURL:Y,00.html>
- UN voting data:
<http://dss.ucsd.edu/~egartzke/datasets.htm>
- The National material capabilities:
<http://www.correlatesofwar.org/COW2%20Data/Capabilities/nmc3-02.htm>
- Gleditch and Warde 2001 minimum distance data:
<http://privatewww.essex.ac.uk/~ksg/mindist.html>
- Gas Import data from Eurostat:
http://epp.eurostat.ec.europa.eu/portal/page?_pageid=0,1136239,0_45571447&_dad=portal&_schema=PORTAL
- Polity data from the Polity IV project: Political Regime Characteristics and Transitions, 1800-2008:
<http://www.systemicpeace.org/polity/polity4.htm>

Appendix: Table 1: Effect on voting in the UN Assembly

Hypothesis 1:		AR(1) Model
Export of gas		-0.0007 (.001)
CINC - National Capacity		1.4 (.72) **
Interaction Variable:		
Export of gas * CINCA		.06 (.025)**
Hypothesis 2:		
Geographic Proximity		-.00003(.0001) ***
Hypothesis 3:		
External Debt		.0012 (.00031) ***
Rate of Inflation		0.002 (.0002)
Control Variables:		
GNI Per Capita		.479 (.08) **
Foreign Direct Investment		-.0023 (.0037)
Intercept (alpha)		.71 (.04) **
R square		0.82
N.obs		788
prob>chi2		0.000
Standard errors are between brackets.		
* = p < 0.1 ** = p < 0.01 *** = p < 0.001		

Table II		The effect of Export of Gas on votes in the UN Assembly on different values of National Capabilities(CINCA)			
		Coef.	Std. Err.	t	P< t
CINCA	HIGH	.0023336	.0006551	3.56	0.000
	MEAN	-.00002	.0009243	-0.02	0.983
	LOW	-.0023736	.0014501	-1.64	0.102
