Energy Policy ∎ (∎∎∎∎) ∎∎∎–∎∎∎

Contents lists available at SciVerse ScienceDirect

Energy Policy

journal homepage: www.elsevier.com/locate/enpol

The interdependence of European–Russian energy relations

Øistein Harsem*, Dag Harald Claes

[a] BFE-fak, University of Tromsø, NO-9037 Tromsø, Norway
[b] Department of political science, University of Oslo, PB 1097, NO-0317 Oslo, Norway

HIGHLIGHTS

- We examine Russian–European gas (inter)dependence.
- East-European countries are most dependent on Russian gas in Europe.
- EU countries, on average, are not better off with a common foreign energy policy.

ARTICLE INFO

Article history:
Received 19 April 2012
Accepted 15 April 2013

Keywords:
Interdependence
Natural gas
Europe–Russia

ABSTRACT

The aim of this article is to explore this dynamic interdependent relationship between Russia and Europe in the field of energy. Based on the concept of interdependence and perspectives on the political aspects of trade relations we discuss how Russia can exercise power based on its energy resources and how the EU can compensate for its lack of power in the energy game with other trade related capabilities. In particular we explore the implications of the lack of a full-fledged EU foreign energy policy towards Russia, with the somewhat counter-intuitive conclusion that the EU countries, on average, not necessarily are better off with a common foreign energy policy.

1. Introduction

After the price fall in 1986 energy supplies were abundant and oil trade was increasingly handled at, or connected to, market-based stock exchanges. Oil had become just another commodity. When Chinese oil demand increased beyond expectation in 2003, the observed oversupply was replaced by a fear of imminent or near-future lack of supplies. Investments in new resources were lagging the increase in demand, and the oil price reached $147 in the summer of 2008. Some oil analysts claimed that it was not only a matter of supply constraints, but also a matter of resource constraints (Aleklett et al., 2010). In a situation with increased attention to resource constraints, the search for new additional resources increases and becomes more politically contentious. Geological studies suggest that most new energy resources in Europe will be found in Russian territories, primarily in the Russian Arctic offshore areas (U.S. Geological Survey, 2008). Russia is likely to increase the development of Arctic energy resources in the future, although the time table seems to be extended as both the technological breakthrough in extraction of shale gas reserves in the US and the financial and economic crisis in Europe indicates lower European energy demand than predicted only a few years back.

From an economic resource perspective, energy consumers would welcome any additional resources adding to the total reserve base. More reserves leads to more production which leads to abundant supply and falling prices. On the other hand, given their geographical concentration new energy resources could also become a source for political coercion. Thus at same time as new Russian resources adds to the global reserve base—to the benefit of consumers, the same resources can be a tool for Russian influence in, or even *over*, European politics. From a geopolitical perspective, energy resources can be a valuable asset in order to gain influence in international politics in general, but also towards ones energy customers. Mueller-Kraenner (2007) claims that "Russian leadership uses the country's key role in supplying energy to Europe and East Asia to gain back the influence in global politics that it lost when the Soviet Union Collapsed," while US Vice President Cheney concluded in a speech in April 2006 referring to the Russian–Ukrainian gas dispute, that "No legitimate interest is served when oil and gas become tools of intimidation or blackmail, either by supply manipulation or attempts to monopolize transportation." (Stern, 2006:420).

The economic and political aspects are indeed intertwined illustrating the demand for perspectives combining economics

* Corresponding author. Tel.: +47 9055 3294.
E-mail addresses: oistein.b.harsem@uit.no (Ø. Harsem), d.h.claes@stv.uio.no (D. Harald Claes).

0301-4215/$ - see front matter © 2013 Elsevier Ltd. All rights reserved.
http://dx.doi.org/10.1016/j.enpol.2013.04.035

and political science made by Susan Strange more than twenty years ago: "What is needed is some analytical framework for relating the impact of states' actions on the markets for various sources of energy, with the impact of these markets on the policies and actions, and indeed the economic development and national security of states." (Strange, 1988:53). The Russian–European energy relation is a prominent illustration of the interaction between market forces and political interests. Contrary to conventional public opinion we will claim that the relationship between Russia and EU member states is not one of dependency, but rather a matter of interdependence. The asymmetry of the interdependence varies over time and can be influenced by the actors, creating political and economic dynamics. The aim of this article is to explore this dynamic interdependent relationship between Russia and Europe in the field of energy.

2. Russian–European energy relation

Since the dawn of international relations, natural resources have been regarded vital to the power structure of the international system of states. Although every state would prefer to have easy access to natural resources, states have sometimes had to compensate lack of natural resources with the use of other capabilities, like human capital and technological skills. In the modern world, energy resources have a prominent role as they form the basis for almost all aspects of human activity, and thus for the potential wealth and power of any state.

In public debates in energy consuming countries energy imports is usually presented as an unwelcomed dependent situation. The political goal set out is often to abolish the need for imports and achieve energy independence. Trade relations among developed countries, also energy trade, are a matter of various degrees of symmetric or asymmetric interdependence. Energy importers are dependent on the constant supply of energy, but energy exporting countries are in most cases highly dependent on the income from their energy exports. Thus, the importance of the energy for the importing country has to be weighted against the importance of the payment for the exporting country. Furthermore, dependency is a matter of alternative options (Fisher and Ury, 1981). Thus, also the availability of other supply options for the importing country has to be weighed against the availability of other customers for the exporting country.

In the international oil market the alternatives are rather extensive, as most oil is traded in a global commercial market, with common price setting and exchanges in various regions. Thus the number of potential customers and suppliers includes almost all market actors. In addition, the international oil market today contains a number of instruments for hedging against price movements both for producers and consumers. In the international gas market, this is more complicated as the countries involved are tied together by pipelines or LNG terminals and facilities, prohibiting an easy switch to other suppliers or customers.

We will proceed by describing the motives and incentives that drive Russian and European decision makers in the energy game. Then we discuss their relative bargaining power and their ability to manage the relationship. But first we need to relate the concept of dynamic asymmetric interdependence to the politics of energy and trade dependency.

3. Understanding asymmetric interdependence

Contrary to the perspectives prominent in the public debate we need more nuanced approaches to the European energy dependence on Russia. One example can be found in the following a CERA study which concludes: "that the sustainability, efficiency, and security of European energy supply will best be achieved not by hastily deciding to reduce dependence on Russian gas, but through the creation of a carefully and cooperatively managed 'interdependence' between Europe and Russia Bochkarev (2009) (Cambridge Energy Research, 2007:406)." It follows that observing an asymmetric structural relationship is only half the story, equally important is how the relationship is politically managed. We thus need to go beyond structural perspectives and look at the dynamic aspects of the Russian–European energy relationship. Two dynamic aspects will be discussed: How can Russia utilize its upper-hand in the gas relations to gain concessions or influence in other areas and how can the EU develop its resistance or compensate for its weaker hand in the gas relation with Russia?

First we will explore the actors' motives and incentives in the Russian–European energy game, in order to: "assess claims linking variation in the particular means available to states on interstates conflict or cooperation (Moravcsik, 1997): 542". Understanding motives and incentives to decision makers becomes pivotal, if one wants to predict what leaders can and will do with the tools that are available to them.

The second step in our analysis is the strategic bargaining between the parties. Here we seek to unveil the relative strength of the bargaining positions of Russia and the European consumers. The importance of the relative bargaining strength relates to the term asymmetric interdependence (Keohane and Nye, 1977). Asymmetry simply means that one party is more dependent on another than vice versa. Nye uses the term 'mutual dependency' in the same manner (Nye, 2009: 208). The fundamental observation these authors make is that pure dependence and interdependence between states rarely exists. Consequently, we are unlikely to find two countries that are either identically dependent on each other, or one of them being totally dependent on the other.

The next step is the consequences that follow from asymmetric interdependence. Hirschman claimed there is a natural connection between unbalanced trade relations and political coercion, i.e. larger states (Russia) can exploit their favourable trade relations with smaller countries in order to increase their influence and consequently their power (Hirschman, 1945). This argument has been refined and expanded by scholars pointing to two primary links between dependence and power either as: absence of autonomy or as highly asymmetric interdependence (Caporaso, 1978; Duvall, 1978; Abdelal and Kirshner, 1999). A government's trade dependence may lead the dependent state to shift or change its national interests in favour of the state that it relies upon. For instance Russia has several times exploited its trade advantages over Ukraine in an effort to alter the country's perception of Russia. "Ukraine's energy dependence on Russia has some straightforward political consequences, since Russia can in theory use this asymmetric interdependence to coerce Ukraine (Abdelal and Kirshner, 1999): 146."

Armstrong and Wagner have warned against overstating the political effects of trade dependence. This scepticism against drawing inferences about the general effects of economic statecraft is also shared by Baldwin (Armstrong, 1981; Wagner, 1988). By taking more of a conditional approach these authors have shown that only under very specific circumstances can trade dependence yield political influence. In order for economic asymmetric interdependence to become a political instrument, the cost of the 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. 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. Second, the resource dependent state should be unable to

Please cite this article as: Harsem, Øistein, Harald Claes, D., The interdependence of European–Russian energy relations. Energy Policy (2013), http://dx.doi.org/10.1016/j.enpol.2013.04.035

find other sources of supply (diversification). This problem becomes evident when we look at the gas dependent Europe, who is currently unable to diversify its gas import. Finally, "a desired political effect may occur without any threats or break in economic relations… economic vulnerability is a powerful influence on the minds of decision maker of the dependent nations, inhibiting a policy shift which might otherwise occur (Armstrong, 1981): 326." It follows that one should be cautious when making inferences between resource dependency and political influence. In addition, Wagner questions the assumption that market power is the same as bargaining power, and he points out how scholars like Hirschman made that connection too hastily (Wagner, 1988). 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 (i.e. not easily diversified), then compensation is not a necessary condition because the fear of a shutting off is an important factor to decision makers in recipient countries.

In the following empirical discussion, we thus distinguish between on the one hand the exercise of political and economic power and on the other hand political and economic compensations for lack of power. Our aim is to contextualise the Russian–European energy relation. We thus discuss the parties' relative dependency based on their energy alternatives and the relative importance of energy compared to other the traded commodity.

4. The potential for Russian coercion

Export of natural gas serves Russian political elite as it raises revenues for the state and as a mean to ensure Russian geopolitical interests. Natural gas (and oil) can be characterized as a free resource (Smith, 2008), meaning income that does not dependent on taxing general economic activity. This makes it "unique" for Russian decision-makers, as they can use the revenues to simultaneously please the winning coalition and the general population. Russian decision makers pursue strategies that maximize their probability to stay in office, as "they pursue energy development strategies that are politically rational, but not necessarily economically optimal (Luong and Weinthal, 2001:394)."

From an economic perspective it is easy to see why the European energy market is vital for Russian leaders. 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. In comparison Belarus, which also is heavily dependent on Russian gas, has not been able to pay the same amount of money for its gas as the Europeans have (Stern, 2006). Furthermore, Gazprom 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).

Politically, Russian leaders fear that an expanding European Union will be able to ignore Russian interests. The governing elite, as Allison, Light and White calls pragmatic nationalists, sees it is near abroad as a natural part of their sphere of influence (e.g. eastern–Europe), and argues that Russia should be free to act in accordance with their own national interests (Allison et al., 2006). Thus, export of gas can either be a tool for coercion, or a trading commodity that enables Russian decision makers to act independently of criticism from recipient countries that otherwise could be inclined to publicly condemn Russian foreign policy actions. While gas export does not necessarily make it possible for Russian decision-makers to change policy in recipient states (especially for export to a relative powerful states like Germany), it can serve as a preventive tool, as a "gas-for—silence"-strategy. The ongoing Russian–Chechnyan conflict serves as a good example. Some argue that Schroeder (former Chancellor in Germany) hesitated to criticise Russia's action due to the fact that the new north stream pipeline was being planned, ensuring German supply of gas directly from Russia (Aalto, 2008). Russian leaders see bilateral trade negotiations as a way to silence European leaders on contested political issues like the conflict in Chechnya (Hughes, 2006).

5. Why Europe might (not) resist

The politics of energy in the EU has not been traditional energy policy, but rather an application of competition policy in the energy sector. The aim has been to liberalize energy trade inside the Union. Reducing the monopoly power of European energy companies in the downstream segment of the production chain has weakened the bargaining position towards external suppliers in the upstream segment. In the Commission Green Paper: "Towards a European strategy for the security of energy supply (Eureopean Commission, 2000)," the efforts to *de facto* liberalize the downstream gas and electricity markets continued, but in the upstream segments the liberal approach of the Internal market was supplemented by a more politically-oriented approach addressing the increased dependency on imported energy. Furthermore, The Russian–Ukrainian gas crisis of 2006 triggered a change in the EU approach, from a market-oriented approach to include also political and strategic considerations related to its external energy relations (Romanova, 2009:129). The EU commission has tried to compensate its lack of market power by including external suppliers in the liberalized market structure. Creating a "common regulatory space" around Europe, would imply progressively developing common trade, free transit, environmental rules, market harmonization and economic integration. If successful such a strategy would create a predictable and transparent market to stimulate investment and economic growth, as well as security of energy supply, for the EU and its neighbors.

This strategy has failed although Norway, another gas supplier to Europe, is *de facto* and *de jure* included in the Internal Market, as the European Economic Area agreement, signed in 1994, obliges Norway to adopt all Internal Market legislation. The effect of this agreement is that the Norwegian upstream energy sector has been liberalized and opened up to foreign investors far beyond the initial preferences of Norwegian energy authorities. In the more important case of Russia, the EU-strategy was to create a common regulatory space in the field of energy through the so-called Energy Charter Treaty, also signed in 1994. However, Russia has not ratified the Energy Charter treaty, nor has Norway. In 2000 Russia and the EU agreed to institute an energy dialogue. However, this has not amounted to anything similar to the ambitions of the Energy Charter.

The question is to what extent the EU is able to develop a common foreign energy policy, and if so, how this should be done. The most important document in this respect is the EU commission green paper: "A European Strategy for Sustainable, Competitive and Secure Energy (European Commission, 2006)." In this paper the need for a coherent external policy is identified, and the member states are called upon to support such a position. A number of key goals are set out including: a clear policy on securing and diversifying energy supplies, energy partnerships with producers, transit countries and other international actors, reacting effectively to external crisis situations, and integrating energy into other policies with an external dimension. With the possible exception of the last goal, all these ambitions are dependent on the willingness of other actors to engage in this project with the EU.

The challenges facing the EU in this sector are matters of politics and strategy, maybe even more than economics and

Please cite this article as: Harsem, Øistein, Harald Claes, D., The interdependence of European–Russian energy relations. Energy Policy (2013), http://dx.doi.org/10.1016/j.enpol.2013.04.035

markets. Creating common positions among the EU members towards Russia is in general difficult, even more so in the energy sector. Geden et al. (2006:10) find that the EU heads of state have recognized the need for a common external energy policy to some extent in the Constitutional treaty, but more so "at the Hampton Court summit in October 2005, where, for almost the first time there was a perceptible move towards a common energy policy." However, as they immediately refute, "The Commission and the Council [Secretary General] resisted the temptation to flesh out a whole common policy; this could not have been realized since there is no sound legal basis for such a move at the moment …. Although there is undoubtedly political will to back up this EPP [External Energy Policy], there is no clear sign that the Member States are ready to give up their competences to the Commission." It is very hard to see how a common external energy strategy could be efficiently and forcefully implemented without a coherent approach and conducted by a single entity with mandate and power. An 'every-country-for-itself'-strategy have possible inefficiencies, would reduce the scope of diversification and weaken most EU-members bargaining power towards Russia.

Furthermore, it is obviously a discrepancy between the stated need for a common external energy policy and the distribution of power among the different EU institutions. In addition to the power struggle between the Commission on the one hand and Member States on the other, a major challenge for a common foreign energy policy is the lack of coherence among the member states themselves regarding how to deal with the external energy suppliers, particular Russia. (Leonard and Popoescu: A Power Audit of EU–Russia Relations. European Council on Foreign Relations (ECFR)) have looked at the differences among EU member states regarding their general foreign policy towards Russia. They find five distinct policy approaches:

- "'*Trojan Horses*' (Cyprus and Greece) who often defend Russian interests in the EU system, and are willing to veto common EU positions;
- '*Strategic Partners*' (France, Germany, Italy and Spain) who enjoy a 'special relationship' with Russia which occasionally undermines common EU policies;
- 'Friendly *Pragmatists*' (Austria, Belgium, Bulgaria, Finland, Hungary, Luxembourg, Malta, Portugal, Slovakia and Slovenia) who maintain a close relationship with Russia and tend to put their business interests above political goals;
- '*Frosty Pragmatists*' (Czech Republic, Denmark, Estonia, Ireland, Latvia, the Netherlands, Romania, Sweden and the United Kingdom) who also focus on business interests but are less afraid than others to speak out against Russian behaviour on human rights or other issues; and
- '*New Cold Warriors*' (Lithuania and Poland) who have an overtly hostile relationship with Moscow and are willing to use the veto to block EU negotiations with Russia."

The traditional saying: united we stand, divided we fall, could also be applied to EU external energy relations. However, one should not overstate the weaknesses of a divided EU. With an uncoordinated foreign energy policy the member states can pursue different strategies, follow various aims, and use different instruments in different external relations. This could be as well as effective and produce better results than a common external energy policy that would have had to be a compromise between different interests. One possible strategy that does not involve a common EPP or unilateral actions is regional co-operations. Bozhilova (2009) argues that co-operations between states, for example in South-East Europe (SEE), is the only realistic solution as long a common EPP is not possible. "…regional co-operation in SEE serves a dual purpose: political stabilization and economic prosperity for the continent" (Bozhilova, 2009:4).

6. European energy (inter)dependence

The concept of asymmetric interdependence provides a useful and accurate description of the Russia–EU energy relationship. Russia exports about 50 percent of its gas to Europe, with currently no opportunity to diversify its gas export (Light, 2008). EU countries on the other hand, imports about the same percent of their total gas consumption from Russia, thus making both parties dependent on each other and their relationship one of interdependence. However, even though Russia is dependent on the income from gas exports to the European market, the European gas consumers seems relatively more dependent on Russian gas supplies. Mainly because gas is an important commodity, which citizens rely upon in order to fulfil basic needs in a society (e.g. heating, cooking and so forth), and because gas in the short-run is almost impossible to substitute, due to the fact that machinery operating on gas cannot use any other source of energy to function (Cameron, 2007). A possible shut-down in gas supply from Russia to Europe will be extremely costly for the latter. When Russia temporarily suspended inflow of gas to Ukraine in January 2009, it became apparent how vulnerable certain European states are to disruption of their gas supply. Structurally this relationship is highly asymmetric. In addition a shut-down in gas supply from Russia would hurt certain European countries harder than others, as the Russian share of gas imports varies across the European countries (Fig. 1).

Thus the costs of a conflict with Russia are unevenly distributed among the European consumers, and consequently therefore the benefits from their potential compliance with Russian political demands would vary. However, while Russia is the major oil and gas supplier to Europe, the EU combined, on the other hand, exports services and good to Russia for around €120 billion (European Commission: www.ec.trade.eu), which makes the EU member states Russia's most important trading partners: Today, the EU is Russia's main trade partner in the world. The share of the original 15 EU member states in Russia's turnover with foreign countries was over a third. The EU enlargement in 2004 and 2007, the accession of Central European countries that traditionally had intensive trading links with Russia, has led to absolute dominance of the EU in the Russian foreign trade, with its share surpassing 50 percent. The trade shows positive dynamics: over the period from

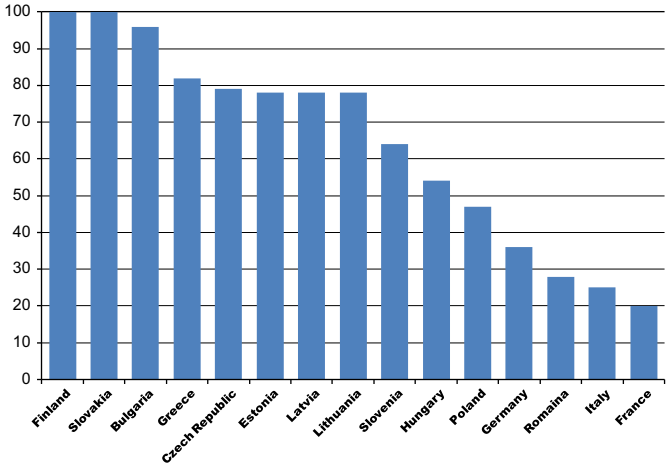

Fig. 1. European countries dependency on Russian gas supplies (percentage of total gas imports), 2006.
Source: Eurostat 2007

Please cite this article as: Harsem, Øistein, Harald Claes, D., The interdependence of European–Russian energy relations. Energy Policy (2013), http://dx.doi.org/10.1016/j.enpol.2013.04.035

1998 to 2008, the turnover between Russia and the EU grew annually by 20 percent on average (http://ruseu.com/stat/details_502.html). Interdependence is thus the most accurate term to describe the Russian–European trade relationship.

European import of natural gas has increased since the early 1990s, and is expected to increase even further in the years to come (Eurostat.com) According to the European Commission the level of dependence on import of energy could reach 80 percent in 2030 (European Commission, 2006). However, recent developments are not all detrimental for European energy consumers. In 2000 Russia was responsible for 49.6 percent of EU imports of natural gas. In 2006 this figure was 40.6 percent. The three largest suppliers (Russia, Norway and Algeria) in 2000 together provided 95.4 percent of EU natural gas imports, while in 2006 the same countries provided 81.2 percent of EU imports. So, the EU has in fact been able to some diversification of its imports of natural gas. Further, proposed new pipeline projects such as the Nabucco pipeline, which will supply EU member states such as Bulgaria and Romania with natural gas from the Caspian, in particular Azerbaijan and Turkmenistan is another example of reducing the overall dependence on Russian gas. Another important aspect in this is the increased number of Liquefied Natural Gas (LNG) facilities, making gas imports possible without the construction of pipelines. An increased share of LNG will to some extent transform the international gas market, and make it more similar to the global oil market (Jaffe and Soligo, 2006). The Russian share of EU gas consumption has been fairly stable (Fig. 2) (Noel, 2008). It follows, that with demand increasing in the same period, Europe's import dependency on Russian gas has gone down from about 70 percent in 1990 to around 50 percent in 2006.

However, as pointed out above, the European countries are expected to increase their share of import of natural gas in the years to come. The EU Commission, who published in 2006 a Green paper on energy security, acknowledged the future challenge facing Europe, but proposed two solutions to the problem: to develop a common energy strategy and to invest in new energy forms in an effort to reduce EU's overall dependence on import of non-renewable energy. Bilateral agreements between individual EU member states and the major gas exporting countries Russia, Norway and Algeria is still dominating how gas is being traded in Europe (Stern, 2006).

This creates a competitive situation between the member countries, and thus undermines the Commissions ambition to create a common approach to external energy relations. The individual trade structure increases the probability that some European Union members that are dependent on imports of natural gas are vulnerable to political pressure from Russia. While some countries are worried about dependency on Russian gas, others are not. On the one hand, the Baltic States and Poland are extremely worried about the new blue-stream pipeline going directly from Russia to Germany (Milov et al., 2006), as it could isolate them from west-Europe. Their role as transit countries would disappear, which in turn could leave them vulnerable to political coercion from Russia. Thus, when the new pipeline is completed, the Russian threat of a shut-down in gas supply to East-Europe could be a more realistic foreign policy instrument, as the new blue stream pipeline would ensure that west-European would not be affected. On the other hand, the Russian has no share of Belgian, Italian and UK gas imports. In the case of France imports from Russia constitute 23 percent of total gas imports, but only 3.6 percent of total energy consumption. These countries are thus not worried about importing gas from Russia.

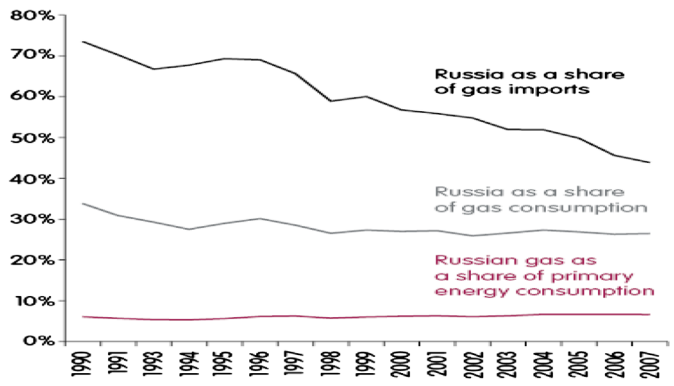

Fig. 2. Russian share of gas imports and consumption.
Source: Noël "Beyond Dependence…" p. 5.

Also Russia has started to diversify. An increased focus on potential Asian gas demand can undermine the European bargaining power towards Russia. In October 2009 energy related deals worth €2.3 billion and a framework for cooperation in areas as nuclear energy, hydrocarbon supplies and pipeline projects were concluded between Russia and China (Bochkarev, 2009). In an interview with *Russia Today* Gazprom spokesman Sergei Kupriyanov said: "I believe that the volume of gas supplies to China will be about a third of the volume of our European gas supplies, The eastern market will clearly not be as large as the European market, simply because it began developing later, but its development will be more intensive than the European market over the coming years (Vyatkin, 2009; Stern, 2006)". We can safely assume that in the future the European market will be relatively less important for Russian gas exports. The ESPO oil pipeline and the development of oil and gas resources at the Sakhalin Island add to the emerging importance of East Asia for Russian external energy relations (Masuda, 2009).

Though some are questioning Russia's ability to increase their production of gas, due to lack of technology and international competition, there are clear signs that Russia is committed to its energy fields in the Arctic. Compared to the cold war, where the Northern fleet was determining the development in the region, the last years have been characterized by a greater cooperation between the oil and gas companies and the military (Aatland, 2009). Licences to search for studying new gas and oil prospects have been given out in record numbers, and Gazprom is planning to invest $500 billion in the Arctic shelf for the next fifteen years. In response to this, the Russian navy has committed itself to support and protect the oil and gas companies' investments. In short the relationship between the petroleum industry and the navy "is in fact fair opportunistic in the sense that each of the two camps systematically uses its relationship with the other to promote its own interests (Aatland, 2009:117)."

On the others hand, we should not forget that Russia is restricting international companies ability to invest in Russian companies, and according to Russian law they are only allowed to own 49 percent of Russian based companies. This does not support the need for foreign direct investments, which are sorely needed if the country is going to be able to effectively extract oil and gas from the Arctic. The monopoly driven sector (e.g. Gazprom) has not been very effective in the recent years, and the Kremlin run company Gazprom has dropped from being the world second biggest company—to not even being among the top 20. The energy sector in Russia, is thus in need of a major restructuring in order to be able to meet Russia's demand for continued export of gas. The IEA is estimating that Russia needs to invest yearly 11 billion dollars in order to meet Europe's gas demand.

Overall, therefore when one consider both the Russian and EU ability and willingness to diversify, we come to the conclusion that the European–Russian gas relationship relative speaking does not change dramatically as some commentators have argued. There is evidence that both Russia and the EU have strengthened their

Please cite this article as: Harsem, Øistein, Harald Claes, D., The interdependence of European–Russian energy relations. Energy Policy (2013), http://dx.doi.org/10.1016/j.enpol.2013.04.035

bargaining position. By only studying European dependency on Russia one could come to the conclusion that the game has been altered. When one compares the relative bargaining position of Russia and Europe in relations to purchase and sale of natural gas, neither party seems to have gained an upper hand.

However, one crucial aspect of the Russian–European energy trade relationship is how quickly change by one part has a costly effect on another. Though both parties are arguably dependent on each other for commodities, an important question is the relative availability and costliness of the alternatives that the parties have in a situation where commodities from one party are unavailable. In our case this would imply a possible shutdown of gas from Russia to Europe, and consequently as a response from Europe, a trade embargo on all commodities to Russia. In this situation we believe that the relative costliness of this scenario would be higher for the European countries compared to Russia. This is due to nature of the natural gas market in Europe where transportation by pipelines dominates. This precludes the European states from easily shift to other suppliers. Russia on the other hand would more easily be able to find other suppliers for commodities (Bozhilova, 2009). The global international commodity market is more mobile and fluid compared the natural gas market. Although this does not imply that Russia automatically is able to coerce European states by the threat of a gas shutdown, it does provide them with an upper hand in case of a serious trade conflict between the respective parties.

Furthermore, one could argue that the EU failed to invest in infrastructure since the end of the cold war (ibid), while Russia was successful in negotiating long term contracts. Nevertheless, developments during the last years in the European gas market and with respect to infrastructure and securing new suppliers suggest that the EU are seeking to reduce their overall dependence on pipeline gas, consequently reducing their overall dependence on Russia. First, there has been a significant increase in the use of hub-based pricing during the last few years. Moving towards hub based pricing would naturally reduce Russia's ability to exert political pressure by the use of long term gas contracts.

The National Balancing Point (NBP) in Britain accounts for a substantial share of gas trade in the UK, and is according to various scholars considered to be a mature market (Heather, 2012; Stern and Rogers, 2011). The Title Transfer Facility (TTF) in the Netherlands has grown substantially during the last decade. In contrast to the NBP, the TTF is also a virtual trading point (Heather, 2012). In addition, in Britain and the Netherlands relative new LNG terminals (South Hook and Grain) has expanded their capacity in order to allow for more competition between pipeline and LNG. Second, LNG has contributed to a decline in the use of imported pipeline gas from 86 percent in 2003 to 78 percent in 2010. While continental Europe has only a few existing import LNG terminals, there are a number of terminals under construction, and a significant number of proposed terminals. Qatar, for example doubled its supplies of LNG to Europe from 2009 to 2010.

Despite these developments in important to bear in mind that most continental European countries have for various reasons not fully mature hubs, and lack adequate infrastructure facilities (Rogers, 2012). Thus at present Russia seems to have a slight trade advantage with respect to the ability diversify, however, if this development continues this may change.

This argument treats Europe, or at least the EU, as a single actor. In the following section of this paper, we look at direct gas sender–recipient dyads, where Russia serves as the sender state, and the EU member states individually serves as the recipients. The EU member states have so far pursued bilateral or to some extent regional energy strategies towards Russia (Westphal, 2006). As an example, the north stream pipeline which surpasses the traditional East-European transit states where signed by the former German chancellor Schroder.

7. Energy as part of EU–Russian trade relations

Obviously, the less dependent the European gas consumers are on Russian supplies the less susceptible they will be to Russian political pressures. However, as we have indicated the European consumers have different exposure to this dependency. While Slovakia and Finland has a 100 percent share of Russian gas, France imports 20 percent of its gas from Russia (Fig. 1).

Natural gas supplied through pipelines creates physical binding relationship between producer and consumer, contrary to regular merchandise or other traded commodities. However, gas is just one of many commodities that constitute the total trade relationships between Russia and European countries. While the EU has a common market with established trading arrangements with some of its neighbour states, the EU members are free to pursue bilateral trade arrangements with Russia. Austria for example base its economic and trade relationship with Russia on a 1991 bilateral agreement.[1] Furthermore, on the overall political level inside the EU economic cooperation, the member states negotiates among themselves in developing their common trade policy towards others states, like Russia. It is outside the scope of this article to empirically study such negotiations. However, the following study of the various member states' trade relations and energy dependence on Russia is a basis for formulating hypotheses regarding the member states' positions in such internal political deliberations inside the various EU institutions. In order to contextualize gas into the general trade relationship we have analyzed 25 different country dyads, with Russia as the respective sender state, and different EU member states as the recipients (we have excluded Malta and Cyprus due to lack of adequate data).

With respect to Russia gas and oil are not the only commodities it sells to Europe, thus it is important to consider total amount of export from Russia to Europe which in 2008 where around 20 percent of total Russian export. Germany is by far Russia biggest export marked, and in 2008 the country exported gods with a total worth of around 33 billion US dollars, which constituted about 7 percent of total Russian export that year. Fig. 3 describes the dyadic relationship between the European countries dependency on imports from Russia, and Russian dependency on imports from the same country.

As Fig. 3 shows Germany is in a particular strong position towards Russia. 12.76 percent of all Russian imports come from Germany. The other major exports to Russia are the larger European countries like Italy, France and the UK. Although German gas imports are dominated by Russia, the Russian share of total German imports is 4.4 percent, which is important, but not a dominant part of German imports. Lithuania, on the other hand imports thirty percent from Russia. Russia constitutes a substantial of imports for Poland, Finland, Slovakia and Latvia.

Also export markets are important, and likely to create dependency. Thus we have combined imports and exports data. In order to express the asymmetry of the trade relations we have given double weight to imports compared to exports. The effect of shortfall in imported energy for the Europeans is far more imminent than the effect of lack of export income for Russian. In the long-run the lack of outlet for Russian gas could of course be more severe. However, as an instrument for economic statecraft, such long-term effects are less relevant. Combining the dyadic relationships with Russia we can categorize the European countries according to their trade dependency on Russia, and Russia's dependency on them (Fig. 4).

[1] For a comprehensive overview of the bilateral relations of EU member states with Russia see the EURUSSIA report from 2008. Available online: http://www.heraldofeurope.co.uk/Issues/5/European%20Affairs/THE_BILATERAL_Relations/THE_BILATERAL_Relations.pdf

Please cite this article as: Harsem, Øistein, Harald Claes, D., The interdependence of European–Russian energy relations. Energy Policy (2013), http://dx.doi.org/10.1016/j.enpol.2013.04.035

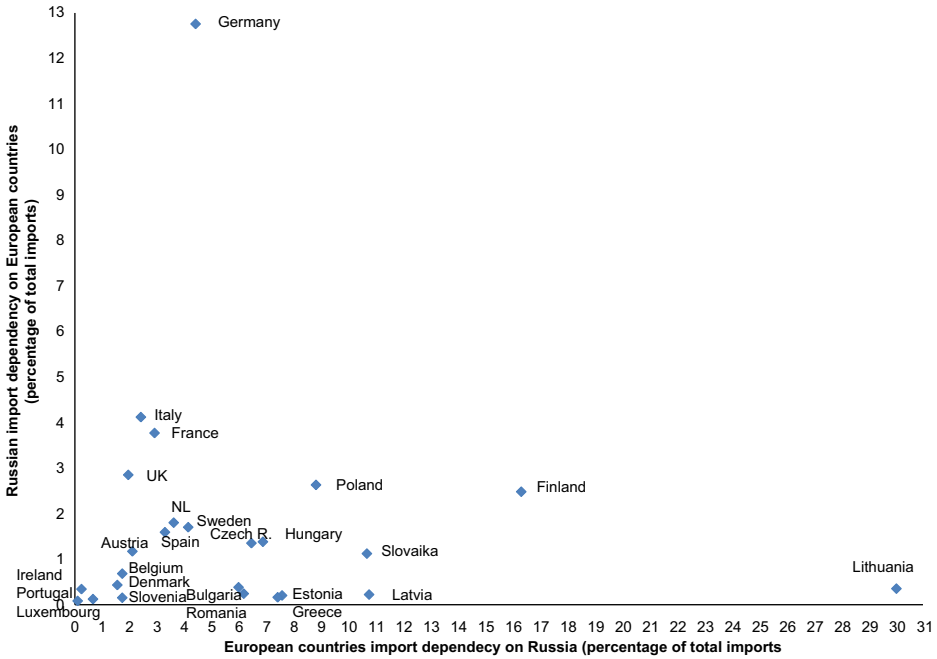

Fig. 3. Bilateral imports dependency (percentage share of total imports).

		Russian trade dependency on European countries	
		High	Low
European countries' trade dependency on Russia	High	Finland, Latvia, Slovakia, Poland, Hungary, Czech	Lithuania, Estonia, Greece, Bulgaria, Romania
	Low	Sweden, Netherlands, Spain, Italy, France, Austria, UK , Germany	Slovenia, Denmark, Belgium, Portugal, Luxembourg, Ireland

Fig. 4. The trade (inter)dependency matrix.

These observations suggest the following: *First*, by looking only at gas export data (cf. Fig. 1) we get an overview of EU member dependence on Russian gas export, and it is quite clear that on average the former East European countries are more dependent on Russian gas. In addition also Germany do rely heavily on Russian gas. *Second*, Russia's overall export to EU is large; however, East-Europe is not as important compared to some countries in Western Europe. France, Italy and Germany makes up around 20–25 percent of total Russian export. *Third*, by looking at Russia's overall import from EU the picture remains the same. Russia is heavily dependent on import from Germany, Italy and France. *Finally*, by looking at EU's export to Russia it is obvious that the Russian market is more important for former eastern-European countries compared to Western Europe (Fig. 4).

These figures are not surprising. Trade is still a geographical phenomenon, countries located geographical close are more likely to trade. It does have implications for the potential and challenges in creating a common European, or EU, trade strategy. By combining these results it is clear that the degree of dependent or interdependent relationship EU countries have with Russia varies to a great extent between East and West-Europe. While certain Former East-European states are dependent on Russia not only for gas but also for overall trade, the same cannot be said of the old West-European members of the European Union. On average interdependence would be an accurate description of the trade relationship between Russia and most of EU's west-European members. However, by looking at the EU's "big four", France, Germany, UK and Italy the picture does appear to be reversed, with Russia as the dependent partner.

8. Conclusion

The European–Russian energy game is complex. Many factors go against the argument that resource dependence automatically lead to political influence, as some earlier scholars have argued (Hirschman, 1945). However, some conclusions can be drawn based on this study: First, Russia's coercive power rests on the relatively high intensity of the demand for Russian gas. In cases where Russia enjoys the role as the sole supplier of a certain commodity to a recipient country, it has a *potential* coercive power capability. Second, as the demand intensity for Russian gas varies among the EU members, in Russia's *actual* political influence in gas recipient states depends on its ability use export of gas in bilateral negotiations with individual EU member states. Third, this again, rests on EU's inability to form a common external energy policy. Russian utilization of its energy weapon is conditioned on the fragmented EU foreign energy policy and the members' different attitudes towards Russia. Fourth, as certain

Please cite this article as: Harsem, Øistein, Harald Claes, D., The interdependence of European–Russian energy relations. Energy Policy (2013), http://dx.doi.org/10.1016/j.enpol.2013.04.035

individual EU members are highly dependent on Russia, others could possibly profit from a bilateral energy relation, rather than a common EU energy policy towards Russia, due to Russia's import dependency on these countries.

If Russia is going to use gas as a political instrument in order to achieve political concessions from a recipient government they can in simple terms do two things: (A) offer a reduce price on gas (as has been done towards Belarus), or (B) threaten with a general shut-down of supply. While both A and B would imply a loss of revenues, B also implies the possibility of retributions from the recipient government. In a situation where Russia faces a strong country like Germany, a country which Russia is heavily dependent on (see Fig. 3), it is less likely that Russia is willing to exert political pressure as Germany has the ability to freeze huge quantities of export to Russia. Therefore it is very unlikely that Russia is able to change German foreign policy behaviour with only the threat of shutting off the gas supply to Germany. On the other hand, a country like Slovakia would have a much weaker bargaining position compared to Germany, and could be more easily coerced since Slovakia is more dependent on Russian gas supply without a compensating trade position.

It follows, that as long as the EU does not enforce a common foreign energy policy towards Russia, the best Russian strategy towards the EU would be a highly differentiated strategy. Generally, the Former East-European states may be more attractive to Russian influence, for several reasons: First, as mentioned above, the Russian elite favours involvement in the near abroad. The governing elite see it as a natural part of the Russian sphere of influence, which is one important incentive for an office-seeking decision maker (Light, 2008). Second, the power ratio between Russia and the small Former East-European countries is relatively large. Third, in these cases Russian decision makers has the ability to use export of gas in combination with other political and economical tools. Finally, the Former East-European countries are the ones most dependent on Russian gas. This increases the likelihood that gas will be a more contested trading commodity in Eastern Europe in comparison with West-Europe.

A common perception is that there is a potential for increased bargaining power towards Russia from a common EU energy policy. Our study indicates that this is a truth with certain modifications. Some EU member states could be worse off bargaining vice towards Russia with a common external energy policy as they would have to come to an agreement with 26 other states upon a common energy strategy towards Russia. We have described the European challenge as a matter of how to achieve one's interests when negotiating with a stronger opponent. A key element in bargaining strategies is to develop your alternatives to a negotiated agreement with the party at hand (Fisher and Ury, 1981). In our case this would first and foremost imply diversification of gas supplies. Reduced dependency on Russian gas supplies would reduce the exposure to potential Russian political pressure. A united European policy towards Russia does also seem to be an obvious answer. However, we would like to challenge this popular idea. If the aim is to diversify, one might very well be better of with a heterogeneous approach to energy supplies. *With* a unified European energy policy, trade partners would have one actor to relate to, and subsequently expose to potential pressure. *Without* a common policy, different member states could far more easily pursue different strategies and approach different potential suppliers regardless of what other members states were doing. We find the external energy relations as a case where the EU members might gain more by not having a common policy, than having one, even without considering the costs involved in creating an effective common foreign energy policy in the first place.

References

Aalto, P., 2008. The EU–Russian Energy Dialogue: Europe's Future Energy Security. Ashgate, Aldershot.

Aatland, K., 2009. Russia's Northern fleet and the oil industry—rivals or partners? Armed Forces & Society 35, 362–384.

Abdelal, R., Kirshner, J., 1999. Strategy, economic relations, and the definition of national interests. Security Studies 9, 119–156.

Aleklett, K., Hook, M., Jakobsson, K., Lardelli, M., Snowden, S., Soderbergh, B., 2010. The peak of the oil age—analyzing the world oil production reference scenario in World Energy Outlook 2008. Energy Policy 38, 1398–1414.

Allison, R., Light, M., White, S., 2006. Putin's Russia and the Enlarged Europe. Chatham House, London.

Armstrong, A., 1981. The political consequences of economic dependence. Journal of Conflict Resolution 25, 401–428.

Bochkarev D., 2009. A fear that is driving Russian gas policy. European Voice, November 30.

Bozhilova, D., 2009. EU Energy Policy and Regional Co-operation in South-East Europe: Managing Energy Security through Diversification of Supply?. Hellenic Observatory Papers on Greece and Southeast Europe, London.

Cambridge Energy Research, A. 2007. CERA: News: Press Releases: "Crisis of Confidence" Afflicts Russian -European Gas Relationship, 2010.

Cameron, P.D., 2007. Competition in Energy Markets: Law and Regulation in the European Union. Oxford University Press, Oxford.

Caporaso, J.A., 1978. Dependence, dependency, and power in global system – structural and behavioral – analysis. International Organization 32, 13–43.

Duvall, R.D., 1978. Dependence and dependencia theory—notes toward precision of concept and argument. International Organization 32, 51–78.

European Commission, E., 2006. A European Strategy for Sustainable, Competitive and Secure Energy. European Commission, Brussels.

Eureopean Commission, 2000. Towards a European Strategy for the Security of Energy Supply. Green paper COM (2000), vol. 769. European Commission, Brussels.

Fisher, R., Ury, W., 1981. Getting to Yes: Negotiating Agreement without Giving in. Houghton Mifflin, Boston.

Geden, O., Marcelis, C., Maurer, A., 2006. Perspectives for the European Union's External Energy Policy: Discourse, Ideas, and Interests in Germany, the UK, Poland, France: Research Unit EU Intergration, Stiftung Wissenschaft und Politik. German Institute for International and Security Affairs.

Jaffe, Amy M, Soligo, Ronald, 2006. Market Structure in the New Gas Economy: Is Cartelization Possible? In: David G. Victor et al. (red.), Natural Gas and Geopolitics —from 1970 to 2040. Cambridge University Press, Cambridge439–466.

Hirschman, A.O., 1945. National Power and the Structure of Foreign Trade. University of California Press, Berkeley, CA.

Heather, P., 2012. Continental European Gas Hubs: Are They Fit for Purpose?. Oxford Institute for Energy Studies, Oxford.

Hughes, J. 2006. EU Relations with Russia: Partnership or Asymmetric Interdependency?—LSE Research online. Volume. Available: ⟨http://eprints.lse.ac.uk/651/⟩.

Stern, Jonathan. 2006. The New Security Environment for European Gas: Worsening Geopolitics and Increasing Global Competition for LNG. Volume. Available: ⟨http://www.oxfordenergy.org/pdfs/NG15.pdf⟩.

Stern, J.P., Rogers, H.V., 2011. The Transition to Hub-based Gas Pricing in Continental Europe. Oxford Institute for Energy Studies, Oxford.

Keohane, R.O., Nye, J.S., 1977. Power and Interdependence: World Politics in Transition. Little, Boston, Toronto.

Light, M., 2008. Russia and the EU: strategic partners or strategic rivals? JCMS—Journal of Common Market Studies 46, 7–27.

Luong, P.J., Weinthal, E., 2001. Prelude to the resource curse—explaining oil and gas development strategies in the Soviet successor states and beyond. Comparative Political Studies 34, 367–399.

Masuda, Lecture at Norwegian Institute for Defense Studies, 2009.

Milov, V., Coburn, L.L., Danchenko, I., 2006. Russia's energy policy, 1992–2005. Eurasian Geography and Economics 47, 285–313.

Moravcsik, A., 1997. Taking preferences seriously: a liberal theory of international politics. International Organization 51, 513 ,.

Mueller-Kraenner, S., 2007. Energy Security. Earthscan, London.

Noel, P. 2008. Beyond dependence: how to deal with Russian gas. Volume. Available: ⟨http://www.ecfr.eu/content/entry/russia_gas_policy_brief⟩.

Nye, J.S., 2009. Understanding International Conflicts: An Introduction to Theory and History. Pearson, New York.

Romanova, T., 2009. The political economy of EU–Russian energy relations. In: FERMANN, G. (Ed.), Political Economy of Energy in Europe: Forces of Integration and Fragmentation. BWV-Verlag, Berlin.

Rogers, H.V., 2012. The impact of a globalising market on future European gas supply and pricing: the importance of Asian demand and North American supply. Oxford Institute for Energy Studies, Oxford.

Smith, A., 2008. The perils of unearned income. Journal of Politics 70, 780–793.

Strange, S., 1988. States and Markets. Pinter, London.

U.S. Geological Survey, 2008. Circum-Arctic Resource Appraisal: Estimates of Undiscovered Oil and Gas North of Arctic Circle. USGS Fact Sheet 2008-3049.

Vyatkin, V. 2009. Russian Gas Supplies to China to Equal One Third of Exports to EU Business, RIA Novosti, Novosti.

Wagner, R.H., 1988. Economic interdependence, bargaining power, and political influence. International Organization 42, 461–483.

Westphal, K., 2006. Energy policy between multilateral governance and geopolitics: whither Europe? International Politics and Society 2006, 44–62.

Please cite this article as: Harsem, Øistein, Harald Claes, D., The interdependence of European–Russian energy relations. Energy Policy (2013), http://dx.doi.org/10.1016/j.enpol.2013.04.035