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Do Transnational Actor Networks Stabilise International Energy Relations?
An Outline and Preliminary Assessment of a Theory of Economic Detente

Working Paper
Abstract

The impacts of cross-border inter-organizational networks on security of energy supply constitute a heavily disputed topic among both practitioners and scholars. Some authors claim that such networks stabilize energy relations and hence increase reliability of transnational trade in energy. Others suggest that cross-border relations might increase import dependence and offer channels to distort domestic energy policy preferences. This paper aims to address this question by looking into the stabilizing impact of inter-organizational relations between German and Russian energy companies and policy bodies.

Building on the energy detente concept as developed by Hanns W. Maull, complex interdependence and approaches in cooperation and network theory, the paper proposes some elements on a refined theory of energy detente or complex energy interdependence. The paper then tests these elements with a process-tracing on German-Russian oil and gas relations between 2000 and 2007. In this, it combines a within-case analysis of the negotiations on the Nord Stream pipeline and the gas field Yuzhno Russkoe with a non-technical discussion of core characteristics of the inter-organizational network.

The case narrative on the national level implies that, while Russia never threatened German energy security directly - during the time frame of research - it nevertheless accepted the risk of supply disruptions from its disputes with the eastern European transit states. Hence, this narrative shows limited discernible international effect of energy detente.

The theory seems to fit better for transnational company relations. But analysis on the company level showed, firstly, that these relations created an relative power position for Gazprom as “laughing third” in its triangular relations with Wintershall and E.ON Ruhrgas and, secondly, the level of stabilization differed between different transnational relations. While Gazprom's relations with Wintershall remained strongly cooperative, the company acted less cooperative in its relation with E.ON Ruhrgas, leading finally to a reassessment on the German side and a significant cooling of this relation.

Overall, support for energy detente is ambiguous at best, even in the most likely case of bilateral Russian-german gas relations. At least, on needs to refine the basic concept by introducing effects of bounded rationality as well as the strategies and preferences of the specific bilateral relationship and to differentiate the effects for different levels of analysis. However, this narrative does not warrant a general assumption that close cross-border relations with exporters increase energy security. Naturally, the informational value of a single within-case study is rather limited and future research using both comparative and statistical methods might lead to more systematic results.
1. Introduction

Political science research on energy security is broadly divided in two positions that correspond roughly to neo-realist and liberal institutionalist approaches (Braghiroli and Carta, 2009, Finon and Locatelli, 2008). These positions differ not only in their general picture of international energy relations, which are depicted either as a zero-sum competition for scarce resources or as a coordination problem to be resolved by international regimes, cooperation and market rules. They also offer divergent understandings of specific relations between producer and consumer countries.

In a neo-realist perspective, cross-border energy relations lead to one-sided dependencies that are exploited as power resources, mainly by producing countries, to pursue geopolitical preferences. Private companies, following short term strategies on the foundation of purely profit-oriented preferences, are mainly seen as either involuntary or acquiescent agents for the implementation of long-term geopolitical strategies (Kupchinsky, 2009, Umbach, 2010). Neo-realist authors present (European) international energy relations as a “new Cold War” (Umbach, 2006) in which the creation of institutions for collective defence is indispensable to ensure energy security of consuming countries. Among other instruments, the foundation of an “Energy NATO” (the concept is assessed for example by: Geden et al., 2007, Frank, 2007) and the consideration of energy in the already existing NATO were proposed in this context. Other neo-realists made the point for a system of collective security, arguing specifically for a pan-European geo-energy space that would include Russia as well as the EU (Mané-Estrada, 2006).

Neo-liberal or liberal institutionalist approaches present a two-fold argument: Traditional analyses, focussing on interdependency or mutual dependency (Grätz, 2009: 67) approaches, argue that Russian reliance of revenues from oil and gas exports excludes (Götz, 2008) or at least reduces any incentive for an intended political disruption of energy supply (Götz, 2008, Alba, 1973, Finon and Locatelli, 2008, Goldthau, 2008, Bressand, 2010). Policy recommendations from members of this research direction mainly focus on the reduction of dependencies by promotion of domestic energy carriers and energy efficiency and especially the
creation of a functioning EU market for energy products. While such approaches mainly continue to focus on systemic interdependencies, aspects of institutional effects were repeatedly included (Grätz, 2009, Finon and Locatelli, 2008). Only recently, liberal analyses assessed systematically the role of international institutions in global and/or regional energy (security) governance (Lesage et al., 2010, Goldthau and Witte, 2009, Bressand, 2010, Goldthau and Witte, 2010), thus introducing the “institutional turn” of political science (Aspinwall and Schneider, 2000) into energy research. Even more recently, researchers began to analyse systemically the relations between different states, energy companies and international regimes in the energy sector, either through analogy (Colgan, Keohan and van de Graaf, 2012) or through network analysis (Thurner and Hatzold, 2010, de Graaf, 2011). Policy recommendations from such studies include, among others, the extension of WTO rules to energy trade, the facilitation of information flows and the integration of producing countries into existing institutions as the IEA (Goldthau and Witte, 2009, Bressand, 2010).

Studies also look increasingly into the interactions between different levels of international energy relations, introducing aspects of political economy (Keating et al. 2012: 3-5). While several authors apply this perspective to the international system level (e.g. the contributions to Kuzemko et al. 2012; Yafimava 2011), others focus specifically on how domestic governance structures impact economic behaviour of energy firms (e.g. Grätz 2013; Locatelli & Rossiaud 2011; Locatelli 2006). A very small set of studies uses network analysis to describe important structures and basic developments of transnational company networks, including their effects on either overall energy governance or specific political relations (De Graaf 2011; Sander 2012; Grätz 2013).

This paper sets out to scrutinize the energy security effects of transnational company relations by extending the theory of economic detente in energy and offering a preliminary assessment at the example of German-Russian energy relations. In doing so, it will answer the research question:

*How did transnational and intergovernmental relations between energy companies and executive agencies influence the conduct of German-Russian energy relations between 2000 and 2007?*
This descriptive question reflects the current focus on theory development. At this stage, the task of the case study is not primarily to offer a thorough test of economic detente, but merely to assess its general plausibility as theoretical concept in international energy relations. More and more refined testing is required, if the theory passes this first test.

The fundamental idea of economic detente is captured by the following general hypothesis:

*H1: Security of energy supply within a given relation increases ceteris paribus with the diversity of the transnational and intergovernmental contacts between the respective exporting and importing countries.*

Following a common definition, security of energy supply here means the availability of sufficient supplies at affordable prices.

The structure of the rest of the paper is as follows: In the first section, I define the term economic detente. Then, I develop a theory on the connection between economic detente and energy security, which will allow formulating specific hypotheses as basis for the empirical assessment. In the third section, I will offer a preliminary test of these hypotheses within a case study on the energy relations between Russia and Germany. Finally, I offer my conclusions and some ideas on how to proceed in the further development of the theory.

### 2. The concept of *economic detente.*

#### 2.1 Definition of *economic detente*

The basic concept of economic detente in energy is as follows: An intricate web of material interdependencies and social contacts on different levels between an energy exporter and an energy importer should *firstly* reduce their incentives to disrupt or distort the relation and *secondly* increase their readiness to mutually support each other in an emergency.

The first adaption of the general concept of economic detente to the energy sector was by Hanns W. Maull in 1984. In his understanding, economic detente “... *aims at influencing the probability of supply-disruptions and the availability of alternative supplies [...] through the development of close ties of co-operation with producer-countries [...] Through weaving an intricate web of interdependencies, such policies hope to remove incentives for deliberate supply-disruptions, and to create*”
a climate favourable to the supply of additional quantities in an emergency. The approach can be bilateral or multilateral" (Maull, 1984). Besides the sector specific focus, Maull's definition also differed from earlier accounts of economic detente (for example Wkoronik and Park, 1979) in three aspects: Firstly, he included non-trade relations like investment relations or institutional cooperation, both of which are more stable and should therefore be more effective in stabilizing economic relations. Secondly, he expanded its geographical scope beyond the two superpowers and applied it to the relations between energy exporting and importing countries. Thirdly and most importantly he substantiated the concept by introducing the ideal type of complex interdependence.

Three main features describe the ideal type of complex interdependence: Firstly, a multitude of transnational and intergovernmental contacts exists for the conduct of the bilateral relation. Secondly, the division between high and low politics blurs as the hierarchy among issues dissolves. Thirdly, the importance of military force – and of coercive measures in general (Gasiorowski and Polachek, 1982, Holsti, 1978) – declines (Keohane and Nye, 2001, Keohane and Nye, 1973). These features substantially alter the conduct of international relations. Firstly, materially dominant states can not easily convert their power resources into political outcomes across issues. Power becomes an issue-specific rather than a overarching phenomenon, while economic power gains importance compared to military capabilities. Secondly, domestic societal groups become able to transfer specific problems to the international level, limiting the role of governmental agencies as dominant actors. Thirdly, international regimes become important elements of the international process by agenda-setting, coalition formation and interest articulation for weak states therewith limiting the anarchy of the international system (Keohane and Nye, 2001).

In the original version, the three features of complex interdependence together establish the independent variable, i.e. a status of the international system that than leads to the new conduct of international relations that constitutes the dependent variable.

Economic detente basically applies two features of complex interdependence to the energy sector and establishes a causal connection between them. This connection states that transnational and intergovernmental contacts on different
levels decrease the importance of coercive policy measures in a relation. Economic detente also extends the concept of transnational and intergovernmental relations by including material interdependencies.

2.2 Contribution of economic detente to energy security

Basically, multiple contacts decrease incentives to disrupt and distort energy trade by facilitating reciprocity, enabling trust to develop and increasing the independence of economic actors from political oversight.

Reciprocity is an important condition to develop cooperation since it allows punishing defection. Multiple contacts facilitate reciprocity by increasing frequency and durability of relations. Dividing a single relation according to different issues and actors leads to more and repeated meetings and interactions. This decreases the time between two different meetings and hence increases the value of the next meeting in the calculation of the actors (Oye, 1985). It also increases the opportunity to punish defection of the partner in one issue with own defection in another issue. Hence, multiple contacts increase both the perceived value of cooperation and the opportunity to sanction non-cooperation (Axelrod 2005; Axelrod & Hamilton 1981). Another aspect of economic detente is material integration through mutual investments and joint ventures. Such integration increases the sunken costs of a cooperative relation, making it more costly to disrupt it. This increases the durability of a relation and hence the timeframe during which defection is punishable. Economic integration should also reduce the willingness to engage in defection by merging the preferences of actors, therewith reducing the importance of relative gains (Busch and Reinhardt, 1993). Cooperative relations, once established and sufficiently strong, tend to exclude external actors from entering into the interaction. This “privatisation” of an issue limits the number of relevant actors and facilitates defining the defector and focusing the retaliation on him (Oye, 1985, Axelrod and Keohane, 1985). Simultaneously, however, privatisation might render transnational energy relations as a zero-sum competition for cooperation and access, depending on how far the exclusion of third actors reaches. In general, however, multiple contacts increase the opportunities for reciprocity, reduce incentives for defection and stabilise bilateral energy relations.
Multiple contacts further increase the chance for cooperation through the development of trust. They do so by opening access to potentially more cooperative actors, facilitating access to reliable information on strategies and enlarging the negative effect of (social) sanctions on a defector (Scharpf, 2000, Granovetter, 2005). A soft understanding of trust simply refers to the acceptance of risk concerning the behaviour of the other (Scharpf, 2000) while a hard understanding sees the other not only as committed but as normatively obliged to live up to his expectations (Hoffmann, 2002). Such a constellation allows actors to “...grant others discretion over their interests based on the belief that those interests will not be harmed” (Hoffmann, 2002). Actors in a trusting relationship may also accept a short-term loss of relative gains in order to contribute to the overall aims of the cooperative relationship, since they expect the others to compensate them for this loss in the longer term. In general, trust lowers the transaction costs for cooperating and increases the incentives for mutual support also in time of a crisis.

Transnational relations transform international energy policy to multiple two-level games, each of which requires the ratification of a negotiation result (Putnam 1988). Important ratifiers in energy companies include the respective oversight committees like the board of directors and in the last instance the shareholder meeting. Coordination can only succeed, if the negotiators agree on a result that is acceptable to their own ratifiers as well as to those in the other subsystem(s), for example to the competent political and bureaucratic bodies. The complementarity of preferences that multiple contacts ensure through material integration and efficient exchange of information does, however, mitigate the ensuing complexity of decision making. Economic actors can also influence the chances of success for an agreement by transnationally manipulating the ratification body's win-set. They can do so either by promising rewards for a positive decision or by threatening to punish non-ratification (Moravcsik, 1993, Putnam, 1988). Note that in a trusting relation, the promise of a future reward or at least future compensation is implicitly omnipresent. Transnational contacts may also serve as channels to “export” societal preferences into the political process of another state, either through direct communication or through the development of a transnationally agreed upon set of preferences. Finally, transnationally connected actors can consciously coordinate their actions vis-a-vis political actors in all
countries involved (Moravcsik, 1993), therewith actively working towards a common understanding of the preferred outcomes both transnationally and internationally. Their ability to do so is of course influenced by their relative influence in their respective political systems.

Multiple contacts reduce incentives for defection by improving sanctioning mechanisms, facilitating the development of trust and supporting development of a mutually shared set of preferences. They increase incentives to support each other in a crisis by allowing cross-border coordination of actions, integrating material preferences, facilitating the exchange of information and most importantly by facilitating the development of a trusting relationship between the actors involved. These mechanisms also support the efficient and effective resolution of unintended distortions or disruptions of energy supply. Energy detente therefore should addresses the whole spectrum of political risks for energy supply. However, the following test only considers intended supply disruptions.

3. Method

I applied process tracing (e.g. Collier 2011; Bennett 2010; George & Bennett 2005: 205-232; ) to assess how transnational company networks affect security of energy supply. My unit of analysis was the bilateral German-Russian gas relation in 2000 to 2007. I had two levels of analysis: The first level concerned the international relation itself, i.e. the international level. I combined this with a within-case comparison of the transnational strategies of the two most important German gas importers, namely E.ON Ruhrgas and Wintershall. These transnational company relations were my second level of analysis.

Following James Mahoney's recommendation (Mahoney 2012: 580), I designed the process tracing as a hoop test for economic detente. To this end, I limited the analysis to politically intended disruptions of energy supply. This allowed me to treat reduced incentives to engage in non-cooperative behaviour as a necessary condition for stable energy supply. If economic detente is to pass its test, cohesive and diverse transnational contacts between the actors involved need to be a sufficient condition to reduce these incentives.

The logic of process tracing demands not only to show a correlation between independent and dependent variable but rather to prove a causal connection
between all variables for each step of the theoretically assumed pathway. In the case study, I focussed on trust as the intermediary variable and tested the following hypotheses:

**First:** If high interdependencies characterise international energy relations, then actors establish transnational networks to govern these interdependencies.

**Second:** If transnational networks are cohesive and diverse, then the members of these networks develop trust towards each other.

**Third:** If actors trust each other, they have reduced incentives to engage in non-cooperative behaviour.

Accordingly, I needed to assess the values for and the causal connections between the following variables: Interdependence, network cohesiveness and diversity, trust and incentives to disrupt energy supplies.

I used the share of Russian gas exports in German primary energy consumption as indicator for sensitivity interdependence. To assess vulnerability interdependence I referred to a qualitative description of the pipeline network that connects Russia and Germany. The resulting exclusion of internal limits to vulnerability – such as flexible end use infrastructures and availability of alternative energy carriers – seem justifiable since I focussed on transnational security of energy supply. This assessment deliberatively excludes the political dimension of interdependence, i.e. the value put on the relation by the actors concerned, which is covered by the later discussion of trust.

To assess cohesiveness and diversity of transnational contacts, I conducted a network analysis of the interorganisational networks in the German-Russian relations for gas for the following years: 2002, 2005 and 2007. Within this analysis, I focused on indicators for diversity and cohesiveness of contacts as well as for relative social power positions. I considered both organisational relations – as joint ventures or mutual shareholdings – and personal contacts, the latter mainly in form of memberships in boards of directors. Data for this step came from public and non-proprietary sources, mainly annual reports.

I measured cohesiveness through density and network centralisation. Density gives the ratio of all possible contacts in a network to all existing contacts. The higher the value, the more relations are realised and the more dense the network
is. Network centralisation gives the amount to which a given influence resource is concentrated in one specific actor. Specifically, I considered two centralisation concepts: closeness-centralisation measures to which extent one actor receives information faster than any other actor in the network. Betweenness-centralisation measures to what extent one actor is in a better position to control the diffusion of information within the network (see Freeman 1979 for centrality and centralisation indicators).

I assessed diversity through a visual interpretation of network maps and an evaluation of direct contacts of the three energy companies. To find close indirect transnational relations especially between economic and political actors, I analysed the network for groups of actors that were either connected directly or via only one intermediate actor – so-called 2-cliques (Alba 1973).

To assess trust, I analysed both national energy policy documents and company publications according to two factors, namely the number of cooperative references to the respective partner and their strengths as derived from the chosen descriptions – e.g. “friend” is stronger than “partner” – and context – i.e. personal statements by corporate officials are stronger than passing references in the general text. Concerning company publications, I referred to the annual reports of the German companies and the annual speeches to the shareholders for Gazprom to compensate for the more technical nature of the Russian company’s reports.

I assessed the value for the dependent variable, namely reduced incentives to disrupt physical gas supplies qualitatively through a case narrative of the negotiations on the Nord Stream pipeline and the gas field Yuzhno Russkoye. Both negotiations were critical in addressing transformational impulses to the EU-Russian gas transport system and (re-)establishing security of supply under changing condition.
4. German-Russian gas relations as a case of economic detente?

4.1 Framework of German-Russian gas relations 2000-2007

According to the German Ministry of Economics and Technology, Russia covered between 40.8% and 43.9% of German gas imports within the timeframe of research. In the same time, they made up between 8.4% and 10.1% of German primary energy consumption, with the highest values in 2004 and 2007.

On the company level, E.ON Ruhrgas covered between 25% and 35% of its gas supply from Russian imports. BASF, Wintershall's mother company, only publishes data on reserves. Here, the Russian share was 61% in 2007, immediately after the joint venture Achimgaz came online. However, the lack of data on general gas supplies limits the informational value of this number. Other than for E.ON Ruhrgas, interdependence in Wintershall's case also had a marketing dimension via the Gazprom-Wintershall joint venture WINGAS. Throughout the timeframe of research, this firm accounted for around 60% of Wintershall's gas sales.

The bilateral relations' quantitative importance is mirrored in the strong bilateral fixation of the Russian-German gas transport infrastructure that currently completely consists of inflexible on-shore pipelines. Russia has a LNG terminal on the island Sakhalin in the Far East that is irrelevant for trade with Germany. Germany has no LNG-infrastructure on its own. Russian gas is mainly transported to Germany via the Ukrainian pipeline corridor. This corridor consists of seven pipelines with an overall volume of 155 m³ per year. It is connected to the German gas grid via the Sachsen-Thüringen-Erdgasleitung (STEGAL), run by the German-Russian WINGAS GmbH (WINGAS, 2010a) and the Mittel-Europäische-Gasleitung (MEGAL), which is operated jointly by the E.ON Ruhrgas AG, the Gaz de France S.A. and the Austrian OVM AG. The latter is subdivided into a Northern branch that starts at Waidhaus at the Czech border and a Southern route, which begins at the Austrian border town of Oberkappeln (EON, 2010). An additional interconnection – the Yamal pipeline – with a capacity of 33 billion m³ runs through Belorussia and is connected to the German network via the Jamal-Gas-Anbindungs-Leitung (JAGAL), run by the WINGAS GmbH (WINGAS, 2010b).

Institutionally, German-Soviet/Russian gas relations largely rested on an adapted Groningen model of Long-Term Delivery Contracts (LTDCs) with its established
model of risk-sharing through take-or-pay clauses and its safeguards for the required long-term inflexible investments, including the oil-pegged pricing system (e.g. Konoplyanik 2009: 447-452). Between 2000 and 2007, two developments put this governance structure in question:

Firstly, the dissolution of the Soviet Union also fragmented the former Soviet gas transport system. With Ukraine becoming a sovereign state, a new actor with considerable potential for obsolescence bargaining (Omonbude 2007) appeared. In the context of Russia's policy to end barter deals and transform politically motivated prices in the FSU to market level (e.g. Konoplyanik 2009: 452-462), she aimed to reduce the powerful Ukrainian position either by circumventing the country and reduce its transit monopoly or by directly controlling the transit pipelines.

Secondly, beginning liberalisation of the EU gas markets put an end to the usual practice of gas importers to establish consortia for their negotiations with Soviet exporters. Hence, importers had to bargain individually with the state-backed Russian quasi-monopolist (Bundesministerium für Wirtschaft und Technologie, 2002a, Bundesministerium für Wirtschaft und Technologie, 2002b). Here again, actors aimed for re-distributing bargaining resources through vertical integration with the gas producer.

Hence transit and access to resources emerged as crucial governance challenges in the timeframe of research. The question now is, if and how transnational company relations contributed to resolving these governance challenges and ensuring energy security.

4.2 Characteristics of the German-Russian interorganisational network

A multitude of international and transnational contacts characterise German-Russian relations. They establish a network that is characterised by cross-border contacts between two essentially different national policy networks: The German network with a punctually bridged division between political and economic spheres and the Russian network, which shows a concentric organisation of actors around

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1 Other major challenges as the unbundling rule or increasing pressure on pricing formulas and long-term contract occurred fully only after the time frame of this research.
a central clique of energy policy organisations and state-controlled energy companies.

In order to meet the basic conditions of economic detente, the network established by these contacts should fulfil two criteria: It should firstly be cohesive and secondly should bring different actors from several levels of society into contact.

Concerning cohesiveness, the evidence is mixed. In fact, network density is rather low, especially compared to the two national-level energy policy network of Russia and Germany. This also holds true for most centralisation measures, which nevertheless show more relevant values than density. It does not apply, however, to the important betweenness-measure, which accounts for the ability to control interactions. For this indicator, measures are generally higher than for both national networks, implying higher opportunities of coordinated action through control. Also, this value is higher in 2004 than in either 2002 or 2007, resulting from the internal cohesion process of the national Russian energy policy network. Especially due to the betweenness values, German-Russian relations qualify as economic detente on the cohesiveness-dimension.

Concerning diversity of contacts, the result is less ambiguous. Even a simple visual interpretation of the network map shows the diversity of transnational relations between both societies. Quantitative network analysis of close cross-border relations supports this even further. In each research year, approximately one fifth of all 2-cliques were transnational in their membership. Approximately half of these included economic and political actors and hence bridged both the national and the functional gap between different subsystems. Dominant among these where large groups of Russian actors that included one or few German member(s). Both aspects resulted from the internal structure of the internal Russian energy policy network, which became increasingly concentrated on a core clique of political and state-economic organisations. Especially in 2007, groups consisting of both economic and political members of this clique accounted for 90% of all internally closely integrated groups in the Russian network.

On the transnational level, the energy companies organised their cross-border interactions according to different principles.
E.ON. Ruhrgas had permanent transnational contacts to Gazprom solely through the shares it owned in the Russian company. At the highest point, the shareholding amounted to 6.4%, with 3.5% held directly and additional 3% held indirectly via a joint venture with the OAO Gazprom, namely the ZAO Gerosgaz. E.ON Ruhrgas AG only owned 49% of the ZAO Gerosgaz, so that any voting rights from the indirectly held shares remained in fact with the OAO Gazprom itself (EON, 2008). Since September 2005, the Nord Stream AG established a third and indirect contact between both companies. These institutional contacts were personally supplemented by the membership of the German company’s then CEO Burghard Bergmann in the board of directors of the OAO Gazprom (Gazprom, 2008).

Wintershall and Gazprom organised their interactions along several mutual shareholdings and joint ventures, the number of which increased during the timeframe of research. On the German side, these included the WINGAS GmbH and the Wintershall Erdgas Handelshaus GmbH together with her Swiss subsidiary Wintershall Erdgas Handelshaus Zug GmbH (Wintershall, 2008). Russian participation in these companies was administered by the Gazprom Germania GmbH – until 2006 the ZGG Zarubezhgas Erdgashandel-Gesellschaft mbH – a 100% subsidiary of the OOO Gazprom Export (Gazprom Germania, 2010). Joint ventures on the Russian side were the ZAO Achimgaz – the first exploration facility that included a non-Russian company -, the OAO Severneftegazprom - the production facility for the gas field Yuzhno Russkoe - and, as of September 2005, the Nord Stream AG (Wintershall, 2008). A further indirect contact between the Wintershall Holding AG and the Gazprom Germania GmbH was established via the shares both companies held in the Verbundnetz Gas AG – Germany’s third biggest gas company, located near Leipzig (Verbundnetz Gas Aktiengesellschaft, 2008). Personally, these institutional contacts were supplemented by the membership of Gazprom-manager Aleksander G. Ananenkov in the Wintershall Holding AG’s board of directors (Wintershall, 2008). This structure disintegrated the transnational company interaction among several intervening institutions, so that they should occur more often and more frequent than in the substantially single direct contact between the E.ON Ruhrgas AG and the OAO Gazprom. Since these institutions are directly coupled to the material gains and losses of the two companies, they should also be stable in the long-term. Both effects facilitate the chances for successful cooperation between
the actors involved. They also reduce the relative transaction costs for the establishment of cooperation and should, therefore, lead to a partial exclusion of the *E.ON Ruhrgas AG*.

### 4.3 Trust and reciprocity

Generally German-Russian energy relations in 2000 to 2007 are considered to be close and cooperative – even too much so from a German perspective. This country's characterisations as “acquiescent partner” (Braghiroli & Carta 2009) may serve as a case in point. This description certainly holds if one considers the official German energy policy documents from this time. The most important of these are the report of the “Enquiry Commission on Sustainable Development” and the results of the three so-called “energy summits” - meetings of the relevant policy makers and representatives of the nationally important energy companies.

In its report, the Commission acknowledged the risk of energy dependency from Russia, but found the country to be generally more reliable than alternative suppliers from the Middle East (Enquete-Kommission 2002:98). To alleviate the risk, the Commission called for a diversification of supply sources and routes on the EU level as well as for an improved institutionalisation of international energy relations. This included support for both the Energy Charter Treaty (Enquete-Kommission 2002: 120, 430 und 443) and Russia’s WTO accession bid (Enquete-Kommission 2002: 99).

Despite their support for increased diversification, the three energy summits largely supported existing cooperative structures with Russia. The reports named both long-term delivery contracts and mutual company integration as valuable instruments to ensure security of energy supply and called for a further deepening of EU-Russian energy relations. This included explicit references to German holdings in the Russian gas producers Severneftegazprom and Achimgaz as well as to the North European Gas Pipeline – which later became Nord Stream. On the other hand, the reports assessed the potential energy security contributions of LNG and market liberalisation critically, pointing to the indispensable division between market and state (Bundesregierung 2007).

Interestingly, this outcome differed largely from the “Status Report Energy”, which served as input the summits' deliberations. In this document, the German
government expressively called for a higher utilisation of domestic energy carriers and for increasing energy efficiency to reduce energy supply risks (Bundesregierung 2006: 1).

This is symptomatic for German elite discourse on energy security in 2000-2007. While documents that dealt explicitly with security of energy supply focussed strongly on integration and cooperation they ranked comparatively low in overall energy policy priorities. Rather, climate policy and ecologic sustainability dominated the discourse with economic feasibility as clear second priority. This is clear not only because of the complete lack of security of supply considerations in the “Integrated Energy and Climate Programe” (Integriertes Energie- und Klimapaket / IEKP), which translated the summits’ outcomes into policy. It also showed in the three coalition treaties concluded during the timeframe of research, all of which treated security of energy supply as a marginal issue. Hence, politically, Germany focussed on renewable energy carriers and energy efficiency, both of which generally reduce demand for energy imports. Obviously, such sensitivity reduction is a relative gain-oriented policy of “defence” rather than one of “integration” with a view to absolute gains. Hence, while not necessarily exclusive, both strategies follow fundamentally different approaches towards energy security and send potentially incompatible signals to the partner.

However, it is difficult to construe this as a lack of trust on the side of the German government. The discourse on energy independence never gained much ground in Germany and later events – especially the nuclear phase-out – support a purely ecological understanding of these policies. Hence, the energy security effect of overall German energy policy might be one of decreasing trust on the Russian side rather than signifying a lack of trust for Germany.

The Energy Strategy of 2003 served as indicator for trust on the Russian side. In its foreign trade related provisions, the strategy aimed for stable exports to the EU importers also under the condition of developing spot markets (Federation Government 2003: 79). In the long term, Russian energy companies should integrate with the world economy, including direct participation in important consumer markets (Federation Government 2003: 40). To this end, the strategy called for non-discriminating access to energy markets, including a stable and unified Eurasian transit system as physical pre-condition (Federation Government
Also, the strategy called for increasing foreign direct investment both into Russia and from Russian companies abroad (Federation Government 2003: 40). Other than in the German case, these preferences not only ranked highly in general Russian energy policy but were also embedded into an integrated and coherent policy strategy. Overall, the strategy shows a strong Russian preference to co-operate with EU importers and to intensify vertical integration.

On the company level, the two German gas importers showed similar levels of trust up to 2004. This showed quantitatively in that both companies referred to their respective Russian business considerably more often than to any other transnational relation. Interestingly, while E.ON Ruhrgas referred mostly to “Russia”, Wintershall focussed more on its transnational partnership with “Gazprom” and their joint venture “WINGAS”. Both companies described Russia not only as indispensable for a secure German gas supply, but also stressed the reliability of established trade relations. For E.ON Ruhrgas, expressions of trust were strongest in 2002, when then CEO Burghard Bergman personally commented on the strong cooperation build on complementary interests and capabilities (E.ON Ruhrgas 2002: VIII).

However, after 2004, E.ON Ruhrgas' perceptions of Gazprom began to differ significantly. After this year not only did the number of references to “Russia” decline significantly, with “Norway” becoming the preferred transnational cooperation partner in 2007. More importantly, the quality and context of these references change as well. Without discarding Russia's indispensability as supplier, E.ON Ruhrgas now planned to expand its Russian imports “within limits”, partially due to the greater closeness of Norway “...not only in a geographical sense” (EON Ruhrgas 2005: 13). In a clear departure from earlier justifications of the Russian political system (e.g. EON Ruhrgas 2002: 24), this implied criticism of authoritarian developments. E.ON Ruhrgas now described its Norwegian business as a “special success story” (E.ON Ruhrgas 2007: 8), a formulation it had before reserved to Russia. Technical criticism of the Russian gas sector with its “low increase in production rates […], technical hurdles to production [and] difficult transportation to consumer markets” (E.ON Ruhrgas 2006: 8) complemented this picture. More important from a business point of view was that E.ON Ruhrgas now replaced earlier references to its Russian partnership with notion of competition and distrust. Instead of a strategic and indispensable partner, Gazprom – labeled
“WINGAS/Gazprom” – now became a “…foreign heavyweight competitor on the German gas market […] with aggressive market strategies under conditions of open market and network access.” (E.ON Ruhrgas 2005: 8).

Even before 2004, Wintershall was considerably more sanguine in its references to Russia and Gazprom than businesslike E.ON Ruhrgas. Terms it used to describe the partnership were “excellent” (Wintershall 2000: 15), “close” (Wintershall 2004: 20; Wintershall 2005: 24, Wintershall 2006: 33; Wintershall 2007: 51), “outstanding” (Wintershall 2006: 36), “strong” (Wintershall 2007: 4) and “successful” (Wintershall 2003: 23). The transnational relation established “a totally new kind of cooperation” (Wintershall 2006:9) and throughout the years “partners have become friends a long time ago” (Wintershall 2003: 53). An anonymous interview partner at Wintershall affirmed this strong and unambiguous expression of trust. Asked, why Wintershall accepted the seemingly disadvantageous distribution of ownership shares in the NEGP project, he stated not only that the pipeline resulted from Gazprom's initiative, but also that Wintershall expected to be compensated at some later point. This is more or less the textbook definition of weak or rationalist trust.

Preferences of Gazprom were very close to those formulated in the energy strategy. As the political document, the company aimed for integration into consumer markets and stabilisation of transport structures (Gazprom 2004; Gazprom 2005; Gazprom 2006). To this end, it planned especially to diversify its transit infrastructure by establishing new pipelines (Gazprom 2003; Gazprom 2004). Planned diversification also concerned export markets where the company saw a greater future role for East Asian markets. However, Gazprom stressed that this would not mean a re-orientation away from its EU costumers, since the company's gas reserves would suffice to serve both markets (Gazprom 2003; Gazprom 2006). The company also aimed to establish transnational partnerships with companies from important export markets, based on complementary interests. In these cases, Gazprom could offer access to Russian gas reserves in exchange for access to end consumers and technological know-how. In this context, the company referred namely to its its partnership with BASF, Wintershall and WINGAS (Gazprom 2005; Gazprom 2006). It never referred to E.ON Ruhrgas as partner beyond purely technical references in its annual reports. This also applied to a written reply of Alexander Medvedev to a questionnaire send to him by the
The results give qualified support for the theory of economic detente. On the one hand, there is a connection between network density and contact diversity and strength of trust. Politically, this shows in the strong preference of German foreign energy policy in favour of increasing integration with the Russian gas sector. On the business level, trust was considerably stronger between the two companies whose relations resemble the conditions of economic detente more closely, namely Wintershall and Gazprom. Hence, generally, the expectations of economic detente bear out.

There are, however, two points that might contradict the theory. The less important resides on the business level. Here, changes in transnational network structures can not explain, why E.ON Ruhrgas lost trust in Gazprom after 2004. Not only did the most important characteristic remain stable – namely the concentration on two contacts which transmitted one interaction. More than that, the transnational network structure between the two companies even became more diversified after 2004, which – according to the theory – should have encouraged stronger trust rather than weaker.

The more important point concerns the political level. Here, trust enhancing effects of networks only appear within the discussion of energy security proper, which had minor importance for German energy policy. Generally, this policy aimed to reduce the share of fossil energy carriers in supply through renewables and energy efficiency. While there is little evidence that this strategy was intended as defensive mean to reduce dependence on Russia, it certainly runs counter to the increased integration allegedly aimed for in energy foreign policy and might even cause distrust on the Russian side. Hence, this overall configuration poses a challenge to the theory of economic detente.

According to these results and if the theory of economic detente holds, one should observe a low readiness of Russia to disrupt gas supplies to Germany. On the company level, one should observe a greater willingness of Gazprom to cooperate with Wintershall than with E.ON Ruhrgas.
4.4 Cooperation and conflict

Between 2000 and 2007, Russia stopped its gas supply to the EU in two cases: 
Firstly, in the context of its dispute with Belorussia on new supply contracts, Gazprom ceased transit across the Yamal pipeline on February 18 2004. Secondly, it stopped gas exports to Ukraine between January 1 and 4 2006 within the context of bilateral negotiations on new supply gas contracts and price increases (Pirani 2012: 176f). In this case, Ukraine caused a shortfall in supplies by diverting transit gas for its own use. Neither of these disruptions resulted in supply problems for Germany and especially the Belorussian case remained virtually unnoticed in the wider public (Yafimava 2011: 81-86). However, one can argue that Russia in these cases at least accepted a risk that German supply might become interrupted. This was certainly the case in the transit disruption of the Russian-Ukrainian gas dispute of 2009, which lies outside of the timeframe of this research. The fact that Russia tried to make up for supply losses through other routes (EU 2009: 10) does not strongly support economic detente, given that she firstly caused these losses herself.

Analysis for the company level focused on the negotiations on the gas field Yuzhno Russkoe and the Nord Stream pipeline. Yuzhno Russkoe is a gas field on the Yamal peninsular, near to the established gas fields Yamurg, Medvezhe and Urengoi. It has reserves of 600 bill. cubic meters and an estimated plateau production of 25 bill. cubic meters per day. Operating company is OAO Severneftegazprom. Nord Stream is an offshore pipeline through the baltic sea with currently two strands with a capacity of 27,5 billion cubic meters per year each and 55 billion cubic meters combined. The pipeline was inaugurated in 2010, but negotiations began and concluded during the timeframe of research.

Gazprom started negotiations on a pipeline to circumvent Ukraine as early as 1997. While firstly aiming for an additional pipeline via Belorussia and Poland, the

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2 Points against economic detente become even stronger when considering the Russo-German “gas war” of 1991 as most blatant example. In this case, Gazprom engaged in an economic battle with Ruhrgas for control over the Eastern German gas company Verbundnetz Gas Leipzig. To get the upper hand, Gazprom simply stopped deliveries to the totally dependent VNG and managed to get included as a shareholder. This presents an obvious, unambiguous and as yet under-researched example for Russian application of the “gas weapon” against German actors. However, its is difficult to draw direct conclusions for economic detente within this study, due to the lack of comprehensive data for this period. Also note that Gazprom acted jointly with Wintershall in its competition with Ruhrgas.
Russian gas company decided to pursue the off-shore route after repeated vetoes from the Polish government (Reuters, 2002b, Reuters, 2002a, Lang, 2006). As of July 2004, negotiations on the later Nord Stream pipeline became part of a comprehensive set of causally interdependent negotiations. Besides aiming for the implementation of the off-shore pipeline, Gazprom looked for the acquisition of shares in E.ON Ruhrugas, while the E.ON Ruhrgas aimed for a participation in Severneftegazprom, the production company for the Yuzhno-Russkoe gas field. Especially Gazprom's interest in E.ON Ruhrgas was highly controversial, since E.ON saw such a direct participation as incompatible with her strategy to keep full control over then newly acquired Ruhrgas (Dohmen/Martens 18.04.2005) and to maintain the diversified supply portfolio of the former German gas monopolist (Frankfurter Allgemeine Zeitung 2005). Also, a Russian share in the former German gas monopolist would have contradicted the spirit, if not entirely the letter, of the ministerial approval for the merger of the utility E.ON with Ruhrgas. This approval prohibited any foreign company from acquiring a majority share in Ruhrgas and obliged E.ON to preserve her new subsidiary as integrated German gas company. Gazprom, however, only aimed for a minority participation in Ruhrgas. (Bundesministerium für Wirtschaft und Technologie, 2002a, Bundesministerium für Wirtschaft und Technologie, 2002b).

Since negotiations with E.ON Ruhrgas led to no substantial results, Gazprom turned to BASF and its subsidiary Wintershall for further discussions. These parallel negotiations led the conclusion of a Memorandum of Understanding on April 11 2005 between BASF and Gazprom. The most important element of this agreement was the exchange of shares between subsidiaries of Gazprom and Wintershall. This resulted in participation of the German company in Severneftegazprom of 49% and a reciprocal participation of Gazprom in the joint venture WINGAS of 50% minus one share. WINGAS was further integrated into a joint venture for the implementation of interconnector pipelines between the later Nord Stream pipeline and the existing German gas grid. At the same day, E.ON Ruhrgas and Gazprom merely agreed to continue their talks on the later Nord Stream pipeline. Concerning Severneftegazprom, E.ON Ruhrgas managed to secure an option for 25% of shares, significantly less than the approximately 50% it initially aimed for (Handelsblatt, 2005, E.ON Ruhrgas 2005, Gazprom 2005). Both documents were hailed by Gerhard Schröder as “historical” as well as
“strategic” and by Vladimir V. Putin as “the first Grand Project in the mutual penetration of our economies” (Wintershall AG, 2004).

The agreements of April 11 2005 resulted in significant relative losses for E.ON Ruhrgas. The company was not only replaced by Wintershall as Gazprom’s favoured partner for cooperation concerning the Nord Stream pipeline. It also failed to maintain her negotiation position concerning Severneftegazprom with its – prospective – shares reduced to a minority position. On the other hand, both Wintershall and Gazprom simultaneously achieved their aims to become “vertically integrated companies”, i.e. to be present on all steps of the gas-related value-added chain. E.ON Ruhrgas’s main achievement on the other hand, was to stay “a relevant partner” for Gazprom, i.e. prevent total exclusion from future interactions.

The main short-term effect of the April 2005 agreements was that E.ON Ruhrgas consented to the off-shore variant for a new pipeline between Russia and Europe as an informal precondition for the later inclusion into Severneftegazprom. Following negotiations led to the foundation of the German-Russian joint venture Nord Stream AG in Zug, Switzerland on September 8 2005. Both German companies received 24.5% of the shares, while Gazprom retained a majority position with a participation of 51%. The partners intended to include another EU-company as fourth partner. This provision was implemented when Nederlandse Gasunie was included into the consortium in October 2006. While each German company transferred 4.5% of Nord Stream’s shares to the new partner, only Gazprom benefitted materially by receiving options for the acquisition of 9% of the shares in the BBL Company B.V., the operating company for the Dutch-British Balgzand-Bacton pipeline (Reuters, 2006). The Nord Stream AG was officially founded on March 31 2006.

Negotiations between E.ON Ruhrgas and Gazprom on the participation in Severneftegazprom continued until 2008. In this time, several offers by the German company, e.g. transfer of shares in Hungarian energy companies Eon Földgaz Trade, Eon Földgaz Storage as well as Eon Hungaria and a financial compensation of 1.2 bill. €, were rejected by the Russian side. Finally, both actors agreed to an asset swap, in which E.ON Ruhrgas would exchange her 49% shares in Gerosgaz for a participation of 25% minus one share in
Severneftegazprom (EON, 2008). Even after this inclusion, E.ON Ruhrugas was less successful than competing Wintershall, which held an additional preferred share in Severneftegazprom’s initial capital and hence participated with 35% in the financial gains from the company, despite its non-preferred shares being reduced to 25% minus one as well (Milne and Gassmann, 2005).

The outcomes of the negotiations on both the Nord Stream pipeline and Yuzhno Russkoe / Severneftegazprom concur with the theoretically expected effects of economic detente. Not only were they successful in the sense that cooperative agreements were reached that reflected the preferences of all actors involved. They also excluded external actors and favoured, within the cooperative interaction, the company with the stronger focus on a cooperative strategy, namely the Wintershall Holding AG. The consideration of this company as favoured partner for the exploitation of the gas field Yuzhno Russkoe can from a Russian perspective be interpreted as a sanction of the E.ON Ruhrugas AG’s uncooperative actions by the OAO Gazprom. The outcomes of the negotiations finally reflected the preferences of Russian actors stronger than those of their German counterparts. While all companies became almost completely vertically integrated in this period, only the OAO Gazprom managed to be present an all stages of the Nord Stream project, from the gas production to the German interconnectors. Also, only the Russian company became an at least almost equal co-owner of most companies covered by the negotiations, while both German companies had to be content with strong minority positions in the Russian gas companies. The asset swap concerning the integration of the N.V. Nederlandse Gasunie into the Nord Stream AG is just a further point to illustrate this pattern.

5. Evaluation

The results give mixed support to economic detente as concept for energy security.

As the theory assumed, actors established transnational contacts to co-opt potential sources of uncertainty within a highly interdependent environment. In this perspective, cross border attempts for vertical integration present rational reactions to transnational coordination problems as well as economic and/or political power play.
These channels also supported trusting relations between the actors. Politically, Germany’s security of energy supply concept strongly focussed on continued integration with Russia. On the business level, trust was considerably stronger and more stable within the bilateral relation that more closely resembled the ideal type of economic detente, namely between Wintershall and Gazprom. However, other elements of this step challenge the theory of economic detente.

Firstly, on the political level, Germany’s overall energy policy aimed at increasing the share of renewables and energy efficiency and hence at reducing imports of fossil energy carriers. This poses a fundamental risk to Russian security of energy demand. Within this general directions, the security of supply strategy of integration had a very low priority and was pursued mainly by actors with strong economic ties to Russia and weak legitimacy within the German energy policy discourse.

Secondly, on the economic level, transnational contacts can at best explain partly why E.ON Ruhrargas had a less trusting relation with Gazprom. In fact, these contacts did not change in structure or quality before the sudden decrease of cooperative references beginning with 2004. After this date, they temporarily even evolved to resemble the ideal type of economic detente more closely, but without any discernible impact on the drastic decline in trust.

However, the theory’s main weakness lies in its dependent variable, especially concerning the political level of analysis. On the one hand, Russia did not pose a threat to German gas supplies directly – within the timeframe of research. But it frequently engaged in tactical behaviour against important transit state that obviously put German energy imports at risk. Also, it excluded interested German actors from potential governance solutions to the transit problem, most importantly the proposed consortium for the Ukrainian gas pipeline system. The fact that Russia tried to make up for the supply losses offers only weak support for economic detente, since the losses themselves were caused at least partly by Russian behaviour.

On the company level, support for economic detente is less ambiguous. Here, Gazprom clearly showed a higher willingness to accept conflict in its relations with E.ON Ruhrargas than with Wintershall, even using its relations to the latter as bargaining tool. Due to the different structures of the bilateral relationships, this is
in accordance with economic detente. Also, the interactions between transnational contacts and cooperative or conflict-oriented interactions are clearly discernible in the networks tactics employed by Gazprom and the integrative strategy of Gazprom and Wintershall.

Results of the process tracing do not allow to qualify the characteristics of economic detente as sufficient condition for energy security. Neither do strong and diverse contacts alone automatically create trust nor does trust alone suffice to reduce incentives to cause or at least accept damages to the corresponding partner. Developments on both the national and the company level of analysis lead to this conclusion. Hence, strictly speaking, economic detente fails the test.

However, results also showed that there is a clear positive effect of diverse and multi-level contacts on energy security. Therefore they seem to point towards further elaboration of the theory rather than to its rejection. The question is, under what additional conditions diverse multilevel contacts do indeed increase energy security and how strongly these effects react to value changes in the conditioning variables.

Results from the case study point to some potential additions to the theory. Most importantly, the wider context of economic detente seems to matter. Specifically, if groups of actors aim for economic detente in an environment that primarily aims for unilateral vulnerability management, this might counteract any positive effects on energy security. Hence, future studies should control for energy policy priorities and actors specific influence potentials.

Also, priorities on the actor level are important. If an actor focuses on relative gains, chances are that she will use her position within a network of transnational contacts - and abuse potential trust - in order to pursue her own ends without regard to cooperation partners. This is an important point since it touches on the basic mechanism of economic detente and indeed general network governance. These concepts rest on the assumption that diverse and multi-level contacts facilitate cooperation by allowing to sanction defection. However, as the results show, it very strongly matters who has the instruments to sanction, i.e. the distribution of social influence is another crucial determinant in assessing the impact of transnational networks. If the superior resources lie with a defector – even a situational defector as one might label Gazprom – strong networks alone
do not suffice to enable stable cooperation. Hence, actors’ preferences and the
distribution of social resources are further variables to control for in future studies.

Finally, the theory needs to account for the actors’ bounded rationality. As the
E.ON Ruhrgas case clearly points out, trust and cooperation may well be based on
insufficient information, flawed strategic analyses and incorrect interpretation of the
other. Hence, actors’ capacities to receive and proceed information – partly but not
totally conditioned by their position within the network of diverse contacts – must
be controlled for in future studies.

All these variables deserve further consideration within future development of
economic detente as concept for energy security, most probably within a
comparative case study design.
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