European Commission´s antitrust investigation against Gazprom

Implications for the Energy Security of Russia and the European Union

Anni Røe

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Department of Political Science
Peace and Conflict Studies

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Abstract

The aim of this study is to analyze the extent to which the European Commission´s (EC) antitrust investigation against Gazprom can affect Russia´s security of demand and the European Union´s (EU) security of supply. The energy security discussion is seen in context of some general characteristics of the gas industry, namely its imperfectness. Hence, the study attempts to give a better understanding of what can be understood as "typical Russia" and what can be understood as "typical gas". Finally, the study seeks to illuminate how problems in the EU-Russia energy relationship in part are a consequence of different preferences and understanding of the situation. This creates a *systemic uncertainty* whether the understanding of one another is adequate or not.

Based on three hypotheses I conclude that the antitrust investigation will have negative implications for Russia´s security of demand. It will abolish essential practices for a natural gas producer to guard against risk in an imperfect market. Contrary, the antitrust investigation will have positive implications for EU´s security of supply. A liberalized Russian gas policy will increase its flexibility and diversity as conditions to secure gas supplies.

However, the hypotheses will be modified. Firstly, the antitrust investigation can have positive implications for Russia´s energy security if it provides incentives to address some serious pitfalls within the Russian gas sector. Secondly, it can have negative implications for EU´s energy security if it limits Gazprom´s range of action to deliver the growing need of gas.

Keywords: energy security, security of demand/supply, economic liberalism, economic nationalism, imperfect market, mature market, risk, uncertainty, sensitivity, vulnerability, oil indexation, third party access, resale

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All deficits and error of this thesis are exclusively my responsibility.

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1. Introduction

The relationship between the European Union (EU) and Russia has been strained over several issues. Energy issues have been among the most serious matters. This study focuses on the European Commission´s (EC) antitrust investigation against Gazprom initiated in September 2012. The primary complaint relates to the abuse of Gazprom´s dominant position on the gas market, mainly in Central Europe. The investigation was launched by Directorate General for Competition (DG Competition) and essentially involves three principal allegations, these are 1) resale obligations, 2) suppression of alternative competition, and 3) pricing.

On this basis attention is given to the concept of energy security. This concept will be understood in terms of *security of demand* for a producer, in this case Russia, and *security of supply* for a consumer, in this case EU (Luft and Korin 2009: 9; Austvik 2009). The notion of energy security is an important concern for both parties, though from different angles. Security of demand/supply is characterized by interdependence, and as long as one of the actors possesses large volume of a resource the other request, the relationship should be unproblematic. The problem is that EU and Russia disagree on the nature of their energy relationship. There is a system polarization with cultural, economic and legislative differences between the states, as well as the companies involved. The actors differ on how to do business, which consequently results in different views of how the energy market should function. This poses a challenge for energy managers and public policy on both sides.

Russia is the greatest producer of natural gas to Europe. In order to secure the large and irreversible investment in production and transmission, close ties is developed between seller and buyer. This has led to the long-term contracts

between Russia and EU. Maintenance of oil indexation[1] in gas contracts has been a primary concern for Russia (Ministry of Energy of the Russian Federation 2010: 167; Komlev 2011: 2). EU, being on the consumer´s side, wants an energy relation based on market principles, with competition and flexibility of supplies. The antitrust investigation therefore challenges the relationship between producer and consumer. Whether the antitrust case will have any implications for EU´s security of supply, and Russia´s security of demand, is therefore the essence in this study. It seems to be a paradox in this case. Despite Russia´s role as the main supplier of natural gas to European consumers, there is some dissatisfaction with Russian gas dependence from the EU side. There is a question whether it is the growth and development of the market, or other political issues that runs the EU policy against Russia. The energy relationship does not always seem to work harmoniously, and a common understanding of the situation seems to be missing.

A concern in this case is how gas as a commodity connects consumer and producer quite different than oil. Compared to oil, gas is more regional than global and therefore the market is not as flexible. Management of risk is a central activity for the gas industry and its customers (IEA 1995: 17). Partly because the gas market is still in large parts immature in contrast to mature market[2]. One of Russia´s main requirements is to keep in place the contractual relationships that provide long-term stability of demand. This strengthens the ability to invest in the necessary infrastructure to meet Europe´s needs (Guillet 2011: 59). The traditional long-term contracts with integrated gas price indexation to oil products have been used since 1970s as an instrument to deal with investments, which is very high for gas pipelines (Honoré 2010: 51). A stereotypical view is that such practice reflects Russia´s use of energy as a power political tool, and its consolidation of power at the expense of its

[1] Gas prices respond to changes in oil with a time lag
[2] ”Whose growth has stopped and which is functioning without change or innovation” (Business Dictionary. www.businessdictionary.com)

customers. For this reason it will be emphasized how gas as a commodity has some special characteristics, compared to oil. What is claimed to be "typical" Russian behavior might be related to what we can call "typical gas". This notion of "typical gas" implies that we have to do with an imperfect market[3] (IEA 1995: 30). As a result, the gas sector, and the Russian as such, violates most of the assumptions for perfect competition. A balanced investment strategy that maximizes profits, based among others on oil indexation and long-term supply contracts, is therefore a rationale for natural gas producer in order to reduce risk related to price volatility, energy market changes, and investments.

EU, at the other hand, wants to reduce any risk related to gas supplies. The vision of a genuine open single market in gas has been the driving force behind the investigation, and lead to incentives for changing Russian gas policy.

Despite different perception of how the energy relation should function, EU and Russia is interconnected in interdependency. Russia cannot easily switch to another market comparable with the European[4]. Neither can EU easily switch to an alternative supplier, as several of member states are overwhelmingly dependent on one single supplier. Interesting is therefore how the antitrust investigation can have any serious implications for the actors´ energy security. On the basis of the positions and political preferences at both ends in the gas chain, we can point out possible problems related to Russia´s security of demand and EU´s security of supply from the antidumping case.

[3] Do not fulfill the four assumptions for perfect competition within economics. Conditions that help cause imperfect competition: Near monopoly power of some suppliers, involvement among sellers to keep prices high, restricted flow of information on costs and prices, and discrimination by sellers among buyers on the basis of their buying power. (Business Dictionary. www.businessdictionary.com)

[4] Russia looks for a destination diversification to Asian markets, but it is still incomplete (Ministry of Energy of the Russian Federation 2010: 24).

In this study energy security will be understood in terms of *security of demand*, for a producer, and *security of supply,* for a consumer (Luft and Korin 2009: 9; Austvik 2009). The concept has proved to be complex, multidimensional, and followed by a wide range of different definitions among scholar. Yet, they do not in an adequately manner focus on the actors´ understanding of energy security concerns. The different definitions are, however, something I will come back to in more detail. Security of demand and security of supply helps illuminate how individual actors view energy security, their incentives and preferences, what implications are included, and how the energy security challenges are addressed.

Due to the situation of interdependence, the theory of *complex interdependence* (Keohane and Nye 2012) will be part of the discussion of security of demand/supply as well. The theory allows us to identify different types of dependency. EU and Russia may be locked in a dependency that is either sensitive or vulnerable. This is determined by whether the actors respond within the existing policy framework, or decide to respond within a new policy. Since Russia is heavily dependent on the European market, and EU gas demand is not yet multilateral dependent, both actors most likely may experience a sensitivity or vulnerable dependency in the energy relation.

1.1. Research question

This study seeks to answer:

"To what extent will EC´s antitrust investigation have any implications for EU´s security of supply and Russia´s security of demand?"

Based on this research question, I will present three hypotheses:

H_o: EC´s antitrust investigation has no implications for the energy security of EU and Russia.

I will, however, consider this as unlikely. My perception is that problems in the EU-Russia energy relationship in part are a consequence of different preferences and understanding of the situation. Despite values like reciprocity and dialogue both in EU and Russia (European Commission 2010; Ministry of Energy of the Russian Federation 2010: 56), principal values seem to prevent the implementation of a partnership that best can serve the energy security of both parties. The difference in their respective political perspective leads to a question whether more knowledge of facts and refinements of arguments actually will make the two converge in policy approach. This creates a *systemic uncertainty* (Godet 1987) whether the understanding of one another is adequate or not. Thus, a more liberalized Russian gas policy is expected to have an implication one way or the other for both parties.

H_1: EC´s antitrust investigation will have positive implications for EU and/or Russia.
H_2: EC´s antitrust investigation will have negative implications for EU and/or Russia.

My opinion is that the antitrust investigation will have *negative* implications for Russia´s security of demand, as seen from Russia. The structural and market pressure on Gazprom is expected to prevent the company from practices being essential for a natural gas producer operating in an imperfect market. Contrary, the antitrust investigation will have *positive* implications for EU´s security of supply. A liberalized Russian gas policy will increase EU´s flexibility and diversity[5] as conditions to strengthen gas supplies, hence reduce cost and risks related to outside changes.

[5] There is no single definition of *diversity*, dependent on whether we are talking about European countries or say North America. The underlying concept is that the more diverse the supply base, the smaller the proportion of supply can be interrupted, and accordingly the higher is the security when it comes to potential disruption of supplies (IEA 1995: 28). A consumer can have a diversified supply portfolio. A producer can diversify destination for energy export.

Two distinctive perspectives in international relations (IR) will be applied. This is respectively economic nationalism[6] and liberalism, which serve as basis for what perceptions drive the actors´ policy and their world perspective. They will, however, function as stereotypes. Moreover, the contemporary international economic system is more closely integrated than ever. The nationalistic and liberalistic perspective will thus be related within the field of international political economy (IPE). In this way, the ideologies[7] will allow me to indicate a set of questions that are created by the interaction of the state and the market as the picture of politics and economics in the modern world.

The aim of this study is to analyze to what extent EC´s antitrust investigation has any implications for EU´s security of supply and Russia´s security of demand. Consequently, the study will see the energy security discussion in context of some general characteristics of the gas industry – its imperfectness. In extension of that the thesis seeks to provide a better understanding of what can be understood as "typical Russia" and what is "typical gas". Finally, to illuminate how problems of reaching a common understanding of the energy relationship, thereby strengthen their respective energy security is part of the creation of a systemic uncertainty.

1.2. Terms and concepts

In order to provide a clear and precise understanding of the analysis there are some key terms and concepts, which ought to be defined. The chapter starts out with how *energy security* is understood among scholars. Furthermore, it justifies the supply/demand perspective of the concept. Subsequently follows a definition of *risk* vs. *uncertainty*. These terms are helpful in dealing with the

[6] Often understood as realism among other writers, like Theodore Cohn (Cohn 2012: 5).

[7] Here "ideology" refers to "systems of thought and belief by which individuals and groups explain how their social system operates and what principles it exemplifies" (Heilbroner 1985: 107 in Gilpin 1987: 25). Intellectual commitments or ideologies do not only provide descriptions of *how* the world does work, but also how the world *should* work (Gilpin 1987: 26).

concept of energy security. The chapter problematizes what we call a systemic uncertainty. Finally, it presents the differences between an imperfect and perfect market, as some of the tension between a gas producer and its costumers are related to the imperfect characteristic of the gas market.

1.2.1. Energy security

Not since the 1970s have energy security been a more prominent political issue than today (Claes 2010: 2), but what exactly is energy security? Is there *one* definition that can cover the interests of all producers, consumers, exporters, importers and transit countries? Unfortunately the answer is more complex than that. The usual definition of energy security is quite straightforward: "the availability of sufficient supplies at affordable prices" (Yergin 2011: 266). But how to know what is "sufficient supplies" and "affordable prices"? Is the understanding of energy security the same for an exporter and importer?

More than a quarter of the world´s population suffers from so-called energy poverty and with no access to electricity. The concept most likely include access to energy to supply basic needs like cooking, clean water, lighting, and public transportation. For these people energy security is different from that of the developed world. In the modern world where human needs are more demanding, energy security is more about reliability of supply, access to sufficient amounts of energy, affordability, and protection from disruption of energy supplies (Luft and Korin 2009: 5). For some leaders and writers in the US energy security has even been synonymous with energy independence (Pascual and Elkind 2010: 2). It becomes evident that energy security is interpreted differently in different countries, depending on their international relations, political system, geographical location, geological endowment, and economic disposition. The perception of energy security might also change regarding which one of the energy sectors we are talking about.

Claes (2010) has disentangled the various aspects of the concept of energy security in order to provide what he regard as a more nuanced understanding of

how structural changes, both political and economic, can influence constraints and opportunities to achieve energy security and the policy implications that follow. He distinguishes between 1) resource availability, 2) economic conditions, and 3) political constraints. In his final remarks Claes (2010) concludes that energy security generates two different debates – a strategic one and a structural. The strategic deals with what kind of policy that increases the actor´s perception of having a secure energy future (distinguishing between two – the liberal free market and free trade, and the more mercantilist approach). The structural dimension at the other hand captures how the geological facts have any significant economic or political implications. Which one of them is perceived as most important for the energy security may differ. However he ends with the argument that the important element of energy security today is related to the price of oil. In other words, energy security is related to economy and money.

Energy security can also be defined in terms of different international relation theories, showing that energy security is related to a number of approaches like realism, institutionalism and critical political economy, which are overlapping and often coexistent. This is what Belyi (2012 [correspondence on e-mail]) has done, in which he argues that energy security is a relative term, which can be viewed from different angles – rational political (mostly realism), rational economic (mostly liberal institutionalism and Keohane´s interdependency), value-based political (securitization of Copenhagen School) and value-based economic (critical economy).

In this study the concept will be simplified to the geopolitical aspects of energy security, which involve managing the perception of energy security from the point of view of the two most crucial actors of the energy-relationship – the consumer and producer. Then we can look at how individual actors view energy security, and how the energy security challenges are addressed. This is the main argument for not follow any of the other definitions. They do not

focus on the main actors preferences in an adequate manner. As emphasized by Claes (2010: 24) this is part of the *strategic dimension* of energy security, as it involves what kind of policy and strategy that most effectively increases the actors´ perception of having a secure energy future, either as consumer or producer. Within the strategic dimension the producer-consumer relationship is dictated by an economic logic, political motives, and foreign policy interests. The *structural dimension* of energy security is about the geological facts of the concept (Claes 2010: 24). The geological defined amount of resources in the ground is a fact of no economic or political relevance for my understanding of the concept *energy security,* and is therefore not taken into account in the thesis.

Having that settled we can now easily distinguish between two terms – *security of demand* and security *of supply* (Austvik 2009). Energy importing countries think in terms of security of supply. They are concerned about any potential disruption to existing supplies, as well as long term risks related to new supplies. Energy-exporting countries turn the question around. They are concerned about their security of demand on which they depend to generate economic growth and a very large share of government revenues, and to maintain social stability. They will also be concerned about the security of demand to pay for new expensive projects and infrastructure (Yergin 2011: 267).

What becomes evident from these definitions of energy security is that they are based on a modern world. Despite the distinguished meaning of energy security in different countries, the way countries act in their energy relations have changed. Going back a century, physical control in order to secure resources was normal state of affairs. From that followed the need to occupy and take control of the territory of other countries. The dependence on energy systems, and their growing complexity and reach, underline the need to understand the risks and requirements of energy security in the twenty-first century (Luft and

Korin 2009). Living in a world characterized by increased integration, globalization and blurred boundaries between national states, normal state of affairs and hence the notion of securing necessary resources, has changed. Instead of occupying, governments resort to other means. Today international organizations, companies, and market organization serves as instruments to attain national interests. For example, the EU will unlikely intervene Russia. It is more likely that EU prefer a restructuring or alternatively and abolishing of Gazprom. Thus, the notion of the geopolitics[8] of energy has changed. Considering energy´s place on the international agenda, and its impact on global security and economy, it might be adequate to claim that energy has become to symbolize the geopolitics of the 21th century, and that energy is an instrument for geopolitical competition. The means of international influence have become more diverse and sophisticated, but the goals remain much the same: national security, power projection, and control over resources and territory.

1.2.2. Risks vs. Uncertainty

An interdependent relationship can have a condition of *risk* or *uncertainty*. Risks can be easy to identify (Guillet 2011: 70). It is more concrete and often related to specific events in the market. For instance it can be lower production, lower transit capacity, lower prices, reduced demand, and delay in projects. Who bears them will depend on what type of risk we are talking about and the parties involved. Uncertainty is more difficult. It is related to whether the understanding of one another is adequate or not. The higher the level of uncertainty, the greater the level of complexity of the situation that needs to be solved. Problems appear as more serious when the energy security issue is related to uncertainty than to risk.

[8] Geopolitics is defined as the studies of the way geographical (and often also historical and social) factors help explain the power of nation states (reference.com). In an economic and political integrated world, the term seeks to understand how control over territory influences political power and economic and political system (Agnew and Corbridge 1989 in Austvik 2009).

Risk is:

> *"When a (desirable) outcome of an action may or may not occur, but the probability of its occurring is known. The lower the probability, the greater the risk involved taking the action"(*Sloman, Wride and Garrat 2012: 76).

Uncertainty is:

> *"When an outcome may or may not occur and its probability of occurring is unknown"* (Sloman et al. 2012: 76).

Michel Godet (1987) identifies what he calls a *structural* and *systemic* and structural uncertainty. The systemic uncertainty refers to the shortcomings of understanding. It does not refer to any lack of knowledge based upon facts and refinements. The uncertainty can be dealt with by extending disciplinary boundaries in a multi- or interdisciplinary manner[9]. How economic and politics interact in the EU is an example of such insight, or how they interact in world markets. In principles it is possible to arrive at a consistent understanding of such relationship and dimensions. The value of one variable can be determined as a result of changes in other variables (Austvik 1992: 1098). Structural uncertainty is inherent to the type of phenomenon being studied. It represents exogenous fluctuations in central variables and relationships, uncertainty in the choice of model, and situations where a model gives results with great variations. This type of uncertainty cannot easily be dealt with. The actors can learn to live with it, or reduce problems it creates (Godet 1987).

[9] Two disciplines include various aspects of an object. In multidisciplinarity the integration is done by combining the two partial studies, alternatively taking conclusions from one discipline to serve as input into research within the other. Interdisciplinarity combines disciplines in a common core of concepts and methods (Austvik 1992: 1105).

In this study the systemic uncertainty whether the understanding of one another is adequate or not is created by the difference in EU´s and Russia´s respective political perspective. It leads to a question whether more knowledge of facts and refinements of arguments actually will make the two converge in policy approach.

1.2.3. Perfect vs. imperfect markets

The model of *perfect competition* is built on four assumptions: i) firms are price takers, ii) there is complete freedom of entry, iii) the products are "homogeneous", and iv) producers and consumers have perfect knowledge of the market (Sloman et al. 2012). A complete free market is subject to the four assumptions. With several producers and consumers, homogeneous products, and full information, no actor can have more influence or political power following at the expense of others. In addition, no one can obtain advantages in the market by manipulating information. However, these assumptions are very strict and few, if any, industries in the real world can meet these conditions. The model of perfect competition serves as ideal type, like other types of market models. We have perfect competition at one end, and monopoly (only one firm in the industry) at the other as two extremes. Most firms compete with other firms, often quite aggressively, and even though they are not price takers, they do have some degree of market power. Therefore, most markets lie between the two extremes, in the realm of imperfect competition (Sloman et al. 2012: 173-193).

Gas markets violates most of these assumptions, because of its imperfectness. Firstly, in the gas industry firms are rarely price takers. The fact that the non-renewables resources are located just a few places in the world, like Russia and Norway, results in a limited number of owners. Besides, gas is found in a relatively small number of large fields far away from the consumer. Transportation costs for natural gas are high, and large-scale operations are thus important to realize investments ought to bring gas to the market. As a result, few companies operate as gas transporters in any gas market (Austvik

2003: 14). It is a major capital-intensive business, and monopoly is a well-known characteristic of the gas industry (IEA 1995: 30). Secondly, complete freedom of entry is also limited. This is due to the oligopoly - a market structure where there are few enough firms to enable barriers to be raised against the entry to new firms from a cost perspective alone (Sloman et al. 2012: 172). Thirdly, the gas industry is characterized by a limited degree of transparency. As a result, costumers may lack the knowledge to make informed judgments about supply security (IEA 1995: 30). Finally, the assumption of homogenous products, however, is present in the gas industry, because the products are not differentiated (Sloman et al. 2012: 173). There might be a slight difference in quality, but it is pretty marginal and the market has no preferences of what for example is Russian and what is Norwegian gas. If we only look at the interest in securing gas supplies alone, and exclude other political interests, we might argue that is should be irrelevant whether the gas comes from Russia or Norway, since the products are homogenous.

We have now looked as some general characteristics of the gas market. In order to better understand Russian gas policy, these assumptions will be seen in context of the Russian gas market. This is something we shall look more closely later in the thesis.

1.3. Structure of the study

Chapter two presents the theoretical framework as the foundation for analysis, in which I will introduce my understanding of energy security, as an account for discussing EU´s and Russia´s energy security perceptions. Thereafter follows some assumptions for a relationship characterized by reciprocity, through the theory of complex interdependence. The second part comprises a short brief of the nationalistic and liberalistic perspective within IPE. They help illuminate how the actors differ in the perception of the relationship between economic and political affairs.

The objective in Chapter three is to present the method of procedure for analysis. It discusses case selection, choice of research strategy and data collection, as well as the validity and reliability of the choices made to answer the research question.

Chapter four covers the specific case being selected. It presents the three allegations from EC in more detail. The chapter provides the background in order to analyze whether the antitrust investigation will have positive, negative, or no implications at all for EU´s security of supply and Russia´s security of demand.

Chapter five looks more closely at some characteristic of gas as a commodity. It enables the reader to better understand how the gas market is functioning, and how it brings certain interests in the policy framework of a producer. It offers some considerations we should be aware of when discussing an energy relationship dealing with gas.

Chapter six focuses on the empirical material. It looks at EU´s and Russia´s positions concerning energy matters, hence their respective security of supply/demand. It gives an account of how gas is affecting the actors´ energy portfolio, economic and political concerns and realities, and finally their respectively energy strategies.

The most extensive chapter of analysis is chapter seven. It reflects the research question, and matches the empirical based pattern with what is predicted through the framework of security of demand and security of supply. The chapter briefs you through each one of the allegations and discusses what implications we expect them to have for the actors´ energy security. It illuminates how different preferences and understanding of the situation makes it difficult to reach a solid mutually agreed and balanced legal basis in the gas chain.

The last chapter offers a summary of the main points derived from the study, followed by concluding remarks whether the antidumping case have positive, negative, or no implications at all for EU´s and Russia´s energy security. It also looks at the extent to which the antidumping case can tell us something more generally about the EU-Russian relationship. Thereafter, it finishes with some reflections regarding further studies, and alternative approaches to the EU-Russian energy relation.

2. Theoretical framework

Without theory we cannot assess the broader implications of our factual studies. The chapter starts with an account of my understanding of *security of demand* and *security of supply*. The definition serves as foundation for how to understand European and Russian energy security. Due to the interdependence, Keohane´s and Nye´s (2012) theory of complex interdependence will follow. Furthermore, a short brief of some basic assumptions within economic nationalism and economic liberalism will follow, which is the point of departure for understanding EU´s and Russia´s perception of the functioning of the market.

There are several critics related to these theories. Of the most common is the argument that assumptions within economic liberalism are unrealistic. Markets do not appear as homogenous, and complete information is more or less impossible. As well, the exchange of good and services is rarely free since coercion and other political factors pretty often is part of it. Critics to the national perspective are related to its emphasis on economic relations as a zero-sum game. It also fails to see the society as pluralistic, and that even though state is a necessity for economic development, it is not sufficient (Gilpin 1987: 43-49). Models and theories operate as stereotypes, and these simplifying assumptions are meant to facilitate scientific research.

Liberalism functions as a basic approach within EU, but we do have variations. EU will be treated as a pragmatic liberal system, rather than an orthodox one. It includes greater government involvement in the market to prevent inequalities and stimulate growth. The Union emphasizes an exchange that is determined by considerations of *supply* and *demand*, and not by the exercise of *power and coercion*. This values function as the foundation on which EU´s market-oriented profile and bureaucratic and judicial system builds. Russia, with a state controlled apparatus in the political, economic and social life, will be represented within the perspective of economic nationalism. Within IPE we can indicate a set of questions that are created by the interaction between the state and the market reflecting the relationship between politics and economics in the modern world.

2.1. Security of demand and security of supply

When understanding *energy security* in terms of security of supply and security of demand, it becomes clear that consumer and producer find themselves in a heavily interdependent relationship to each other. Natural gas is important for energy supplies and the economic development within EU, and similar important to Russia, exporting to the European market, where costs and revenues are significant for their welfare. As a result both importer and exporter can become vulnerable and sensitive to changes in prices, supply and market access. In that way, the behavior of the participants becomes crucial, whether they are political, commercial or regulative, especially if the markets are imperfect. Problems and risks of security of supply for importers, and security of demand for exporters, are therefore linked to type and degree of dependence on the other. The potential risk for both producer and importer is, to a large extent, due to the increased interdependence created by closer integration, globalization and international trade. When talking about interdependence in energy relation, this is a result of a situation where consuming country does not possess the capacity to produce 100% of its own needs. Similarly for a producing country, it does not have domestic customers with the capacity of consuming 100% of its production. In a modern society,

dependency on import and export of good and services is a normal state of affairs (Austvik 2009: 88).

In regard to natural gas importing countries there are some challenges that should be addressed. The International Energy Agency (IEA) (1995: 17) has two broad categories for gas security risks:

> *"Long term risks that new supplies cannot be brought on stream to meet growing demand for either economic or political reasons;*
>
> *Risk of disruption to existing supplies such as political disruption, accidents or extreme weather conditions".*

Since natural gas is non-renewable, long-term supply risk is not only concerned with investments in new field developments in order to replace decline in old fields, but also to increase production sufficiently to meet the expected growth in demand. Similarly, producers are concerned with their security of demand for gas in terms of market access and price disruption, transit issues and the functioning of upstream[10] and downstream[11] infrastructural connections. For both the consumer and producer, the real political concern arises when the dependency causes short- or long-term problems due to significantly changes in prices, supply or market access. The character of the dependency will be a function of the magnitude and duration of change, the country´s ability to adjust to it, and how economically important the commodity is.

[10] "Oil sector term commonly used to refer to the searching for and the recovery and production of crude oil and natural gas" (Business Dictionary. www.businessdictionary.com)

[11] "Oil sector term commonly used to refer to the refining of crude oil, and the selling and distribution of natural gas and products derived form crude oil" (Business Dictionary. www.businessdictionary.com)

Even though the dependency is reciprocal, it is not necessarily symmetric, and the balance may change. Imagine a continuum, a country can be neutral, sensitive or vulnerable in its dependency (Austvik 2009: 88-89).

Neutral dependence is a situation where a country exports or imports a commodity, but has an alternative if they encounter a situation where a supplier or costumer disappears. This is a normal situation in contestable markets, where you have numerous suppliers and customers. If an actor withdraws from a relationship, there will be someone else to fill the place. Concern over supply or demand is quite absent (Austvik 2009: 89).

If the market is imperfect, the problems regarding supply and demand will be more serious. Here the actors are more or less locked-in with each other. If the price or availability changes, it leads to changes in costs and/or access to the commodity for an importer, and in revenues and/or access to the market for an exporter. In such a situation the actors cannot just change to another seller or buyer, but have to adjust to it. In such a context *sensitivity* in the dependence involves degrees of responsiveness within an already existing policy framework – how quickly do changes in one country bring costly changes in another, and how great are costly effects? Sensitivity assumes that the framework remains unchanged, and thereby reflects the difficulty to change policy within a short time, and/or bind to domestic or international rules (Austvik 2009: 89). In terms of cost of dependence, sensitivity means "(…) liability to costly effects imposed from outside before policies are altered to try to change the situation" (Keohane and Nye 2012: 11).

We must also consider what the situation would be if the framework of policies could be changed. What would be the cost of adjusting to the outside change if alternatives and new and different policies were available? This is the *vulnerable* dependence, which is more serious. Vulnerability can therefore be defined as "(…) an actor´s liability to suffer costs imposed by external events

even after policies have been altered" (Keohane and Nye 2012: 11). Since it can be difficult to change policies quickly, immediate effects of external changes tend to reflect sensitivity dependence. Vulnerability dependence is primarily concerning long-term supply and demand issues. Country´s vulnerability dependence can be quite different from its sensitivity dependence, and potentially more costly (Austvik 2009: 89).

In order to measure the costs of dependency on imports of a specific commodity, we can look at potential increased expenditures and the effects of changes on societies and governments due to higher prices and/or any problems with access to the commodity. For an exporter, the costs of dependency can be measured by possible changes on society due to a drop in prices and/or problems with access to markets. Recalling the fact that importing and exporting is a normal state of affairs, we expect governments to aim for reducing or even eliminating a sensitivity or vulnerability dependence. The neutral dependence will be the optimal. However, the challenges can be both external and domestic. The response by politicians depends on the political will and ability, as well as resource capabilities and the rules of conduct embedded in international regime, like the WTO and the EU. For an importing country the sensitivity or vulnerability can arise if the commodity originates from one powerful state instead of being multilaterally dependent. An exporter, on the other hand, can become sensitive or vulnerable if it is heavily dependent on one market instead of having many markets in its portfolio. Therefore, foreign policy emerges as an important tool in order to reduce a possible sensitivity or vulnerability dependence (Austvik 2009: 89-90).

Even though the physical markets are not considered commercial or political "risky", sensitivity or vulnerability dependence on imports and exports may occur. For example, exogenous shocks in international markets, like war and earthquakes, can limit supplies, disrupt pipelines and may change prices dramatically even in markets that are regarded as secure. Taken into account

the physical element related to gas as an energy resource, we see that for a consuming country security of supply is influenced by the pure physical access to gas, in addition to increased economic costs due to a rise in energy prices and the political pressure that may come from parties controlling supply elsewhere. For an exporting country, security of demand includes the risk of a dramatic price drop, the following economic loss, and potential adjustments in the economy as a result of lost revenues, in addition to the risk of being subject to political pressure by parties controlling the market. If problems related to security of supply/demand cannot be solved through market reorganization or foreign policy, they have to be addressed by domestic measures. The ability to do so for both the importer and exporter is of major importance in determining whether the actors are sensitive or vulnerable in the short- and long-term respectively (Austvik 2009: 91).

As a concluding remark we see that the nature of the dependence on others and whether the dependency is a political problem or not, is to a great extent created by the domestic and external market, together with political situation. As a result, both external and domestic measures can deal with a problem. As an example we can imagine a consumer that find itself in a one-sided dependence on *one* natural gas pipeline, from a supplier regarded as insecure. Its security of supply can be strengthened and the problem reduced if: 1) it improves the relationship to the supplier, or the supplier becomes more friendly, 2) another pipeline is built, and the transit country becomes more predictable, 3) the importance of the commodity is reduced through energy efficiency measures, 4) it can switch to alternative fuels, or 5) there are stocks available that can solve problems related to disruptions. For an exporting country the security of demand can be enhanced if the relation to the importing country is improved, together with the development of new pipelines to other consumers. This is external measure. Domestic measures involve a diversification of the economy in order to avoid a huge dependence on natural gas exports. Further, in order to reduce short-term domestic economic

problems and sensitivity dependence on price and markets, the revenues can be gathered in a fund, and refrain from using all revenues as they are earned. Then even vulnerability dependence can be reduced. A fund can serve both short- and long-term purposes (Austvik 2009: 91-92).

2.1.1. Complex interdependence

Considering that the potential risk for both producer and importer to a large extent is due to the increased interdependence created by closer integration, globalization and international trade, the concept should not be overlooked. It is important in order to understand the theoretical framework of "security of demand" and "security of supply". Here we focus on interdependence as an analytical concept, and the relation between power and interdependence.

The theory does not reject realism. Rather it sees realism as an insufficient explanation for the mechanism of the modern world. It posits a spectrum, which at the one end has a realist "ideal type", in which states are concerned only with survival and security, and at the other end has the world of so-called "complex interdependence", where states are mutually dependent on each other for their well-being. Thus, any given outcome in international life will depend upon where state sits on that spectrum (Keohane and Nye 2012: xv). Neither does the theory suggest that international conflict disappears when interdependence prevails. Rather, conflicts take other forms, and may even increase (Keohane and Nye 2012: 7).

Interdependence most simply defined means "mutual dependency" (Keohane and Nye 2012: 7). This reciprocal effect is to a great extent caused by the increase in international trade and transactions, which are flows of money, people, goods and messages across national boundaries. Although costly effects of transactions are reciprocal, they are not necessarily symmetrical. The concept is therefore not reduced to situations of mutual benefit. To specify *a priori* whether the benefits will exceed the costs is, however, impossible (Keohane and Nye 2012: 7-8).

The asymmetry provides the influence by one actor in its relationship with another. For example, less dependent actors can use the interdependent relationship as a source of power in bargaining over an issue (Keohane and Nye 2012: 8-9). Today, the resources that produce power have become more complex, and include more than the dominance of military power. In the context of asymmetrical interdependence and how this can be a source of power we are thinking of power as "(…) control over resources, or the potential to affect outcomes" (Keohane and Nye 2012: 10). The asymmetrical interdependence occurs when there is a less dependent actor in a relationship. Any changes in the relationship will be less costly to that actor than to the partner.

It is in this situation of asymmetrical interdependence that one of the actors in an energy relationship can get a potential ability or actual influence over patterns of outcome. The continuum of neutrality, sensitivity and vulnerability again becoming relevant. One example of sensitive interdependence is when the United States, Japan, and Western Europe were affected by increased oil prices in 1971. In the absence of new policies, which potentially could take many years to implement, the sensitivity of these economies was a function of the costs of foreign oil. These circumstances proved how changes in one country, brought costly changes in another, due to the interdependent relationship. If one of the countries could shift to domestic sources at moderate costs, and the other had no such alternative, the second state would be more vulnerable than the first. What we see is that the vulnerability dimension of this interdependence rests on the relative availability and costliness of the alternative the countries face. Country A´s vulnerability can be less than its sensitivity. This is due to the fact that a policy change at the beginning of period x (in a given time perspective) might allow that country, by another period, to reduce costs imposed by external change. The reduced vulnerability reflects an effective policy, for example by becoming actually or potentially self-sufficient in petroleum. If country B is not in the position to alter its

situation by changing policy, it will remain vulnerable to costs imposed by outside events (Keohane and Nye 2012: 10-11).

In the context of energy relationship, this indicates that vulnerability interdependence is more significant in providing power resources to actors than sensitivity interdependence. The reason is that vulnerability focuses on which actors can set the rules of the game. If an actor is in the position to reduce its costs by altering its policy, being domestically or internationally, the sensitivity patterns will not be a good guide to power resources. It indicates that sensitivity interdependence is less important than vulnerability interdependence in providing power resources to actors. This is not to say that sensitivity interdependence is irrelevant. Often, complaints from actors like oil consumers, textile workers and the like, origin from a rising sensitivity. They may demand government policies to protect their interests. However, the potential costs by altering policy and underlying patterns of vulnerability interdependence must be considered by policymakers and policy analysts. While sensitivity interdependence explains where the shoe pinches, coherent policy is based on an assessment of potential and actual vulnerabilities (Keohane and Nye 2012: 13).

2.2. Global political economy

Political economy allows handling the parallel existence and mutual interaction between the *state*, a sovereign territorial unit, and the *market,* a coordinating mechanism where buyers and sellers exchange goods and services at prices determined by supply and demand (Cohn 2012: 3). The state is associated with the political pursuit of power, and the market with the economic pursuit of wealth. However, the state also has an interest in accumulating wealth. Hence, the market is not totally distant from power considerations. There is a mutual interaction between politics and economy (Gilpin 1987).

The tension between the state and the market has lead writers for several centuries to debate over the conception of the relationships among society,

state, and the market. A model of contemporary capitalism is the one presented by Peter Hall and David Soskice (2001). They raises some fundamental questions, which the try to answer by their institutional theory of Varieties of Capitalism (VOC). What type of economic policies will improve the performance of the economy in each nation? Do companies differ in structure and strategies? This has led to the perspective of liberal market economy and coordinated market economy, meant to expand our understanding of national production systems. They show that the differences among them allow countries to pursue distinctly different strategies of international competition.

The three perspectives Marxism, liberalism and realism are most contrasting, and the theoretical approaches that are most used in introductions to the study of IPE. Critics have, however, questioned the value of using this typology for examining IPE, and argued that it is of limited utility today, because of the many theories and methodologies applied in the study of global political economy (Ravenhill 2008: 3). However, the IPE perspectives will never be entirely compatible because they are based on different sets of values. According to Cohn (2012: 5) liberalism and realism continue to be the two mainstream perspectives, which has most influence on the practice of IPE, and had a profound influence on scholarship and political affairs.

2.2.1. Liberal perspective IPE

Liberal economic theory is committed to the free market and a limited use of state intervention. Rather, the state shall prevent restraints on competition (Cohn 2012: 79). Despite the many forms and categories, they are all committed to the market and the price mechanism as the best and most efficient means for organizing domestic and international economic relations. The doctrine sets principles for organizing and managing the market economy in such a way that it maximizes economic growth, efficiency and individual welfare. This is also the rationale for a market system (Gilpin 1987: 26-28).
Economic liberalism allows us to understand the behavior of individuals as rational. Hence, they tempt to maximize certain values at the lowest possible

cost for themselves. The costs involved by reaching the objective will have to be equal to the benefits (Rogowski 1978 in Gilpin 1987: 28). Individuals have complete information, enabling them to select the most beneficial course of action. Producers and consumers will therefore be aware of any price signals, contributing to a flexible economy in which changes in price provides a corresponding change in patterns of production, consumption, and economic institutions. As the market is truly competitive, we can define exchange as being determined by considerations of *supply and demand*, and not by the exercise of *power and coercion*. This is fundamental to the operation and success of a market system of economic exchange. There is an assumption of long-term harmony of interest, which underlies the market competition of producers and consumers. A harmony that supercede any temporary conflict of interest (Gilpin 1987: 28-30).

The global economic interdependence is growing even stronger, and a greater part of the world is moving in the direction of market economy. For a liberalist, this is due to the fact that the market has proved to be more efficient than other forms of economic organization (Hicks 1969 in Gilpin 1987: 31). Trade and economic intercourse is a source to expanding interdependence among national economies. This helps foster cooperative relation, contribute to bonds of mutual interests, and a commitment to status quo. We can regard the actors as being optimistic to the prospects for cooperation among states, and that international institutions can help promote cooperation. The perspective enables us to regard economic relationship as a positive-sum-game, in which all states benefit, even if they do not benefit equally. Even though everyone will be better off in "absolute" terms under free exchange, the "relative" gains might differ. It is, however, this element of relative gains that has given rise to economic nationalism, as we shall look more closely (Gilpin 1987: 31).

2.2.2. National perspective IPE

This perspective enables an understanding where the state is and should be in charge of economic activity to state interests. Here, markets function in a world

of competitive states and groups. The system of nation state is expanding, and despite the emergence of other actors at the international agenda (transnational and international organizations) the economic and military efficiency of the state makes it preeminent over all these actors. In the organizing and functioning of the international system, the state, national security and military power is the most important. The security of the state is a necessary precondition for its economic and political well-being in a system that is anarchic and competitive (Gilpin 1987: 46-47).

Contrary to liberalists, nationalists tend to regard the goals of wealth and power as complementary (Knorr 1944: 10 in Gilpin 1987: 32). The struggle among states for economic resources is inherent in the nature of the international system itself. Economic resources are necessary for national power, and hence every conflict is at once both economic and political (Hawtrey 1952 in Gilpin 1987: 32). The perspective enables us to deal with actors who are skeptic about the prospects for cooperation among states. International economic cooperation and the pursuit of liberal policies are, however, not absent. Instead there is a consciousness that economic interdependence is never symmetrical, and that it constitutes a source of continuous conflict and insecurity. We can understand IR as a zero-sum game, in which one state´s gain is another state´s loss. Therefore, many nationalists stress the importance of self-sufficiency rather than economic interdependence (Gilpin 1987: 34).

The nationalist approach allows us to emphasize how states pay attention to geographical location and the distribution of economic activities. Economic nationalism seems fruitful and important in the context of international relations as long as the state system exists (Gilpin 1987: 34).

2.3. Operationalization

Within the framework of security of supply/demand we have some specific expectations in order to confirm the hypotheses that are presented. For the null hypothesis to be right a change in Russia´s gas policy will have no impact one

way or the other for EU´s energy security. Concerns over supply will be absent. It will not have any impact on EU consumers´ ability to protect against short- or long-term problems due to significantly changes in price, supply or market access. It will not strengthen nor weaken EU´s flexibility and/or diversity as a condition for reducing risk to *existing* supplies, or that *new* supply cannot be brought on stream. A more liberalized Russian gas policy will neither have any implication for Russia´s ability to protect against short- or long-term problems due to significantly changes in price, supply or market access. Concerns over demand will be absent. A policy change in Gazprom towards EU consumers will not strengthen, nor weaken Russia´s gas volume deliveries to EU. A liberalized policy in an imperfect and inflexible market is expected to have no influence for Russia´s ability to secure its gas deliveries to a final destination.

For hypothesis one to be right a change in Russia´s gas policy will strengthen EU consumers ability to reduce risk related to potential disruption of gas supplies, whether it is due to political concerns, technical problems, bad weather conditions, etc. Third party access (TPA)[12] to Russian pipelines and resale opportunities will strengthen EU consumer´s diversity and flexibility as a basic condition for the security of supply. With a diverse supply base, EU can more easily get access to the commodity. Its responsiveness to any outside changes will thus be strengthened, and costs imposed by outside changes in price and/or access will be reduced. Finally, risk related to the fact that many factors may have effects on the price of oil, will be mitigated with liberalized prices for Russian gas. Furthermore, a liberalized Russian gas policy has to turn out being effective in order to be positive for Russia´s security of demand. Gazprom will manage to increase market shares and profit maximization for the benefit of huge and long-term financial projects. Increased competition and non-discrimination in the gas market will enable Gazprom to reform, hence improve its competitiveness, efficiency, and flexibility in the interdependency.

[12] The process whereby Shippers have the opportunity to transport their own gas supply through a network owned and operated by another company (Gaslink 2013).

Changed policy will strengthen Russia´s capability to deal with long-term demand issues.

For hypothesis two to be right a liberalized Russian gas policy will jeopardize EU´s security of supply. It is not given that a change in Russian gas policy becomes effective. EU might limit Gazprom´s range of action to deliver the growing need of gas. A long-term supply risk is that the policy prevents Russia from sufficient investments in new field developments in order to replace decline in old fields. For instance, a new pricing system for gas can lead to lower prices, thus preventing Gazprom from necessary export returns meant to meet new infrastructural and production investment. Russia can also be prevented to increase production sufficiently to meet the expected growth in demand. Furthermore, policy liberalization, in a rather immature and inflexible market, will reduce Russia´s ability to guard against risks related to the large and irreversible investments on production and transmission. Alternative suppliers in the European gas market will lead to market share losses. Due to Gazprom´s heavily dependence on the European gas market this is expected to have serious implications for it gas export volume. Russia cannot easily switch to another buyer, in a situation of both revenue losses and change in access. Thus, a liberalized policy can be costly for the Russian government, and the society as such.

3. Methodological framework

Due to the complexity and scope of the antidumping case, I consider a case study research strategy as a natural choice. It allows me to go deeply into the case, as well as working closely with the concept of energy security, which I regard as essential in order to answer my research question. Why and how I treat the antitrust investigation against Gazprom is discussed in the following section. This is followed up by an elaboration of the conditions related to design quality. This centers on the study´s internal and external validity, as well as its reliability. The ability of the case study strategy to explain a larger

universe through generalizing from single case study will also be discussed. Finally, it briefs you through how data are collected.

3.1. Picking EC´s antitrust investigation as study object

The choice of topic is due to three reasons. First of all, because of the complexity of the concept *energy security*, and consequently its different meaning to different countries, I find it important and relevant to discuss what energy security implies for two of the most essential actors on the gas market. The energy sector is central to the future economic security and development of both Russia and EU. The antidumping case opens for a discussion of how energy security appears as a concern for both parties, though from different angles.

Secondly, the case touches upon stereotypical opinions about Russia´s gas policy towards costumers, particularly from Central Europe. Yet, it allows for a discussion of security of demand/supply in the context of certain characteristics of gas as a commodity. By reaching a better understanding of the gas market, we can acquire a better understanding of what can be understood as "typical Russia" and what is more "typical gas".

Thirdly, the antidumping case is a new and important part of the EU-Russian gas relation story, and might open up for a new precedence in the interdependencies. The case allows generating some hypotheses of potential implications a liberalized European gas market will have for EU´s security of supply and Russia´s security of demand, whether they are negative and/or positive, or has no implications at all. As well, it can illuminate the extent to which an inadequacy of the understanding of one another cause problems related to EU´s and Russia´s respective energy security. This is relevant considering the importance of a EU-Russian strategic partnership that can work for the benefit of the energy security of both parties.

3.1.1. The study´s limitations

Due to the interests of space and feasibility, I will have to make some trade offs. The first one is related to number of actors. The interests of Russian authorities and those of Gazprom are complex and not necessary the same in all points. Gazprom and the Russian government will, however, be perceived as one actor. The Russian government owns more than 50 percent of Gazprom´s shares, and the link between Russia´s foreign policy and energy policies are noteworthy. "Energy security is one of the most important components of national security" (Ministry of Energy of the Russian Federation 2010: 28). The interests of Gazprom and the Russian government have lately converged. For about a decade, Russia received little in exchange for subsidizing the gas consumption of Ukraine and the Caucasus countries. This stance has since changed. Since 2001 the state has moved to tighten its grip over the company (Ahrend and Tompson 2005: 803). Russia´s official energy strategy to 2020 urges the state to deeply involve in the energy sector as to protect the country from both internal and external threats (Dellecker and Gomart 2011: 1).

The relationship between state and company in the energy sector is not exceptional for Russia. Also in Norway, energy impacts various manifestations of power such as political, military, economic and technological power. The difference, however, is that Russia is not a "quiet" energy producer like Norway, nor a vocal and aspiring power, like Venezuela. Russia´s international influence spans from its nuclear status to its participation in world forums like the G8 and G20, not to mention its permanent seat on the United Nations Security Council. In that sense, Russia´s international influence is not limited to its energy supplies, thereby having a potential on the international scene, like alter its environment with its foreign and energy policy (Dellecker and Gomart 2011: 1).

Turning to EU, the 27 EU member states differ in their relation and approach to Russia. Several of the gas contracts are based upon bilateral agreements. I am

well aware that Gazprom has been more flexible to open up for competition in Western Europe, especially Germany, compared to most of Eastern Europe (Stern 2009). However, EU will be treated as one single actor. To treat each of the 27 members becomes too extensive. We could pick one particular country from Central or Eastern Europe. But all of the members are committed to the EU regulations, hence the DG Competition. The antitrust proceedings against Gazprom were launched from EC, not from one particular country. Besides, official statements from the Union are easily accessible, compared to what might be the case for the governmental web sites of an individual country. I am, however, well aware of the fact that we might talk about three actors in this case. This is because EU as a regulator and EU as a buyer is not the same. Energy is the Commission´s responsibility, but the competence lies with the member states. It is the companies in each country that buy Russian gas, not EU. Tough, EC desires to play an increasingly important role in shaping energy policy within the Union (Kardas 2012, September 5th). Finally, the term "Europe" can be misleading. In this study, "Europe" is defined as the 27 countries included in the European Union.

As part of a "bigger picture" it could be interesting to discuss the extent to which there is any overarching political interests within Brussels that goes beyond the interest of this particular case. If Russian gas companies are going to have a major role as gas suppliers to an enlarged European market, EU probably requests a Russian policy that is liberalized. In that sense, there might a European interest in "forcing" a systemic change in the Russian economy and politics. Yet, this requires a scope that bypasses the aim of this study.

3.2. Qualitative research and case study research as strategy

There is a question of the choice of a qualitative approach. Drawing lessons from King, Keohane and Verba (1994: 5), neither quantitative nor qualitative research is superior to the other. Rather, the differences between the quantitative and qualitative traditions are stylistic. Many subjects of interests to social science can hardly be meaningful formulated in ways that permit

statistically testing of hypothesis with quantitative data. This is my core argument for picking a qualitative approach to the study. The concept of energy security and its different interpretation in different countries can hardly be measured quantitatively. The notion of energy security hinges on perspective: the temporal choices that we make and the way that we balance economy, national security, and environmental concerns. Regardless of whether the study is quantitative or qualitative, our goal is practical: designing research that can produce valid inferences about social and political life.

Qualitative research covers a wide range of approaches and this study has a *case study approach*. Gerring (2007: 20) defines a case study as ”The intensive study of a single case where the purpose of that study is – at least in last part – to shed light on a larger class of cases (a population)”. However, how do I know if I should use the case study method? According to Yin (2009: 4) the choice depends in larger part on the research question. The more the question seeks to describe something related to “how” or “why” some social phenomenon works, the more the case study method will be relevant. Thus, case study is appropriate to my research question.

There is a question whether one or a few cases yield theoretical gains. Much of the critic is related to the so-called small-N problem – how one can draw any conclusions or evidence from only one case, as well as its representativeness and generalization capability (Gerring 2007: 17). The strength and weaknesses derives from trade-offs that we can find from different research goals. As a *research design* a case study allows me to have a single, bounded unit under the lens, which is EC´s antitrust investigation against Gazprom. Moreover, the depth of analysis that it offers of some social phenomenon is one of the primary virtues of the case study method (Yin 2009: 4). This allows me to go more deeply into the gas market and include certain characteristics of the gas market as an essential part of the energy security debate. Simultaneously it can illuminate characteristics of a broader context and serve as a backdrop for

explaining a larger universe/phenomenon (Gerring 2007: 43). For instance, the case can serve as an example of how the challenge to reach a principal consensus in the EU-Russia relationship more generally is part of the systemic uncertainty. It can also be part of some general problems between a buyer and seller within an imperfect market, concerns and risks related to the gas industry, challenges in the Russian gas sector, as well as a potential overarching political interest within Brussels to change Russian perception of politics.

Case studies enjoy a natural advantage in research of an exploratory nature, and as a *scientific view* it is interpretative (Gerrin 2007: 39). The conclusion presented is not the only and correct answer. Considering that the social world changes rapidly, the knowledge and inference about the external world is uncertain (King et al. 1994: 8). But I can present some interpretations and perceptions on the basis of the theoretical framework. The objective is therefore not to search for some kind of statistical generalization, through testing of a large-N sample as we find in quantitative analysis. Rather, the case study method allows generation of hypothesis, as one primarily research goal (Gerring 2007: 38). This allows me to generate some hypothesis of whether the antitrust investigation will have any implications for EU´s and Russia´s energy security.

Case studies suffer problems of finding causal effects ("The expected effect on Y of a given change in X across a population of cases" (Gerring 2007: 44). Due to small-N problem, it does not offer a statistical basis for assessing the strength of a causal relationship (Gerring 2007: 43). My aim is, however, rather to examine the operation of a *causal mechanism:*

> *"Ultimately unobservable physical, social, or psychological processes through which agents with causal capacities operate, but only in*

specific contexts or conditions, to transfer energy, information, or matter to other entities" (George and Bennett 2005: 137),

I can look at a large number of variables and inductively observe any unexpected aspects of the operation of a particular causal mechanism. It helps me to identify what conditions present in a case that activates the causal mechanism – if A then B (George and Bennett 2005: 21). For instance, a drop in prices and/or problems with market access due to a changed Russian gas policy can potentially increase Russia´s cost of dependence, and potentially jeopardize Russia´s security of demand. Contrary, a liberalized European gas market can strengthen EU consumers´ flexibility for the benefit of its security of supply. Thus, the case study strategy appears as an appropriate research design for this study, and by far the most fruitful way to go in order to gather empirical evidence that answer the research question in a satisfactory manner.

3.2.1. Pattern matching

The research question is analytical, not descriptive, and the method will be a "theoretical interpretative" one. I will use theoretical perspectives in order to analyze an empirical case. The theory can help organize the interpretations and add the necessary assumptions to match *observed data* with the *expected pattern*. This method is applicable in models with rational actors, which is the point of departure for the actors´ behavior in this study. Some of the problem related to this strategy is that we often have a number of competing perspectives. This is a matter of choice of analytical "glasses". Anyway, the theory must have implications about the observations we expect to find if the theory is correct (King et al. 1994: 28). Whether the test case is most-likely or least-likely depends on the theory´s "universe". The test case in this study is most-likely for the theory of security of demand/supply. This is because the case is closer to the theory´s area of validity. The independent variables (read: price, supply and market access) asserted in the theory are at values that strongly posit an outcome in the given case study (George and Bennett 2005: 121). This outcome is primarily related to the expectation of negative

implications for Russia´s security of demand, and positive implications for EU´s security of supply, given a more liberalized Russian policy.

In the case study strategy there is different ways of relating data against the theoretical assumption. One of them is the analytic tactic of *pattern matching,* which also is one way of addressing the internal validity in case studies (Yin 2009: 43), as well as the causal mechanism (George and Bennett 2005: 21). Such an analytical technique always involves an attempt to link two patterns where one is a theoretical pattern and the other is an observed operational one. Thus, in pattern matching we compare an empirical based pattern with a predicted one (or several). If the patterns coincide, the results can help the case study to strengthen its internal validity (Yin 2009). In this study security of demand and security of supply represent an expected pattern. The theoretical framework provides preferences that will help illuminate what variables that should be emphasized when assessing certain implications for EU´s and Russia´s energy security. The empirical evidence carried from the literature serves as observed data and will be matched with the expected pattern. More substantial, the three allegations from the Commission are expected to have an impact on certain variables in the theory, being important for EU´s and Russia´s energy security.

3.2.2. Validity and reliability

Validity and reliability are two key criteria in a methodological framework, and plays an important role when assessing strengths and weaknesses of a study. Questions of validity are often divided in two parts – internal and external validity. One of the recurrent trade-offs include the related tension between achieving high *internal validity*, which is concerned about making valid causal and descriptive inferences, versus making generalizations that apply to a broader population, which is the *external validity* (Gerring 2007: 217). Reliability is related to whether other researchers can repeat the study, thereby whether the results are consistent over time (George and Bennett 2005: 106).

The virtue of case study is first and foremost its *internal validity* (causal relationship), I hope to establish when paying attention to a single case. Often it is easier to establish the veracity of a causal relationship when pertaining to a single case rather than a larger set of cases. This is primarily because of the tick description and the rich empirical evidence that is offers (Gerring 2007: 43; George and Bennett 2005: 19). In order to prove the causal relationship, and thereby strengthening the internal validity, a good operationalization of key terms and concepts is required. The issue of operationalization is the issue of measurement – that is, how do I know concept A or theory B when I see it? (Gerring 2007: 215). This is first and foremost related to the notion of the concept energy security in terms of security of demand and security of supply, and the notion of risk and uncertainty. I therefore aim to achieve high level of *conceptual validity* (George and Bennett 2005: 19). The case study allows me to make the conceptual refinements required in order to avoid "conceptual overstretch". This applies in particular to the concept of energy security. I need a research design that allows defining the concept in such a way that I can achieve the most valid inference. Without the possibility to define and assess the concept in terms of Russian and EU policy, the validity and reliability of the analysis can be reduced. Finally, the notion of uncertainty can be reduced to the systemic one, as we at least can identify three types of multi- and interdisciplinary uncertainty: systemic, structural and trivial (Godet 1987).

This case study has some weaknesses when talking about *external validity* and possibility for generalizing, as it suffers problems of representativeness. It includes only a small number of cases, by definition, of some more general phenomenon (small-N problem) (Gerring 2007: 43). It seems appropriate to regard the trade-off between external and internal validity, like other trade-offs, an intrinsic to the cross case vs. single case choice of research design. Yet, on the background that a single case can be a backdrop for explaining a larger universe/phenomenon, I will say that my study does not represent "the whole"

population. Potential for making it further subject to generalization will therefore be presented in the subsequent section, 3.2.3.

Also the reliability will be weak since the results emerging from a case study are quite dependent on the context that prevailed during the analysis. Replicability of data might be difficult, as the results are not based upon a statistical method with statistically data. Rather they are dependent on my choice of analytical glasses and choice of causal variables. I might have overlooked or minimized potentially important causal variables, or overlooked the possibility that the phenomenon is subject to a multiple causation (George and Bennett 2005: 106). The analyses will, however, be presented with enough transparency with respect to method and procedure to gather information that the inferences hopefully also can be drawn by other researchers.

3.2.3. Generalizing from single case study

Since each case can be conceptualized as a member of a class of events (King et al. 1994: 10), I will illuminate whether we can generalize from single case study. According to Andersen (1997: 10) the desire for a generalization is not synonymous with seeking general laws. Rather there is a desire to gain insight into the possibilities and limitations of a generalization. His opinion is that the desire to identify similarities and regularities across unique variations should be a key objective within social science. Generalization within social science has validity for certain classes of phenomena under certain conditions.

Andersen´s arguments can be followed up by the argument of Mary M. Kennedy (1979). She claims that generalization is not simply a function of the number of units one has observed. More important are the *kinds* of units observed. The range of characteristics included in a sample increase the range of population characteristics to which generalization is possible. The range of generalization is necessarily a matter of judgment. That judgment should, however, not be made by the evaluator. Rather, by those who wants to apply the evaluation findings to their own situations. The evaluator produces the

information, and the receivers of this information must determine whether it applies to their own situation.

The process is one of search and comparison, where the attributes of the current case are compared with the attributes of a variety of other cases. The case, which is most analogues with most similar attributes, is selected as the most relevant precedent. Similar attributes can be linked to *material facts* of the case as well as the *appropriateness, reason* and *generality* of the decisions (and policies) observed (Kennedy 1979: 673)[13]. Also Ruddin (2006: 797) argues that "(…) case study is idyllic for generalizing (…)", and emphasizes how Kennedy´s method is a matter of applying the facts of one case to another case.

3.3. Data collection

In order to improve the data quality I will employ triangulation[14]. The more observable implications we can find to be consistent with the theory, the more powerful the explanation and the more certain the results (King et al. 1994: 24).

The research question is requested on the basis of applicable articles, political science books, journals and web sites. Large part of the data material comes from primary sources. This mainly applies to theory, and information about the actors' energy strategies and political positions. Theory is derived from political science books. Information of the two positions is obtained from governmental agencies such as the European Union, European Commission, Gazprom and Government of the Russian Federation, which include statements from authorities Sergei Komlev, Head of Contract Structuring and Pricing Directorate of Gazprom Export.

[13] Austvik (2012: 329) did this in his article "Landlord and entrepreneur: the shifting roles of the state in Norwegian oil and gas policy". He ended the study by asking the extent to which inferences could be drawn from the Norwegian petroleum experiences as a single case to the roles of the state in other countries and sectors.

[14] Multiple sources of evidence (Yin 2009: 114).

Further information has been secondary sources. The empirical material for the antitrust case has been taken from Centre for European Policy Studies (CEPS), though supplemented with information from research institutions like Centre for Eastern Studies and Oxford Institute for Energy Studies. It proved difficult to find background information about the antitrust case from governmental agencies of Russia as well as Russian web-based newspapers. This has, however, been compensated with official statements from Russian authorities. General background information and researching on the Russian gas sector has been taken from various types of sources; political science books and articles, in addition to some conference and working papers. Discussions and viewpoints related to the case and the EU-Russian relation in general comes from some web based news articles, and independent think tanks working with energy issues, like Platts, Euractiv and Gaslink. This is a supplement to the official statements, which have been primary sources. Prognoses for the European gas market, as well as the functioning and characteristics of gas as a commodity, are taken from research institutions like the Oxford Institute for Energy Studies, International Energy Agency (IEA), the US Energy Information Agency and Eurostat. Finally, the web site of WTO has proved helpful what comes to general background information about the organization, and additionally opinions regarding Russia´s membership.

Secondary sources allow an understanding of the phenomenon from different angles. The weakness, however, is related to the requirement of reliability. This was a challenge when working with a case characterized by tension between two parties. Some of the literature was clearly anti-Russian, and had a political bias. This was the argument of Russia´s use of energy as a political tool. Due to the political and economic circumstances in this case, the discussion can quickly turn into one driven by ideological believes.

I do not speak Russian. However, web site of the Russian government, as well as the most essential documents with respect to the Russian viewpoint, has

been accessible in English. Therefore, I do not consider this as putting limits on the analysis.

The method of searching has been a type of "chain searching" and systematic search. References in political science books and articles brought me into new and relevant sources. The latter method has been applied in Bibsys and the databases at the University. Articles and journals not available here have largely been available at the Internet, in addition to conference/working papers. I got access to most of the books through Bibsys and the Norwegian Atlantic Committee, in addition to some publications.

4. EC´s antitrust investigation against Gazprom

On September 4 2012, the EC announced the initiation of an antitrust investigation against Gazprom. For both economic and political reasons, it is expected to be hard fought by both sides to a final prohibition decision and then onwards into the EU courts. Some experts think the case will turn out to be the antitrust case of this decade. Normally such cases are resolved through a private settlement by an Article 9 decision[15]. The political and economic circumstances in this case are quite exceptional. It puts Gazprom´s market model under immense pressure. The primary complaint relates to the abuse of its dominant position on the gas market, mainly in Central Europe. The case against Gazprom involves three principal allegations with respect to

(1) resale obligation, which limits the freedom of movement of gas between EU member states,
(2) suppression of alternative competition, which prevents any attempts by EU countries to diversify gas supplies, and spread risk and

[15] "Commitment decisions can be taken in antitrust cases where an investigated party is willing to cooperate with EC. Decisions are adopted under art. 9 of Regulation 1/2003 (the Union´s core procedural regulation)" (Riley 2012: 1).

(3) pricing, where Gazprom is accused to impose unfair prices on contractors (Kardas 2012, September 5th).

This case has certainly set both structural and market pressure on Gazprom, and DG Competition is determined to ensure a genuine open single market[16] in gas. It has been argued that the Kremlin should deploy the antitrust case to force Gazprom to reform. The European gas market is expected to enlarge over the next decade, which could give Russian gas companies a major role in an enlarged European market. In that sense there is a question whether the Russian market itself must be liberalized. This could possible undermine Russia´s monopolistic position in the European gas market. Across the continent and beyond, Gazprom is to a large extent perceived as a commercially and politically powerful company (Riley 2012: 2). This is much due to Russia´s role as a key supplier of natural gas to consumers like Germany, Italy, Turkey, and its dominant role in the Central and Eastern European States. The commercial power has been followed by the notion of political power. This is especially related to the argument that Russia is willing to hike up oil and gas prices, engage in anti-market practices and use energy as a foreign political tool (Cohen 2009: 91).

The economic and perceived political power is further underpinned by the long-term supply contracts, involving vertically integrated[17] national energy incumbents. This can be regarded as a challenge for costumers being 100% dependent on Russian gas, primarily costumers in Central and Eastern Europe, where alternative sources of gas to Gazprom supplies is more or less absent.

[16] Free movement of labour and capital, common taxes and common trade laws. Eliminate any discrimination between member countries, which may distort competition (Sloman et al. 2012: 731).

[17] The process in which several steps in the production and/or distribution of a product are controlled by a single company. This will increase the company´s power in the marketplace. (Investor Words. www.investorwords.com)

This is to a large extent due to the structure of the pipelines, running from East to West, as they were designed during the Soviet period (Riley 2012: 3).

4.1. Allegation of resale protection

The first allegation against Gazprom is the one of resale protection. The practice of destination clauses or resale prohibition prevent that consumers can resale the gas contracted from Gazprom to third parties. Consequently the costumers are in danger of possesses gas deliveries they don't "need". This can be an burdensome provision precisely because of the take-and-pay[18] clauses, which force Gazprom costumers to take all quantities of gas that has been contracted for, even though the country don't have a market for such gas. According to the DG Competition this certainly undermine the creation of a single market in gas, because resale clauses prohibits onward sales across national borders. This is an obvious restriction of the free movement of goods across the single market. In other words, such a behavior limits the freedom of movement of gas between EU member states (Riley 2012: 8).

4.2. Allegations concerning suppression of alternative competition

This allegation appears as more serious. This is because it prevents the diversification of gas supplies, which is one of the most essential means for a consumer in order to improve its security of supply. As Russia possesses the largest Eurasian oil and gas pipeline network built under SU, this is mainly about applying transparent and non-discriminatory rules of transit, and providing TPA to the Russian network (Jervalidze 2011: 15). Russia denies TPA to Gaprom´s transportation capacity within Russia as competitors of Gazprom seek to sell their gas. This is due to Gazprom´s ownership or minority shareholdings in downstream assets, together with its market power derived from its monopoly or quasi-monopoly supply of gas. One of the main difficulties for Gazprom is that EU´s abuse of dominance provisions has a wide reach. What comes to abuse of dominance provisions, the EU General Court

[18] Buyer-seller agreement where the buyer´s obligation to pay is not unconditional, but is contingent either upon the delivery of purchased goods or services or upon the buyer´s consent to take the delivery (Business Dictionary. http://www.businessdictionary.com)

and the European Court of Justice have resisted taking a narrower economic approach to the interpretation of the best practices on the conduct of proceedings related to Treaty of the functioning of the EU (TFEU). From their point of view, dominant companies like Gazprom have to respect competition and competitors in Russia. As well they underline the traditional "as if" standard, which require dominant companies to act *as if* there was competition in the market. Taking into account Gazprom´s current business practices this may be difficult (Riley 2012: 8-9).

4.3. Allegation of unfair pricing

This allegation is primarily related to the practice of linking the price of gas to the price of oil, called oil price indexation. The perception is that this kind of price indexation in long-term gas contracts makes it possible for Gazprom to maintain revenues and pricing power. It is questioned whether it is acceptable under EU antitrust law. DG Competition have to decide whether or not a dominant company like Gazprom in the gas supply sector can link its prices to oil when there in modern gas markets is no practices for such a link, further whether this constitutes an abuse of dominance (Riley 2012: 9).

However, this link hasn't always been that strange. Such a link made sense when oil was also used for heating and power generation. After the oil price shock of 1973 non-transportation utilization of oil has declined. In Europe most of the power generation comes from gas, approximately 23.6% and represents more than 70% of total gas consumption. Whereas oil represents only 2.6% of Europe´s power generation. A potential danger for Gazprom is that any European ruling against indexation can be used worldwide to challenge its legitimacy. For example, China, currently in negotiations with Gazprom over the price it is willing to pay for gas from Eastern Siberia, may be able to deploy antitrust arguments in order to avoid prices linked to oil. A worst-case scenario for Gazprom would be if almost every existing long-term supply contract with Gazprom is challenged via arbitration panels across the continent (Riley 2012: 9). Yet, oil product link make sense in immature markets in order to deal with

the specificity of investment, which is especially high for gas pipelines (Honoré 2010: 51). It makes, however, less sense in developed market being in consumer or producer countries. This may be a part of the different views.

5. Gas, risks and security

In this study, the gas sector and characteristics of gas as a commodity is a variable that is highly emphasized. The majority of the literature and most of the debates is concerned about the security of oil. In order to consider the possible applicability of the energy security debate to gas, there are some significant differences between oil and gas market that should be highlighted. The notion of *risk*[19] becomes especially relevant. The important role of governments when talking about gas security is partly because of this notion of risk. Therefore, gas security is to a large extent about measures to minimize the risks of disruptions in supply or, more fully, reduce the risk and potential consequences of a disruption of the supply of gas to an acceptable level (IEA 1995: 23).

5.1. Gas as a commodity

There is a world oil market. Given its nature, oil is easily transported between markets and between countries. Oil is by far the most traded commodity. Individual countries and regions can hardly isolate oneself from market developments in other regions, and a disruption to oil supplies somewhere in the world, tends to affect the whole world oil market (IEA 1995: 24).

By contrast, gas markets are still pretty regional. There is some linkage between regions because of trade in LNG, but it is still quite limited. Gas transportation is much more costly than oil transportation. Therefore, price formation and the actual prices can be different in the different regions (such as between the UK and Continental Europe). There is not given that supply shortage in one region affect another directly, unless a consumer switches to oil, which cause an indirect impact through the effect on the world oil price.

[19] See section 1.2.2

This regional structure is to a large extent due to the high cost of gas transportation. This is a major capital-intensive business, and means that delivery systems are relatively inflexible. Gas is transported through pipelines, linking buyers, transmitters and sellers in different countries together. Consequently, gas, in contrast to oil, requires a fixed physical link all the way from producer to consumer. From that follows the fear of any disruption or interruption of one producer´s output since the number of alternative routes is limited. The network of flexibility can increase as the gas infrastructures mature, but still the limitations are economic and physical, as well as contractual considering the long-term contract structure between consumer and producer. Switching the destination is not as easy when it comes to gas as it is for oil (IEA 1995: 24). A seller needs some guarantee that the final market is large enough. It has to consist of end-user that actually needs the gas volumes, which is brought by the pipeline. Continental Europe is such a large market. It has additional capacity, thus to keep up with economic growth make sense (Guillet 2011: 65).

The physical and contractual features of gas contribute to a relationship of strong interdependency between seller and buyer. As a consequence, continuity of supply is in the interest of both parties. Just as the consumer is not in the position to produce 100% of its own needs, producer is not able to consume 100% of its production. As a result, both actors have to act like a stable and reliable partner in the interdependency.

Furthermore, governments in most countries regulate the supply of gas to the final consumer. This is also the case for the transmission and distribution of gas. That is due to the natural monopoly characteristics of these functions. Hence, the government´s role tends to be twofold. First of all, it shall provide a framework that reduces non-commercial risks, and thereby encourage investment and trade. Secondly, due to the natural monopoly characteristics of the gas industry, the government may act directly or alternatively through a

regulatory body. Therefore the government will in some cases define the acceptable level of risk or security to be achieved. Gas companies, like Gazprom, can therefore be in a position where they need regulatory or government approval for investments, as well as for imports and exports. Hence the companies also are subject to controls on price (IEA 1995: 25-30).

Considering the fixed physical link, long-term contract structure, and interdependence, it is natural that most gas companies will be conscious about their reputation. They have to be regarded as a reliable and stable supplier of gas, and preserve a reputation for security of supply. The companies are well aware of the fact that oil is nearly always an alternative. Therefore, high level of security and safety is crucial in order to maintain the ability to sell, and normally companies work hard to avoid security risks (IEA 1995: 25).

Gas security involves protection against the risks involved, whether they are technical, political or long-term risk. Absolute security, where the risk of all actors is reduced to zero, is more or less impossible. Not least would it be very expensive. Instead, some consumers are willing to accept some degree of risk in exchanges for lower prices, but of course the consumers can make different trade-offs in this regard. Considering that some degree of risk will be present, the actors can take a number of measures in order to reduce the chances for an adverse contingency, or reduce its impact if it does occur (IEA 1995: 27).

As a concluding remark, we can claim that the differences between oil and gas is great enough to suggest that oil security issues should not be a precedent for gas security issues. The nature of security issues that arises separates from oil. The global dimension is limited, and in particular the physical shortage is a greater concern than price shocks, which is more typical for oil. Furthermore, the potential government involvement seems to be larger when talking about gas security issues. It is up to individual countries to decide what is the acceptable level of security, and which measures that best serve as instrument

to achieve it. This is because there is no generalized cost-benefit ratio (IEA 1995: 32).

5.2. Typical Russia or typical gas?

Moscow has been excused for engaging in anti-free market principles in its gas sector. Several of the main assumptions for a perfect market were absent in the gas industry[20]. Consequently, also the Russian gas industry appears as imperfect. What then is "typical Russia", and what is related to the Russian gas industry?

Firstly, Gazprom´s natural monopoly in the transmission and distribution of gas, as well as the regulation of the gas supplies to the final consumers, reflect a common characteristic in the gas market (IEA 1995: 30). Russia is one of few countries in the world that possesses huge gas resources. Russian gas fields, compared to those in North America, are also pretty large with significant economies of scale[21] as it is a capital-intensive business. This results in a limited number of actors in the industry, since large fields are quite difficult to split, and consequently it becomes difficult to bring competition. Transportation must be organized with supply to reach markets far away, and there are significant economies of scope [22] between production and transportation. Hence, supply systems in Russia have strong elements of natural monopoly.

Secondly, Gazprom´s monopoly position both in transportation and export, as well as the vertically integration structure in the sector (Riley 2012: 3), prevents free entry for new, individual firms. Gazprom has a large share of the

[20] See section 1.2.3

[21] The reduction in long-run average and marginal costs arising from an increase in size of an operating unit. (Business Dictionary. www.businessdictionary.com)

[22] Reduction in long-run average and marginal costs, due to the production of similar or related goods or services where the output or provision of an item A reduces the cost of item B. (Business Dictionary. www.businessdictionary.com)

market and can as such avoid other firms from abusing their economic power (Sloman et al. 2012: 384).

Thirdly, there are some information gaps in the industry. Among others, Gazprom has information monopoly regarding technical solutions in the industry, and the real capacity in the pipeline system (Krykov and Moe 2012: 20). Transparency on gas prices is also restricted (Harriman 2010: 58).

Finally, the assumption of homogenous products appears, however, to be applicable to the Russian gas sector. The supply side in Russia, as well as in Norway, will therefore in most cases look different than the supply side in for example the United States. For European costumers, Russian and, for instance, Norwegian gas is more or less the same. In the U.S. there are many suppliers and many purchasers (IEA 1995: 25**)**. This limits the scope of disruption and new suppliers can be brought on stream quickly.

We see that the imperfectness in the gas market generally affect the Russian gas policy, as well as the policy in other natural gas producing countries, for instance Norway. The Russian gas industry violates all assumptions for a perfect market, except from one - the products are homogenous because they are not differentiated (Sloman et al. 2012: 173). The gas sector requires more management than other markets. In principle, Russia and Norway as gas exporters have the same interests (Moe 2013 [Personal correspondence]). Yet, Norway has to a greater extent adapted to certain developments in the market, and requests from the buyer. Statoil, which account for most of the Norwegian export to Europe, has shown greater flexibility in its approach than Gazprom in modifying its long-term supply contract terms. Finally, commercial and political conflicts of interests as well as the concentration of new gas resources far away outside the EU, make a perfect liberalization of the European markets even harder (Austvik 2003: 15).

What is legitimate to call "typical Russia" is the Russian perception of control and regulation. The Russian state seems deeply involved in economic activity, and it might be subordinated to state interests. There is a chance, however, that the state overrides commercial decisions. Moreover, personal ambitions can be disguised as political interests. The role of the state is as we know nothing uncommon in the gas sector. What might be typical Russia, however, is the perception of *how* the state should manage this role. Russia has not experienced market liberalism like the way we did in Europe since the industrial revolution. The Kremlin may therefore regard the market different than EU. Culture for economic cooperation among states and bonds of mutual interests seems limited compared to EU. Corruption is a problem in Russia. One example is what happened in the oil industry in the 1990s during Yeltsin, a period affected by privatization and chaos. The state transferred ownership cheaply to private owners. But the rivalry to privatize the various oil fields, refineries, and pipelines became challenging. Because of politics, greed, and corrupt implementation, a small number of investors ended up in control of most of the previously state-owned enterprises. One group was the so-called oligarchs, which were former government officials (Goldman 2008: 56-58). Thus, some elements can be argued to be typical Russia.

We should, however, be aware of an uncritical explanation of all gas disputes on the basis of Russian anti-free market behavior. Despite other perceptions of control and regulation, Russia, as well as the EU, searches more flexibility as a concern for its security of demand. Such interests can be addressed with pipelines going directly to the market and a strengthening of Russia´s commercial decisiveness by turning to Asian costumers. Yet, flexibility requires a lot with respect to necessary production, transportation capacity, and even new technology (IEA 1995: 28-29). The interdependency causes the player with most flexibility to be the one benefiting from a situation of asymmetrical power. The question remains whether flexibility can be requested

in an imperfect market. From the Russian side, part of the problem is whether EU has an adequate understanding of these conditions within the gas market.

6. Positions: security of demand and security of supply

The framework of security of demand and security of supply put Russia and EU in different positions with respect to their energy security concerns. As one actor seeks supply of gas, and the other actor holds large volume of the commodity, the interdependence should be unproblematic. In order to address any concerns related to their energy security, both actors have developed an energy strategy package. This is respectively Russia´s energy strategy up to 2030, and EU´s energy 2020 strategy. According to the IEA (1995: 27-28) there are primarily three factors that can help actors increase gas security – diversity, efficiency and flexibility. These are basic criteria for long-term energy security in the energy sector. The criteria are essential for both actors, though from different angles. This is something we shall look more closely in the following section.

6.1. The role of gas in Russian politics and economy

The natural gas sector plays a vital role for Russia´s economic and political power. The size of Gazprom´s export earnings largely fills in Russia´s budget revenues, and the huge gas resources makes Russia an energy superpower on the international scene. Gas export is therefore vital for the survival of the Russian regime. This chapter looks closer at the Russian gas sector at a general level. It starts out with a short brief of structure and politics, and the role of gas in the economy. Furthermore, it addresses some of the greatest challenges within the gas industry. Finally it touches upon the most essential points in Russia´s energy strategy up to 2030.

6.1.1. Structure and politics

The Russian domestic gas market is a monopoly. Gazprom is by far the most important player in the Russian gas market, and has played a vital economic and social role for the government, in exchange for monopolistic privileges. In 1999 Gazprom got the pipeline system as property (Kryukov and Moe 2012:

8), limiting independent companies´ access to the market. In 2005 it was mandated through legislation that the state should own 50% of Gazprom plus one share (Kryukov and Moe 2012: 7). The incentives was to obtain full control over the company, and with state majority ownership, minority shareholders become more or less irrelevant in the governance of the company. In 2006 a complete export monopoly was legally formalized (Kryukov and Moe 2012: 8). Consequently, Gazprom is in a position to maintain tight control over the sector´s infrastructure and over information flows within it (Ahrend and Tompson 2005: 801). Apart from certain advantages, Gazprom also has its obligations. The company is obliged to secure an uninterrupted flow of gas to both domestic and foreign consumers. It is required to pay taxes for all production and delivering, even though they don't get paid for all deliveries. This means that the tax potential of the company gives Gazprom a central role in stabilizing state finance (Kryukov and Moe 2012: 8).

Moreover, the industry has preserved some of the same structure and characteristics of the previous Soviet state structure. Due to an infrastructure that was developed under a centrally planned economy in the old USSR, the Russian gas sector has been constrained. The industry suffers from many of the weaknesses inherent in the old structure, like an underdeveloped distribution pipeline system. Gas has also been used to subsidize other parts of the economy. This has left the gas industry under-financed for years (Kryukov and Moe 2012: 3-7). The natural gas industry is probably the least marketised major sector in Russia, and comprehensive reform in the gas sector reform has been requested (Ahrend and Tompson 2005: 801).

6.1.2. Prices and economic implications

The share of hydrocarbon exports for the Russian economy is significant. In 2008 totally hydrocarbon exports (inclusive natural gas and petrochemicals) accounted for 65% of total export revenues in Q2 (Benedictow, Fjærtoft and Løfsnæs 2009: 6). Oil and gas account for approximately 20-25% of Russia´s GDP (Anker and Sonnerby 2008 in Benedictow et al. 2009: 6).

As the financial crisis in 2008 demonstrated, relying on a resource-based economy and high oil prices makes Russia vulnerable to fluctuations in prices (Harriman 2010: 49). Due to oil indexation in its long-term supply contracts, the price of oil has a significant impact on the Russian economy. According to Sergei Komlev (2011), Head of Contract Structuring and Pricing Directorate of Gazprom Export, the best available pricing mechanism for Europe is oil-indexation, and not hub-based pricing[23]. In an interview under the 1st Eurasian Dialogue in Moscow, Komlev´s basic argument is that a supply/demand based pricing system is not capable of providing sustainable price signals to support investment. He further underlines that Europe has to be attractive to producers and be aware of the fact that they are potential loosing competition to Asia as there is huge demand for gas (Energy Delta Institute 2012). A pricing system based upon supply/demand is also "unfair". Such a practice produces a price, which is less than would be achieved under oil indexation (Komlev 2013, January in Stern and Rogers 2013: 4). Komlev´s view regarding market liberalization and the "invisible hand" is that such a practice will not work in the gas industry, as markets cannot perform their balancing functions properly. Underpricing is thus a major concern, and discounted gas prices might put long-term investments in the industry at risk.

> *"The necessity of pricing natural gas via a third commodity stems from the fact that the market for natural gas is not perfect enough to function properly and produce quality price signals"* (Komlev 2011: 15).

Russia is not, however, just a great energy exporter but also a major consumer. Domestically the government regulates the gas market by obliging Gazprom to supply a certain amount of gas at regulated prices. This limits the company´s monopoly vis-à-vis consumers (Lunden and Fjærtoft 2011: 11). One of the great challenges for Gazprom in that context is the relatively low regulated gas

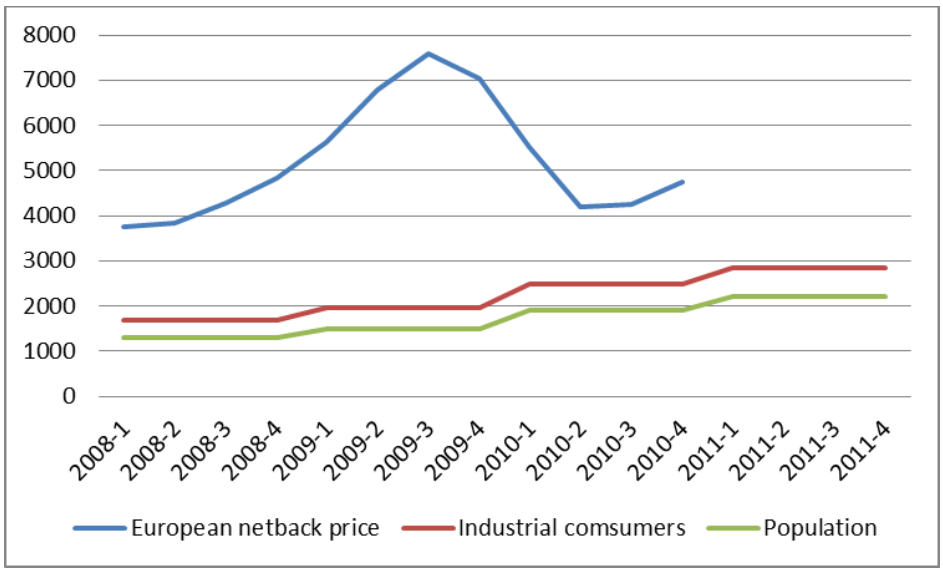
[23] "The Henry Hub is the largest centralized point for natural gas spot and futures trading in the United States" (U.S. Energy Information Administration 2002, July).

price on the domestic market. Figure 1.1. illustrates the large returns from European netback prices compared to domestic prices, looking at the green line for "population". Russia charges about $75-97 per thousand cubic meters (tcm) on the domestic market. Simultaneously it costs Gazprom about $132 to produce, acquire and distribute 1 tcm of natural gas. Thus, Gazprom produces more gas at a loss than it would do if it charged domestic costumers what it charges international customers. The company loses about $50 per tcm sold domestically. This is a huge loss considering that 60% of sales come from the domestic market (Euractiv 2012, April 11th). Low domestic prices mean that Gazprom´s exports, which take roughly one-third of its output, account for about three-quarters of its income (Ahrend and Tompson 2005: 803). Another domestic challenge for Gazprom and the Russian gas sector as such is that Russia restraints its exports when winters are particular cold. In that way more supplies at kept at home. Again, Gazprom loose a great deal of money. If European costumers are able to diversify away from Russian gas supplies, Gazprom may be unable to offset its domestic losses with high profit margins from the sale on the European market. Abroad the revenue on natural gas is approximately $279 per tcm, about double the cost of production. The Kremlin might have maintained this domestic pricing policy for a reason, namely to keep the population happy, and avoid destabilization and appetite for social unrest (Euractiv 2012, April 11th).

In order to financially handle new field- and pipeline projects like the Yamal, the Stockman and the South Stream, Gazprom needs more revenue from domestic sales. In 2006, the gap between domestic and foreign prices was about $250 per tcm (Lunden and Fjærtoft 2011: 3). Russian policymakers do desire a closer link between domestic and international prices, and in 2007 the government adopted a program with the vision of transferring domestic prices to European export netback prices. Though, this goal has now been postponed to 2014 (Kryukov and Moe 2012: 14). Nevertheless, the domestic market has become more important for Gazprom´s results. The hope, especially from the

outside world, is that an increase in domestic prices will help solve the problem of over-consumption, underinvestment in new production capacity, and improve the energy efficiency (Lunden and Fjærtoft 2011: 2).

Figure 1.1: Russian domestic wholesale prices vs. calculated European netback price (rubles per 1000 cubic meters)



Domestic prices are annual averages. Increase as projected in early 2011

Source: Kryukov and Moe 2012: 15

In the wake of the financial crisis, gas prices decreased substantially both in the US and Europe. As well did European demand for Russian gas (Honoré 2010: 16). Russian gas accounts for approximately 30% of the overall gas consumption in European countries, including Turkey, but excluding the Commonwealth of Independent States (CIS) (Ministry of Energy of the Russian Federation 2010: 21). It provides 36% of Europe´s gas imports (Euractiv 2012, September 5th). Russia´s share of EU-27 imports of natural gas declined from 45.1% to 31.9% between 2003 and 2010 (Eurostat 2012, August). In addition the link between gas and oil prices has declined, and the prices on gas have failed to keep up with the oil price recovery. If the Liquefied Natural Gas (LNG) market becomes more integrated we might also see price equalization throughout the world. Russia will then not only be dependent on

European demand for gas, but world demand as well. The prospects for gas price increases in Russia´s export markets are therefore hard to forecast (IEA 2012). There is a Russian concern that opposing long-term oil-indexed gas contracts will have a tragic effect on European gas supply, energy security and price stability (Komlev 2013, January in Stern and Rogers 2013: 6).

6.1.3. Energy Strategy of Russia up to 2030

The energy strategy for Russia to the period up to 2030 is pretty extensive and covers almost 200 pages. Yet, we can look at some key elements, which reflect Russian interests regarding energy matters. Concerning the prospects of demand for Russian energy resources, Russia will undeniably play a leading role on the world hydrocarbon market. Maintenance of good and stable relations with its traditional consumers of energy resources, as well as the development of equally stable relations on new energy markets, becomes a key principle. Export of energy will still remain the major development factor for the Russian economy. Though there is an awareness of the fact that its impact on the economy will decrease as a function of long-term economic policy, which focuses on diversifying the economic structure and reduce the country´s dependency on energy export. Energy markets in Europe, in addition to CIS countries, remain the main sales markets for Russian energy resources. Measures are therefore intended to reduce any transit risk, including more development and improvement of full-scale export infrastructure in order to ensure reliable Russian energy to these markets. The total volume of Russian energy export to European energy markets will, however, decline due to export diversification to eastern energy markets like China, Japan, Republic of Korea and other countries in the Asia-Pacific region. Russia will not only retain its position as the largest energy supplier in the world, but also change presence by diversifying destination of energy export. This is part of the aim to reduce the dependence of the Russian energy sector on export to Europe (Ministry of Energy of the Russian Federation 2010: 22-24).

Energy security serves as a guideline for Russia´s long-term energy policy. Moreover, energy security is one of the main components of the national security. There have, however, been some main problems related to it. The most serious being the failure of the industrial potential of the fuel and energy complex to cope with the world scientific and technical level, limited development of the energy infrastructure in Eastern Siberia and Far East, low level of investment in fuel and energy complex, and finally the dependence of the Russian economy and its energy sector on natural gas, representing about 53% of domestic energy consumption. There is a strategic objective to improve energy efficiency, as over-consumption has been a challenge for the energy sector. This is achieved by maximizing the rational use of energy resources by ensuring that the consumers have an interest improve their individual energy efficiency, save energy and invest in this field (Ministry of Energy of the Russian Federation 2010: 24-29).

Interesting to mention is the newly Russian membership to WTO from 2012. It might be argued that WTO´s significance for Russia´s economy and policy within the gas sector should not be exaggerated. Such an argument is closely connected to the fact that 60% of gas sales come from the domestic market (Euractiv 2012, April 11th), and that energy trade is meant to be regulated through the ECT. A membership might, however, work for the benefit of Russian gas sector by enabling the Russian government to reduce its subsidies to domestic industries and demand higher prices for gas in the domestic market.

Several of WTO´s guidelines toward the domestic policy of nation states are similar to EU´s internal market principles. Regionally, however, EU goes deeper in the integration process than WTO (Austvik 2003: 13). Principally, the rules maintain a non-discrimination policy towards domestic and foreign actors, as well as fair competition (WTO 2013). Individual countries and regional trading partners like EU can refer any case to the organization

(Sloman et al. 2012: 729). The pressure against Russia in this study may therefore be similar to potential pressure from WTO. The membership will affect the organization of production, transportation and sale for Russian gas, as well as the profitability and Russia´s strategies and policies (Austvik 2003: 13). A membership can at best contribute to a modernization of Russia´s gas sector. At the same time it can guarantee demand for its energy, by abiding to the rules of non-discrimination, transparency, and commitment to the progressive liberalization of international trade. Consequently, it would secure gas supplies to Europe. In which case, differences in the understanding of a situation might be mitigated. Hence the possibility for the creation of a systemic uncertainty can be lowered. With a WTO membership at both sides of the gas chain, the policy of EU and Russia can converge. Then they can cooperate on the basis of common principles (Harriman 2010: 44).

6.2. European concerns

According to Honoré (2010), researcher at Oxford Institute for Energy Studies, "uncertainty" has become a key characteristic of the European gas industry. With increased imports from Russia (Honoré 2010: 180) the uncertainty can among others be related to how Russia will act in the dependency in the future, and the adequacy of a common understanding of one another. This chapter looks closer at some overall trends in the European energy market, and the prospect for dependence on external gas suppliers. Furthermore, it looks at EU´s energy 2020 strategy as an indicator of how EU seeks to address European energy security concerns the next coming years.

6.2.1. Trends and dependency

Looking at the trends in European natural gas demand, natural gas has gradually increased its market share since the early 1960s. However, already before 2008 and the economic crisis, these trends where put into question due to a combination of policies on climate change, rising natural gas prices, uncertain regulatory and competitive environment, cycles of investments and fears about security of supply. Prognoses predict that demand will increase

substantially in Europe, but not as much or as fast as was generally expected for a few years ago (Honoré 2010: xxxvii).

Traditionally, Europe has relied on four main sources of gas - Netherland and Norway as the European, and two non-European - Russia and Algeria. There has been a trend towards declining indigenous gas production and resource discovery. How fast the production will decline is a matter of debate and hard to predict, as it will depend on prices and technological developments. What comes to resource discovery an interesting question is whether shale gas can become commercial viable (Jervalidze 2011: 13). Extensive studies argue, however, that the region will be increasingly dependent on imports, whether by pipeline or LNG (Honoré 2010: xli-xlii). It should be noted that there exist a wide disparity regarding import dependence across Europe. In several EU member states gas comes from one sole supplier, for example Russia in the case of the Baltic States and Bulgaria. Others get supplies from a dominant supplier, like Algeria in the case of Spain (Honoré 2010: 181). Regardless of that, security of supply became one of the greatest concerns in the mid-2000s. The growing fear about rising import dependence and the market power of exporters (mainly Russia) led to skepticism in several governments of whether gas was a desirable fuel whose growth should be encouraged (Honoré 2010: xlii).

European consumers have increasingly become dependent on non-OECD sources over the last decades. From 48% in 2008, Europe might depend for about 70% on external sources of gas by 2020 (European Commission 2008; Honoré 2010: 180). The region is further expected to increase its import from Russia and Middle East (Honoré 2010: 180). EC (2010) underlines that natural gas will continue to play a key role in the EU´s energy mix in the coming years. The ECT (2013) is meant to regulate the trade in energy. The aim has been to strengthen the rule of law on energy issues. It plays an important role as part of an international effort to build a legal foundation for energy security,

based on the principles of open, competitive markets, and sustainable development. According to IEA (1995: 18) it could reduce risk of politically generated disruption, which might otherwise prevent new supplies to the market. Several EU member states have ratified the trade amendment, while the Russian Federation has occasionally informed that it did not intent to become a contracting party to the ECT (Energy Charter Secretariat 2012, August).

The fact that a high proportion of imports are concentrated among relatively few partners has been regarded as one of the greatest threats against EU´s primary energy supplies (Eurostat 2012, August). This is because companies like Gazprom have a de facto monopoly position in the European gas market. The element of foreign policy and national interest can be reinforced when companies in the energy sector are driven by the state. Trade in energy supplies can potentially becomes an element of state policy. This has led to central concerns in the Commission. Gazprom´s export power prevents other companies' access to the European gas, hence violating central market principles embedded in the EU system, whereas non-discrimination and free flow of gas between member countries are among the most essential (European Commission 2010).

Dependency on external supplies has led Continental European countries to try to diversify their gas supplies and build storage facilities in order to cope with supply variations and/or cuts. A concern is that external suppliers are less reliable than domestic ones (Honoré 2010: 182). The gas crisis between Russia and Ukraine in 2009 was by far the most serious, which led the transit issue to be a greater anxiety. Transit disputes pose real problems to European gas supplies. This has led to incentives for pipeline projects like the Nord Stream and South Stream, in order to reduce risk and diversify transit away from Ukrainian territory (Jervalidze 2011: 21-22). Agreements between Russia and European companies are mainly based on long-term supply contracts. Today,

there are limited possibilities for a significantly reduction of volumes under these contracts. Yet, even if there were, a diversification away from Russian gas over the next year is difficult. A Russian willingness to show more flexibility to the ideology of long-term contracts and resale prohibitions could, however, increase EU consumers´ flexibility to strengthen gas supplies.

6.2.2. The "Energy 2020 strategy"

"The energy challenges is one of the greatest tests faced by Europe today" (European Commission 2010). EU wants to secure a genuine single market[24] in gas, and the Commission regards a transparent, competitive, and integrated market as a key element to increase the energy security. This will allow European consumers to choose between different suppliers, irrespective of their size, to access the market, and most importantly reduce the price on gas. Such principles are adopted in the Third Energy Package. Rising energy prices and increased dependence on imports is claimed to jeopardize Europe´s security and competiveness. The energy bill has to be lowered by reducing the amount of energy that is consumed, and energy efficiency is one of EU´s main objectives for 2020 (European Commission 2010).

The "Energy 2020 strategy" was adopted by EC. This strategy defines the energy priorities for a period of ten years. It sets the measures to be taken in order to tackle a variety of challenges. Additionally, achieve a market with competitive prices and secure supplies, boosting technological leadership, and effectively negotiating with international partners (Eurostat 2012, August). The strategy provides a solid and pretty ambitious European political framework for energy policy.

A functioning single market with sufficient transmission and storage infrastructure is said to be the best guarantee for security of supply. Then

[24] Free movement of goods, services, capital and labor across national borders. Eliminate any discrimination between member countries, which may distort competition (Austvik, Bredesen and Vårdal 2002: 327).

energy will follow market mechanism and flow to where it is needed. Today some players have an unfair privileged access to energy grids. Thus, the competition has to be managed in a better way. EU plays a vital role in that regard. If EU can be a game changer it has extensive power to supervise markets in order to prevent certain actors from unjustly exploiting any kind of monopoly. Furthermore, EU policies aim at protecting its own citizens and vulnerable consumers against supply risk. Among other things they should be able to switch supplier, and get straightforward bills and offers, which can be compared. This is part of a secure, safe and affordable energy. Likewise, EU has the interest of free movement of energy. This interest is part of the fact that energy policy decisions made by one country inevitably affect other countries, considering that gas is transported through pipelines that often cross national borders. Free movement provides greater security of supply, more reliable prices, competitiveness, and more choice for consumers. This results in a desire to stronger international partnership when it comes to energy policy (European Commission 2010).

As the world´s largest regional market, Europe has to asserts its interests in the international arena. Europe must ensure that its neighbours serve its energy interest, not only for the sake of secure transport of energy, but also as a way of extending its energy markets. Hence, energy diplomacy becomes highly important. However, the Union has found it difficult to speak with one voice (European Commission 2010). It has been argued that the security and sustainability of energy supplies has mostly been left to individual EU member states. There has been a lack of unity among member states in their energy policies. The current multipolar structure of European politics reduces the scope for cooperation that can favours EU as a whole, in this case its energy security. The fact that the Commission and the member states, and the member states among themselves, differ in their energy policy towards Russia, exacerbates these circumstances (Harriman 2010: 4). Russia is claimed to take advantage of this absence of cohesion to gain favorable energy deals and

increase European dependence on Russian gas supplies. An enhanced cooperation on energy security within EU is therefor claimed to be essential in order to withstand Russian pressure (Baran 2007: 131). Such a pan-European (European Commission 2010), competitive wholesale gas market is part of a long-term gas supply security. Some has even argued for the necessity of national (or European) champions in order to counterbalance the power of exporters (Nöel 2010).

7. Conflict of interests

EC´s decision of launching an antitrust investigation against Gazprom illuminates how EU and Russia has different preferences and understanding of the energy relationship. This creates a systemic uncertainty whether the understanding of one another is adequate or not. Such an uncertainty can make it difficult to agree on what policy that best can serve their respective security of demand and security of supply. In this chapter, we shall look more closely at the complaints related to Gazprom´s abuse of its dominant position on the gas market. The chapter analyses whether the various allegations will have positive, negative, or no implications at all for EU´s and Russia´s energy security.

7.1. Security of demand implications

The real political concern for Russia arises when the dependency to EU results in short- or long-term problems as a consequence of changes in price, supply or market access. Gas is important for Russia´s economic and political power. This section considers the Commission´s three allegations in light of Russia´s security of demand. On the background of what we know about the gas market, we can discuss the extent to which a liberalized gas policy will affect Russia´s ability to maintain its security of demand as a natural gas producer.

7.1.1. Resale protection

The allegation towards resale protection touches upon certain characteristics of the functioning of the gas market, characteristics that are not uncommon. Thus, the practice is not necessarily invented from Moscow, and not a distinctive

Russian policy against European consumers. Rather, the Russian policy appears as a function of the general imperfectness of the gas market, hence reflecting what we have called “typical gas”. Resale protection is primarily related to the long-term gas supply contracts between Gazprom and its European costumers.

While production of gas is reasonable constant throughout the year, demand varies (Austvik 2003: 226). Anyway, Russia´s gas must have a final destination, and this final destination has to consist with end-user that actually needs the gas volume that is brought into the pipeline. The continental European market is large, and additional capacity to this market to keep up with economic growth makes sense for Gazprom, and Russia as such. Stable and continuing flow to this market is guaranteed through long-term supply contracts, and export revenues are ensured for the next coming years. The difficulty for Russia as a seller is that market growth is a fairly continuous process (Guillet 2011: 65). It can be a function of demand and market developments. Today we have the financial crisis and certain developments in the gas market, like LNG and shale gas, in addition to EU´s attention to energy efficiency and renewables. Pipeline capacity can, however, only increase in large sudden fixed numbers. Therefore, targeting a market is difficult for a seller or any pipeline project (Guillet 2011: 65).

Due to the government´s presence as a regulatory body in the gas industry, we expect the Kremlin to define the acceptable level of risk or security to be achieved. It can minimize risk related to sudden and unpredictable changes in the market. Energy market changes and price volatility make it extremely difficult for producers to make long-term decisions for the development of costly projects (Jervalidze 2011: 11). Also the significant economies of scale make it important to ensure a market that can stimulate further growth and gas production. Long-term commitments are therefore important in order to address such challenges. Furthermore, agreements based on long-term

commitments might help Russia to be less sensitive to pressure from individual players. As Gazprom does not have many alternative markets in its portfolio, Russia can be sensitive to an opening for resale. This is because it can weaken the assurance of future gas deliveries as it is guaranteed through the long-term supply contracts. The reduced demand for Russian gas during the financial crisis in 2008 certainly demonstrated how vulnerable Russia is when relying on a resource-based economy. Lack of assurance for future gas deliveries, can lead to delays in decisions to invest in new import infrastructure. This can have serious implications for the future security of supply for EU consumers, since they are heavily dependent on Russia´s ability to ensure their gas needs.

Liberalization in terms of resale opportunities can put Russia in a vulnerability dependence that turns out more serious than its sensitivity dependence. This is because possibility for long-term contracting in a liberalized market is diminished (Austvik 2003: 223). If EU member countries are able to resale the gas, they will become far more flexible than Russia. A possible danger for Russian energy security is if member countries conduct a resale to other member states to a better price. Resale permission can contribute to limit the incentives for signing long-term contracts with Gazprom, and Gazprom will loose market shares in its largest export market. This is because it satisfy EU´s request for more flexibility, which is one of the most important condition for a consumer in order to maintain its security of supply. If EU member states enter into bilateral agreements with each other, it will lead to the dismantling of the Gazprom model as a network of long-term supply contracts. The situation can be exacerbated if Gazprom suffers problem of being competitive and flexible, in terms of reaching new markets. Due to fact that Russia has problem to keep up with the world scientific and technical level, in addition to limited development of the energy infrastructure, it becomes important for Russia to have access to the European gas market. Moreover, the company cannot easily compensate potential export loss with domestic deliveries, since Gazprom sell at a loss on the domestic market.

The necessary commitment between producer and consumer appears to be particularly important in the gas market. After identifying a potential gas-producing area, more specific questions need detailed answers when plans become more concrete: who will actually purchase the gas to be transported, and more important - who will pay for it? Can the entity afford it? And is the relevant infrastructure to use it present? (Guillet 2011: 69). The questions mirror the necessary certainty before taking large and irreversible investments in production and transmission. Due to the different perceptions and understanding of the situation between EU and Russia, it appears as even more important for Russia that there is an adequacy in EU´s understanding of the risks involved for a natural gas producer. The take-and-pay clauses, hence the requirement for a minimum level of income, appear as a legitimate rationale for a producer. Because of the huge financial resources, Russia has to be sure that the market will be there for their resources after ten years when the project is implemented to recover their investments (Jervalidze 2011: 11). This is because it takes long time between the decision to develop is made, and the time when production enters the market. A number of assumptions have to be taken so that the producer can make new field decisions about investments. These assumptions indicate how these central conditions will develop over many years (Austvik 2003: 225).

The question remains whether Russia can manage to adjust to a free market, and modify its long-term supply contracts. In order to maintain its security of demand, Russia must be capable to respond to changes in the market, even without the current market power. Interesting is whether its dominant position in the market reduces incentives for renewal or reform in Gazprom. With limited competition, and European dependence on Russian gas, Gazprom can stick to its own practices without serious consequences. As a monopoly, Gazprom will also quite easily be assigned new projects. We might argue that what best serve Russian energy security is not a Gazprom with monopoly, but a Gazprom forced to reform (Kryukov and Moe 2012; Ahrend and Thompson

2005). A productive way to face a more flexible consumer and problems related to export volume is to increase its own flexibility. This is because in interdependency, the actor with most flexibility will be the least dependent. A positive side effect of facing a flexible consumer can therefore be increased incentives within Russia for a destination diversification to Asian markets, and a political will to spread economic activity (Ministry of Energy of the Russian Federation 2010). If such external measure succeeds, the vulnerable dependency may be less severe than the sensitive. By showing more flexibility in its approach in modifying long-term supply contracts, Gazprom can adapt to certain developments in the market, and requests from the buyer. In best case, it can improve relation to consumers, and lead to trust and commitment comparable to the commitment embedded in long-term contracts. However, the Russian gas sector suffers problem of insufficiency in technology and transportation capacity, and underinvestment. Thus, stable and continuing flow to Continental Europe appear as important in order to improve pipeline capacity and other developments in the industry. Long-term supply contracts appear as vital in order to guard against risk related to these huge and long-term financial projects, which we find in the gas market. As long as such long-term contracts are diminished in a liberalized market, Russia´s security of demand might be jeopardized.

7.1.2. Third-party access

EU energy liberalization will grant energy companies access to infrastructure held by others. Russia has, however, been reluctant to give TPA to its pipelines, especially South Stream (Euractiv 2012, December 18th). Suppression of supply diversification and market equalization in the European gas market enables Gazprom to secure against competition from individual actors in the European gas market, hence making Russia the main gas supplies in the EU.

From the Russian side, to grant other access to its infrastructure, can discourage Gazprom from investing in pipelines and gas storage facilities

(Euractiv 2012, December 18th). The significant economies of scope between production and transportation, lead to the argument that Gazprom is concerned with keeping control on their own pipeline infrastructure. TPA can, from a Russian point of view, be considered as an effort from the EU to retain control over Gazprom´s transportation capacity. Risks that follow from TPA are related to market share losses due to increased competition. The costs might also come very quickly, as they will be reflected in volume and export revenues. Since energy markets in Europe remain the main sales markets for Russia, this is a serious concern. Market share losses can put the development and improvement of full-scale export infrastructure at stake.

Also here, the notion of flexibility becomes essential. Since security and diversification of supply is a primary concern for European energy security (European Commission 2010), TPA is essential as a measure to increase flexibility in terms of giving alternative suppliers access to the market. However, Russia´s responsiveness within a policy based on free markets instead of domination is rather unclear. Such an argument is closely connected to the rejection of gas sector reform in Russia (Kryukov and Moe 2012: 3). If other firms enter the European energy market, this will be a test case for Gazprom´s competitiveness and ability to be attractive to European consumers. Considering that EU and Russia is locked-in with each other, Gazprom cannot easily change to another consumers when facing changes in revenues and/or access to the market due to TPA. Rather, the company has to adjust to it. Among others, Russia could pay attention to increase its own flexibility by, for instance external measure, like South Stream and North Stream. However, on order to make sure that these external measures work for the benefit of increasing export volume and revenues, incentives for building new pipelines should not only be related to a replacement of existing transit through Ukraine. It might, however, make more economic sense for Russia to pay off the Ukrainians (for instance with free gas). Yet, the incentives for increasing flexibility should come from the opportunity of rising capacity. If demand

keeps growing in Europe, new capacity is needed. Then it makes sense to look for alternative routes for the *additional* volumes (Guillet 2011: 63).

Considering that targeting a market is difficult for a natural gas producer (Guillet 2011: 65), we might argue that the cost of adjusting to a liberalized gas policy will be domestic. Pipeline projects in order to reach new markets, for example in Asian, is long-term projects, which require huge resources whether they are financial or technological. With an open market place through TPA, Gazprom may have to rely more on supplies from the domestic market. In which case, there is a question of price, since domestic gas prices are lower than the gas prices for EU consumers. Increased prices for Russian consumers can, however, bring costly changes on society. Considering that Russia suffers problem of overconsumption and lack of interest in the population to improve the individual energy efficiency, higher gas prices can result in dissatisfaction.
Instead of such internal measures, Russia has tried to negotiate external ones. Russian authorities want Brussels to provide a status of so-called Trans-European Energy Network. This status will exempt Russia from rules on TPA and separate gas trading from gas network operations (Euractiv 2012, December 18th).

This leads to the argument that vulnerability dependence might become more serious than the sensitivity. Russia can also experience being sensitive in its dependency within the existing policy framework. This is because any change in, for instance demand for Russian gas as we saw in 2008, can bring costly effects to Russia in terms of reduced export revenues. Yet, due to the problems within Russian gas sector, in addition to the fact that we operate in an imperfect market with its risk involved, we expect that cost of adjusting to outside changes is more serious within a liberalized policy. With a new market structure, and when new contract partners emerge, the incentives for entering into long-term contracts from the buyer´s side changes (Austvik 2003: 223).

With a de facto monopoly, Russia might enjoy a natural advantage of asymmetrical power. Interesting is whether Gazprom becomes more risk averse due to its position in the interrelationship. We have argued that the dominant position within existing policy framework can reduce costs related to the interdependency, compared to a non-dominant position within a liberalized policy. Gazprom can largely define the playing rules against European consumers. A prerequisite, however, is that the consumers do not have access to alternative gas suppliers. TPA will be a central concept to market opening and non-discrimination. If Russia do not share these perceptions of how the market should function, TPA is unlikely. This illustrates how EU and Russia adhere to different political perspectives, and from a Russian point of view, EU has not an adequate understanding of Russia´s concern to security of demand.

We should not overlook Russia´s importance to appear as a reliable and stable gas supplier. Not only to the European market, but also worldwide. As mentioned, Russia is aiming for an export diversification to eastern energy markets like China, Japan, Republic of Korea and other countries in the Asia-Pacific region. It is difficult to imagine Russia´s diplomatic stance as ignoring this fact. This is important if Russia wants to reach the strategic goal of retaining its position as the largest energy supplier in the world, as well as a successful diversifying destination of its energy export. This is part of the ambition to reduce the dependence of the Russian energy sector on export to Europe (Ministry of Energy of the Russian Federation 2010: 23).

Gazprom´s supply portfolio is restricted, and its flexibility with respect to alternative markets is inadequate. Due to the fact that the Russian gas sector suffers problem of limited competition, low efficiency, and little incentives to lower cost (Kryukov and Moe 2012: 18-19), we can argue that denial of TPA is an essential condition to maintain Gazprom´s market share. On the other hand, increased competition should be a rationale for Gazprom to address some pitfalls within the company. If an altered gas policy turns out being effective,

Russia can improve its liability to suffer costs and reduce risk to outside changes in the future, whether they are due to dramatic price drop, the following economic loss, or potential adjustments in the economy as a result of lost revenues. It requires, however, political will among Russian authorities and the resources required in order to be implemented. As well, Russia will have to be optimistic about the prospect for cooperation in the market if individual actors are granted access to its infrastructure.

7.1.3. Pricing

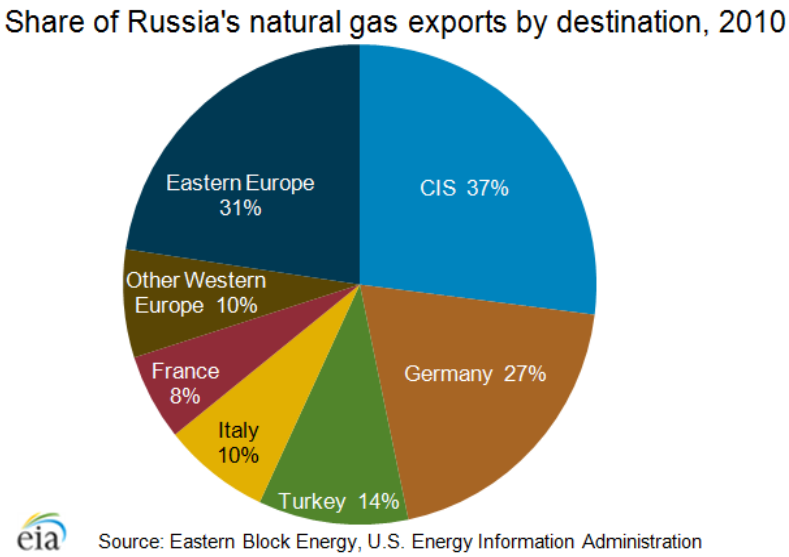
Quite often long-term oil-indexed contracts provide the highest price, hence the highest return (Stern and Rogers 2013: 4; Powell 2013, February 18th). Profit maximization is a commercial rationale for every exporting company. Considering that export revenues constitute an important part of the Russian budget, any radical loss could lead to significant budget shortfalls. This can have serious implications for the gas sector, hence putting financing of new project at stake. It can affect the well-being of the society, and not least the legitimacy and stability of the state. Normally, increased gas export revenues create incentives for companies to produce more. This illustrates the general relationship between supply and price: "When the price of a good rises, the quantity supplied will also rise"[25] (Sloman et al. 2012: 39). Though it depends on the amount of profit they will make, but given that the firm can increase profit by producing more, it normally do so (Sloman et al. 2012: 39). This is essential for the Russian gas sector with significant economies of scale as it is a capital-intensive business.

Regarding the notion of Russia´s use of gas as a power political tool, this is a question of political risk. Such an argument undermines Gazprom´s dependency on the European market for revenues. Reminding the interdependence and its potential as a source of power it can be argued that in

[25] Like demand, supply is not simply determined by price. Other determinants could be change in technology, organisational changes, government policy etc. (Sloman et al. 2012: 40).

times of low gas prices, Russia find itself sensitive to its dependency of Europe, and being the most dependent (Lunden and Fjærtoft 2011: 18). Looking at the distribution of Gazprom´s gas supplies in Figure 2.1, we see that export to European countries is what keeps the Russian gas machine running. Prices on gas might become an even greater concern as the European financial crisis has lead to serous implications for European gas demand. There is a lot of money at stake within the gas sector, and the gas price risk is usually borne by the seller. Gazprom will only get the prevailing price for the gas delivered as part of the gas sales contract, or alternatively as a separate transaction. The expected income has to be sufficient to cover the cost of extraction, production and transportation, while not undermining the economics of the sale of gas (Guillet 2011: 71).

Figure 2.1 Russian natural gas exports



Source: U.S. Energy Information Administration 2012, September 18th

The price debate reflects the dilemma of the traditional relationship between demand and price in economics. When the price of a good rises, the quantity demanded will fall (Sloman et al. 2012: 32). On one hand, Gazprom can stick to its own demand for oil-indexed gas prices. A rationale for Gazprom to follow such a practice can be to reduce the potential of volatility in gas prices,

as indexation is a mechanism of softening price fluctuations (Konoplyanik 2011). Since liberalization will lead to more price volatility (Jervalidze 2011: 10; Austvik 2003: 227), there is a potential for decreased security of demand in terms of frequently price drop. Such price volatility can be difficult to deal with within in a resource-based economy, especially when operating in an immature market, functioning with great amount of change and innovation in terms of capital-intensive projects.

It has, however, become increasingly questionable as to why the price of oil, set by some combination of supply and demand, speculative activity, OPEC decision-making and market expectation, should be the critical element of price formation for gas (Pirani, Stern and Yafimava 2010: 24-25). Stern and Rogers (2013, February 12th) from Oxford Institute for Energy Studies have commented on Komlev´s reluctance to a balance of supply and demand. They are not advocating a move to hub-based pricing, but maintain that such a move is inevitable because of market liberalization, gas supply and demand conditions in Europe and globally, in addition to prices on oil, coal, power, and carbon. If Stern and Rogers (2013: 5) prognoses turn out right, Russia´s vulnerability dependence can become more serious than the potential sensitivity dependence. This is because a liberalized gas policy can cause major problems for existing long-term contracts, some of which may not survive. Hence, also oil-indexation may gradually disappear as a principle of gas pricing. Without the oil-indexed long-term contracts, the cost of adjusting to outside changes can be serious with respect to long-term demand issues. The question remains whether Russia can manage to cover the costs of extraction, production, and transportation, in a market where prices are volatile.

Gazprom has been accused for following a practice of high price-low volume (Stern and Rogers 2013: 8; Powell 2013, February 18th). This is not fruitful for capital-intensive projects like Nord Stream and South Stream, designed to meet growing demand for gas in Europe, and secure deliveries towards potential

transit disputes. The fact that one company control production, export and pipelines have resulted in little incentives to lower costs and lower price increases (Kryukov and Moe 2012: 18). Thus, supply/demand based pricing system might not be capable of providing sustainable price signals to support investment in the Russian gas sector. However, in order to keep on costumers, the price it will pay must make sense for it (Guillet 2011: 69). For EU consumers this means to get a price that reflects market trends. Yet, price has a dual role. On one hand it compensate the producer for costs and indicate the profitability of potential investment. On the other hand, it gives signals to the buyer about the relative cost of consuming the product (Kryukov and Moe 2012: 13). As well, competing fuels, cheaper than Russian gas, might enter the European market[26]. Russia will then be sensitive in its dependency since it can experience market share losses. So far, Russia´s LNG capacities are rather limited, and hydrocarbon export is significant for the Russian economy. Furthermore, EU pays heavily attention to increase its energy efficiency. Also this can lead to a reduction in demand for Russian gas. All these factors bring the risk that, if oil-indexed prices are getting too high, Russia can experience market share looses and reduced demand for Russian gas. Gazprom´s inflexibility towards changes in price can jeopardize the future of gas, by pricing it out of the market (Powell 2013, February 18th).

Considering the importance of the signals to the consumers, and the fact that Gazprom face a changing European gas market, we might argue that Russia should adjust to these changes. This applies in particularly to potential price volatility and the expected proportion of hub-based prices in the European gas market. Such an argument, however, requires at least three things. Firstly, it has been argued that the Kremlin should deploy the antitrust case to force Gazprom to reform (Riley 2012: 2). Thus, the Kremlin can use the antitrust investigation to force changes that increase Gazprom´s competitiveness. Secondly, being competitive, Gazprom can give price signals to the consumers that make sense,

[26] For example the potential success of LNG.

and which make Russian gas deliveries attractive. Finally, the new pricing system has to provide sustainable price signals to support investment in the Russian gas sector. If the new policy turns out being effective, Russia can reduce costs of adjusting to changes in the market.

However, it can be difficult to change policy quickly. It requires a certain degree of political will and ability to establish a resource regime, which is sufficiently flexible and broad in scope to include norms, rules and procedures to encourage decisions that are economically efficient. The ability to distinguish between various forms of ownership and activity will be required as well (Kryukov and Moe 2012: 20). Such measures will not least depends on the resource capabilities available for Russian politicians. As exporting and importing is a normal state of affairs, we expect the Russian government to aim for a reduction of any costs related to a more liberalized gas policy. What would be the cost of adjusting to outside changes can be measured by looking at certain changes on society due to, for instance a drop in prices. Problems related to the dissolution of oil indexation in terms of economic losses on the European gas market, could be addressed by domestic measures. Recalling Gazprom´s loss on the domestic market, this could, however, be a lever for the government to require higher prices. If the domestic prices rise to a level above marginal income in Europe, Gazprom may even decrease export in favor of a higher market share at home. Domestic market share can then be a greater part of Gazprom´s earnings. Such an adjustment and change on society can, however, be more costly. Due to the fact that Russia has problems with over-consumption (Lunden and Fjærtoft 2011: 2), higher prices can lead to widespread discontent in the population.

A domestic price reform has also brought concern for some consumers. If the share of profit generated in foreign markets diminishes, Russia can more easily improve bargaining position at the expense of its consumers. An unexpected side effect of higher domestic gas prices might be a Russian inclination to use

gas a political weapon, and impose political costs on its exports (Lunden and Fjærtoft 2011: 21). In which case, an asymmetrical dependence may appear. Whether the Kremlin will use the antitrust investigation, as a lever to increase domestic gas prices is, however, hard to predict. Rather, assessments should be drawn on the background of the current situation.

As European markets will remain the main sales market for Russian energy products at least up to 2030, we expect that Gazprom pay attention to its role as a reliable gas supplier. "Enhancing the security of gas supplies to European consumers is one of Gazprom´s strategic targets" (Gazprom 2013), this reflects Russia´s attention to its reputation as a reliable and stable gas supplier to EU. For the overall economic results of Gazprom, export prices and volume remain crucial (Kryukov and Moe 2012: 18). The existing policy framework appear as essential with respect to Russia´s ability to reduce market risk, for example the risk that the gas is not sold profitably (IEA 1995: 26), or risk related to the ability to cover cost in the gas industry. This is, however, nothing uncommon in the gas industry, and it is not only Gazprom that favor this link. Norwegian gas price, among others, has traditionally been linked to the price of oil through contracts, which is indexed to developments in oil prices with a lag (St.meld. nr. 1 (2008-2009)). In that sense, the question remains whether there is an adequacy of common understanding between EU and Russia. EU being at the consumer´s side wants the market to be a buyer´s market. Russia, being on the producer´s side will claim that the market for natural gas is not perfect enough to function properly and produce quality price signal. In that sense, the Russian perception might be that EU has not an adequate understanding of the risk involved in an imperfect and immature market.

7.2. Security of supply implications

Free markets are claimed to be the most important single component to energy security (IEA 1995: 30). Gazprom´s monopoly position constitutes a restriction for competition, free flow of gas, and flexibility as measures to improve energy security. This section considers the Commission´s three allegations in light of

EU´s security of supply. A liberalized Russian gas policy will help EU come closer to the vision of a genuine single market in gas. The question remains, however, whether this is sufficient in order to protect its citizens and vulnerable consumers against supply risk.

7.2.1. Resale protection

The resale protection sets barriers to the EU target of a truly pan-European integrated energy market. Unless robust efforts are made to create a more interconnected, competitive and integrated market (European Commission 2010), the potential of full reliability and competitive prices will not be realized. Due to the take-and-pay clauses it is the European consumer who bears the gas volume risk (Guillet 2011: 71). The consumers may perceive such practice as unfair considering that they might be in danger of possessing too much gas.

EU´s requirement for resale is part of the Union´s vision of a genuine single market in gas. Gas can follow market mechanism and flow to where it is needed. Resale will help making member states equal since, in principle, a single market will make sure that all producers and suppliers are competing with each other. EU member countries can then buy gas wherever they want, at least in the theory. Such flexibility is an important component for the pure physical access to gas. Gazprom has, however, been reluctant to amending its long-term supply contracts (Powell 2013, February 18th). The fact that consumers may possess gas they not necessarily need, nor can it be resold to other member countries demanding the gas, in practice decreases flexibility as a key measure to secure gas supplies. Hence, EU consumers´ responsiveness to radical changes in supply and/or price is limited within the long-term supply contracts. Therefore, they can be sensitive in their dependency. The contracts also prevent flexibility in an economic sense. If EU consumers are not tied to long-term contracts, they have greater flexibility what comes to changes in price. For instances, in a period with low prices, the buyer can enter into short-term contracts. Contrary, if there is an expectation that the price will increase,

the buyer will try to close long-term contracts at these low prices. The costumers have the flexibility to decide to how long-term contracts they want to enter into (Austvik 2003: 222). A mixture of short- and long-term contracts may help resolve problems related to risk in terms of increased economic costs due to a rise in energy prices.

The contracts give high security of supply under normal conditions, but the security is low under situations like technical problems, political concerns, or bad weather conditions. This became evident in the 1990´s when the gas dispute between Russia and Ukraine resulted in a drop by 50% for deliveries to Western Europe (Austvik 2003: 223). In that sense, resale can help EU consumer reduce risk of disruption to existing supplies, whether it is political disruption, accidents or extreme weather conditions. It can also serve as a measure against long-term risk that new supplies cannot be brought on stream. The greatest problem is when there is a huge gap between long-term supply/demand. Even though it is difficult to define and measure this kind of risk, they might be identified by looking at projected demand and contracted supply, and thereby estimate the gap between these two. The size of the gap can give you an indication of the size of the potential security problem. Alternatively you can look at reserve/production ratios (IEA 1995: 26-27). If Russia´s gas-producing investments diminish, member countries with an abundance of gas can resale the gas where it is needed. This happened in 2006, when demand on gas in EU grew so rapidly, that Gazprom found it difficult to meet it by its own production (Jervalidze 2011: 18). On this background, EU´s sensitivity in the dependence can be mitigated if Russia liberalizes its gas policy with respect to resale protection. Costs related to any change in the gas market are reduced, due to greater flexibility and responsiveness.

Looking at certain developments in the energy market, the rationale for continued linkage of long-term contract gas prices to those of oil products have been questioned. LNG, among others, has brought increased flexibility into the

market (Stern 2009: 6), and we witness a significant shift in the traditional order of power in gas. Additionally, considering that hub-based prices are expected to increase its proportion in the European gas market, this will cause major problems for existing long-term contracts (Stern and Rogers 2013: 5). When new contracts are more directly determined by market conditions and made also directly with the consumer, they will be less long term than today (Austvik 2003: 223). In light of this, the take-and-pay clauses can be perceived as a noncommercial practice, from the point of view of a consumer. Gazprom´s monopoly position breaks with the strategic goal of a market based on non-discrimination and free flow of goods and services across national borders.

A real concern, however, is how much flexibility can be requested in an industry that is characterized as inflexible. The liberal way of managing the market is easier in a market that is mature. It does not require the same extent of management as in an immature market. Thus, making it easer to enable market principles like competition and free flow of goods and services. A liberalization, which is "perfect" according to economic theory, is rarely possible in the gas market (Austvik 2003: 14). EU´s demand for resale requires an infrastructure and transmission capacity that is much more developed than it is today. Among others, Europe lack interconnected infrastructure, especially where gas is concerned (Harriman 2010: 25). In that sense, EU´s requirement for resale appears more or less practically impossible. Additionally, innovation, growth and expansion are a great part of the Russian gas industry, and long-term supply contracts may potential recover costly mega projects.

In EU energy security and solidarity action plan, the Commission states that "(…) *mutual benefits in the long-term perspective that is needed to finance the more capital-intensive projects of the future (...) EU should continue to press for further liberalization of trade and investment (...) "* (European Commission 2008). The quote clearly illuminate that EU has an understanding of the risk involved, the adequacy of the understanding is, however, unclear.

Theoretically, resale permission can strengthen EU´s energy security. It will, however, affect the entire structure embedded in the long-term contracts. A potential risk is that such a radical and quick change in the structure of Gazprom might prevent Russia from delivering the amount of gas actually needed. Given the key role natural gas will have in EU´s energy mix, it can be hard to understand the EU´s logic. As Grigoriev (2011: 167) puts it: "How can the EU hope to encourage Russian companies to cooperate in supplying its growing gas needs while simultaneously limiting Russian companies´ range of action within the EU?". EU´s policy of creating alternatives to Russia by avoiding Russian territory is a particular case in point.

Tradition long-term contracts between European and external suppliers, where Russia has played a key role, have provided good security of supply for decades (Honoré 2010: 181). Interesting is whether EU is willing to abolish the guarantee embedded in the long-term contracts. The contracts form the backbone of reliable gas supplies in Europe. Long-term delivery contracts are the expression of decades of energy partnership. We should keep in mind that Russia provides 36% of Europe´s gas imports (Euractiv 2012, September 5th). Russia´s strategic goal of diversifying destination of energy export to the Asia-Pacific region should neither be overlooked in EU´s policy against its main energy partner. If EU wants to eliminate such partnership, there are some specific questions that need detailed answers. EU has no guarantee that other suppliers can replace Gazprom´s volume of gas. First of all, who can replace Russia as a great gas supplier? Does the entity have the physical resources? For how long? And how much of it? Who will fill the pipeline day in and day out for the next 20 years? A European ignorance of such circumstances might jeopardize the consumer´s gas security, yet there will be a question of EU´s acceptable level of risk.

Mostly, discussions of the EU-Russia relationship are related to political interests, and how the Union should act against a Russian governmental system

totally different from the EU principles. The energy relationship, however, involves more than that. It is as much about individuals who daily are dependent on Russian gas deliveries. The great concern for these individuals will most likely be whether the pipelines are filled with gas the next ten years. Failure to mobilize long-term supply, not least ensure deliverability, is one of the greatest risk regarding gas security. This is a situation where gas demand or economic gas-consuming investments surpasses the supply of gas or gas-producing investments (IEA 1995: 26). The point is that decades of partnership with Russia through long-term supply contracts should not be rejected completely unconditionally. Considering that the construction of production capacity takes many years and are quite capital-intensive, there potential risk is that demand for gas is not compatible with the delivery capacity. Thus, encouraging of further Russian gas-producing investment and long-term commitments might be what best ensure EU´s security of supply, especially if the pure physical access to gas, and long-term supply issues is the greatest concern.

7.2.2. Third-party access

Diversity is a basic condition for longer-term energy security broadly speaking, but also gas security more specifically (IEA 1995: 27). Gazprom´s denial or limits on TPA has been one of the toughest discussions in the EU-Russian energy relationship. TPA is a central concept to market opening, and from a EU perspective it is driven by the desire for more choice for the consumer in an open market place. Russia´s denial of TPA to its network undermines free competition and equal access of all participants to its infrastructure.

Denial of TPA deteriorates EU consumers´ ability to secure against supply disruption of *existing* supplies, whether it is due to weather conditions, political concerns or technical problems. In case of any interruption of gas deliveries from Gazprom, no alternative supplier can easily replace the volume of gas to EU consumers. For instance, such a policy could have reduced the negative consequences from the gas crisis in 2009. Complete cessation of gas deliveries

became very critical for countries in southeast Europe, where several countries are 100% dependent on Russian gas (Kovacevik 2009: 11). The crisis illustrated EU´s concern that external supplies are less reliable than domestic ones. The crisis was due to political concerns between Russia and its most important transit country to the European market. TPA can also, however, secure against potential technical problems in Gazprom´s transmission capacity. Then alternative suppliers can help reduce costs related problems of pure physical access to gas. Denial of TPA also poses a threat towards long-term risks that *new* supplies cannot be brought on stream. If Gazprom do not increase production sufficiently to meet the expected growth in demand, EU may be in danger of having insufficient gas supplies compared to the volume actually needed. Considering that Gazprom has suffered problems of underinvestment, concerns related to long-term supply issues appear as contingent. If Gazprom do not invest in new field developments in order to replace decline in old fields, this can potentially lead to a long-term supply/demand gap.

Being heavily dependent on one supplier we see that EU´s responsiveness to outside changes is limited within the existing policy framework. Hence, EU appears as sensitive in its dependency. An argument, however, is that if we just look at the EU level, the import portfolio represents a reasonable well-diversified supply picture[27]. Yet, at nation level the picture is more serious since a number of member states are 100% dependent on gas from Russia. Alternative suppliers are therefore essential to spread and reduce individual risk (European Commission 2008). Any change in one member country can bring costly effects in another due to the fact that the pipelines cross national borders. With limited responsiveness, the situation becomes deteriorated for most costumers across the Central and Eastern Europe, which have no alternative or only limited sources of gas to Gazprom supplies (Riley 2012: 3).

[27] 42% Russia, 24% Norway, 18% Algeria, and 16% other countries (European Commission 2008)

The cost on society during the gas crisis in 2009 became serious as it happened during the wintertime. This exemplifies the sensitivity dependence. With several suppliers in its portfolio, smaller proportion of supply can be interrupted if Gazprom do not meet its obligation, whether it is due to political incidents in supplier on transit countries, accidents or natural disaster, or impacts of climate change. In that sense, EU can reduce real political concerns that the dependency can cause short- or long-term problems. Consequences of any disruption can become less severe, and the sensitivity dependence can mitigate. Hence, the responsiveness to any outside changes will be strengthened.

As long as Gazprom retain its market power through monopoly, diversification as a measure to strengthen energy security becomes difficult. Such practice can, from a EU perspective, be perceived as a direct utilization of the old pipeline structure as they were designed during the Soviet period. Gazprom´s dominant position works as a barrier to open and fair competition. Refusal to grant TPA to energy networks to competitors might constitute an abuse of a dominant position enjoyed by energy utilities (Kotlowski 2003: 101). The question remains whether Gazprom is willing to let competitors get access to its pipelines. Assumed that Gazprom look at the European gas market as a zero-sum game, in which one state´s gain is another state´s loss, a Russian willingness to open up for third parties is questionable. It illuminates how the creation of a systemic uncertainty makes it difficult for EU and Russia to agree on the principles concerning the transmission capacity. EU may don't have other options than being pragmatic to Russia´s demand for the Trans-European Energy Network[28]. From a EU perspective, Gazprom might be in a position that enables Russia to take advantage of an asymmetrical dependency. Leaving Gazprom as the dominant player with respect to exploration, production, wholesale and retail levels of the market, combined with export and pipeline monopoly, Russia has a de facto control over resources, and is well positioned

[28] See section 7.1.2

to affect outcome. For instance, given a European concern over Russia´s interests in the Central and Eastern Europe, controlling deliveries into the pipeline might serve as a political tool for Russian authorities.

TPA would help EU reach energy 2020 strategy of competitive, sustainable and secure energy to the economy and the society. All suppliers will reach the market irrespective of their size. EU can hinder that consumers suffer from a vertical integration, and ownership unbundling can instead accelerate investment in energy infrastructure. Consequently, Gazprom´s power in the market place will be mitigated. As the customers will have access to several suppliers under a TPA regime, this also affects the rationale for long-term contracts. It weakens the argument that long-term contracts are better for the EU consumers due to security of supply considerations. A buyer´s incentive for entering into long-term contracts decrease with new market structure (Austvik 2003: 223). More suppliers enter the market and consequently new contract partners emerge. It will enhance cross border trade, and with access to diversified sources of energy EU consumers can take an advantage of reduced price on gas (European Commission 2010).

7.2.3. Pricing

Any degree or form of liberalization of the market can affect prices and profitability to one or more parties in the gas chain. Lower costs and prices one place will in general be an advantage for someone else in the gas chain. EU aims for the consumer to reap this benefit (Austvik 2003: 15).

The pricing system is a critical issue for EU consumers. It has been argued that long-term contracts with oil indexation do not reflect the reality of today´s liberalized market (Powell 2013, February 18th). It has been claimed that Russia sells it gas at a political price (Euractiv 2012, September 5th). Any EU argument that a new pricing system will help improve security of supply requires, however, that a change in Russia´s gas policy bring more satisfactory prices into the European gas market. Interesting is whether there is a big difference between oil indexed prices and hub-based prices. To answer this is

not part of this study, and forecasting about levels of energy prices is said to be very difficult (Honoré 2010: 48). However, oil indexed gas is claimed to be more expensive than hub-based gas (Stern and Rogers 2013: 4; Powell 2013, February 18th). This is because energy demand has fallen below the levels that the buyers had expected when the contracts where signed, and oil prices have at the same time risen (Powell 2013, February 18th). Considering that the current pricing system seems to leave Gazprom better off through relatively high gas prices, this makes EU consumers sensitive to outside changes. For instance, the finance crisis had serious implications for the economy in many EU member states. Still they were obliged to relatively high oil indexed gas price, instead of supply/demand-based prices (Honoré 2010: xxxvii). The change in demand would then lead to a corresponding change in gas prices.

With oil indexation, changes in society, politics, or economy within EU member states can be a function of radical changes in the oil market. This reflects the costs of dependency on imports. The costs of dependency can then even be related to outside events like war, far away from EU consumers. A war, taking place in oil rich regions, can lead to radical changes in oil prices, hence potentially increase economic costs due to a rise in gas prices. This makes EU consumers sensitive in their dependency. Stern and Rogers (2013, February 12th) have addressed some pitfalls in Komlev´s rationale for linking the price of gas to other commodities. Their argument is that Komlev´s emphasize on oil-indexed contracts is mainly due to the average higher prices, thereby the higher return for gas producers and exporters. In that sense, he is asking for a one-sided fairness – applying only to producer. Fairness is, however, not commonly used in economic literature. Actors within the gas industry is well known of the lower return on gas developments compared to oil, because of the physical characteristics of the fuel and the markets which it is sold. Thus, there is not a question of "fairness" but commercial reality. In a market there is no guarantee for profit on investments, and this is a question of making judgments and take risks. This kind of market-based argumentation

could possibly be transmitted to EU. The damaging effect on European gas demand in the period 2008-2012 was partly caused by maintaining gas prices at artificially high levels linked to oil. The authors predict a further decline in European gas demand unless the gas prices are adjusted to hub prices (Stern and Rogers 2013, February 12th).

Concerning EU´s interests to liberalize the gas prices, there is a question whether it is the growth and development of the market, or other political decisions that runs the European policy against Russia. If the pure physical access to gas was the only concern, long-term contracts meant to ensure stable and reliable gas supplies from Russia should be welcomed. This is an important concern given that the European gas market will enlarge over the next decade (Honoré 2010: xxxix), and that EU is expected to increase export from Russia. From a EU perspective, an energy market that is truly competitive can provide a supply/demand based pricing system, instead of a system based on the exercise of power and national interests. There is a trade off, however, between stable, but possibly higher oil indexed prices, and prices based on supply/demand, but which are more volatile when liberalized (Jervalidze 2011: 10). The question then is EU´s acceptable level of risk. So far it seems like EU is willing to except some degree of risk in exchange for lower price.

Within a EU perspective based on a fully liberalized market, the concept of security of supply may be considered differently. Instead of being a volume argument, the concept might equally be considered as a price argument. The vulnerability for an importing country to the supply of gas might be expressed more precisely as a vulnerability to high petroleum prices (Austvik 2003: 225). However, if gas prices based on supply/demand are meant to strengthen EU´s security of supply, the consumer´s must manage the unpredictability we find in a liberalized market. Quickly changes in gas prices must be managed in such a way, whether it is by external or internal measure, that it reduces any costs on society and governments.

8. Summary and concluding remarks

The aim of this study was to analyze the extent to which EC´s antitrust investigation against Gazprom can affect EU´s security of supply and Russia´s security of demand. The energy security discussion became part of some general characteristics of the gas industry, namely its imperfectness. In that sense, the study aimed to give a better understanding of what can be understood as "typical Russia" and what is more "typical gas". Finally, it aimed to illuminate how problems in the EU-Russia energy relationship are part of the creation of a so-called systemic uncertainty whether the understanding of one another is adequate or not. EU will strive for a diversification and increased flexibility as a condition for securing gas supplies, and prices based on supply/demand. Russia, on the other hand, wants a balanced investment strategy that maximizes profits, based among others on oil indexation and long-term supply contracts. This reduces risk related to price volatility, energy market changes, and investments in an inflexible market.

I presented three hypotheses. The null hypothesis was that the antidumping case would have no implications for EU´s security of supply and Russia´s security of demand. The second hypothesis was that the antidumping case would have *positive* implications for EU and/or Russia. Finally, the third hypothesis was that it would have *negative* implications for EU and/or Russia.

We found that both actors´ could put the other in sensitivity dependence, hence affect outcome. EU can reduce demand for gas. Russia can stop supplies. An asymmetrical power relation might therefore, most of the time, serve as a source of power for one actor at the expense of the other. Nevertheless, due to interdependency the argument of any asymmetrical relationship might be wrong. Taking advantage of an asymmetrical dependency would be destructive because the damage will ultimately be on both sides. Both will remain unavoidably linked by the pipeline. Nobody can therefore win a "gas war" (Guillet 2011: 59). Both ends to the chain must be satisfied with one another.

They underpin what the other actually needs – a reliable supplier and a reliable buyer.

8.1. Conclusion

The null hypothesis can be rejected. Because of interdependency, problems and risk for EU´s security of supply and Russia´s security of demand are linked to their dependency on the other. The behavior of the participants will therefore become crucial. Based upon liberal economic thinking within EU, and from EU´s point of view, we can conclude that Russia does not act commercial. Russia, on the other hand, finds rationale for its behavior in the imperfectness of the gas market, and how it contributes to certain practices for a natural gas producer. On this background, it is not logical to say that a liberalized Russian gas policy will have no implications for EU´s and Russia´s energy security.

I conclude that both hypothesis one and two are largely confirmed. A change in Russia´s gas policy, due to the antidumping case, will have *negative* implications for Russia´s security of demand. It will abolish essential practices for a natural gas producer to guard against risk in an imperfect market. This risk is primarily related to huge and long-term financial projects. This risk is mitigated through the predictability of oil indexed gas prices and long-term supply contracts. It ensures a final destination and future export revenues for Russian gas deliveries. Potential price drop can lead to costs in terms of possible changes on society and adjustments in the economy. This is because Gazprom may have to compensate losses in export revenues with domestic measure, like increasing domestic prices of gas. Due to over-consumption this can contribute to dissatisfaction in the population. Furthermore, because of limited incentives for lowering costs, underinvestment, and insufficient technology and transportation capacity, Gazprom might suffers problem of being competitive in a liberalized market and ensure a final destination for its gas export. These circumstances can make it more difficult for Russia to maintain its security of demand in an imperfect market. Thus, Russia´s vulnerability dependence will become more serious than the sensitivity. Russia

seems better positioned within existing policy framework as to secure its gas deliveries. Market domination can compensate for the lack of necessary reform and competitiveness. The Kremlin is also unleashed to take unpopular decisions in the domestic market. Under current market and regulatory conditions, the ability to challenge Gazprom is restricted. It contributes to reduced competition from individual companies, hence limiting EU´s flexibility to access gas elsewhere.

The antidumping case, hence a liberalized Russian gas policy, will turn out *positive* for EU´s security of supply. This argument is connected to the fact that a liberalized Russian gas policy will increase its flexibility and diversity as conditions to strengthen security of supply. It will reduce cost and spread individual risk, because its responsiveness to outside changes will be strengthened. Such changes can be related to the pure physical access to gas whether it is due to technical problems, political concerns (if. gas disputes), weather conditions etc. and/or increased economist cost following from a rise in energy prices. Reduced physical access to gas can become costly for individual home consumers, as well as European industries. With a supply portfolio consisting of alternative suppliers, EU consumers can reduce risk related to both *existing* supplies, and that *new* supplies cannot be brought on stream. Finally, a liberalized Russian gas policy will help EU come closer to the vision of a genuine single market in gas. The argument that free markets will be the most important single component to energy security, seems to applicable to EU´s security of supply.

In extension of this I conclude that the opposing implications for EU´s and Russia´s energy security, hence problem of finding ways to cooperate on matters that would be mutual beneficial for their respective energy security, partly is due to the different perception of the situation. The systemic uncertainty whether the understanding of one another is adequate or not, became evident when discussing the extent to which a liberalized policy can be

requested in an imperfect and inflexible market. This conclusion is connected to the argument that, from a Russian perspective, EU has not an adequate understanding of the fact that the gas market is not perfect enough to function properly and produce quality price signals, neither how it affects the Russian gas policy. Furthermore, from a EU perspective, Russia´s perception of control and regulation prevents a greater flexibility towards costumers. Moreover, Russia is reluctant to principles for organizing the market economy in such a way that it facilitates economic growth, maximum efficiency and individual welfare.

Yet, on the background of the analysis the hypotheses need some *modification.* Firstly, the antidumping case can potentially have positive implications for Russia´s energy security. If an altered Russian gas policy turns out being effective it can help strengthen Russia´s security of demand. In order to be effective, however, new commercial reality in the EU-Russia energy relation has to provide incentives to address some serious pitfalls within the Russian gas sector. It can stimulate investment in gas production, force Gazprom to reform, and serve as a leaver to increase gas prices on the domestic market. This can also help Gazprom being competitive in meeting with other markets, for instance the Asian. Not least, a liberalized Russian gas policy is expected to improve the adequacy of a common understanding of one another in the EU-Russia relationship. If EU´s and Russia´s policy converge, this will reduce the creation of a systemic uncertainty.

Secondly, the investigation can potentially have negative implications for EU´s energy security. It is not given that increased liberalization in the gas market guarantee stable gas supplies to EU consumers. The Union should be aware of limiting Gazprom´s range of action to deliver the growing need of gas. Gas production and transportation are long-term projects and cannot necessarily be brought on stream quickly. Long-term purchasers contracts form the backbone of reliable gas supplies to Europe. Before rejecting such a commitment from

Russia, EU has to be sure someone can replace Gazprom´s gas deliveries, and that they are willing to meet the growing demand of gas even without the long-term commitment. It can take time for Russia to adjust to such radical policy changes. This, together with insufficient alternative suppliers, can jeopardize future gas deliveries. As well, EU has to know whether its capacity is sufficient for implementing projects meant to reduce its dependence on Russia, for instance infrastructure projects. This concern is related to the difficulty of speaking with one voice within EU. There is no such thing as a long-term supply/demand gap.

8.2. Generalizing from single case study

I wanted to illuminate how this study can shed light on a larger set of cases. To what extent can generalizing be drawn from the antitrust investigation against Gazprom as a single case to some fundamental challenges in the EU-Russian relationship? Kennedy´s (1979) four attributes lay the foundation for a process of search and comparison.

The *material relevance* for other EU-Russian matters can, for instance, be whether the relation is characterized by a situation of interdependency. This appears as an essential requirement since potential problems and risks to the actors´ interests are linked to type and degree of dependence on the other. In order for the single case to be comparable we expect that the behavior of the participants, whether they are political, commercial or regulative, becomes important. Potential shut down of Russian gas deliveries to Europe might have serious implications for individual home consumers, as well as European industries. Therefore, if another EU-Russia relation is characterized by such a low interdependency that the behavior of one part has limited or no implications for the other part, the single case does not appear as generalizing. If the interaction neither has any costly effects nor is reciprocal, there is interconnectedness (Keohane and Nye 2012: 7) rather than interdependency. Then the relation between power and interdependence would be absent, hence

not comparable to the single case, since both EU and Russia could position each other in a situation of sensitivity or vulnerability dependence.

The *appropriateness* of the decision is determined by the actor´s value system (Kennedy 1979: 673). My opinion is that the value system tells us something about the actor´s behavior, hence their perception of law and justice. The appropriateness of policy is here linked to whether EU´s and Russia´s behavior in a given interaction is determined and part of their world perspective. The questions remain whether the value system in the single case also is present in the comparable one. In the single case, we saw that problems in the EU-Russia energy relationship in part where a consequence of different preferences and understanding of the situation. To what extent can we identify the creation of a systemic uncertainty? Furthermore, to what extent are potential problems in the relationship part of the uncertainty whether the understanding of one another is adequate or not? Moreover, there is a question whether the state will be active or passive in the relation, and how the actors perceive the tension between state and market. The Russian government could emerge as a key player in the interaction through a state owned companies like Gazprom or Rosneft. There might also be a consciousness that economic interdependence is never symmetrical. EU at the other side could pertain to the value of full liberalization where the state is excluded from taking a leading role, and rather meant as to prevent restraints on competition. One example is the talk on Free Trade Agreement (FTA) in WTO. In the past Russia and the EU have linked FTA negotiations with Russia's accession to WTO, but decisive progress in this negotiation has recently become less certain (European Commission 2008). Also here EU and Russia has suffered problems of reach an agreement on some common principles.

The *reason* for the policy/decision I believe is related to the actors´ goal. It can tell us what kind of factors that underlie a given behavioral pattern. The reason is the statute used to justify the decision (Kennedy 1979: 673). It can thus be a

question of whether or not there is a clear vision and goals for a national strategy. In the single case the Commission´s antitrust investigation was part of the vision of a genuine single market in gas, embedded in the energy 2020 strategy. Thus, to what extent is liberalization and non-discrimination between actors an important part of EU´s policy in the relation? Additionally, is there a European perception that Russia behaves noncommercial? Russia´s gas policy, on the other hand, could to some extent be seen in context of the general imperfectness of the gas market. This led oil indexation and long-term supply contracts to be a rationale for sustainable price signals in order to support investment (Energy Delta Institute 2012). We might ask whether Russia´s policy is driven by what can be understood as "typical Russia", or whether it is other elements that affect the Russian policy. In order for the single case to be generalized the reason for decision should be part of the actors´ value system and different preferences. Russia´s goals and rationale for a decision should be defined by the polity instead of the market. EU goals and policy reason should be defined by the market.

The last attribute is the *generality* of policy design/decision. My understanding is that it is related to whether we can expect the actors´ policy to be transferable in areas other than energy in the EU-Russian relation. The questions remain whether the goal of the Russian state in its interaction with the Union is always to play a key role in negotiations and implementations of international agreements. Furthermore, whether state involvement is motivated by the aim to stabilizing state finance, like the taxes for all production and delivering required from Gazprom, which we saw in the single case (Kryukov and Moe 2012: 8). Moreover, can it be related to a EU vision of putting structural pressure on other Russian companies acting in the European market? Moreover, whether there is an interest to mitigate a Russian dominant position and its influence on EU member states as such. Furthermore, is there a perception that both actors want to reduce its dependency to one another? The ability to reach an agreement in this case can illuminate the ability to reach solutions beneficial

for both parties in other matters, for instance, the ability to cooperate and reach agreement within the WTO.

8.3. Further research

For further studies it could be interesting to study whether there is conflicting interests between the Kremlin and Gazprom. Gazprom may be prevented to act as commercial and profitable actor. This is particularly applicable in the domestic market. Here prices are kept low, possible in order to avoid dissatisfaction in the population (Euractiv 2012, April 11th). The Kremlin might override commercial decisions. Modernization has the potential of affecting the Kremlin´s control over strategic sectors, like energy. Modernization will not only mean to upgrade the infrastructure. It is also about the rule of law, transparency and competition. Today, there is a danger that short-term interests from Russian authorities outweigh long-term commercial interests (Loe 2012, June). It could also be fruitful to study the gas relation between Russia and one specific EU consumer, since they differ widely in their dependency and relation to Russian. For instance, at one hand we have the Russia-German relation, where Russia has been a stable and reliable key supplier of natural gas. On the other, we have the Russian-Ukrainian relation, based on a recent gas dispute and a tense relation to the past. The interesting in such a comparison could be to look closer of the what can be understood as "typical Russia" and what is more related to "typical gas", as we know the terms from this study.

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