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**Interdependence and Diversification**

**- A view at current EU-Russian energy relations -**

*Master thesis*

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## **ABSTRACT**

The thesis is aimed at exploring the implications of energy interdependence for political relations between the European Union and the Russian Federation under current circumstances determined by the crisis in Ukraine. In this context, relying on the interdependence model of international relations theory, asymmetries in sensitivity and vulnerability of the sides were established and linked to their respective diversification strategies as part of the political power play between the EU and Russia. As shown, high levels of sensitivity and vulnerability, together with the diverging interests of consumer and supplier countries, under conflict situations lead to a situation of “negative interdependence”, pushing the parties further apart. In this sense, interdependence under conflict – although persisting in the short term – induces a reconsideration of the relationship.

## **KEYWORDS**

power, interdependence, Russia, European Union, cooperation, conflict, diversification

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## **DECLARATION OF AUTHORSHIP**

1. The author hereby declares that he compiled this thesis independently, using only the listed resources and literature.
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Prague, 30/07/2015

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# Master Thesis Proposal

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## Proposed Topic:

**Challenges and prospects for energy in EU-Russia relations**

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## TOPIC CHARACTERISTICS

The (in)security of energy supply and the role of oil and gas flows in the EU-Russian relationship have been in the focus of public and academic attention in recent years - especially the wider backdrop in relations between the two powers has brought energy considerations to the fore. In fact, since the disruptions of gas supply transiting Ukraine in 2006/2009 and in light of the implications of the current Crimean and Eastern Ukrainian crisis on gas flows, the importance of energy in foreign policy agendas has become indisputable. On one hand, Putin's Russia uses its position as the biggest energy exporter towards Europe as an instrument for demonstrating great power status and achieving favorable outcomes in its foreign policy. On the other, although in a different manner, also in the case of the EU - the biggest investor and market for the Russian energy sector – pipeline projects and decisions concerning energy security have become increasingly politicized. My Master thesis will aim at exploring how energy resources and projects have been utilized by both Russia and the EU to follow political goals, not merely economic opportunities, and what are the underlying factors to this politicization of energy issues. Consequently, I will try answering the questions if the EU and Russia are indeed destined to compete and oppose each other (also) in the energy sphere, or if there is interdependence and common interests for the two powers making cooperation more fruitful.

## **Hypothesis**

1. Energy and politics are intrinsically interlinked, energy is part of the foreign policy arsenal.
2. Energy has been used by Putin's Russia as well as to a different extent by the EU to pursue political goals.
3. The issues of energy security are part of a wider problematic of different political principles in the EU and in Russia. This is making a deeper cooperation between them more difficult despite the common interests on the economic level.

## **Methodology**

My thesis is going to use primarily a qualitative approach to the abovementioned questions. I am going to use the data analysis method for evaluating statistical data (about the energy reserves, production, consumption etc) as well as the method of comparative analysis in order to study the usage of energy for foreign policy goals in the EU and Russia. Moreover, I am using the case study method to demonstrate my findings. My thesis will draw upon secondary sources such as scholarly books and articles, publications as well as primary sources, mainly statistical data concerning energy trade and European Union decisions, strategies.

## **Outline:**

1. Introduction
  - 1.1. Methodology and Literature Review
2. The concept of interdependence
3. Energy in Russian foreign policy
  - 2.1. Russian hydrocarbon resources
  - 2.2. Strategic goals and the role of energy in Russian foreign policy
3. Energy in EU foreign policy
  - 3.1. Energy resources and imports in the EU
  - 3.2. Energy in EU foreign policy
4. Russian-European energy relations and their prospects
  - 4.1. Interdependence vs. different political principles in the EU and Russia
  - 4.2. The current state of EU-Russia energy relations and its future
5. Conclusions
6. References / Bibliography

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## LIST OF ABBREVIATIONS

<b>bcm</b>	billion cubic meters
<b>tcm</b>	trillion cubic meters
<b>Mtoe</b>	million tons of oil equivalent
<b>CIS</b>	Commonwealth of Independent States
<b>CEE</b>	Central and Eastern Europe
<b>MS</b>	Member State (of the EU)
<b>EC</b>	European Commission
<b>TEP</b>	Third Energy Package
<b>SGC</b>	Southern Gas Corridor
<b>TAP</b>	Trans-Adriatic Pipeline
<b>TANAP</b>	Trans-Anatolian Pipeline
<b>SCP</b>	South-Caucasus Pipeline
<b>TCP</b>	Trans-Caspian Pipeline
<b>LNG</b>	Liquefied Natural Gas
<b>ESPO</b>	East Siberia-Pacific Ocean Pipeline
<b>POS</b>	Power of Siberia Pipeline

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## 1. INTRODUCTION

The crisis in Ukraine has been going on for more than a year now and a quick – or any - resolution for it is less and less in sight. Since its outbreak political relations between Western powers and the Russian Federation have sunk to their lowest point since the end of Cold War; sanctions and countersanctions have been imposed and political cooperation in most areas has largely been put on hold – the energy sector being no exception. With the conflict, in fact, the complicated political power play between the EU and Russia has come to the fore again, overshadowing their relations on the economic level. Though, on the other hand, as for the time being, trade in hydrocarbon resources still connects the two sides to a great extent; Moscow still remains the largest single supplier to the European Union, while the revenues paid by the EU still constitute the most significant source of hard currency for the Russian state budget.

In line with these observations, it is certainly no exaggeration to state that the EU-Russian relationship is a greatly contradictory one; extremely intriguing and - especially during times of crisis - highly divisive, seen from the European Union. The contradictory nature itself of EU-Russian relations has long been noticed, the complex interplay between conflictive and cooperative elements regarding (also) their energy linkages has been in the center of both public and academic debate for more than a decade. On one hand, the fact that Ukraine's role as a transit state renders relations between Kiev and Moscow crucial also for Brussels, has become apparent already during the gas supply crises 2006 and 2009 - well before today's conflict. On the other, with the 2004 and 2007 eastern enlargements the European Union has come to include countries highly dependent on Russian energy resources, thus also assuming liability for those regions' energy security – regions, furthermore, that Moscow still largely

perceives as its historical zone of influence in Europe. Both of these developments have in fact fuelled - predominantly in Europe - a heated public and scientific controversy surrounding the energy problematique.

However, the debate – not to mention media coverage - concerning recent EU-Russia energy relations has been highly politicized, even securitized, and largely framed in moral-emotional terms, rendering an objective assessment of critical issues more difficult. After the 2006, 2009 gas crises between Russia and Ukraine – and especially today - the European narrative has become largely dominated by the image of Moscow as a neo-imperialist, aggressive power, fuelling the fear that it will be increasingly using the EU's dependence on its energy supplies as a source of (geo)political leverage towards the continent. On the other hand, the Russian side has been deflecting accusations and blaming Europe for obstructing cooperation and not facilitating the resolution of existing disputes. With the outbreak of the current conflict in Ukraine, in fact, not just the above accusations have come to the limelight again, but as well the debate about implications, limitations and the future of the EU-Russian energy interdependence.

In this context, the relevance of the chosen topic for further academic research lies on one hand in its contemporary character as well as its obvious significance for future policy decisions by the EU and by the Russian side. My thesis will, in line with this, aim at contributing to this (seemingly) never-ending debate through offering an objective assessment of the current state of the EU-Russia energy relationship, based on the interdependence model of international relations theory. The interdependence model itself is widely utilized in academic research in order to characterize EU-Russian energy relation, as it is perfectly suitable to describe both the cooperative and conflictive

tendencies in this complex relationship – though, emphasis is for the most part laid on its implications inducing cooperation.

This thesis will aim at testing this commonly assumed notion under current circumstances, through examining strategies of diversification currently followed by the EU and the Russian Federation under the prism of interdependence theory. In this context, diversification efforts will be outlined as strategies in order to diminish sensitivity and/or vulnerability of the actors, and thus improve (bargaining) position towards the other. Although the author of this thesis acknowledges that other strategies are also used by the sides to improve their energy security and reduce dependence on each other, as the study focuses on diversification, these will be considered merely to the extent they are connected to diversification efforts.

In line with the above, the study will aim to answer the following research questions:

- How does the energy interdependence between EU and Russia affect their current power relations? (Is it exacerbating conflict or restricting its escalation?)
- What are the main features of interdependence between EU and Russia today and how do they affect current diversification strategies on both sides?
- What are the consequences of diversification efforts on the sides' power relations and their interdependence for the future?

Consequently, in attempting to answer these questions, it poses the following hypotheses to test and explain:

- Currently, the energy interdependence between EU and Russia is exacerbating tension rather than facilitating return to cooperation.
- Interdependence between EU and Russia is asymmetrical, leaving one side with stronger bargaining power than the other.

- Diversification efforts are used to strengthen each side's bargaining power and might lead to permanent changes in the relationship in the long run.

In order to find answers to the above research questions and test the outlined hypotheses, my thesis will - following this introduction and after reviewing the relevant literature used -, firstly present the theoretical underpinning to be utilized as a basis for the following research, introducing the notion of interdependence. This part will outline firstly the concept of interdependence as conceived in the (neo)liberal and the (neo)realist traditions of international relations theory and clarify terms such as "sensitivity", "vulnerability", "positive" and "negative" interdependence. Chapter 4 will then introduce information on the relative endowment in and the importance of hydrocarbon resources for the EU and the Russian economy, in order to reach to a preliminary conclusion about features of the interdependence between the two actors. Consequently, chapter 5 will link interdependence to (bargaining) power and concentrate on diversification strategies followed respectively by the European and Russian side. Interests guiding these diversification efforts will be outlined as well as their viability and/or importance for the sides' respective power rhetoric will be briefly assessed. Chapter 6 will draw the final conclusions.

Economic and political implications of a problem are closely intertwined in the area of energy, possibly more than in any other research field of social sciences today. In fact, researchers have been approaching the energy problematique from various angles, either focusing on solely the political implications (for example by using a geopolitical perspective), or just on the economic side (using energy economics) – while a number of approaches exist combining these two (for example geo-economics or political economy). In line with these latter approaches this thesis aims at merging the

two perspectives, although – after giving a brief overview of the economic side of interdependence - primarily concentrating on the political point of view. The research will aim its attention to the recent period beginning from the mid-2000s with the eastern enlargements of the EU and the two gas crises between the Russian Federation and its transit state Ukraine, until the present time.

Due to its limitations, it is not the aim of this thesis to include global developments in energy trade or domestic issues within Russia or within the EU Member States into the analysis. My work is focused on EU-Russian energy linkages, not bilateral Russian-Member State relations, although it does take into account how individual MS' dependence on Russian gas affects the EU's political position and rhetoric in its relations with Moscow.

## **2. LITERATURE REVIEW**

Interdependence has certainly been among the most commonly used theoretical frameworks in the academic literature to assess EU-Russian energy relations. Nevertheless, besides agreeing on the fact that there obviously is a high level of mutual dependence between these two actors, the academic community seems rather divided when it comes to defining its typology and its implications. Authors like Finon and Locatelli (2007), Proedrou (2007), Protasov (2010), Paillard (2010), Casier (2011), Kratochvíl and Tichý (2013), Pick (2012), Belkin et al. (2013), Harshem (2013), Güney-Korkmaz (2014), Krickovic (2015) and Monaghan (2006) all examine the EU-Russian energy relationship under the prism of interdependence, though laying their emphasis on different aspects of the topic. On one hand, by Western authors considerable attention has been devoted towards the subject considering primarily the



European perspective, approaching the issue within the context of EU energy security - emphasizing the continent's dependence on Russian supplies and promoting alternatives, though largely neglecting to take into consideration the Russian point of view. Belkin et al. (2013) for example, in a report commissioned by the Congressional Research Service – thus mainly based on US energy policy priorities concerning Europe -, argue in favor of supply source diversification in order to improve the EU's energy security. Conversely, Paillard (2010) offers a solid and comprehensive factual overview of interdependence advocating the pursuit of European energy security through overcoming internal divisions in energy matters, rather than devalorizing ties with Russia. In works that approach the issue from the Western point of view, dependence on Moscow's supplies is frequently presented under a geopolitical perspective, characterizing it as a clear threat to European security, enabling the Kremlin to use energy to obtain political leverage within the EU (for example (Baran, 2007)).

In contrast to the above viewpoint, authors such as Finon and Locatelli (2007) or Protasov (2010) approach the issue from a predominantly market-oriented and/or institutional point of view, largely omitting the political or geopolitical implications of economic (inter)dependence for great power politics. In fact, Finon and Locatelli, through assessing the effects of the Russian dominant position in EU gas markets, come to the conclusion that energy trade between Moscow and Brussels has to be predominantly based on mere market principles. Similarly, Protasov's article (2010) concentrates mainly on the economic features of interdependence, calling for a more active institutional cooperation. As follows, the abovementioned two approaches are presenting a largely one-sided perspective – pointing either merely to the European or just to the political or the economic side of the issue -, thus allowing only a limited understanding of the problematique.

Among the authors explicitly using a combination of economics and political science are Harshem and Claes (2013), who – in line with the aim of this study – are focusing on the relation between asymmetry in trade interdependence and changing dynamics in bargaining power. They conclude indeed that (potential) Russian strength in bargaining position stems indeed from its role as sole – or predominant – gas supplier to some of Europe, with the large differences among Member States’ exacerbating its position. Though, in order to reduce dependence on Russian supplies - contrary to what is commonly suggested - they advocate a heterogeneous approach towards diversification rather than introducing a common foreign energy policy; emphasizing the costs for individual Member States of reaching a compromise within the EU. Harshem and Claes point to the importance of developing alternatives (reducing vulnerability) as a bargaining strategy, however, they fail to elaborate further on this idea.

In general, research concerning the EU-Russia energy relationship tends to be rather empirical – only few authors approach the issue explicitly relying on comprehensive theoretical frameworks. In turn, most of the authors pointedly drawing upon the theoretical framework of interdependence utilize it to underpin the cooperative aspects of the EU-Russia relationship. For example Proedrou (2007), using the neoliberal interdependence model, examines conflictive and cooperative elements of EU-Russia relations in the energy sector, coming to the conclusion that cooperation is the predominant pattern of interaction. Contrastingly, among the relatively few authors focusing more on the conflict potential arising within this relationship is Krickovic (2015), drawing in fact upon the realist line of thought and approaching the topic in terms of a security problem. In line with Monaghan (2006) he depicts the relationship between Moscow and Brussels as a classical security dilemma, where pessimistic

expectations of the actors about changes in their interdependence negatively influence their behavior thus undermining future cooperation.

Although in the framework of their studies most of the abovementioned authors mention European or Russian diversification efforts briefly, works explicitly and comprehensively dealing with the sides' diversification strategies are few. On one hand, examining the Russian search for alternatives was for example Baev (2014), offering a rather critical view of the prospects for Moscow's diversification efforts. On the other, the abovementioned report of Belkin (2013) presents a detailed and comprehensive overview of possible options regarding new supply sources for Europe predominantly regarding Caspian and Central Asian states; while Feklyunina (2008) concentrates on the dominant (negative) perception in Moscow surrounding the EU's initiatives in the same countries constituting Russia's "Near Abroad". Among the very few authors discussing the importance of diversification in Western-Russian relations comprehensively was Filis (2009), however, focusing more on the global context than on explicitly EU-Russian relations. Consequently, most of the abovementioned works dealing with diversification efforts present a one-sided – thus incomplete - perspective, largely neglecting the other point of view, and thus the importance of diversification efforts in the EU-Russian power play.

The book *Energy Politics* by Shaffer (2009) has offered a good basis at the beginning of my research, presenting a thorough general overview. Furthermore, Böhme (2011) has proven a valuable source throughout writing my thesis, giving an objective, very comprehensive and detailed analysis of EU-Russian energy relations, differing interests, motivations of their energy policies manifesting themselves in conflict situations and offering an outlook about the future of this relationship.

### **3. RESEARCH METHODOLOGY**

This thesis aims on one hand at analyzing the main features and characterizing EU-Russia energy interdependence as well as understanding its implications for the sides' political power relations. Thus, instrumentalizing the notions of sensitivity and vulnerability, the research will shed light to EU and Russian efforts to diversify energy partners – thus enhance bargaining position towards each other. Taking into account that thus the primary objective of this work is to explain political implications of the economic interdependence in the EU-Russia energy relationship, it will use a combination of qualitative and quantitative methods. Though, as the main focus of the research is not economic interdependence as such, but political power stemming from the ability of reducing this interdependence, the chosen topic will be approached mainly from a qualitative perspective. Firstly, in order to assess energy interdependence between the EU and Russia, my research will make use of quantitative methods consisting of the descriptive analysis of statistical data – through grouping, visualizing and evaluating the presented data preliminary conclusions will be drawn about the nature of such interdependence. Most of the quantitative data has been obtained from official databases provided by the International Energy Agency, Eurostat or the US Energy Information Administration. Secondly, in analyzing diversification strategies as means to reduce vulnerability thus sources of bargaining power, the thesis will be based on a qualitative research approach, drawing upon primary, secondary and tertiary sources. As follows from the subject of the thesis, primary sources utilized included most importantly official documents published by the European Union and the government of the Russian Federation, such as among others their respective energy strategies. These were complemented by the use of secondary sources, scholarly books, journal articles and publications by international authors concerned with the study of

political and economic implications of EU-Russia energy relations. The works of the authors most referred to in this thesis have been presented in the previous chapter containing the literature review. Moreover, in addition to the mentioned primary and secondary sources, my thesis will rely on tertiary sources, such as web pages of relevant energy companies and pipeline consortia, online articles of periodicals, as well as – due to the recent or ongoing character of some of the events examined – a limited number of news articles.

#### **4. THEORETICAL BACKGROUND: INTERDEPENDENCE IN INTERNATIONAL RELATIONS**

In order to gain a deeper understanding of the complex relationship between economic interdependence and political conflict in Russian-European energy relations, this thesis builds upon the theoretical concept of interdependence and its connection to political power. This chapter will therefore present the theoretical background to be used, based on its understanding in the (neo)liberal and in the (neo)realist schools of thought of international relations theory.

In line with Baldwin's observations, the topic of (economic) interdependence has been part of political and economic scholarly discussions for centuries: the terms "dependence" and "mutual dependence" have been used in various contexts, for defining various types of international relationships since the 16<sup>th</sup> century. In fact, the terms "self-reliance" and "dependence" as opposed to each other appeared already in Machiavelli's *Prince*, and have given rise to lively academic debate ever since (Baldwin, 1980). In both the liberal and the realist traditions of IR theory, the concept of interdependence has been discussed predominantly with reference to economic and trade relationships, - as Baldwin notes – assuming one of two basic meanings. On one

hand, referring to situations where one state is conditioned or significantly affected by external forces; on the other indicating relationships of subordination where one thing must rely on another for fulfillment (Baldwin, 1980, p. 475). In other words, the distinction points in the first case to the extent to which changes in one state determine developments in the other, while in the second it expresses the costliness of doing without the given relationship.<sup>1</sup> Baldwin himself, after an extensive review of existing approaches, defines interdependence in general as “*international relationships that would be costly to break*” (Baldwin, 1980, p. 484), i.e. as cases where “*the opportunity costs of autonomy are prohibitively high*” (Baldwin, 1980, p. 489). Logically, then on one hand interdependence becomes tighter if the parties depend on each other for larger flows of goods, on the other if the exchanged goods are more essential for their economies and would be harder to substitute from other partners.

Though, due to the liberal and the realist traditions’ opposing views about human nature and, later, the international system, the concept of interdependence has been discussed with different emphases within the two – in turn, depending on the differing worldviews, the question whether enhanced (economic) exchange reduces or rather increases the possibility of conflict among nations has also been answered differently (Mansfield & Pollins, 2003); (McMillan, 1997). On one hand, the idea that extensive trade links and economic cooperation tend to reduce the likelihood of confrontation significantly has been at the core of the classical liberal tradition and has been advocated by authors such as Immanuel Kant, Baron de Montesquieu or Adam Smith. In the early 20<sup>th</sup> century, the liberal notion of commerce increasing a nation’s interest in peace was shaped predominantly by Sir Norman Angell’s *The Great Illusion*, now arguing that interdependence had replaced military means for gaining wealth.

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<sup>1</sup> The terms “sensitivity” and “vulnerability”, defining these two aspects of (inter)dependence, will be examined further in the subchapter 4.1.1.

According to this point of view thus trade interdependence prevents states from engaging in open military conflict with their partners, mainly for fear of losing the benefits their economic linkages produce. Mutual dependencies make conflict more costly, inducing cooperation instead (Polachek, 1980). On the other hand, authors belonging to the mercantilist and classical realist tradition focus on the causes of conflict and thus have laid emphasis on the possibility of differences arising from higher levels of (economic) contact and the constraints due to a closer connection to other states. The philosophical foundation for this idea was based on Jean Jacques Rousseau's work who argued that increased interdependence results in inequality among nations, which in turn is a leading cause of conflict. In fact, as realists claim, peace is likely to result from an equal distribution of power, rather than trade interdependence (McMillan, 1997, pp. 40-41).

In more recent international relations theory, the concept of interdependence has been increasingly used since the 1970s, in the framework of the neorealist-neoliberal debate. Utilizing the notion as a constituting element of the neoliberal tradition, it was most notably the political scientists Robert Keohane and Joseph Nye who put forth the concept of "complex interdependence". In their seminal work *Power and Interdependence* (first published in 1977) they attempted to offer an alternative explanation of world politics to that of the then dominant neorealist paradigm, using the notion of interdependence as one of the key tenets of their argumentation (Keohane & Nye, 1989). In the abovementioned book Keohane and Nye use the term for defining situations characterized by mutual dependence and consequently by "*reciprocal effects among countries or among actors in different countries*" (Keohane & Nye, 1989, p. 8). As they observe, these reciprocal effects are mainly due to the continuously increasing level of transactions between countries since the end of World War II: rising flows of

goods, capital and people across borders all contribute to a highly interconnected world, where the participating parties usually benefit from these interactions and, consequently, have less interest in confrontation. Nevertheless, this interconnectedness is likely to be associated also with significant costly effects – either arising simply because of the enhanced contingency on changes in other states or imposed directly and intentionally by one actor on another. The second case is referred to as "strategic interdependence" by the authors and illustrated by the example of American-Soviet nuclear arms race during Cold War (Keohane & Nye, 1989, p. 9). Thus, although – in line with the classical liberal tradition – they clearly point more to the pacifying effects of interconnectedness in the modern world, neoliberal interdependence theorists also acknowledge the constraints that the extensive mutual links result in. In fact, the term interdependence involves both costs and benefits for the sides - and is not used exclusively to identify situations of mutual benefit.<sup>2</sup>

Though, as neoliberals see the anarchy in the international system merely as the absence of a supranational global authority dictating the rules - rather than chaos inducing struggle for power as realists claim – conflict in the international system is not considered as an inherent, but merely a possible outcome (Nye, 2003, p. 4). Consequently, they claim that states do not have to be concerned primarily about their national security, but rather care about continuously increasing their welfare. In line with this, they emphasize the absolute welfare benefits resulting from increased cooperation and advocate the establishment of various cooperation schemes. This is why Keohane and Nye are also often cited as neoliberal institutionalists, pointing to the importance of international regimes and organizations in facilitating cooperation within the anarchical global system. As they argue, these sets of arrangements may be the key

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<sup>2</sup> The terms "positive" and "negative" interdependence, referring to this aspect of the term, will be discussed further in subchapter 4.1.2.



to regulating the situations of interdependence and thus towards a more peaceful world, as they compensate for traditional military strength and allow a focus on trade and welfare issues instead (Keohane & Nye, 1989, p. 19).

On the other hand, researchers of the neorealist school of thought, such as Kenneth Waltz, - although they agree with neoliberals on the fact that international interdependence has reached high levels - predict its effects rather differently. According to Waltz – similarly to the ideas of classical realist authors - growing closeness among countries and actors in the international system does not reduce the importance of force as an international conflict resolution mechanism – on the contrary, it rather raises the chances of confrontation (Waltz, 1979, p. 138). As neorealists argue, anarchy in the global system not only means the absence of a supranational authority dictating the rules, but consequently also an environment of chaos and continuous insecurity where states are engaged in constant struggle for power. In contrast to the neoliberal point of view, neorealists thus emphasize that growing contact among competing actors offers more room for conflict, while also acknowledging – just as their neoliberal counterparts – that regulating the relationships of the interdependent parties, for example through creating international institutions, may reduce the risk of escalation (Waltz, 1979, p. 138). Though, under the circumstances of continuous struggle states do not have trust towards each other, thus appropriate cooperation schemes are difficult to create. Especially as neorealists focus on relative gains from interdependence, according to their view actors are not willing to engage in cooperation schemes where another actor might gain more benefits, since this could be used as an instrument of power towards them (Proedrou, 2007, p. 331). As Waltz argues in fact, while interactions might increase absolute welfare and make participants in general better off - but as long as the states do not have identical economic endowments, one of them is always likely

to gain more in respect to the other. Consequently, these inherent inequalities among states create differences in their power relations and thus more room for political hostilities (Waltz, 1979).

In summary, as we can see, what in the end exponents of both paradigms agree upon is the two-faced character of interdependence. Although they aim their attention to different aspects of the phenomenon and are offering different conclusions about its effects - as neoliberals focus more on its potential on reducing conflict, while neorealists emphasize the increased possibility for friction in case of interdependence – the complexity of such relationships in the international system is visible from both theories. As it on one hand limits the autonomy of a state creating constraints, while on the other increases its economic possibilities, interdependence may be both a source of increased cooperation as well as of conflict.

Though, either it induces cooperation or generates conflict, the question of power is inevitably related to interdependence. Not just for (neo)realist considerations, but also in the liberal understanding of interdependence, power – defined as “*control over resources or the potential to affect outcomes*” by Keohane and Nye – will remain a central question determining the actors’ ability in international bargaining (Keohane & Nye, 1989, p. 11). This is why the next subchapter is concerned with answering the question how economic interdependence and political power are related to each other.

#### **4.1. INTERDEPENDENCE AND POWER**

As shown before, the effects of the increasing interdependence on political and power relations have been in the center of scholarly debate for centuries in international relations theory, as well as the question where political power originates from under

circumstances of interdependence. The topic is certainly not only theoretically significant, it has important policy implications as well: in fact, policy makers have been relying frequently on the interdependence argument to advocate closer ties with other actors, suggesting that this will lead to more cooperative relations in general – though, according to Barbieri, insufficient evidence has been provided to convincingly underpin this claim (Barbieri, 1996, p. 29). On the theoretical level, both the (neo)realist and the (neo)liberal schools of thought have been concerned with this question, with the central issue at discussion being whether interdependence brings equal mutual benefits to its parties or not.

As for example Albert Hirschman pointed out in his *National Power and the Structure of Foreign Trade* (1945), interdependence is almost always asymmetrical, thus rendering the relationship exploitable as a source of coercion for the stronger side of the interaction. Focusing on trade links between markets, he noted that power under circumstances of asymmetry stems from the capacity to interrupt the economic relations – or even just from the threat of doing so (Hirschman, 1945, p. 16). Keohane and Nye have built upon this argument when examining the political implications of economic interdependence, stating - similarly to Hirschman - that asymmetries are often a source of influence that the “less dependent” side may exploit against the “more dependent” part (Keohane & Nye, 1989). This means thus that differences in power according to this understanding are due to the economic asymmetry, which may affect the bargaining power determining relations between states.

Related to this is the possibility of manipulation of the asymmetric economic relationships for political objectives. In fact, as Crescenzi notes, states often use the threat or actual manipulation of economic links in order to obtain favorable outcomes in another state’s foreign or domestic policy (Crescenzi, 2005, p. 2). In the energy context

an often cited example for this is the relationship between Russia and the post-Soviet CIS states, with Russia claimed to be using its position as dominant oil and gas supplier to the region as an instrument to keep these countries in its sphere of influence (see among others (Newnham, 2011)). Though, whether Russia does have a similar position towards Europe and is able to use its influence as main oil and gas supplier to the region has been debated (see for example (Harsem & Claes, 2013)).

#### **4.1.1. SENSITIVITY AND VULNERABILITY**

As already mentioned, the two dimensions of power resulting from an asymmetry in interdependence have been acknowledged both in the (neo)realist and the (neo)liberal approaches. Their clear distinction, though, is usually attributed to Keohane and Nye who introduced the terms “sensitivity interdependence” and “vulnerability interdependence” (Keohane & Nye 1989). In this context, sensitivity determines an actor’s ability to respond to changes within an existing policy framework, and means *“liability to costly effects imposed from outside before policies are altered to try to change the situation”* (Keohane & Nye, 1989, p. 13). On the other hand, vulnerability might be defined as an actor’s *“liability to suffer costs imposed by external events even after policies have been altered”* (Keohane & Nye, 1989, p. 13).

In other words, the degree of an actor’s sensitivity displays how quickly changes in one state induce the other one to undertake inevitable costly adjustments and how great the costs of these are - though while still keeping the existing framework of the relationship in place. In the economic sense, this phenomenon is exemplified by the level of responsiveness among economic variables of the actors (Gilpin, 2001). Accordingly, this is what Waltz calls “sensitivity of adjustment”, noting also that *“the*

*more sensitive countries become, the more internal economic policies have to be brought into accord with external economic conditions”* (Waltz, 1979, p. 142). Sensitivity thus concerns the costs each side has to bear when the other does not live up to its commitments, for example, in the context of energy relations, the level of immediate exposure of the consumer state to unexpected price increases or decreases in the amount of supplied energy can be considered a measure of sensitivity. Logically, the assumption behind sensitivity is that the existing relationship is too costly and complicated to alter significantly, at least as regards the short term, thus – besides smaller adjustments - it induces the parts to remain committed to their pattern of interactions. Nevertheless, in the long term an extremely high degree of sensitivity is usually likely to lead to the reconsideration of the relationship.

Vulnerability, on the other hand, indicates the degree of costs in case one side of the interactions decides to completely alter the interdependent relationship. Thus, it is dependent upon the ability to compensate for and rebound from one-sided policy changes undertaken by the other part and is closely connected to the availability of other alternatives and the costs of pursuing these, rather than of using their existing interactional framework (Keohane & Nye, 1989, p. 13). In the energy context this would be the case for example if the supplier side promptly cut off energy deliveries to its consumers. As in this scenario short-term costs would be extraordinarily high for both sides of the interaction, a high level of vulnerability is more likely to motivate the parts to continue their cooperation. Though, in case the consumer was able to quickly replace supplies from other domestic or foreign sources, or the supplier could find new consumers in the short term, their respective levels of vulnerability would decrease considerably – it is visible thus that the diversification efforts to be examined in chapter 6 are measures of the sides’ vulnerability.

In general, sensitivity concerns thus the costs of short-term adjustments that the sides are induced to undertake, while vulnerability refers rather to the long-term losses of breaking up the interdependent relationship. As Crescenzi puts it very aptly: *“As such, sensitivity interdependence involves the cost of being in an economic relationship with another country, while vulnerability interdependence refers to the costs of getting out of such a relationship”* (Crescenzi, 2005, p. 28). Both sensitivity and vulnerability, though, make the parties aware of their dependence on the other side and thus, in case they reach considerably high levels, are drivers for change. On one hand they induce states to diminish their dependence on each other through finding new alternatives of cooperation; on the other they might lead one of the parties to attempt to increase the other side’s dependence on them, increasing its sensitivity and vulnerability and consequently leading to conflictive policies (Proedrou, 2007, p. 332).

#### **4.1.2. POSITIVE VS. NEGATIVE INTERDEPENDENCE**

As follows from the foregoing explanations, the presence of interdependence between two actors might result in elevated levels of sensitivity and vulnerability. Consequently, these situations lead to attempts of reducing dependence in order to improve position towards the other – especially in cases where one of the parties becomes (or even just fears to become) more sensitive/vulnerable than the other. In turn, these attempts on the longer term are likely to increase conflict and induce the parts to reconsider the existing relationship. On the other hand, if the actors’ sensitivity and vulnerability does not reach very high levels, interdependence might be considered as mutually beneficial for both.

As Keohane and Nye observe, limiting the actors' autonomy always creates costs in addition to the benefits, thus interdependence cannot always be considered as bringing equal and mutual benefits to the parties. In fact, it can be considered completely symmetrical only in the rarest cases, as a consequence it is almost always leading to an unequal distribution of gains and losses (Keohane & Nye, 1989). Logically, the willingness of the parties to leave their existing framework of relationship in place then depends on the fact whether its costs outweigh its benefits or vice versa. On one hand, "positive interdependence" implies that the benefits the cooperation brings exceed its costs, on the other, the term "negative interdependence" denotes a relationship which is not considered as mutually beneficial by the parties. Consequently, as Belyi notes, in the case of positive interdependence the participants of the interaction are willing to cooperate and depend on each other in the future as well, while negative interdependence leads to a situation where the parties are willing to end their cooperation (Belyi & Talus, 2015, p. 8).

In order to be able to apply this above presented theoretical framework to the case of the EU-Russian energy relationship, it is necessary firstly to assess the presence and typology of interdependence between the parties. This is in fact what the next chapter will be concerned with, presenting the sides' respective endowments with crude oil and natural gas, these resources' importance for the Russian and EU economies, and finally giving a brief assessment whether the EU-Russian energy relationship fits the criteria of asymmetrical interdependence.

## **5. INTERDEPENDENCE IN CURRENT EU-RUSSIA RELATIONS**

### **5.1. HYDROCARBON RESOURCES IN THE RUSSIAN ECONOMY**

Russia is commonly known for its exceptional endowment in raw materials - most importantly for the topic of this thesis, it possesses among the most significant reserves of oil and natural gas in the world, which it exports predominantly towards European states.<sup>3</sup> According to CIA estimates, the country holds in fact 80 bln barrels of proven crude oil reserves and 47.8 tcm (trillion cubic meters) of proven natural gas reserves, respectively the 9<sup>th</sup> and the 1<sup>st</sup> largest in the world - Russian natural gas reserves account thus for almost one-third of the global total (CIA, 2014). Moreover, the country possesses wide unexplored territories that offer further potential for growth in the amount of known and recoverable reserves, the leading role Russia is playing in the world's energy supply is likely to persist (Shaffer, 2009, p. 114).

This is supported also by data presented on Graph 1, which, - besides showing Moscow's position among the five largest energy producers of the world – displays a gradually increasing trend in Russian total energy production (with the exception of 2008-9, during the global economic crisis) (International Energy Agency, 2015). Although, as often noted, the future of Russian energy production will largely depend on the presence of investment in the sector, an increase is predicted also by BP, expecting it to rise further until 2035 (BP, 2015, p. 53). Specifically, total primary production<sup>4</sup> amounted to about 1331 Mtoe<sup>5</sup> in 2012, with crude oil accounting for

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<sup>3</sup> Estimates about proven and potential reserves around the world differ significantly depending on the providing institution and used measurement methodology. In this chapter, I will be basing my analysis mainly on the latest available data provided by the US Energy Information Administration, the International Energy Agency, the Russian Federal State Statistics Service and BP.

<sup>4</sup> Any kind of extraction of energy products from natural sources to a usable form is called primary production. Primary production takes place when the natural sources are exploited, for example in coal mines, crude oil fields, hydro power plants or fabrication of biofuels (Eurostat).

<sup>5</sup> Million tons of oil equivalent: unit of measurement of energy, the amount of energy produced by burning one million tons of crude oil.



521.25 Mtoe and natural gas reaching 540.64 Mtoe within this (International Energy Agency, 2015) (International Energy Agency, 2015).

In turn, these numbers, considered together with the considerably lower primary domestic consumption data (387.01 Mtoe for natural gas and 168.55 Mtoe regarding oil), indicate the significant export potential for Russian hydrocarbon resources. In fact, Russia, with 152.2 Mtoe in 2012, ranks by large as the biggest net exporter of natural gas in the world (International Energy Agency, 2015). As for oil, it occupies the second place, following Saudi Arabia with 344.1 Mtoe (International Energy Agency, 2015).<sup>6</sup>

In order to understand trade dynamics of Russian energy exports better, it is also interesting to look at the location of reserves. As Maps 1-3 in the Appendix show, both proven oil and natural gas resources in the country are mostly located in the Western Siberian region. Major oil producing areas – indicated with dark green color on Map 1 – besides Western Siberia, include the Volga-Urals region, as well as the Timan-Pechora Basin. Similarly, the most substantial gas reserves are supplied from Western Siberia, with the most significant fields - Yamburg, Urengoy and Medvezhye - alone accounting for about 45% of Russia's total reserves (Grams, 2012, p. 87). Though, Western Siberian fields are considered to be in slow decline, thus exploration in other areas – mainly Eastern Siberia, the Sakhalin fields in Russia's Far East, the Yamal Peninsula and the Russian Arctic - is expected to gain more importance in coming years (Böhme, 2011, p. 60).

Consequently, a gradual eastward shift in Russian energy production is predicted, offering a good indicator also of slowly occurring changes in export patterns.

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<sup>6</sup> At this point it is interesting to notice that Moscow exports considerably higher amounts of oil than natural gas, and, as will be presented, a higher percentage of these go towards Europe – despite this EU energy security fears concern predominantly exports of natural gas. This can be explained by the fact that as crude oil is usually traded on global markets, alternative suppliers are easier to find. Contrastingly, natural gas is, as for now, almost exclusively transported via pipelines, creating direct and long-term supply relations, particularly exposed to political influences (Shaffer, 2009, p. 10)

As for today, though, the main export markets for Russian resources remain the European Union and the Commonwealth of Independent States (CIS) – with over 50% of Russian oil and natural gas exports being destined to the EU (Proedrou, 2007, p. 335). In this context, Russia has also been playing a leading role in supplying gas to Europe from Central Asia, using the extensive gas transportation system it owns in the region (Ministry of Energy of the Russian Federation, 2010, p. 21).

Energy flows to the countries currently part of the EU-28 began during the Cold War-period: on one hand the Soviet Union was supplying oil to its socialist allies in Eastern Europe through the Druzhba (Friendship) pipeline, on the other the first main natural gas pipeline to Western Europe, to Germany, was built in 1973 (Shaffer, 2009, p. 117). Since then, as visible in Map 4, a dense network of infrastructure connecting European markets to Russian resources has been constructed and expanded. On one hand, Druzhba is by far the most important route for carrying crude oil from Russia towards Northern and Central Europe, and is with its over 4000 km length until today the world's longest oil pipeline (Borisocheva, 2007, p. 5). On the other, the Bratstvo (Brotherhood) pipeline is the largest route for natural gas transport, delivering Russian gas mainly to Italy, Hungary, Slovenia and Croatia. Other major gas pipelines are the Soyuz (Union), running through Ukraine and Yamal-Europe, reaching Germany through Belarus and Poland. Moreover, since 2011 Nord Stream is bringing Russian natural gas directly to Germany through the Baltic Sea. As visible from the map, these main pipelines, together with their branches and other smaller routes, create a well-established and complex network linking the European markets to Russian supplies for the long term, with the two main transit countries being Belarus and the Ukraine.

Overall, as mentioned, 152.2 Mtoe of natural gas were exported in net terms from Russia in 2012, with virtually all of this amount going to Europe (including

Turkey) (US Energy Information Administration, 2014). As Graph 2 displays, 57% of natural gas exports were delivered to Western European countries, with the largest consumers being Germany, Italy, France and the United Kingdom. Central European states received other 24% of these sales with Poland, the Czech Republic, Hungary and Slovakia importing the largest amounts in the region (US Energy Information Administration, 2014). Consequently, due to its significantly smaller size, the Central and Eastern European market is, as regards revenues, of less importance to Moscow – though, due to the fact that most states in this region are extremely dependent on its supplies, it is the most vulnerable part to potential Russian political leverage (refer to Graph 7). Regarding crude oil, in turn, in 2012 Russia exported approximately 344.1 Mtoe in net values, with about four-fifths of this amount being destined to Europe. The largest amounts, as Graph 3 shows, were sold to Germany, Poland and the Netherlands (US Energy Information Administration, 2014). As opposed to the mentioned 80% of oil exports going to Europe, just about 18% of Russian crude oil is currently sold to Asia, with merely the remaining 2% going to the Americas – confirming once again the position of the EU-28 as by large the dominant market (US Energy Information Administration, 2014).

Taking into account the presented numbers, it is hardly surprising that the Russian economy is highly dependent on its hydrocarbon exports and is suffering from all the benefits and drawbacks related to this fact.<sup>7</sup> Raw material exports are providing the main source of economic growth and development in the country - despite increasing awareness and efforts of the government to diminish dependence on them (Ministry of Energy of the Russian Federation, 2010). Graph 4 shows that mineral product sales account for over 70% of all exports, while on Graph 5 it is visible that

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<sup>7</sup> The Russian economy is in fact often diagnosed with having the “Dutch disease” or suffering from the “resource curse”, phenomena generally linked to the one-sidedness of national economies in resource rich countries (for more see for example (Böhme, 2011, pp. 175-178).

revenues obtained for these sales amount to approximately 350 bln USD, making up 68% of total exports revenues and half of the federal budget revenues for Moscow (Tradingeconomics.com, 2015). Furthermore, as World Bank data show, almost one-fifth of Russian GDP comes from total natural resource rents – amounting to 18%, compared to merely 1.2% in the United States and 4.6% in China. In this context, oil rents accounted for almost 14% of GDP, while natural gas contributed solely by 2% to the same indicator (World Bank, 2015). Not surprisingly thus, the Russian economy is not just extremely dependent on its natural resource exports, but highly exposed to fluctuations in the level of oil prices on global markets as well. In terms of value, crude oil export revenues from non-CIS – consequently, mainly from European - states accounted for 95% of the total in 2014, though showing a notable decline in the last quarter of the year<sup>8</sup> (Central Bank of Russia, 2015). This indicates clearly the importance of EU customers' payments, not just due to the size of the EU market but also bearing in mind the fact that to CIS republics Russia generally applies lower than market prices for its exports (Shaffer, 2009, p. 125).

## **5.2. EUROPEAN ENERGY RESOURCES AND IMPORTS**

After reviewing the Russian endowment in hydrocarbon resources and their importance for the country's economy, this chapter turns to a similar assessment of the European side. The relative lack of energy resources in Europe is a commonly noted fact today and lies at the basis of the EU's energy security fears<sup>9</sup>. Firstly, total primary

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<sup>8</sup> The backdrop can be attributed in part to the stagnation of oil exports towards Europe due to the political conflict concerning the current crisis in Ukraine, as well as to the steep drop in oil prices since last year. The Urals average crude oil – the reference brand used for measuring Russian exports - price fell from 108.93 USD per barrel in June 2014 to 46.58 USD per barrel in January 2015 (Top Oil News, 2015).

<sup>9</sup> For an energy importing region such as the EU, energy security concerns the security of long-term, uninterrupted supply at reasonably low prices (Zhiznin, 2010, p. 8).

production amounted to 789.8 Mtoe in 2013, equaling roughly half of the Russian production. (From this, production of crude oil totaled in 66.2 Mtoe, while that of natural gas in 131.7 Mtoe (Eurostat, 2015)). Though, what underpins fears about growing import dependence is the fact that the data – and Graph 6 - display a continuous downward trend in EU domestic production; its total in 2013 reached just about 85% of 2003 values (Eurostat, 2015). As clearly indicated on the graph as well, crude oil production has been showing the most drastic decrease, in 2013 not even arriving to half of its 2003 values. Though, also natural gas production decreased significantly during the last decade, reaching only 65% of the 2003 level in 2013 (Eurostat, 2015).

What to a certain extent offsets the alarming fall in production of oil and natural gas within the EU is, as Graph 6 demonstrates, that continuous efforts to increase the production of renewables are bringing their results: production growth in renewable energy exceeded that of all other types as it almost doubled in the last decade - while that of nuclear heat underwent merely slight changes. Today, nuclear energy and renewables provide respectively for nearly one-third of the total EU production (Eurostat, 2015). However, as the European energy mix is still clearly dominated by oil products (34%) and gases (23%), as Graph 7 shows, their imports remain indeed essential to European energy security.

What greatly complicates the energy situation within the European Union is the fact that its 28 Member States all differ as regards their production and consumption levels, their used energy mixes<sup>10</sup> and main suppliers. Within the EU, the largest producers of crude oil were the UK, Denmark, Italy and Romania – with production in the UK (39.5 Mtoe) arriving alone at almost 60% of the total – although its share has

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<sup>10</sup> The range of energy sources a given area uses to satisfy its needs.

decreased by 10% during the last decade. Consequently, as regards crude oil, the relative weight of the EU's main domestic supplier has also been fading, further supporting the downward trend mentioned before. Natural gas production, in turn, reached its highest levels by far in the Netherlands in 2013, amounting to 61.7 Mtoe, almost half of the EU total (Eurostat, 2015). Overall, the highest primary energy producer within the EU in 2013 was France, providing 17% of the total production, though mainly delivering nuclear and renewable energy, not hydrocarbons (Eurostat, 2015).

As opposed to the abovementioned 789.8 Mtoe of total production, final consumption in the EU-28 for all types of energy reached 1103.8 Mtoe – evidently indicating the need of energy imports. Although the share of oil and petroleum products in the European energy mix has been in slow decrease, its import dependency levels, as Graph 8 displays, have been rising sharply, arriving at close to 90%. At the same time, the consumption of natural gas has – after some decline 2003-2009 - been slightly increasing in recent years, reaching 252 Mtoe in 2013 (as opposed to the mentioned production of 131 Mtoe) (Eurostat, 2015). Similarly to oil products, import dependency of natural gas has been showing a strongly increasing trend in the last decade (see Graph 8). Overall, the EU has to import more than half (53%) of the energy it consumes and this proportion has been growing during the past decade (European Commission, 2014).

This difference between domestic production and consumption, together with the mentioned downturn in primary energy production, has in fact enhanced the need for energy imports from non-Member States. As for today, the European Union is the world's largest net energy importing area, and, according to BP predictions, only by the early 2020s will it be overtaken by the Asia-Pacific region in this position (BP, 2015, p.

55). Several third countries provide the EU with crude oil and natural gas, with the largest among the external suppliers being without doubt the Russian Federation as for now. Nevertheless, there are other partners with a significant share of total imports, with Norway, Algeria and Qatar being the most important ones as for gas; and Norway, Nigeria and Saudi Arabia for oil (Eurostat, 2014). What is interesting to notice on Graphs 9 and 10 is the fact that imports from Russia, as for crude oil, underwent a sharp increase in the last decade, while those for natural gas remained relatively stable, displaying a slight decrease since the 2008 economic crisis. Moreover, imports of natural gas from Norway have been rising fast, reaching nearly the same levels as Russian imports<sup>11</sup> – defying the frequently voiced claim that Europe is increasingly dependent on *Russian* natural gas.

As regards the quantities, in 2013 Russia accounted for 34% of total imports of crude oil and provided 39% of the EU's natural gas imports (Eurostat, 2014). As regards their value, imports from Russia in 2013 represented about 34% of total imports of crude oil and about 49% of total imports in natural gas (Eurostat, 2014). In general, the total value of extra-EU imports of major energy products increased by 70% during 2005-2013, while the value of imports for the same goods from Russia has risen by 80% during the same period – however, it has be acknowledged that the increase in value was mostly due to soaring prices, rather than the growth in amounts. Not surprisingly, the largest importers of primary energy are the most populous member states, such as France and Germany – with the exception of the UK, where domestic reserves are still fairly extensive. Since 2004, the only net exporter of primary energy among Member States has been Denmark (Eurostat, 2014).

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<sup>11</sup> In fact, as regards only the first quarter of 2015, as a result of the political conflict concerning Ukraine and sanctions imposed on the Russian Federation by Western governments, Norway has overtaken Russia as Europe's most important supplier of natural gas (RT.com, 2015).

After the outbreak of the Ukraine crisis, the Energy Security Strategy reiterated the reliance on one single supplier – which, in line with the above presented numbers is certainly Russia - as the most pressing issue concerning the security of supply (European Commission, 2014). Though, as degrees of energy dependence show significant differences among individual Member States, the real challenge for European energy security is mainly due to the especially high reliance in certain Central and Eastern European MS. As Graph 11 indicates, in fact, the Baltic States, Finland, Slovakia and Bulgaria depend to 100% on Russian supplies for their imports of natural gas (European Commission, 2014, p. 8). In turn, this level of dependence, together with each country's ability to cope with possible supply disruptions as well as the importance of these imports to their economies (as presented on Graph 11), is feared to influence their respective foreign policy approaches towards Russia.<sup>12</sup> The stress tests conducted by the European Commission in October 2014, simulating the effects of a 6-months supply cut from Russia, confirmed these data, showing the serious exposure of Central and Eastern Europe in such a case (European Commission, 2014) (see Map 5). On the other hand, Ireland, Belgium, Spain, Portugal, Sweden, Croatia, the UK and Denmark import merely negligible amounts of gas and oil from Russia, which makes them relative outsiders in EU-Russia energy relations. Germany and Italy represent the biggest markets and in general the most Russia-friendly countries in “Old Europe” (Aalto, 2010, p. 166).

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<sup>12</sup> However, it has to be mentioned, that also among the new, CEE Member States significant differences exist in their approach towards Russia, and thus towards the issue of diversification. On one hand, the Baltic States (especially Lithuania), as well as Poland, although highly dependent on Russian gas and with rather low ability to cope with supply disruptions (see Graph 11), have frosty relations with Moscow and have been active in shaping more critical EU policies towards it. On the other, for example Hungary and Slovakia tend to oppose hostile policies towards Russia (Leonard & Popescu, 2007). Thus, in this context, in addition to these countries' dependence on Russian oil and gas, their historical-political traditions also play a key role.



### **5.3. PRELIMINARY CONCLUSION:**

#### **EU-RUSSIA ASYMMETRICAL INTERDEPENDENCE**

In order to being able to apply the interdependence model to the EU-Russian energy relations, this subchapter aims firstly at confirming the presence of interdependence as well as assessing asymmetries within this framework. In order to do so, it will instrumentalize the notions of sensitivity and vulnerability, as presented in the theoretical part to this thesis. Firstly, sensitivity, recalling Keohane and Nye's definition, concerns the "*liability to costly effects imposed from outside before policies are altered to try to change the situation*" (Keohane & Nye, 1989, p. 13). Sensitivity, as established, thus involves the costs that the actors have to bear, in case the other does not live up to the commitments it assumed. Secondly, vulnerability means an actor's "*liability to suffer costs imposed by external events even after policies have been altered*" (Keohane & Nye, 1989, p. 13). Vulnerability thus is connected to the ability to compensate for one-sided policy changes undertaken by the other part and is closely connected to the availability of other alternatives.

On one hand, regarding the Russian Federation, sensitivity concerns a loss of income if its partners do not pay the agreed prices for the hydrocarbons imported – vulnerability, in turn, would mean the total loss of all revenues from the same partners. As shown before, revenues collected for oil and gas exports are the main drivers of growth and bear an essential importance for the Russian economy, thus such a shortfall or total loss would cause indeed extraordinary costs to bear. Recalling what has been shown before; mineral products are essentially the only export product Moscow can rely on, with their sales accounting for over 70% of all exports. In case of a significant loss in the revenues obtained in turn, Moscow would risk losing up to 68% of its total exports revenues and at the same time up to half of the federal budget revenues.

Moreover, Russian GDP could shrink by up to 18% - up to 14% of GDP in case of a loss in oil rents, while up to 2% for natural gas revenues. As over 50% of all oil and gas exports from Russia are destined to European markets, with 80% of its oil exports and over 70% of its natural gas exports going there, EU payments are obviously the biggest source of income for the Russian Federation. Even more so, as European customers are paying higher, market prices for their imports, contrary to most CIS states buying Russian hydrocarbons at more subsidized prices. The EU, especially Western European states constitute indeed the most lucrative energy export market for Russia – as mentioned, a loss in crude oil export revenues would deprive Moscow of up to 95% of its oil export revenues in total.

On the other, according to the before presented logic, for the European Union sensitivity entails a decrease in energy supplies arriving to the continent, while vulnerability would measure their total disruption. As shown in the previous chapter, the EU's energy security concerns are in fact underpinned by the fear of such a scenario (and fuelled by the 2006 and 2009 actual disruptions). These concerns, in turn, as outlined, are on one hand due to the falling domestic production levels - crude oil production falling to below half of its 2003 values and that of natural gas reaching only 65% of the 2003 level by 2013. On the other by the fact that domestic consumption in the EU is still largely dominated by oil and gas products – rendering relations with supplier countries crucial for Europe. The EU in fact has to import 53% of the energy it consumes; its import dependency reaching the critical level of 90% for oil and the also rather high degree of 66% in the case of natural gas – with these proportions showing an increasing trend. In fact, a reduction or cut in energy flows arriving from its largest external supplier, Russia, would deprive Europe of up to 34% of its total imports of crude oil and up to 39% those of natural gas. As for the case of the EU, though,

assessing sensitivity and vulnerability needs to entail two levels of examination – concerning the EU as a whole and individual MS. As for the EU as a whole, the above presented loss in supplies of up to about one-third of its imports of oil and natural gas respectively does not imply an excessively high sensitivity level. However, a significant reduction or cut in supplies would hit certain Central and Eastern European MS particularly hard, making countries like Bulgaria, Slovakia, the Baltic States and Finland particularly sensitive in case of a Russian supply reduction (or vulnerable in case of a total disruption).

In line with the above and with what has been said in the theoretical underpinning to this thesis, the EU-Russia relationship is without doubt an interdependent one, with both sides holding a high level of sensitivity in case the other side does not keep to its commitments. In relation between the Russian Federation and the EU as a whole, the European side seems to have the upper hand entailing both lower sensitivity and overall vulnerability levels – though, these relations quickly change in favor of Moscow considering just the new MS in Central and Eastern Europe (in relation to the Czech Republic see for example (Binhack & Tichý, 2012)).

Moreover, as the measure of vulnerability is logically related to the availability of other alternatives, in this sense once again, as regards the relationship between the EU as a whole and Russia, the EU seems to have more alternatives: it already imports significant amounts of oil and natural gas – besides from Russia - from Norway, while lower amounts also from Algeria and Qatar (gas) as well as Nigeria and Saudi Arabia (oil). However, regarding the MS level, a sudden termination of the relationship would obviously hit the abovementioned CEE countries harder than Russia, as their everyday consumption is still largely (or completely) dominated by the hydrocarbon products imported from it, without any credible alternatives as for now. In fact, the 2014 stress

tests conducted by the European Commission predicted – without additional measures and cooperation among the Member States - serious shortfalls of 20-40% for CEE states in case of a 6-month disruption of Moscow's gas supplies (European Commission, 2014, p. 6).

## **6. POWER IN CURRENT EU-RUSSIA ENERGY RELATIONS:**

### **THE QUEST FOR DIVERSIFICATION**

As shown, the EU-Russia energy relationship is one of asymmetrical interdependence, with both the EU (especially certain MS) and Russia holding rather high sensitivity and vulnerability levels. Becoming aware of these, in turn, induces the parts to undertake efforts for decreasing their interdependence – this is why this chapter will be examining diversification strategies followed by the EU and Russia.

#### **6.1. EUROPEAN UNION**

For the EU as the world's largest energy consumer, energy security means assuring the security of supply – something in which, as shown, Russia has a decisive role for now. In this context, for the EU, the most important way to reduce its vulnerability, thus to enhance its position in relation to Russia is reducing dependence on its energy imports. This is why diversification efforts are aimed in any case to follow this objective - either on one hand through the diversification of energy sources within the union, or on the other through opening towards new suppliers and supply routes (Filis, 2009, p. 8).

Although, as the previous chapter has revealed, the EU as a whole seems to be the less sensitive side of the relationship, the agenda of diversification has been remarkably accentuated both on the discursive and policy levels for more than a decade. This has, in fact, been largely attributed to the EU's increased sensitivity and vulnerability through the inclusion of Central and Eastern European states as well as related to the 2006 and 2009 gas crises causing substantial supply cuts, thus making Europe aware of its dependence.

As Casier notes, in fact, with the eastern enlargements the average dependence of MS on Russian gas rose from 25% to 47%, with consumption in 12 countries depending more than 50% on Moscow's supplies (Casier, 2011, p. 542). Consequently, in addition to overall dependence of the EU, the number of MS who perceived diversification as a priority also became higher. Moreover, as these changes have not significantly affected levels of sensitivity and vulnerability in "Old Europe", dependence has at the same time become greatly differentiated within the EU. This, in turn, together with the diverging historical-political approaches of individual MS towards Russia, has been rendering relations with Moscow in general, and the issue of diversification in particular, a highly conflictive one for the continent. In this context - bearing in mind the lack of a common foreign energy policy in the European Union -, although on the EU level political discourse has put an accentuated emphasis on diversification of suppliers, with most documents and officials continuously addressing the heavy import dependence of the EU and emphasizing the dangers of excessive reliance on one single supplier, individual MS still largely pursue their own agenda in regard (Kratochvíl & Tichý, 2013) (Leonard & Popescu, 2007). In fact, as for today, for example gas trade between the EU and Russia is largely dominated by long-term supply contracts, concluded on a bilateral basis between individual MS and Moscow (Filis,

2009, p. 3). Similarly, the presence of individual national markets and the ownership of pipeline networks within EU MS allow Gazprom to alter the level of prices, leading to a situation with differing prices paid by different countries (De Micco, 2014). Consequently, with the inclusion of the new CEE Member States - largely dependent on Moscow's energy supplies and having shared past, but diverging approaches towards Russia - the EU's position has been fragmented and weakened to a great extent. Thus, from Brussels' perspective, the problem of diversification of supply sources concerned not only reducing its overall vulnerability to supply disruptions but could also be coupled to the issue of achieving greater unity in energy matters – and through this enhance strength in its relations with suppliers, and the Russian Federation in general.<sup>13</sup>

In addition, with the expansion to countries of the ex-communist bloc, to what Russia still largely considers its sphere of influence in Europe, significant geopolitical conflict potential has been added to EU-Russian energy ties, contributing to the high level of politicization as well as securitization of energy relations (Pick, 2012). In this context, from the European perspective, reliance on Russian energy has increasingly been seen under a geopolitical prism, as a threat to its energy- and overall security, implying the need for diversification of suppliers in order to reduce the possibility of Russian leverage in the region. In turn, from the Russian perspective, the EU's initiatives in their shared neighborhood have been considered with suspicion and seen as highly contrasting to its national interests (Feklyunina, 2008).

In the context of the above explained changes, the 2006 and 2009 gas prices disputes between Moscow and Kiev and the consequent supply cuts affecting Europe as well have acted as “wake up calls” making the continent aware of its vulnerability and thus underpinning the emphasis on diversification in the EU on the discursive as well as

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<sup>13</sup> This is in fact partly the argumentation behind the Energy Union strategy currently being pursued in the EU, calling for the completion of the internal energy market, because “the European Union has to improve its ability to project its weight on global energy markets” (European Commission, 2015, p. 6).

the policy levels. In fact, after the crises Russia's image as unreliable supplier threatening the EU's vulnerability have become a recurring figure in European political discourse - an argument that currently has gained strength again (Kratochvíl & Tichý, 2013). Consequently, on the policy level, the EU has laid special emphasis on bypassing Russia through finding new suppliers and establishing alternative supply corridors, with the most prominent and advanced measure in regard being the Southern Gas Corridor project.

### **6.1.1. DIVERSIFICATION OF SUPPLIERS AND SUPPLY ROUTES: THE SOUTHERN GAS CORRIDOR PROJECT**

In line with the above, in order to reduce the increased sensitivity and vulnerability of the EU and especially that of Central and Eastern Europe, the establishment of a Southern Gas Corridor has been promoted. The new route would in fact enable Europe to import gas towards the South, primarily from Caspian and Central Asian sources rather than Russia, though it requires the establishment of new and expensive pipelines. Throughout its planning-realization, planned pipelines within the framework of the SGC have undergone significant changes – though, its main elements can be considered on one hand the already cancelled plan of Nabucco, on the other the currently pursued Trans-Adriatic (TAP) and Trans-Anatolian (TANAP) pipelines (Belkin, et al., 2013, p. 14).

Firstly, it was the Nabucco pipeline that was since 2002 promoted by European Union leaders (and supported by the USA) as the flagship project of the Southern Corridor: in its most ambitious form it was planned to span more than 3800 km and bring 31 bcm of natural gas per year from the Caspian region or Central Asia (possibly

even from Iraq or Iran) to Central Europe (Naturalgaseurope.com, 2015). As visible on Map 6, it was supposed to cross Turkey and enter the EU through Bulgaria, Romania and Hungary. As among others Sartori observes, Nabucco was from the beginnings presented as a means to diminish dependence on Russia - and thus minimize the possible political leverage of Moscow in Central and Southeastern Europe. EU institutions and leaders had on several occasions expressed their full support for the project and reiterated their clear preference for it over any other possible plan (Sartori, 2013, pp. 2-3).

Though, despite the decisive political backing and enthusiasm on the narrative level, the project had encountered several technical-commercial, as well as political challenges during its finalization, which in the end led to its cancellation in 2013. Firstly, the plan was challenged – on the political as well as the technical level - in the context of the rivalry with the Russian-supported South Stream project. As Map 6 displays, the two pipelines would have targeted virtually the same European consumers, run partly along the same route, while even largely relying on the same supply sources – thus they were regarded as competing elements of the EU-Russia political power play by many analysts (see for example (Baev & Øverland, 2010)).<sup>14</sup> In fact, the plan of constructing Nabucco was contrary to Russian interests in two ways: not just was its biggest market attempting to reduce dependence on its gas supplies, but as well to find alternative sources from territories that Moscow still considers its “Near Abroad”. Indeed, rivalry with the Russian project made securing the appropriate supplier basis for

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<sup>14</sup> Although officially the European Commission had not considered the two projects to be competitors, at one instance even then-Energy Commissioner Günther Oettinger had to admit the rivalry – during a conference for the 10th Anniversary of the EU-Russia Energy Dialogue in 2010 he stated that “*South Stream can, in the long term, be considered a rival to the Nabucco project.*” (Novinite.com, 2010).



Nabucco the main source of difficulties for the EU.<sup>15</sup> Since the project's inception, there had been talks about delivering gas from Egypt, Iran, Iraq, Azerbaijan, Kazakhstan or Turkmenistan - with Azerbaijan and Turkmenistan having been the most likely partners for Europe. Though, Moscow, incentivized to render EU diversification in the shared neighborhood more difficult, signed an impressive number of energy contracts with the mentioned Central Asian and Caspian CIS-countries, purchasing infrastructure as well as natural gas in order to further export it towards Europe. In fact, by Western commentators the country has been repeatedly accused of laying obstacles in front of the realization of the project, by buying the Central Asian resources that would have been needed to fill the pipeline (Böhme, 2011, p. 121) (Feklyunina, 2008, p. 134).

Secondly, in addition to the difficulties in securing sufficient supplies, technical-financial concerns also complicated the realization of the Nabucco project. In the end, the project proved to be too ambitious and strong competition has arisen from within the Southern Gas Corridor itself. On one hand, Azerbaijan, the main potential partner for Nabucco - as a result of the long and ineffective negotiations about the project -, agreed with Turkey in 2011 about the construction of the Trans-Anatolian Pipeline (TANAP) (Belkin, et al., 2013, p. 15). After this the Nabucco project was revised, shortened and re-planned to start from Turkey's western border with Bulgaria, under the name Nabucco West (see Map 8). On the other, one year later the – according to Sartori - commercially more but politically less funded Trans-Adriatic Pipeline (TAP) project was chosen by the deciding consortium (Sartori, 2013, pp. 3-4) (Tap-ag.com, 2013). This step was widely interpreted as a positive development for the Russian South Stream project, with Moscow seen as having “won the battle” - though the European Commission officially welcomed the decision, acknowledging that from the geopolitical

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<sup>15</sup> Related to this the rivalry between the Russian South Stream and Western Nabucco has often been interpreted as an episode of the “New Great Game”, the geopolitical competition among great powers for Caspian and central Asian hydrocarbons (see for example (Feklyunina, 2008).

point of view, for Europe it is the materialization of the SGC that carries weight, in one or another way.

Just as in 2006 and 2009, with the 2014 outbreak of the ongoing crisis in Ukraine and the freeze in EU-Russian political relations since then, EU countries increasingly became distressed concerning their vulnerability to Russian energy - the plan of opening the Southern Gas Corridor and within this framework finalizing the TANAP and TAP pipelines has come to the fore again. Indeed, right after the annexation of Crimea in March 2014 EU leaders in a European Council meeting strongly condemned the act, while at the same time reiterated that efforts to decrease the EU's high dependency rates have to be intensified, calling on the European Commission to present a comprehensive plan in regard – resulting in the adoption of the European Energy Security Strategy and the accompanying in-depth study in May 2014 (European Council, 2014). In line with earlier European objectives, the Strategy called once again for new supply sources from “the Caspian and beyond” (European Commission, 2014, pp. 15-16).

In this context, in February 2015 Vice-President for Energy Union Maroš Šefčovič called Azerbaijan “*one of the EU's major and most reliable energy partners*” and urged an opening of the – until now blocked - negotiations about the energy chapter in the accession talks with Turkey (Euractiv.com, 2015). In March 2015, the construction of TANAP began formally, while that of TAP is expected to start during the same year. As Map 8 shows, thus the TAP-TANAP-SCP (South-Caucasus Pipeline) route, once completed, will be the main element of the EU's Southern Gas Corridor, linking the Azeri Shah Deniz gas field to markets in Southern and Western Europe. In fact, after connecting to TANAP at the Turkish-Greek border, TAP is planned to cross Greece and Albania in order to arrive in Italy (Tap-ag.com, 2015). The three pipelines

are designed to bring 16 bcm of Azeri gas per year to Turkey and about 10 bcm to Europe by 2018 and 2020 respectively – though this capacity might be expanded to about 30 bcm per year by the mid-2020s<sup>16</sup> (Gulbanov, 2015, pp. 1-2).

The above numbers show indeed that – when realized – the Southern Gas Corridor will not solve the EU’s energy security concerns at once, and will certainly not replace Russia alone. The projected amount of approximately 10 bcm of natural gas per year might seem rather modest compared to the originally projected 31 bcm with Nabucco and especially if contrasted with the Russian South Stream and Turkish Stream projects<sup>17</sup>, announced to start supplies already by December 2016 and supposed to bring about 47 bcm of gas per year to Europe (Gulbanov, 2015, p. 1). However, as for today, the Southern Gas Corridor as well as Turkish Stream are at a very initial phase of their realization, thus numerous questions remain about their future. It is too early to see whether they will follow the pattern set out by Nabucco and South Stream and remain merely what Wiśniewski calls “virtual pipelines”, existing merely on paper, though used as leverage in bargaining processes, or become “actual pipelines” (Wiśniewski, 2015). In this context, as for now, any development of the Southern Gas Corridor project is likely to be perceived as alarming by the Russian side – as is visible already by the announcement of the Turkish Stream plan.

Once realized, the Southern Gas Corridor will certainly allow certain states for a gradual supplier diversification – and thus for reducing vulnerability and enhancing Europe’s position towards Russia. Even more as it is planned to involve other suppliers as well in the future - as the Energy Security Strategy declares, the SGC is crucial for opening towards supplies from the Middle East, especially Israel, as well as provide connection to countries such as Turkmenistan, Iraq or Iran in the longer term (European

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<sup>16</sup> Note that Russia sent about 155 bcm of natural gas to the EU in 2013 (Chazan, 2014).

<sup>17</sup> The projects will be dealt with in detail in chapter 6.2.

Commission, 2014, p. 16). Negotiations with Turkmenistan have already been under way and have gained new momentum when Šefčovič visited the country in May, discussing the Trans-Caspian Pipeline (TCP) to be constructed (linking Turkmenistan to the Southern Route through the Caspian) and agreeing on the “development of cooperation” (European Commission, 2015). Interesting in this context is also the fact that the sanctions regime on Iran is poised to be lifted after an agreement was reached in July 2015 concerning restrictions on the country’s nuclear program, which could soon make Iran a potential partner for the SGC (Sengupta, 2015).

### **6.1.2. DIVERSIFICATION OF THE ENERGY MIX: PROMOTING INDIGENOUS RESOURCES**

Bearing in mind the lack of a common external energy policy, the presence of extensive measures focusing on European energy security from the internal aspect is not surprising. In this context, the promotion of activities to pursue alternative, indigenous resources in addition to the slowly progressing diversification efforts on the external level has been stepped up. As the European Energy Security Strategy states, increasing energy production within the EU can also reduce its dependence on “particular suppliers and fuels” - in line with the aim of decreasing vulnerability through diminishing reliance on Russian gas supplies (European Commission, 2014, p. 12).

In the context of diversifying the European countries’ energy mixes, most importantly the pursuit of renewable resources has been of particular importance and has become rather successful: in fact, the EU has been a fierce advocate of climate change policies for years and, related to this, has undertaken conspicuous efforts in order to assume a leading role in the field of renewables. However, most importantly for

the topic of this thesis, for the EU renewable energy sources - such as mainly solar-, hydro-, wind-power or biomass - serve a dual purpose. They contribute not only to combating challenges posed by global climate change, but also to reducing dependence on imported supplies of energy. In fact, already the Renewable Energy Directive, adopted in April 2009 – just four months after the gas supply dispute between Moscow and Kiev - coupled the quest for renewables not only to the need of reducing greenhouse gas emissions, but as well to the necessity of achieving security of supply (Directive 2009/28/EC, 2009). With the Directive, in order to achieve the above goals, for the first time binding, individual targets were set up for each Member State regarding the share of energy from renewable sources in their gross final consumption, to be met by 2020.

As established before, renewable and nuclear energy constitute already a significant part – respectively about one third - of European energy production, with especially renewables having shown a fast increase in the last decade. However, although not produced in significant amounts within the EU, petroleum products and natural gas still dominate the EU energy mix by large (refer again to Graph 7); their levels of import dependency reach in fact 90% for oil and 66% in the case of natural gas - with the Russian Federation being the most important supplier of both products. As of 2012, renewables contributed to 11% to the EU-28 inland consumption, in contrast to the 34% and 23% of petroleum products and natural gas respectively (European Commission, 2014, p. 22). On the other hand, import dependency regarding renewable resources amounts merely to 4% (for biomass) (European Commission, 2014, p. 5). Logically thus, in line with the stated goal of reducing dependence on Russian supplies, Brussels is incentivized to diminish oil and natural gas consumption,

while at the same time increase the domestic production of renewables and other indigenous resources.

In line with the above, the European Energy Strategy 2020, adopted in 2010 by the European Council, set the famous 20/20/20 energy and climate change objectives: pledging to increase the share of renewable energy within the European energy mix to 20%, while at the same time reducing greenhouse gas emissions by 20% and improving energy efficiency by 20% until 2020 (Europe 2020, 2010). Being on the right track in order to achieve these targets, in October 2014, during a summit confirming the proposed energy and climate objectives proposed by the European Commission for 2030, the European Council raised this objective to 27% (European Council, 2014, p. 5). Becoming aware of these targets' implications, for its part, Russia was fast to dismiss them as wishful bureaucratic thinking, declaring the target of 20% and the "fat subsidies to wind farms and solar panels" as a deliberate violation of market competition (Baev, 2014, p. 115).

The connection between the European Union's climate change policies with energy security concerns has become evident again since the outbreak of the current crisis in Ukraine, and is thus reflected in the Energy Security Strategy published in May 2014, highlighting once again the importance of a low-carbon economy in diminishing dependence on external supplies: *"In the long term, the Union's energy security is inseparable from and significantly fostered by its need to move to a competitive, low-carbon economy which reduces the use of imported fossil fuels"* (European Commission, 2014, p. 3). In fact, as the European Commission predicts, for every 1% increase gained in EU energy efficiency, gas imports are likely to decrease by 2.6%, thus increasing self-sufficiency of the EU. In line with this - referring to the special importance of diminishing dependence on one single supplier and once again invoking

the supply disruptions 2006 and 2009 as a “wake up call” in order to strengthen the EU’s energy security -, the Strategy in fact sets the maximization of the use of indigenous energy sources as one of its key pillars. Most importantly, in this context, it calls for an increase in the use of renewable and nuclear energy as well as a sustainable production of fossil fuels (European Commission, 2014). In this context, stepping up production of conventional as well as unconventional (especially shale gas) hydrocarbon reserves within the union is stated as clear goal.

Though, as Buchan highlights, profound divisions exist among the Member States as regards the EU’s objectives, that have been causing a backdrop in the momentum of efforts pursued by Brussels (Buchan, 2014). On one hand, the main lesson to learn from the Ukraine crisis for Western European states has been to push forward with developing indigenous energy and improving energy efficiency, thus reducing dependence on Russian oil and gas – while, on the other, eastern Member States are more reluctant following this lead. Despite large improvements in its energy efficiency during the last decade, Central and Eastern Europe still remains the most energy-intensive region of the EU, with high reliance on coal (especially as regards Poland) and on Russian fossil fuel imports – therefore considering the march towards more ambitious targets for renewable energy development as unaffordable (Buchan, 2014, pp. 9-10).

## **6.2. RUSSIAN FEDERATION**

For the Russian Federation, as a major energy exporter, energy security means assuring the security of demand for its products, guaranteeing continuous financial inflow for its energy exports at reasonably high prices (Zhiznin, 2010, p. 2). In line with

this logic, two ways of enhancing its position towards Europe are available to the Russian Federation: on one hand it might reduce its own dependence through opening towards new markets, but just as much it might intensify European dependence through strengthening its dominant position in EU markets. Consequently, in the realm of diversification, not only the diversification of customers for its hydrocarbon products, but as well the rerouting of exports towards Europe – also with the aim of avoiding transit countries and reaching markets there directly - are presented as strategic objectives of Russian export strategy (Böhme, 2011). This duality of interests is in fact reflected in the Energy Strategy of the Russian Federation up to 2030, which declares both the “*maintenance of Russia’s stable relations with its traditional consumers of energy resources and development of equally stable relations on new energy markets*” as key principles guiding energy policy for the coming years (Ministry of Energy of the Russian Federation, 2010, p. 22).

### **6.2.1. DIVERSIFICATION OF ROUTES TOWARDS THE EU: NORD STREAM, SOUTH STREAM, TURKISH STREAM**

On one hand, thus, in addition to the promotion of long-term, bilateral gas supply contracts with EU countries, establishing new routes towards the export markets in Europe is a logical way for the Russian Federation to intensify European dependence. In this context – as opposed to the European image -, Moscow aims at preserving its consideration as a reliable supplier, with the intention of initiating new projects and setting up new infrastructure in order merely to assure the security of European energy imports (Kratochvíl & Tichý, 2013). In fact, the disputes over pricing of oil and gas deliveries in the last decade with Ukraine and Belarus have seriously harmed Russia’s



image in Europe, though seen as a result of Ukraine's activity of tapping off gas destined for Europe in Moscow (Feklyunina, 2008). Consequently, the current conflict in Ukraine, together with the uncertainty about the future of the country, strongly incentivizes Moscow for reducing its dependence on Ukraine as an energy transit route. In fact, in line with this logic, on June 9<sup>th</sup> Gazprom Deputy CEO Alexander Medvedev announced that after 2019, when the transit contract with the country expires, the Russian Federation is going to stop deliveries through its neighbor completely, urging Europe to reach agreement on other possible routes (Cunningham, 2015).

In line with the presented strategy of avoiding reliance on transit states, three major projects excel from recent years: the Nord Stream pipeline, running through the Baltic Sea directly to Germany; the South Stream project, supposed to cross the Black Sea to Bulgaria, and the latest, so-called Turkish Stream plan which replaced South Stream just recently. In addition to – as mentioned - avoiding transit states and allowing Russia to intensify its stance as the main supplier to Europe, these projects contribute to further strengthening Russia's position as they evoke diverging attitudes from individual Member States towards them – these will be briefly presented in this chapter as well.

Nord Stream was the first main project of the Russian diversification strategy running towards the north of Europe, assuring a direct link between the Russian port of Vyborg and the German city of Greifswald through an offshore pipeline system running under the Baltic Sea (see Map 10). Thus, the two pipelines constituting Nord Stream establish a direct connection linking Siberian reserves to the most lucrative markets in Western Europe, mainly to Germany, as well as to the UK, Netherlands, Denmark and France (Gazprom.com, 2015). In line with this, most of all for Germany (as the bulk of the gas it transports is earmarked for the country), but as well for other Western European states, Nord Stream has indeed been a key project in ensuring their energy

security for the future. That is why, as Whist points out, leading German officials - echoing the Russian point of view - frequently promoted the project as one of "strategic interest for the whole of Europe" for route diversification, urging other EU members to support it. In line with this argumentation, Nord Stream has been declared a priority project by the European Commission as well, meant to help enhancing the continent's security of supply (Whist, 2008).

However, since its planning phase, the project had encountered fierce opposition mainly from the states it circumvented – especially Poland, though as well the Baltic countries, Sweden and Finland have expressed their criticism towards what was regarded a German-Russian bilateral deal threatening their national interests and energy security. The project's "pan-European" status has been called into question on several occasions, as critics have seen Nord Stream as part of a broader Russian strategy to divide Europe (Whist, 2008). In line with this argumentation, in 2006 the Polish Minister of Foreign Affairs, Radek Sikorski even compared the project to the 1939 Molotov-Ribbentrop Pact under which Nazi Germany and Stalinist USSR divided Central and Eastern Europe into spheres of influence, resulting in WW2 (Kramer, 2009). Moreover, even after the pipelines' completion Poland refused to be delivered gas from Germany through Nord Stream, even though the lines run to just about 50 km from the Polish-German border (Böhme, 2011, p. 115).

Despite the criticism, construction of Nord Stream's first line was completed in 2011, with its second one going operational one year later. With this, the proportion of Russian natural gas destined to EU markets crossing Ukraine, decreased indeed from about 80% to approximately 50% (Metelitsa, 2014). Currently, the pipelines are transporting 55 bcm of gas a year combined, and this capacity is planned to be doubled. In fact, on the 18<sup>th</sup> of June, at the St. Petersburg International Economic Forum,

preliminary deals have been signed between Gazprom and three Western European companies about the expansion of the pipeline capacity (Gazprom.com, 2015). Although under the current political climate between Russia and Western powers and with the sanctions regime in place against Moscow, the actual viability and rightness of the expansion project in coming years has been questioned, it is in line with the Russian rhetoric about its reliability as supplier and demonstrates the continued importance of these markets to Russia.

Not only towards the north of Europe, diversification of export routes for Russian gas has been planned towards the south as well. In 2006 – in fact, after the gas dispute with Ukraine – the South Stream project was announced. As has indeed been argued, one of the main consequences of the crisis for Russian export policy was the decision to expand diversification capacity further after Nord Stream. In line with this, the pipeline's capacity, originally planned to be 31 bcm per year, was doubled to 63 bcm per year after the 2009 Ukraine crisis (Stern, et al., 2015). Aimed at reaching markets in Central and Southeastern Europe, the development of new infrastructure was also of vital geopolitical importance to Russia, as parallel US- and EU-backed initiatives – just as the mentioned Nabucco -, intended to offer alternative suppliers and supply routes to roughly the same European customers, were centered on the South Caucasus and Caspian regions and run along the same route (Böhme, 2011, p. 117). South Stream was planned to transport Russian natural gas to the Bulgarian city of Varna, crossing the Black Sea (see Maps 7 and 11). As visible on the maps, its main route was then supposed to reach Central and South-Eastern European markets and arrive in Austria through Serbia, Hungary and Slovenia. That the importance of the project to Moscow was not merely economic is shown clearly on one hand by the fact that it was deemed to be technically rather challenging (four pipelines, each of 930 km

length, were planned to be laid as deep as 2000 km deep in the sea), on the other by the high total cost, estimated to be around \$40 billion in mid-2014 (Stern, et al., 2015). With this, South Stream in 2014 was in fact by far the largest ongoing gas infrastructure project towards Europe. According to plans, the first line was supposed to become operational at the end of 2015, with the full capacity to be reached by 2020. When the project was finally abandoned in December 2014, works on its offshore section had already started (Stern, et al., 2015).

Just as Nord Stream, the construction of the South Stream pipeline was surrounded by controversies from the beginnings: firstly, as shown in chapter 6.1.1., the plan was seen with suspicion on EU level because it was regarded as challenging the realization of the Western-backed Nabucco pipeline. Although the 2013 abandonment of Nabucco in favor of TAP seemed as a major victory for Russian diversification efforts (rhetoric), South Stream was also cancelled not much later.

At this point, to understand the factors that led to the plan's cancellation, it is vital to take a small excursion to explain Gazprom's export strategy and EU legislation in regard. On one hand, the company, aiming at becoming one of the world's largest vertically integrated energy firms, follows the strategic objective of purchasing downstream assets in EU markets, thus of controlling not merely production and transportation activities but distribution as well (Shaffer, 2009). On the other, contrary to this, Brussels has been pushing for further liberalization and competition in its energy markets since the 1990s and – in response to the events of 2006 – in 2007 has adopted its Third Energy Package (TEP). Thus, the concept of "ownership unbundling" was introduced in European legislation, providing for a separation of production, transportation and distribution functions in the natural gas and electricity sectors. Thus, energy companies operating in the EU were forced to sell their supply networks or place

them under independent management, unless an exemption is granted by the European Commission (see Directive 2009/73/EC, 2009). Not surprisingly, this measure has created significant regulatory obstacles for Gazprom's activity in the EU, and thus determined the future of South Stream as well. From the Russian perspective, in fact, the measure was seen as an explicit "anti-Gazprom clause", challenging the company's strategic export objectives, posing an obstacle to Gazprom's access to EU markets (Pick, 2012).

In this context, and especially as the current crisis in Ukraine had started, the Third Energy Package and its implications for Russia came to the fore: although, as mentioned before, Nord Stream had been supported by the EC and even declared a priority project, in the case of South Stream any kind of political support for the project was – not surprisingly - lacking from the EU side. Although Moscow applied for and received partial exemption from the TEP for Nord Stream, it did not even attempt in the case of South Stream. In fact, then-Energy Commissioner Günther Oettinger stated in March 2014 that all talks about pipelines such as South Stream have to be put on hold until the resolution of the Ukraine crisis (Reuters.com, 2014). Moreover, in April 2014 the European Parliament adopted a non-binding resolution, explicitly taking the view *"that the South Stream pipeline should not be built, and that other sources of supply should be made available"* (European Parliament resolution 2014/2699(RSP), 2014). In line with the above in fact the EC declared the intergovernmental agreements on which the project had been based contrary to the TEP and threatened the participant Member States with infringement procedures – thus Bulgaria, where the construction of the pipeline had already begun, suspended the works (Stern, et al., 2015).

As a result of these controversies, on a state visit to Turkey on the 1<sup>st</sup> of December 2014, Russian President Vladimir Putin announced the cancellation of the

South Stream project, blaming the European Commission's negative approach as a reason for his decision. In fact, while one strand of (Western) opinion emphasized that Russia - amid biting sanctions and falling oil prices – must have recognized that the project was not economically viable anymore, the Russian point of view implied that the cancellation of South Stream was entirely due to the legal obstacles the European side “created” against the construction – and the pressure it put on participating MS like Bulgaria. The same perspective was reflected in the announcement of the construction of a new project instead, called Turkish Stream (or TurkStream). The pipelines, of the same capacity as South Stream, would deliver 63 bcm of Russian natural gas per year to Turkey through the Black Sea, out of which 49 bcm should be sent to a gas hub on the border with Greece, potentially supplying European markets (Gazprom.com, 2015). Thus, although the Turkish Stream project can be considered as an element of the Russian strategy of diversifying routes *towards* the EU, it is also notable that the new pipeline will not deliver gas directly *to* European countries, but only to the Turkish-European border, thus avoiding EU legislation. In fact, from the delivery point onwards, it will be up to Europe to decide how to reach the various Southern and Eastern European markets.

However, as mentioned in the previous chapter, Turkish Stream is a merely “virtual pipeline” for now, especially amid the current situation in Ukraine serving as a – predominantly rhetorical – foreign policy tool and instrument to enhance bargaining position, although its future is still uncertain (Wiśniewski, 2015). Just as it was the case for Nord Stream, the South Stream and its successor Turkish Stream projects have both divided – and thus weakened - the EU and EU countries internally: while on EU level, as shown, the projects were condemned and negotiations about their construction put on hold since the outbreak of the Ukrainian crisis, some Member States clearly expressed

their support for the plans. Especially Bulgaria, non-EU member Serbia and Hungary, which were to gain from their transit role, were hit by the cancellation of South Stream and are thus negotiating participation in the Turkish Stream project currently. Particularly interesting is the position of Greece towards the TurkStream project at present – even more as the country is crucial for the construction of the TAP pipeline as well. In this context, Greece’s “turn towards Moscow” amid the struggle to reach a deal with its international (Western) creditors, signing an agreement about the extension of the TurkStream pipeline on its territory, was widely interpreted as bargaining strategy playing Brussels ad Moscow further against each other.

### **6.2.2. DIVERSIFICATION OF CONSUMERS: THE “ASIA CARD”**

In line with the gradually occurring shift towards East in the world economy the opening towards new markets had been a priority of Russian energy policy for more than a decade, although the announced steps of rapprochement were extremely slow in materializing (Baev, 2014). The Energy Strategy of the Russian Federation up to 2030 had foreseen in fact, that *“the proportion of European energy markets in the total volume of Russian energy export will steadily decline due to export diversification to Eastern energy markets (China, Japan, Republic of Korea, other countries of the Asia-Pacific region)”*. Moreover, it forecasted that by approximately 2030 *“the proportion of Eastern energy markets in the Russian energy export of liquid hydrocarbons (oil and oil products) should grow from the current 6 to 22–25%, while natural gas export should grow from 0 to 19–20%”* (Ministry of Energy of the Russian Federation, 2010, p. 23).

However, especially since 2014, amid the current freeze in political relations with Western powers, the country’s turn towards East has gained new importance.

Dealing with the EU, Moscow has often been making use of “the Asia card”, invoking the possibility of turning towards other markets in case cooperation with Europe becomes unsustainable – something especially imaginable in the current situation (Itoh, 2011). In fact, Russian President Vladimir Putin - in a speech at the St. Petersburg Economic Forum in May 2014 - acknowledged the economic and political limitations for the relationship with Europe as the main driver for a newly accelerated opening to the East: *“Today Europe accounts for over 70 percent of our oil exports and almost all of our pipeline gas. However, we have to admit that energy consumption in Europe is growing slowly due to low economic growth rates, while political and regulatory risks are increasing. Transit is also an issue. Given these circumstances, our desire to open up new markets is natural and understandable. Primarily we are talking about the dynamically growing Asia-Pacific region.”* (Putin, 2014).

In this region, not surprisingly, the most important potential new market for Russian hydrocarbons is considered to be the People’s Republic of China. On one hand its geographical proximity to the rising exploration and production areas in the Russian Far East and Eastern Siberia, on the other the fast increase of the Chinese economy and its soaring demand for energy resources both render the PRC a promising new partner for Russian energy exports (Feklyunina, 2008). Moreover, with the geographical proximity connected is the fact, that pipelines to be constructed between Russian exploration areas and the Chinese market do not have to pass through transit countries, which constitutes a fundamental advantage over Europe – especially bearing in mind the implications for transit of the current situation in Ukraine. In this context, the so-called East Siberia-Pacific Ocean (ESPO) oil pipeline constitutes the first – and already completed - project. Terminated in 2012 by the Russian oil giants Transneft and Rosneft, the nearly 4800 km long pipeline links East Siberian oil fields with the port of



Kozmino, close to the Russian borders with China and North Korea (see Map 13). The ESPO pipeline has been built in order to deliver 30 million tons of crude oil to the emerging export markets in the Asian-Pacific region, and its capacity is currently being expanded to more than double by 2020 (Transneft.com, 2015). In line with the above explained argumentation, the increase in oil sales through EPSO towards Asian markets has often been used by Moscow as a propaganda instrument towards the EU, with Russian politicians suggesting that legal impediments to the activity of Russian firms in the union are likely to lead to a more intense turn towards Asian customers (Kononczuk, 2008). Proving the strategic importance the Russian government attaches to the project, with its total cost exceeding \$23 billion as well as further funds dedicated to its expansion, ESPO is among the most expensive infrastructural constructions Russia has ever undertaken (Kononczuk, 2008).

On the other hand, with the political climate cooling down and the first rounds of Western sanctions over the crisis in Ukraine, the expansion of the Russian-Chinese energy relationship in gas trade as well has come to the fore. Firstly, in May 2014 the Russian and Chinese governments signed a \$400-billion gas supply deal, gaining much media attention, referred to as “historic” and interpreted by many as the beginning of a new era of Chinese-Russian alliance in defiance of the West (Weitz, 2014). The agreement included the construction of the so-called Power of Siberia (POS) pipeline that, according to plans, beginning from 2018 is going to deliver 38 billion cubic meters of gas per year to the Chinese market. With the deal, according to Gazprom.com, the two governments have signed the “biggest contract in the entire history of the USSR and Gazprom”, as during the whole contractual period of 30 years over 1 trillion cubic meters of gas will be supplied (Gazprom.com, 2014). Investment in the infrastructure

from both sides is planned to be more than \$70 billion, with these numbers accounting for the biggest construction project on global scale.

In addition to plans about constructing the POS pipeline constituting the “Eastern Route” towards China, on the 8<sup>th</sup> of May 2015 Gazprom and CNPC (China National Petroleum Corporation) signed a further agreement about opening the “Western Route”, projected to supply gas from Western Siberian fields to China’s Xinjiang region (Henderson, 2014). The conclusion of this deal, disposing of the construction of the Altai gas pipeline, in fact happened under rather symbolic circumstances: on the day of the military parade organized in Moscow in order to commemorate the end of the World War II in Europe, with most Western leaders boycotting the event in protest of the Russian involvement in the crisis in Ukraine, while on the other hand having Chinese President Xi Jinping as the most illustrious guest.

Of course, though, as Henderson notes, a certain dose of criticism concerning Russian diversification efforts towards the Asia-Pacific is still justified. Even if Russian media applauded the conclusion of both abovementioned deals as historic steps of opening towards new Asian markets, other, mostly Western authors have received the news with significant skepticism (Henderson, 2014). As for example O’Sullivan pointed out, negotiations about the POS project between the parts have been going on since the mid-1990s, and yet a final agreement – most importantly concerning the price of the gas to be delivered – has been reached just last year. With this, the May 2014 deal constitutes a rather unpromising precedent for the other project, where the issue of the final price is expected to be settled until the end of this year. Moreover, although the complete financial details of the POS deal are not known, Russia is believed to have accepted a price of around \$350 per thousand cubic meters, similar to what it is getting

from its European customers, while significantly lower than it was hoping for because of the higher prices of gas in Asia. This is why, doubts about Russia being able to secure advantageous prices for itself in the case of the Altai deal also remain for now (O'Sullivan, 2014) (Weitz, 2014). In the context of EU-Russian power relations this means thus that, even though on the discursive level the turn towards China is already presented as a viable alternative to European customers, certain problems remain in that relation too.

In fact, the long-standing lack of trust and difficulties concerning Russian-Chinese relations in the past are noted in general. Kaczmarek for example is emphasizing the fact that although China and Russia had long claimed to be strategic partners - having cordial political relations with growing trade and regular meetings of the respective leaders -, the fear in Moscow about increasing leverage from Beijing and of becoming a mere "resource hinterland" for the Chinese economy, hindered deeper cooperation until recently (Kaczmarek, 2015). Just after the global economic crisis 2008-9, amid falling oil prices and especially the political crisis with the West since 2014, the Russian turn towards China has become more pronounced. Though, wanting to enhance bargaining position through reducing dependence on Europe might have its price for Russia in relation to the PRC – and lead to an increased dependence there in turn. As Kaczmarek observes: *"the pattern [of dependence] Moscow rejected in its policy towards the West, was, in a modified version, accepted in relations with China"* (Kaczmarek, 2015). In fact, related to this concern, according to Baev it was personally President Putin who insisted on creating the second line of the ESPO pipeline, thus enabling the increase in Russian oil exports towards Japan, Korea and other – not Chinese – Asia-Pacific destinations (Baev, 2014, pp. 121-122).

However, even if, as Baev observes, Russian efforts for a redirection of export flows towards the East are as for now far less impressive than what the rhetoric suggests, the two recent gas deals with China constitute without doubt a significant step in the development of Russia's gas export strategy, and they do anticipate a gradual shift towards new Eastern markets (Baev, 2014). Although as for now the amount of gas that China would receive is just about one-fourth of that destined to Europe, it would mean about 16% of Gazprom's current exports and make China the second-largest national customer after Germany (Weitz, 2014). Moreover, in light of the current Ukraine crisis and Western sanctions in place against the Russian Federation, the deals have obviously a rather strong political overtone. As Henderson notes, with Western governments trying to isolate Moscow on the diplomatic level for involvement in the conflict, the agreements clearly serve to demonstrate that Russia does have alternatives to the EU markets in the mid- and long-term at least. Consequently, in case these continue striving for diversification away from Russian resources, Moscow might also be able to divert gas meant for Europe towards Asia instead (Henderson, 2014). Especially as the Altai deal concerns delivering gas to Chinese markets from the Western Siberian gas fields, currently providing for supplies towards Europe as well, it might be well used in order to enhance Russian bargaining position in negotiations vis-à-vis the EU.

In the same context, as well as in order to compensate for the mentioned fear of dependence on merely the Chinese market, Moscow has been attempting to open towards other Asian export destinations as well, though - as Kaczmarek points out - for now China practically remains a monopsonist client for Russian oil and gas in Asia (Kaczmarek, 2015). With Japan Russia has signed just one more significant energy deal, about the sales of liquefied natural gas (LNG) to Osaka Gas; with the two Koreas

security and economic concerns have until now prevented reaching an agreement about a planned pipeline crossing the whole peninsula; while with Vietnam partnerships among Vietnamese and Russian energy companies exist, but are limited and less strategically important (Weitz, 2014). In addition to this, talks about the construction of direct pipelines, transporting crude oil and natural gas from Russia with India have also been going on – though a final agreement has not been reached yet. Moreover, Russia and Pakistan have announced that they are finalizing a deal under which Moscow would lend Islamabad \$2 billion, in order to build a pipeline transporting LNG between the two countries (Pakistan Today, 2015).

Bearing in mind that most of the abovementioned energy deals the Russian Federation has been finalizing with Asian states recently are still at an initial stage of their development, just “virtual pipelines”, as the Turkish Stream towards Europe, their actual impact and final conclusion will have to be seen in the medium and longer term. However, even if the final agreements might take years to negotiate, having certain alternatives outside Europe - even just as regards the discursive level - enhances Russian position. Moreover - similarly to what is often raised as an argument about certain EU countries - the more Asia relies on Russian energy supplies, the less willing they will be to challenge Moscow’s policies regarding Ukraine and other issues.

## **7. MAIN FINDINGS**

This thesis was - in the broad sense - aimed at understanding the potential of energy interdependence for easing or exacerbating conflict in the EU-Russia energy relationship under current circumstances determined by the crisis in Ukraine. In this context, the study’s main hypothesis to be examined was that currently the energy

interdependence between EU and Russia is exacerbating tension rather than restricting it.

In order to test the above hypothesis, my work firstly focused on understanding the nature of EU-Russian interdependence in the energy sphere, coming to conclusions firstly about the presence of asymmetries within this framework. A relationship characterized by asymmetrical interdependence, according to what both the neoliberal and the neorealist theories predict, might be used by the parts in order to enhance their power, thus give room to a complicated power play between them. According to the theory, the less vulnerable part of a relationship has the stronger position as regards political power relations. However, as for the case of the EU, although being the less dependent part-, its position is strongly complicated by the presence of highly divergent interests regarding energy among MS - strengthening Moscow's position. Thus, as for the Russian-EU case, interdependence theory's predictions have to be taken with caution.

The next part of my thesis focused on the sides' respective diversification strategies as part of the political power play between the EU and Russia. In this context, diversifying strengthens (bargaining) position, however, it obviously weakens the logic of interdependence. As seen, on one hand, the power play is accentuated by the diverging interests of the sides as respectively consumer (thus interested in diversifying suppliers and energy sources) and supplier (striving for more and more lucrative markets). In fact, the EU's pursuit for new suppliers is seen with skepticism by Russia, who in response is trying to obstruct such initiatives. Firstly it is doing so, as shown for the case of Nabucco, by buying up energy infrastructure and the resources that would be necessary to fill the European pipelines. Secondly, in striving to cement its position in European markets by relying on long-term, bilateral supply contracts in its gas trade and

buying up downstream infrastructure within the EU - causing, in fact, enhanced controversy from Brussels' side, as seen regarding the Third Energy Package. Thirdly, through building the mentioned Nord Stream and South Stream/Turkish Stream pipelines, bypassing transit countries deemed uncooperative, and winning certain Central-Eastern-Southern MS' support for its projects, Moscow also enhances its power position. Demonstrating its importance for the Russian supplier - although Brussels' internal pursuit of diversification of its energy resources does not affect Russian interests as directly as the turn towards new suppliers -, these endeavors have also been dismissed with criticism by Russian officials. In turn, the Russian "turn towards east" has been deemed a "bluff" by Western officials, while Brussels has been countering Russian pipeline projects by pushing towards liberalization of its energy markets and invoking legal obstacles – as was the case surrounding South Stream and its collision with the TEP.

Furthermore, as seen, especially under circumstances of conflict the importance of reducing the sides' sensitivity and vulnerability came to the limelight over and over again. The 2006, 2009 gas supply crises between Russia and Ukraine have induced the parts to rethink their dependence, with the EU adopting measures such as the 2006 Green Paper calling for an enhanced diversification of suppliers or the 2009 Renewables Directive, advocating the reduction of the reliance on "particular fuels and suppliers"; while Russia announcing the construction of South Stream in 2006 or the doubling of its capacity in 2009. In line with this, under the current conflict in Ukraine – already ongoing for more than a year - the importance of diversification strategies has come especially to the fore. Since March 2014 the European side has increasingly reiterated the importance of reducing the continent's dependence on Russian gas, the European Energy Security Strategy was adopted; stress tests were conducted simulating the

continent's vulnerability to supply cuts and the Energy Union plan is being put forward. The Russian side, in turn, has signed new, monumental gas supply contracts with China, and announced the construction of a new pipeline *towards*, but not anymore *to* the EU.

In line with this, as it is under conflict situations as the ongoing crisis in Ukraine that the sides become increasingly aware of their high levels of sensitivity and vulnerability, the importance of diversification efforts comes to the fore during these situations. The parts are incentivized to take further steps in order to decrease the mutual dependence (and at the same time demonstrate their relative power). In this context, thus, interdependence is not considered as mutually beneficial by the parties, but is pushing the sides further apart - leading to a situation of "negative interdependence". Under these circumstances, although interdependence persists, the sides are moving towards an alteration of the relationship as regards the longer term.

## **8. CONCLUSIONS**

After the first, introductory chapter, the review of the main literature and methodology used during the research, the study presented the theoretical underpinning to be utilized in the following chapters. The interdependence model, including the widely researched connection between economic interdependence and its potential to either restrict or exacerbate political conflict in respectively the liberal and realist traditions in international relations theory were outlined, together with the importance of terms like "sensitivity", "vulnerability" and "positive" or "negative" interdependence. In the following chapter my research was aimed at the descriptive analysis of statistical data concerning hydrocarbon resources (crude oil and natural gas) in the Russian Federation and the European Union, as well as their importance for respectively the



Russian and European economies. Based on these data a preliminary conclusion was drawn regarding the characteristics of energy interdependence between the two actors, defining this situation as in fact asymmetrical in favor of the EU (as a whole), though implying high sensitivity and vulnerability levels for both parties. As shown, sensitivity and vulnerability of the Russian Federation might be higher in relation with Brussels, though as within the EU significant differences in Member States' energy dependence on Russian resources persist, relating the EU as a whole and Russia is insufficient.

The consequent chapter has connected the issue of asymmetrical energy interdependence proven by the statistics to the concept of political power. As interdependence theory predicts, asymmetries in interdependence can be used as sources of political power, leading to complicated power plays between the actors. In this sense, the next part of my thesis focused on the sides' respective diversification strategies as part of the political power play between the EU and Russia.

As shown, both sides have been pursuing diversification efforts in order to reduce their vulnerability, thus also increase their bargaining position towards each other – though, being on opposite sides of the supplier-consumer relationship, energy security has diverging meanings for the EU and Russia. Consequently, undertaking diversification efforts is inherently conflictive between the sides: for the EU, - especially for its Central and Eastern European Member States - finding new suppliers and reducing dependence on energy imports (among other measures) through increasing indigenous production is essential; while the Russian Federation aims at cementing its position in its most lucrative EU markets as well as to extend its exports to other markets. In line with this, Russia has on one hand been “looking east”, pursuing extremely costly contracts and projects mainly with the People's Republic of China, while on the other enhancing its position towards Europe through (among other

measures) the construction of new export infrastructure such as Nord Stream or (potentially) Turkish Stream, with the avoidance of problematic transit states. The EU, in turn, in order to enhance its position towards Russia, in the realm of diversification is looking towards new regions to find alternative suppliers or promoting a diversification of energy sources used within the union.

Although the pursuit of diversification, as mentioned, is inherently conflictive, its importance rises extraordinarily during conflict situations. Especially during times of crisis, when political crisis overshadows the presence of the economic linkage, the parts' are becoming increasingly aware of their sensitivity as well as vulnerability. In this context, crisis situations are drivers for change, inducing diversification on both sides, exacerbating mistrust and suspicion further.

As this thesis argues thus, the demonstrated high levels of economic interdependence in EU-Russia relations are currently pushing the sides further apart, leading to a situation of "negative interdependence" as defined in the theoretical underpinning to this thesis. In this context, the mutual dependence between the two actors is not perceived by either of them as stabilizing their relations, but rather as harmful, inducing both to diminish their connection, interdependence is considered as a burden, paving the way for further disconnection between the parts. However, exactly because the EU and Russia are interdependent in the energy sphere, displaying high levels of vulnerability, a complete reconsideration of their relationship concerns the longer term.

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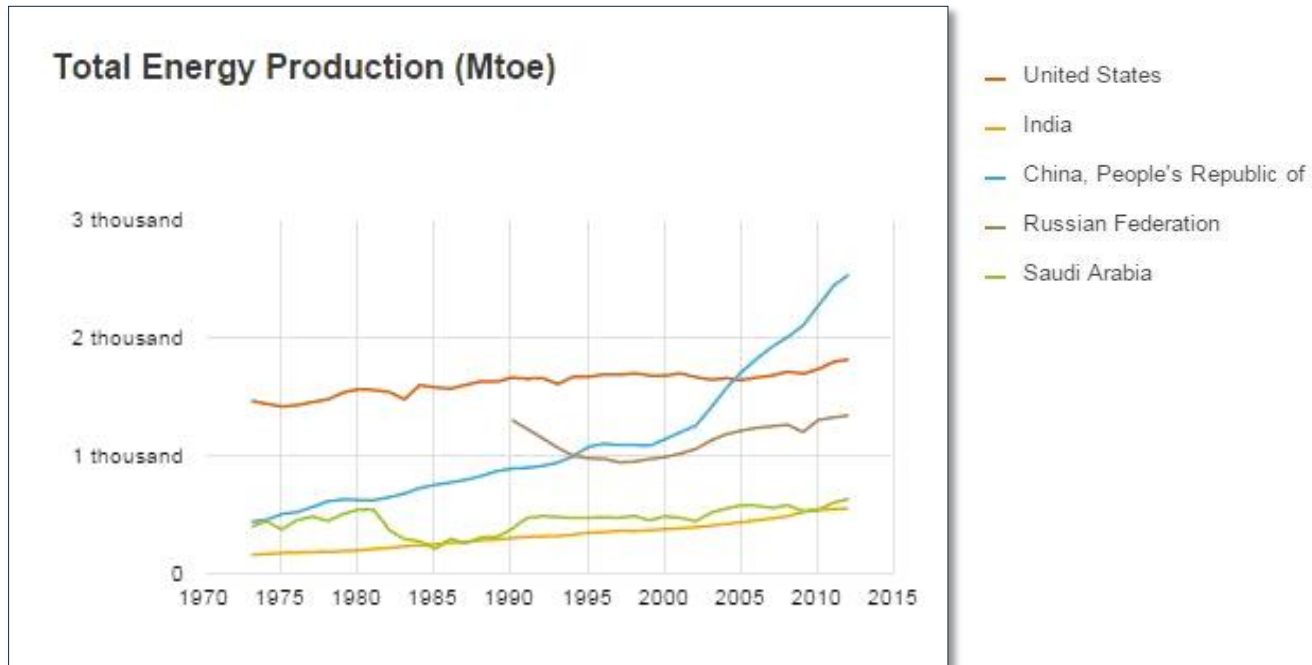
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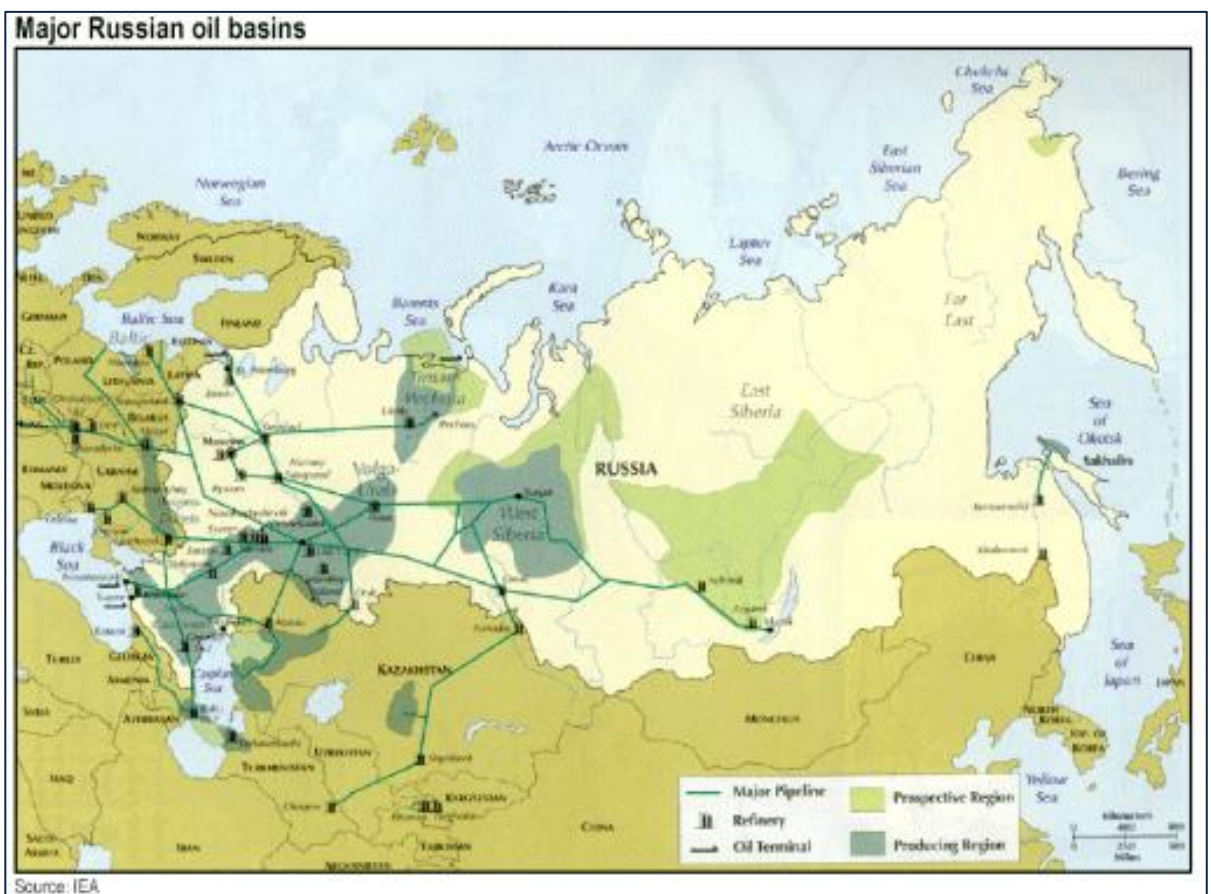
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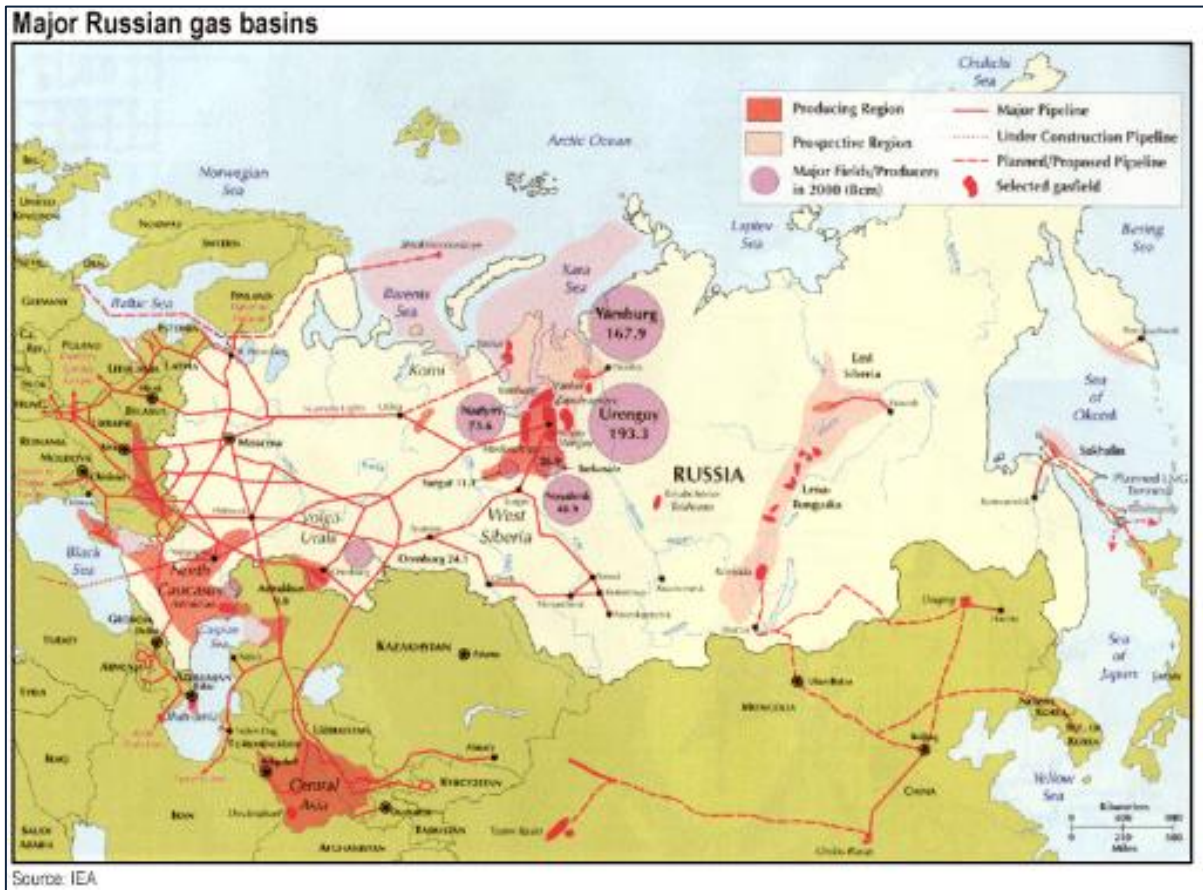
## APPENDIX



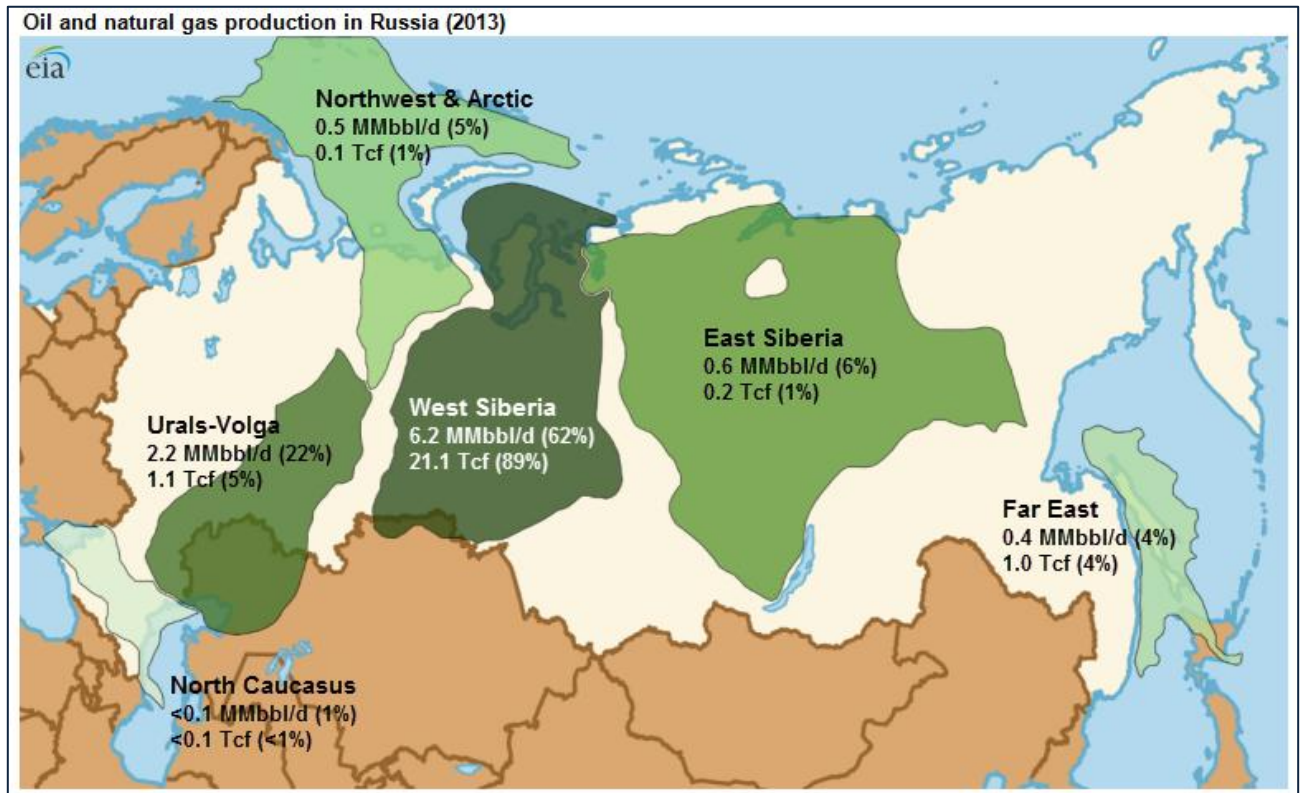
Graph 1: Total primary energy production of the five major producer countries  
Source: IEA



Map 1. Major Russian oil fields  
Source: IEA



**Map 2: Major Russian gas basins**  
Source: IEA

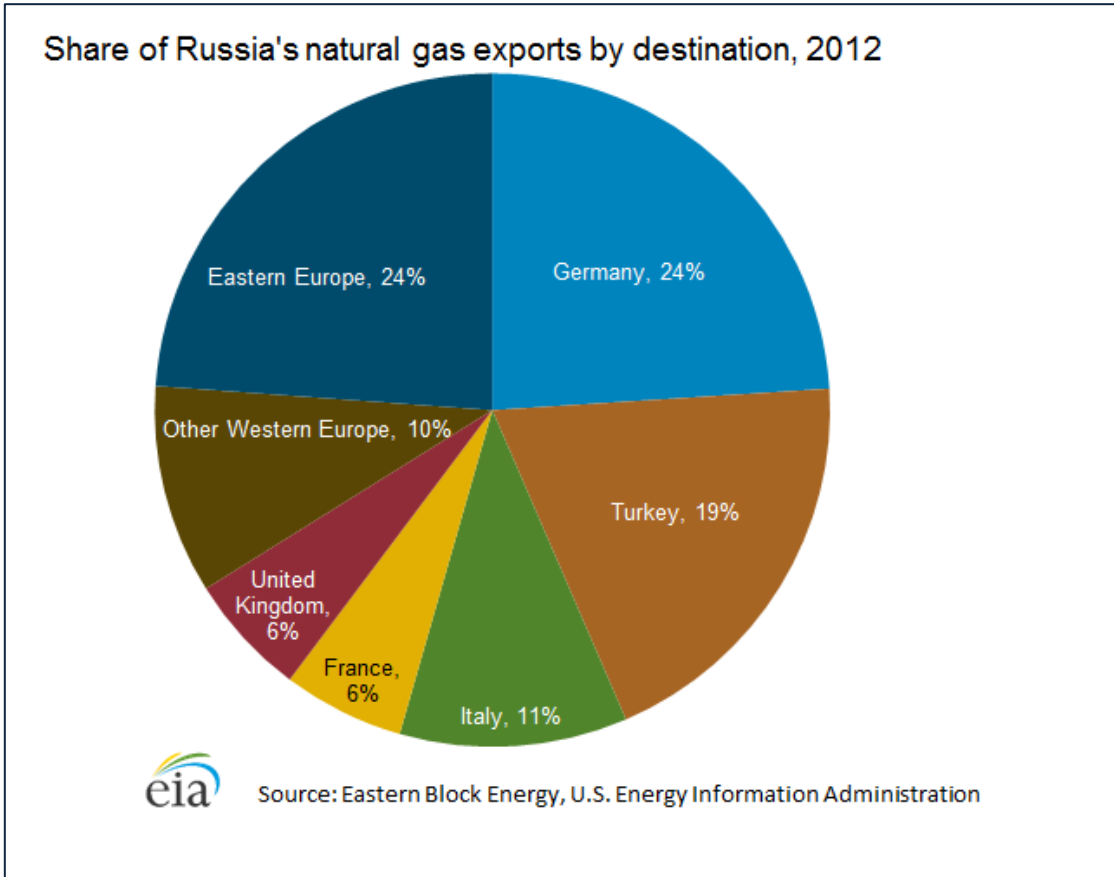


**Map 3: Major oil and natural gas producing regions in Russia**  
Source: US EIA

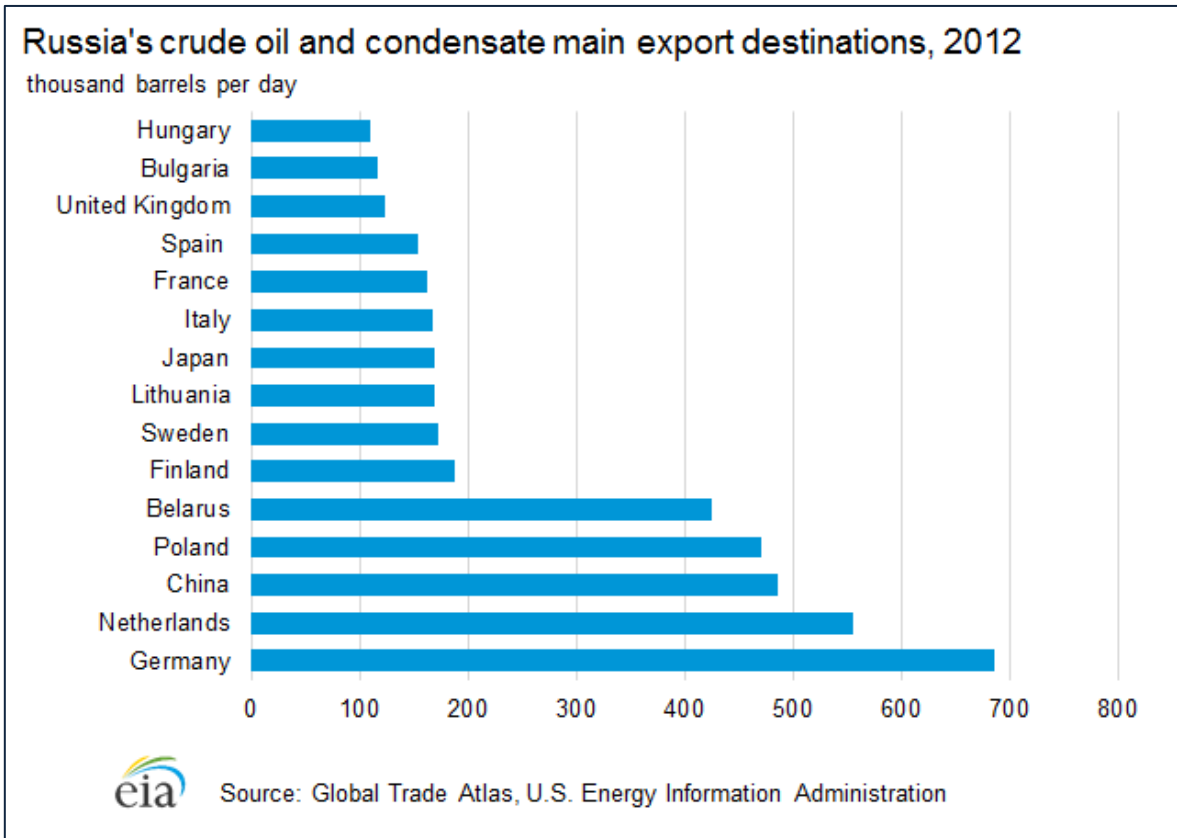


**Map 4: Major oil and gas pipelines from Russia to Europe**

Source: Aworldin crisis.org

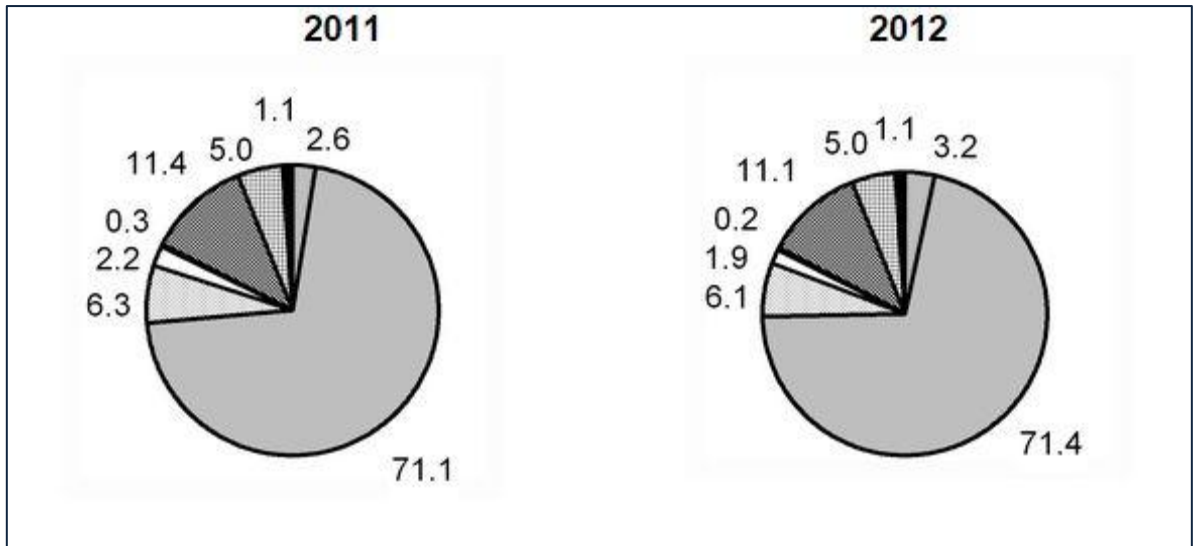


**Graph 2: Share of Russian natural gas exports to Europe by destination, 2012**  
 Source: US EIA



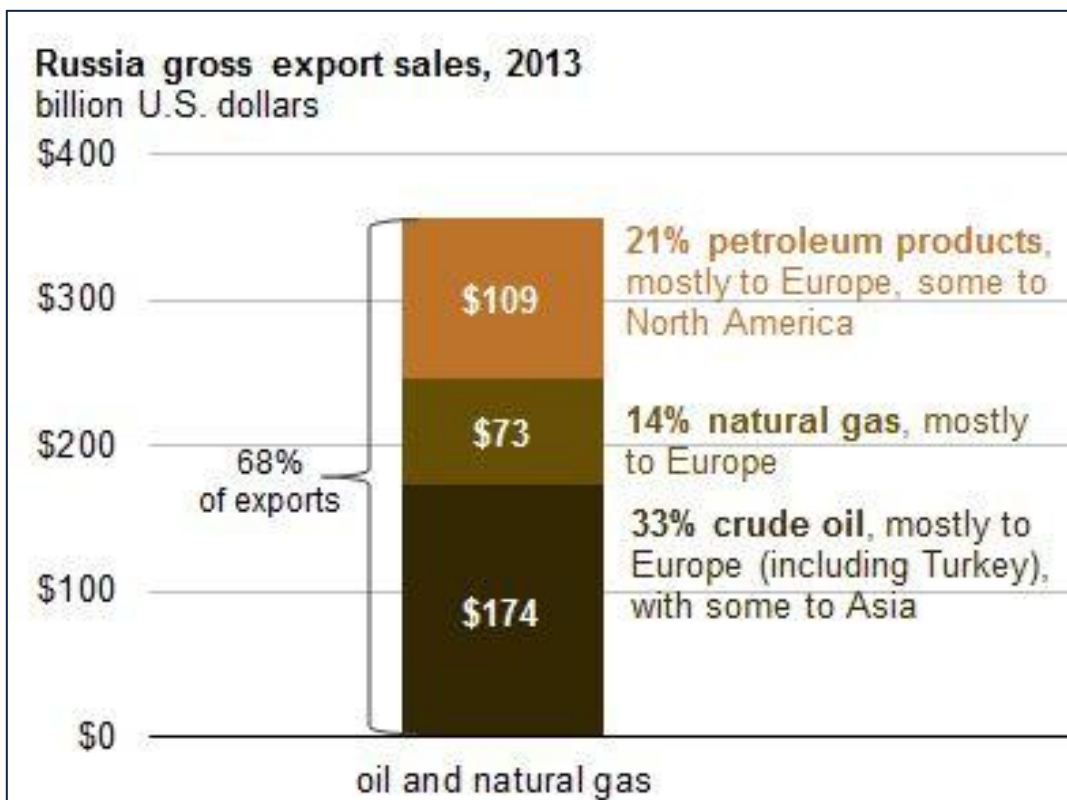
**Graph 3: Main destinations for Russian oil exports, 2012**  
 Source: US EIA





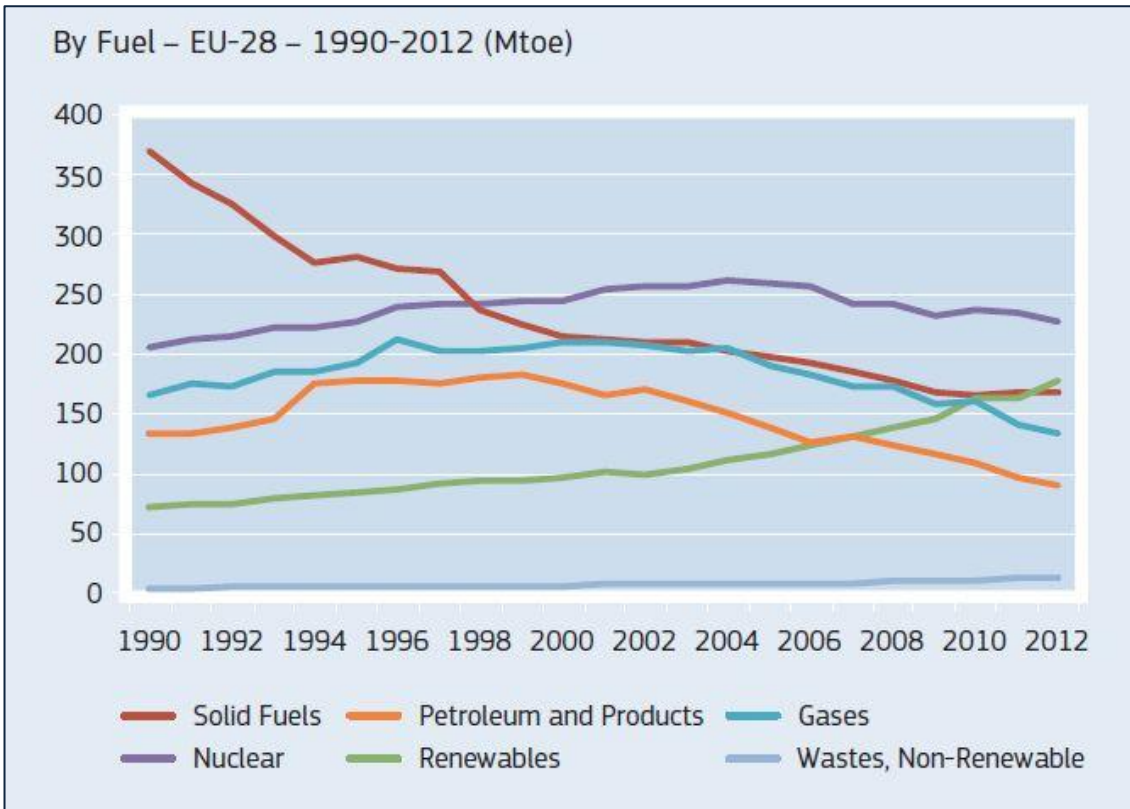
**Graph 4: Commodity structure of Russian exports**  
(71.1% and 71.4% standing for mineral products incl. oil and gas)

Source: Goskomstat



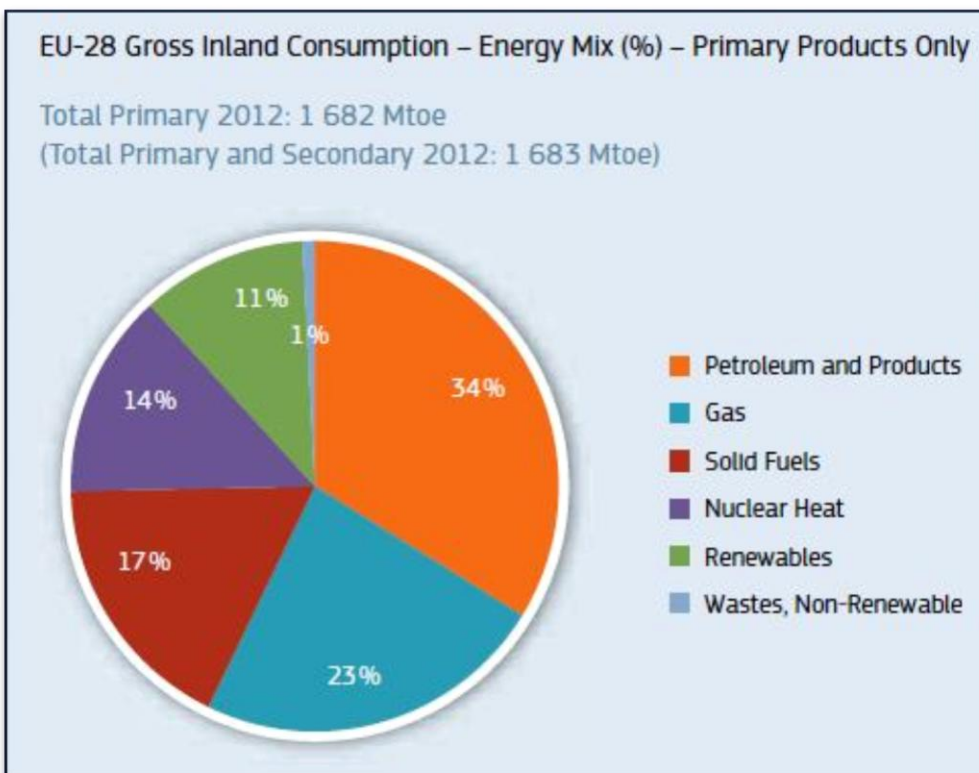
**Graph 5: Russian gross export sales, 2013**

Source: US EIA



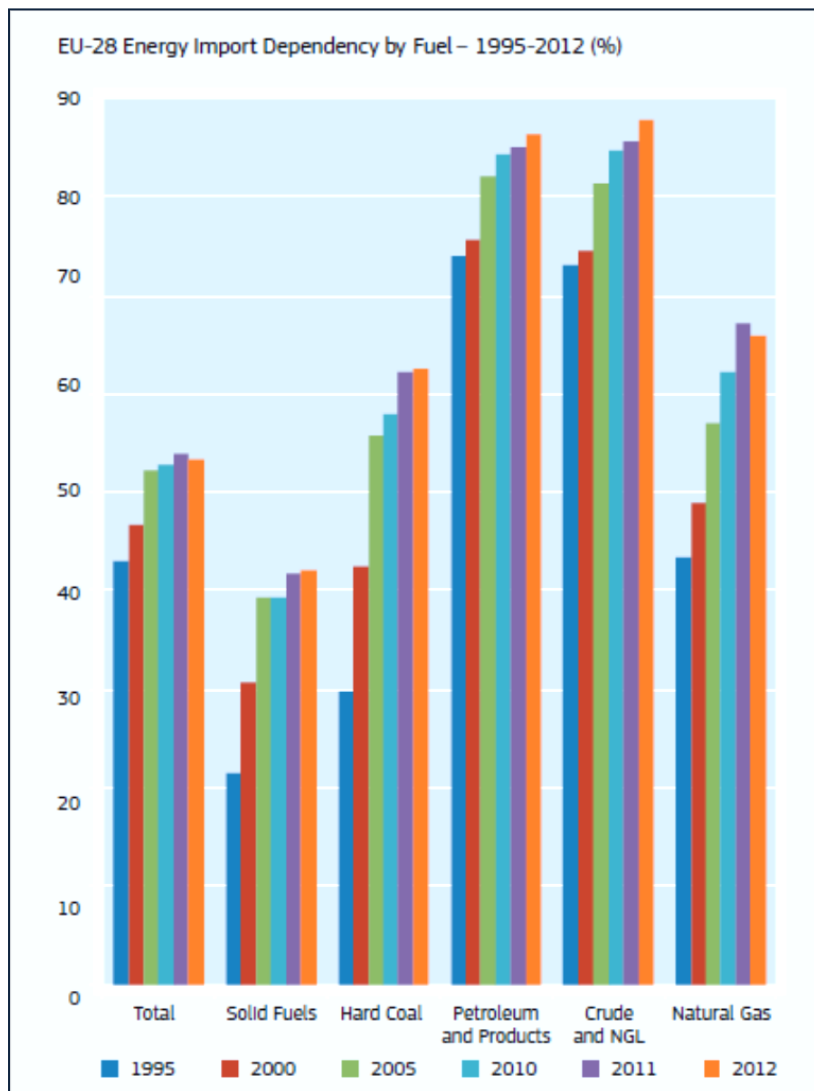
**Graph 6: EU primary energy production by fuel, 1990-2012**

Source: EU Energy in Figures, Statistical Pocketbook 2014

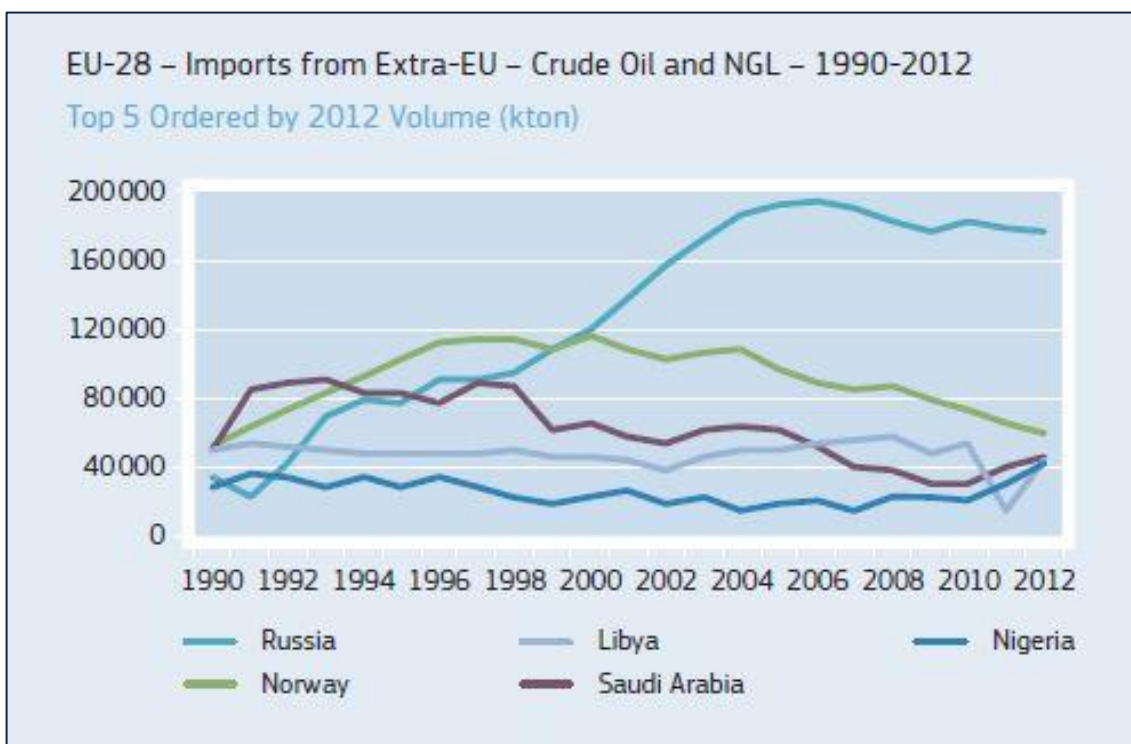


**Graph 7: EU-28 energy mix, 2012**

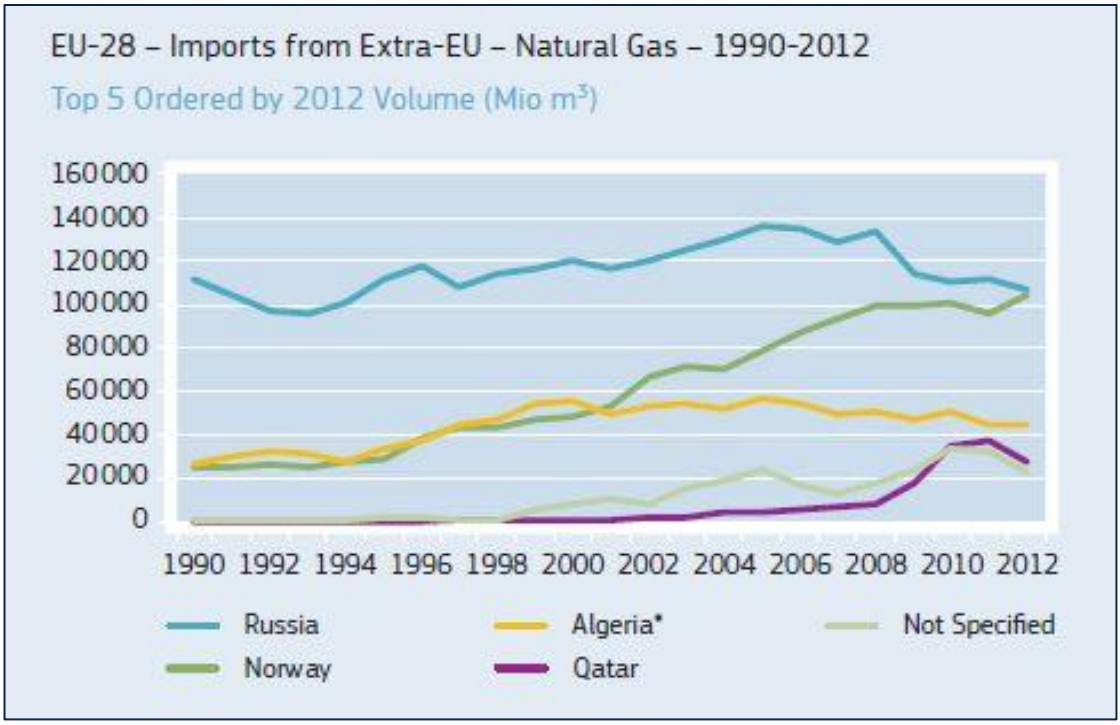
Source: EU Energy in Figures, Statistical Pocketbook 2014



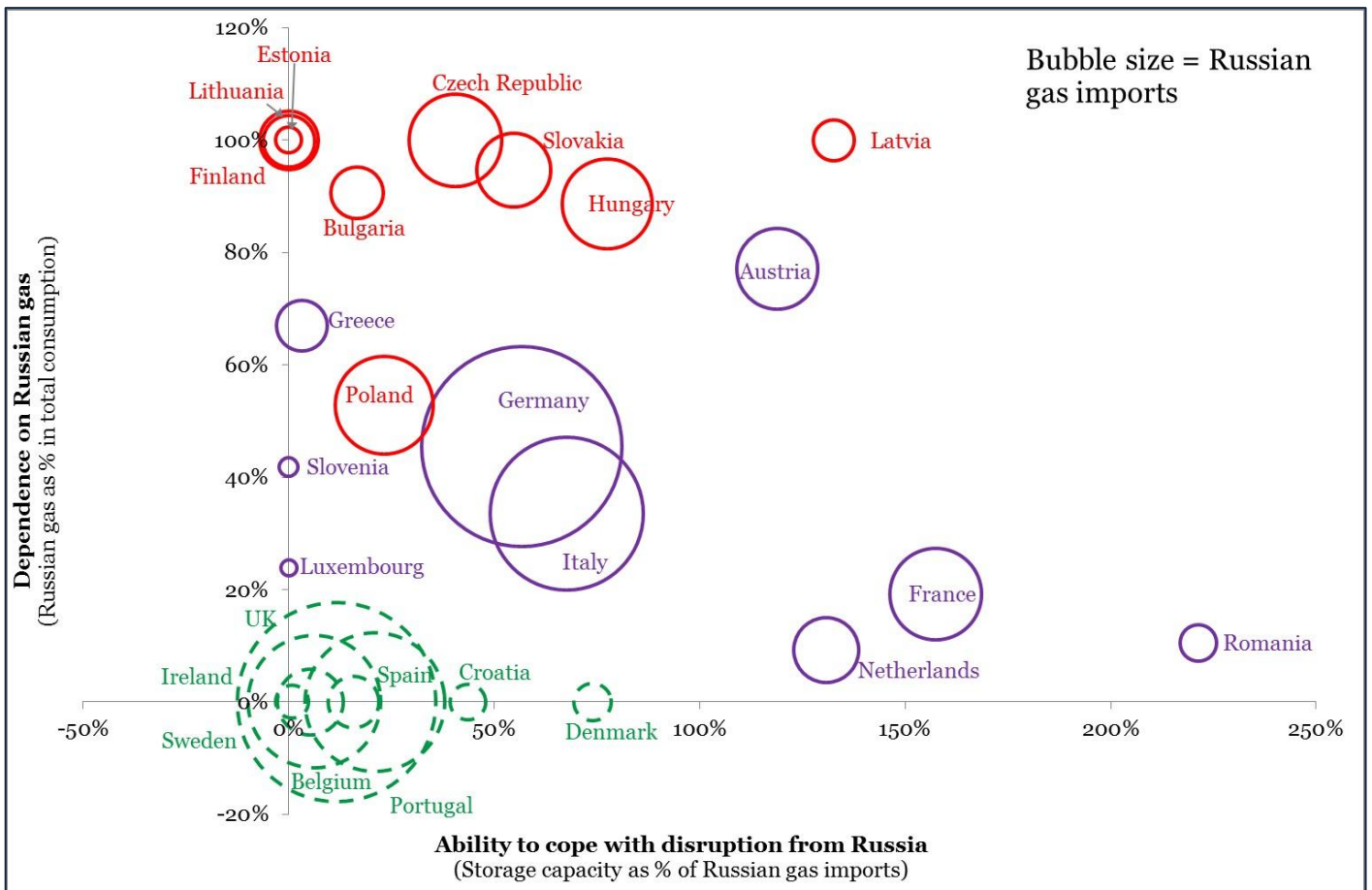
**Graph 8: EU-28 import dependency by fuel, 1995-2012**  
 Source: EU Energy in Figures, Statistical Pocketbook 2014



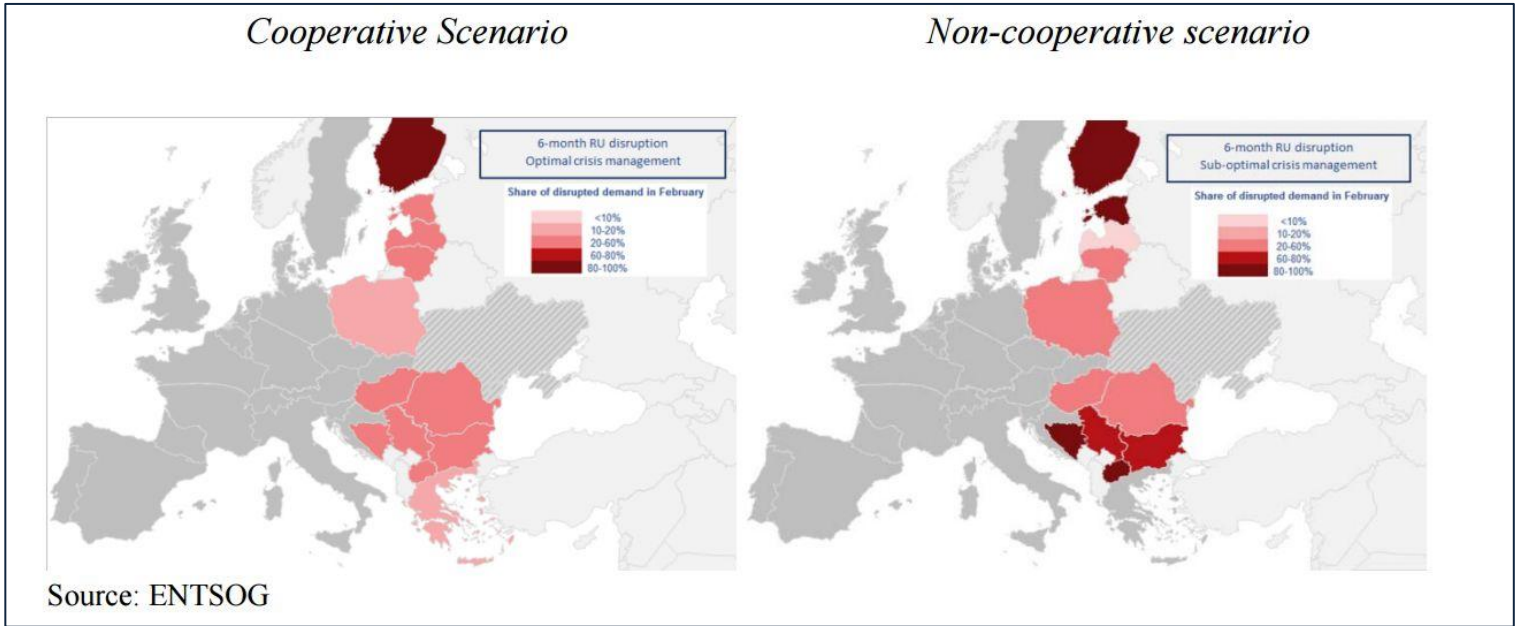
**Graph 9: Crude oil imports from extra-EU, 1990-2012**  
 Source: EU Energy in Figures, Statistical Pocketbook 2014



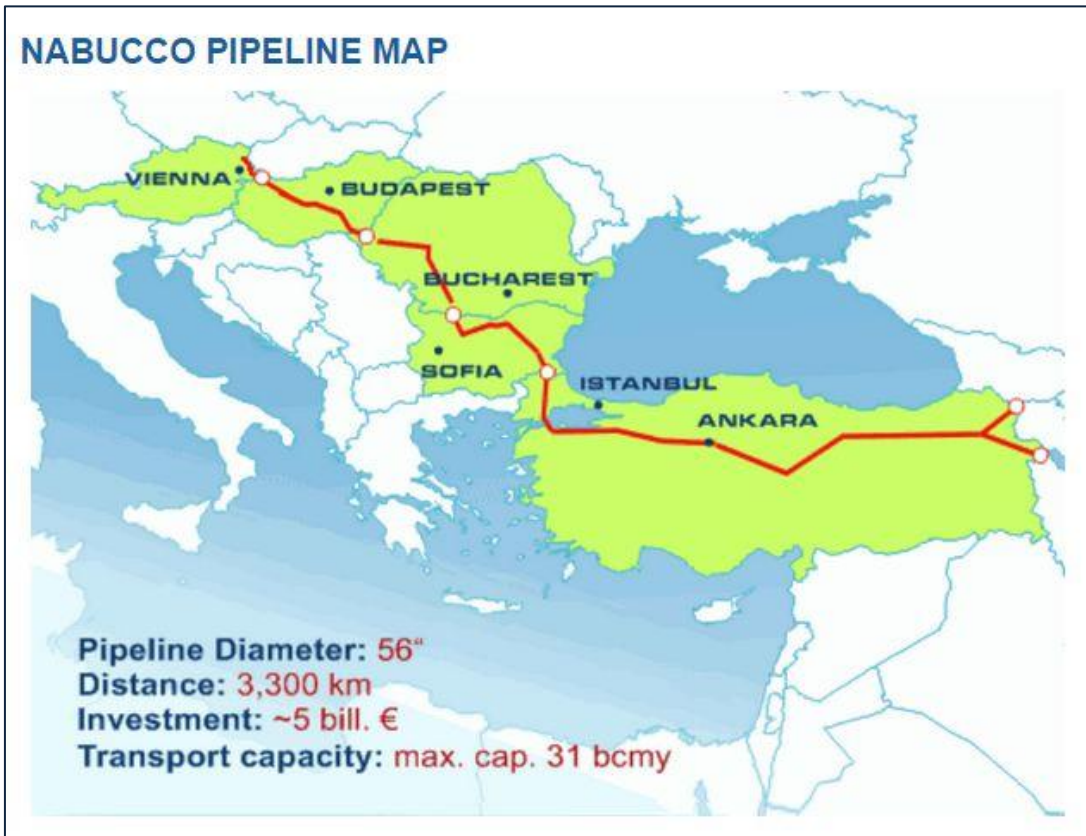
**Graph 10: Natural gas imports from extra-EU, 1990-2012**  
 Source: EU Energy in Figures, Statistical Pocketbook 2014



**Graph 11: Vulnerability to Russian gas supply disruptions by EU country**  
 Source: ECFR



**Map 5: Results of the European Commission Stress tests on preparedness for a possible supply disruption, 2014**  
Source: European Commission



**Map 6: The Nabucco project**  
Source: European Dialogue



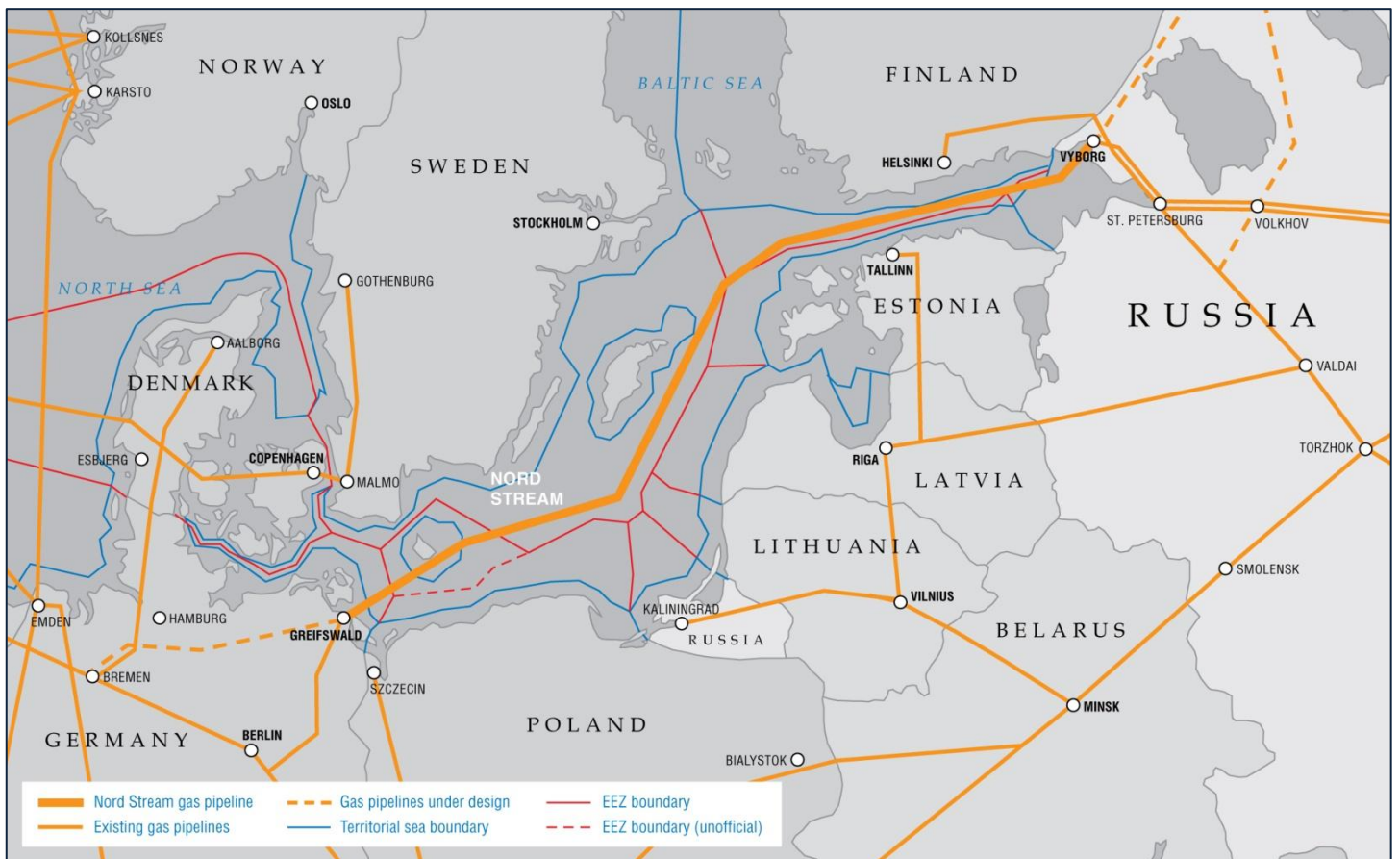
Map 7: The Nabucco and South Stream projects  
Source: BBC



Map 8: The Nabucco West project  
Source: Nabucco Consortium



**Map 9: The TANAP and TAP projects**  
Source: BP



**Map 10: The Nord Stream pipeline**  
Source: Gazprom

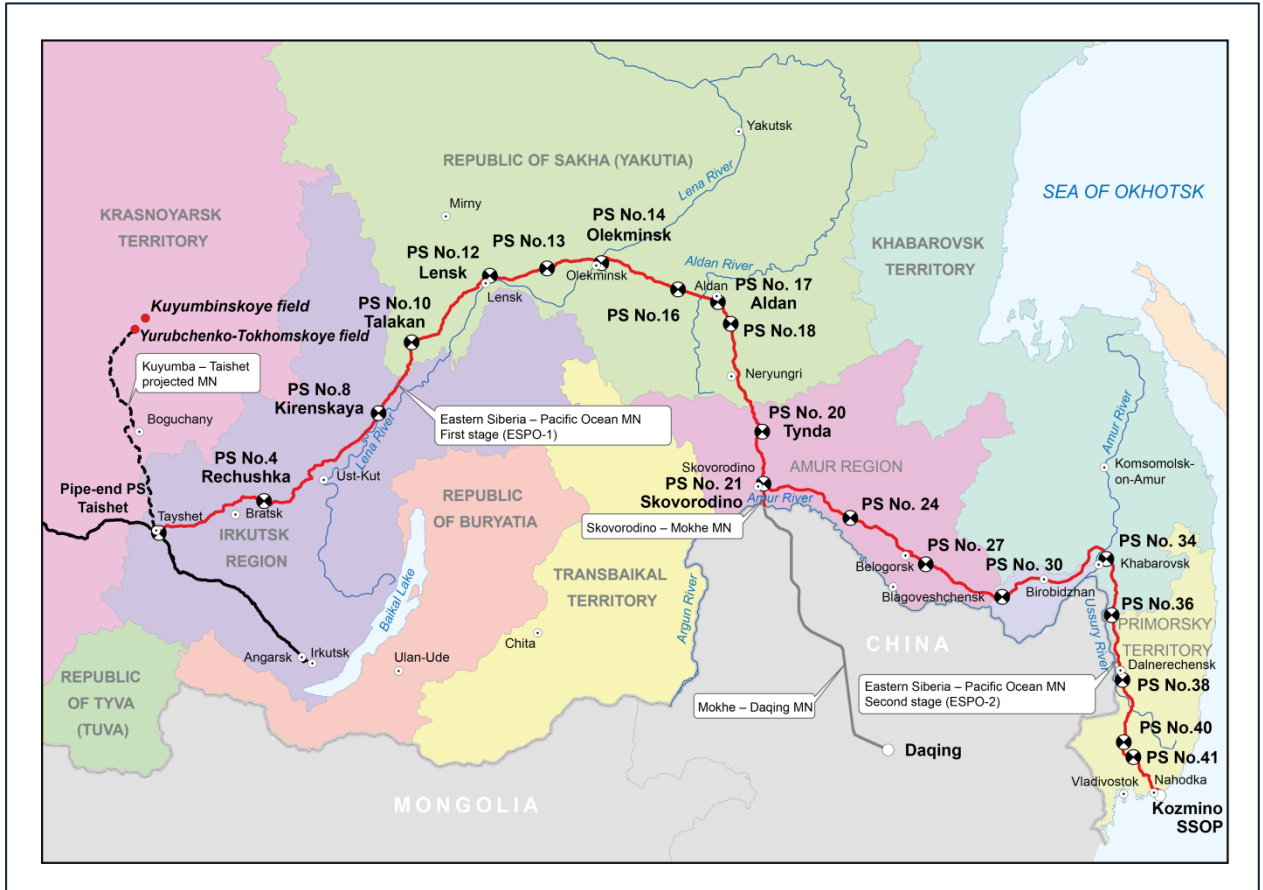


**Map 11: The South Stream pipeline**  
Source: Gazprom



**Map 12: The Turkish Stream project**  
Source: Gazprom





**Map 13: The ESPO oil pipeline**  
Source: Transneft



**Map 14: The Power of Siberia pipeline**  
Source: Gazprom