THE INTERDEPENDENCY BETWEEN RUSSIA AND THE EUROPEAN UNION: SECURITY OF SUPPLY OR SECURITY OF DEMAND?

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THE INTERDEPENDENCY BETWEEN RUSSIA AND THE EUROPEAN UNION: SECURITY OF SUPPLY OR SECURITY OF DEMAND?

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ABSTRACT

THE INTERDEPENDENCY BETWEEN RUSSIA AND THE EUROPEAN UNION: SECURITY OF SUPPLY OR SECURITY OF DEMAND?

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It is a commonly acknowledged fact that energy has a substantial role for the states. The level of interdependency between countries in terms of energy trade puts them into a vulnerable position if any controversial circumstance related to energy issues ever happens. Provided the framework, indeed, the very recent Crimea crisis had a global effect on the energy markets, especially on Russia, Ukraine and the European Union. The crisis has deepened the debate that the dependent countries on Russia to search for diversifying their natural gas sources in order to decrease vulnerability. What is more to that is both sides of the energy trade, namely Russia and the European Union, have been adversely affected which resulted for Russia to seek new customers and for EU to look for alternative sources and resources for the purpose of diversification in

medium and long term. For a Union that 34% of its imported gas is coming from Russia, which accounts for 162,4 billion cubic meters (bcm) of gas, it is difficult to substitute the source of supply as much as it is difficult for Russia to instantly find alternative buyers. Thus, it is noticeable that this crisis would bring various alterations on the politics of natural gas for both parties. Considering the facts that there about to happen several changes that would effect the relations between Russia and the EU, the main question of this study is to analyse future challenges triggered by the latest crisis in Crimea in terms of energy security with respect to the interdependency theory, while regarding the Sino-Russian and Turco-Russian relations as well.

Keywords: Russia, European Union, Ukraine, Turkey, China, Natural Gas, Interdependency, Crimea Crisis, Energy Security

ÖZET

AVRUPA BİRLİĞİ VE RUSYA ARASINDAKİ KARŞILIKLI BAĞIMLILIK: ARZ GÜVENLİĞİ Mİ, TALEP GÜVENLİĞİ Mİ?

DÖNMEZ, Sinem

Sürdürülebilir Enerji Yüksek Lisans Programı,

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Enerjinin devletler için önemli bir role sahip olduğu yaygın olarak kabul edilmiş bir gerçektir. Enerji ticareti bağlamında ülkeler arasındaki karşılıklı bağımlılık düzeyi, bu alanda yaşanabilecek herhangi tartışmalı bir durum söz konusu olduğunda ülkeleri savunmasız bir konuma sokabilmektedir. Bu çerçeve kapsamında, nitekim son zamanlarda Ukrayna ve Rusya arasında yaşanmış olan Kırım krizinin başta Ukrayna, Rusya ve Avrupa Birliği olmak üzere küresel enerji piyasası üzerinde etkileri hissedilmiştir. Yaşanan bu kriz, doğal gaz tedarikinde Rusya'ya bağlı olan Avrupa Birliği ülkelerinin tedarikte tek bir ülkeye fazlaca olan bağımlılığın yaratmış olduğu hassasiyeti azaltmak adına kaynak çeşitlendirmesi arayışına girmelerini tetikleyici bir unsur olarak

nitelendirilmektedir. Bu duruma ek olarak, Rusya ve Avrupa Birliği krizin sonuçlarından, Rusya'nın doğal gazı için alternatif müşteriler ve AB'nin de kısa ve orta vadeli dönemde kaynak ve tedarikçi çeşitlendirmesi yapabilmek adına yeni alternatif arayışına girmesi sebebiyle olumsuz bir şekilde etkilenmişlerdir.

Doğal gaz ithalatında gazının %34 (162,4 milyar m^3)'ünü Rusya'dan tedarik eden bir birlik için kısa zamanda en büyük tedarik kaynağı yerine alternatiflerini bulmak zor olduğu kadar, Rusya için de kısa sürede doğal gazına yeni alıcı piyasalar bulmak için zorluklar söz konusudur. Bu sebeple de Kırım krizinin geçmişte yaşanmış olan doğal gaz krizleriyle birlikte Rusya ve AB arasındaki doğal gaz politikaları üzerinde bazı değişimler yaratacağı söylenebilir. Gelecekteki AB ve Rusya enerji ilişkilerinde yaşanabilmesi muhtemel değişikliklerin değerlendirilebilmesi adına bu tezin ana sorusu 'karşılıklı bağımlılık teorisi çerçevesinde gelecekteki Rusya ve AB arası enerji ilişkilerinde Rusya-Çin ve Rusya-Türkiye ilişkileri de göz önünde bulundurularak Kırım krizinin belirleyici bir rolünün olup olmadığı' olarak belirlenmiştir.

Anahtar Kelimeler: Rusya, Avrupa Birliği, Ukrayna, Türkiye, Çin, Doğal Gaz, Karşılıklı Bağımlılık, Kırım Krizi, Enerji Güvenliği

TO MY FAMILY

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CHAPTER 1

INTRODUCTION

The relationship between the European Union and Russia in terms of energy can best be titled as asymmetric interdependence, since both parties are dependent on each other; as Russia for gas exports income and EU for Russian gas supplies and thus Russia's power to be the biggest supplier of EU creates the asymmetry in their relationship (Harsem & Claes, 2013). Regarding the history of gas relations between the EU and Russia, interdependency is the decisive factor from the end of 1960s forward; such that, between the 1970s and mid-1990s, the state of relations was rather stable which only concerned contractual relations; however, the state relations has been unstable due to tensions and conflicts mostly because of gas transit disputes that took place with Ukraine, with the beginning of 2000s (Boussena & Locatelli, 2013). In January 2006, EU Member States have been distressed with the fear of gas supply cuts due to the dispute between Russia and Ukraine as the rate of gas dependency on Russian imports of European countries' was 40% back then and this situation has raised concerns of deteriorating relations together with geopolitical power struggle over politicians and media (Finon & Locatelli,

2008). While with the 2006 crisis, a number of western European countries have faced cutbacks in gas supply; in January 2009 another gas dispute, which took place between Russia and Ukraine, has caused a complete gas cutback in South-Eastern Europe for approximately two weeks and major shortfalls of gas in some other western European countries (Le Coq & Paltseva, 2012).

It has been stated in the study conducted by Kratochvil and Tichy (2013) that the interdependence between EU and Russia is in favour of the EU since Russia is more dependent on EU market than EU is dependent on Russian gas supplies because Russia would be a lot more affected by the lack of diversification alternatives to be found in the medium term due to its geography and also because of high fiscal dependence on the financial means from the EU. Currently, more than 50% of Russian natural gas exports and almost two thirds of oil exports are destined to the EU; which around 30% of the EU's hydrocarbon imports originated from Russia (Romanova, 2014). Three risks can be created due to the import dependency, which are source dependence, transit dependence and facility dependence and the circumstances between the EU, Russia and Ukraine represents source and transit dependence that would have result in great damages which is often overlooked in EU policy-making circles (Spanjer, 2007).

The latest event took place in the first quarter of 2014 that was the annexation and occupation of Crimea and Russia's engagements to

destabilize the situation in East Ukraine has again elevated the energy security problem which resulted for EU to take decisions on strengthening efforts to decrease gas dependency on Russia by increasing energy efficiency, diversification and increase in the use of indigenous resources (De Micco, 2014). Although the EU and Russia are strategic partners due to their geography, common history, social and economic obligations, their relationship is now going through a phase of pressure due to innovation requirements and the crises in the past (Kempe & Ochmann, 2013). Since the dependency rates of EU states on Russian natural gas varies from each other, the cutbacks of gas as a result of the crises would have significant effects on more dependent states within the EU since it is also dependent on Ukraine as a transit country to acquire Russian gas (Sharples & Judge, 2014).

On the other hand, China's energy market is the world's fastest-growing one, and Russia is now in need of turning to eastern markets due to the limited growth opportunities in the future of oil and natural gas markets in Europe, hence this in turn would create an 'Asian card' toward the European Union countries which are sceptic about Russia's use of energy as a diplomatic tool and accordingly trying to decrease their dependence on Russia (Itoh, 2011). Most recently the actions of Russia in Crimea and Ukraine in 2014, have led the European countries to rethink their level of dependency on Russia especially in natural gas and the member countries came to a decision that it would be better to decrease their reliance on

Russia which would actually take a long time to be achieved (Chang, 2014).

Ultimately in March 2013, there had been a memorandum of understanding between the Russian Gazprom and China National Petroleum Corporation for the delivery of 38 bcm of natural gas to China for 30 years starting in 2018. This agreement is important for Russia to show the world that it has not stepped out from the international scene and it has non-western alternatives to maintain its position (Skalamera, 2014). Another important aspect of this agreement is that after ten years of negotiations between Russia and China, this agreement brings a profound connection for Russia as it is facing the threats of sanctions due to its actions in the latest Ukraine crisis (Koch-Weser & Murray, 2014). However with an agreement between Russia and China, the latter will be benefited to secure its gas supplies, which would cover a large part of its gas demand, but there aren't any natural gas pipelines between China and Russia up until today and the trade was taking place via LNG which only accounted for 1 per cent of China's total gas import in 2012 and in 2013 there hasn't been any LNG trade among the two countries (Odgaard & Delman, 2014; BP, 2014). Nevertheless, the lack of a gas pipeline between the states was due to Gazprom's reluctance of building an expensive pipeline since they could not settle on a pricing method for the deliveries (Weitz, 2014). On the other hand, Russia has recently declared that the construction of the South Stream pipeline project has been postponed and the direction of the pipeline route would be changed through to Turkey

instead of its original route transporting Russian gas through Black Sea to Bulgaria, Serbia, Hungary, Slovenia and Austria, also with a possibility of a hub on the Turkish-Greek border that could ship the natural gas to southern Europe (Jensen, 2014). Moreover the developments in the construction of TANAP (Trans-Anatolian Pipeline) natural gas pipeline project is aimed to carry gas from Azerbaijan's Shah Deniz 2 field of Caspian Region primarily to Turkey and then to Europe by combining with the South Caucasus Pipeline (SCP) and Trans-Adriatic Pipeline (TAP) and forming the Southern Natural Gas Corridor (TANAP, 2015). Besides, the Nabucco project was also favoured by the EU and became a leading project in the Southern Gas Corridor which was designed to carry natural gas from Caspian and Middle Eastern Regions to Europe but this project was failed due to market uncertainties, commercial and financial reasons since all potential suppliers were experiencing hardship in materializing their motivation to bring gas to Europe via Turkey (Tagliapietra, 2014).

Given the recent developments between Russia-EU together with the relations of Russia-China and Russia-Turkey, the purpose of this study is to shed a light on the possibilities of future agreements and cooperation among these states, deliberately focusing on the natural gas trade relations between Russia and the EU since their relationship of dependency is caused by their bilateral trade of natural gas by referring to the ***interdependency theory,*** while reviewing the ***regional energy security complex theory*** and ***energy security*** together with considering the bilateral relations of Sino-Russian and Turco-Russian in terms of natural gas.

Hence, together with its main question that is whether the Crimea crisis is a triggering factor for the possibility of changes about to happen in the interdependency relations between Russia and the EU or not, considering natural gas trade. Therefore, this study aims to find answers to the consequent research questions:

i) What is the level of interdependency between Russia and the EU Member States, considering the natural gas trade?

ii) Is interdependency an important factor in the energy policy making of Russia and the EU?

iii) What is the impact of the recent Crimea crisis together with the previous crisis between Russia and Ukraine on the natural gas trade between Russia and the EU?

iv) How would the recent geopolitical shifts such as the new Sino-Russian agreement on natural gas, cancellation of South Stream and newly emerged Turco-Russian cooperation on a new pipeline, recalled as Turk Stream, affect the future relationship between Russia and the EU, through energy security perspective?

The study consists of 8 chapters. **Chapter 1** is the 'Introduction' in which a general and brief state of the art is provided in relation to the European Union and Russian energy relationship, regarding the recent developments happened in Crimea and the latest evolvements in Sino-Russian and Turco-Russian relations.

Chapter 2 is the 'Literature Review' chapter where interdependency and regional security complex theories, and energy security concept in order to create a base for analysis in the upcoming chapters are being explained.

Chapter 3 and **Chapter 4** are the chapters in which European Union and Russia's energy profile and strategies together with Russia's relationship to Turkey and China respectively, due to recent geopolitical developments which are the Turkish Stream and the Chinese natural gas deal are being explained respectively in order to understand the role of interdependency in the energy policy making of Russia and the EU.

Thus, in **Chapter 5**, this study deliberately choose to focus on natural gas, rather than any other energy resources as it is focal point of the energy trade and interdependency between Russia and the EU as discussed.

Consequently, **Chapter 6** is providing a background insight to examine the recent and past contradictions between Russia and its most important natural gas transit country towards the EU, Ukraine, and the existed and possible impact of these disputes.

Chapter 7 is the 'Analysis and Findings' chapter where four research questions that are stated in the introduction part of the study are being discussed.

Finally **Chapter 8** is the 'Conclusion' chapter in which the study is trying to illustrate both the possible agreements and contradictions of natural gas trade in the Russian-European Union interdependency relationship with regards to China and Turkey as collateral actors in the general picture.

CHAPTER 2

LITERATURE REVIEW

The notable decision of Winston Churchill before the commencement of World War I in 1914 to change the source of power of Britain's navy ships from coal to oil transformed the notion of energy security to a matter of national security and according to Daniel Yergin, energy security draws renewed attention in the events of 'high oil prices, threat of terrorism, instability in some exporting nations, a nationalist backlash, fears of a scramble for supplies, geopolitical rivalries and countries' fundamental need for energy to power their economic growth' (Yergin, 2006, p.69). On the definitions of the concept of energy security, there hasn't been a consensus that is achieved by the authors and according to Winzer (2012); there are three groups of authors who are defining the concept with different aspects in which the first group authors focus on the concept of the supply continuity; the second group authors come up with further severity filters and the last group enlarge the scope of the impact measure afar from the continuity of supplies to continuity of services.

So as to provide an example within the broad variety of the definitions of energy security, Andrews (2005, p.17) stated that he would use Yergin's definition on energy security, which is "The objective of energy security is to assure adequate, reliable supplies of energy at reasonable prices and in ways that do not jeopardize major national values and objectives". Furthermore, Bohi and Toman have also indicated the definition as "Energy insecurity can be defined as the loss of welfare that may occur as the result of a change in price or availability of energy" (Winzer, 2012, p.42). Similarly to Bohi and Toman's definition, United Kingdom's Department of Trade and Industry (2002, p.37) provided a definition as "Insecurity of energy supply, in the form of sudden physical shortages, can disrupt the economic performance and social welfare of the country in the event of supply interruptions and/or large, unexpected short-term price increases".

Intharak et al. (2007, p.6) expressed the definition of energy security as "the ability of an economy to guarantee the availability of energy resource supply in a sustainable and timely manner with the energy price being at a level that will not adversely affect the economic performance of the economy". Likewise Jansen and Seebregts (2010, p.1654) give the definition as "Energy (supply) security can be considered as a proxy of the certainty level at which the population in a defined area has uninterrupted access to fossil fuels and fossil-fuel based energy carriers in the absence of undue exposure to supply-side market power over a period ahead of 10 years or longer". However Keppler (2007, p.20) has developed concept of

energy security from the traditional definitions by defining it as "Traditional definitions of energy supply security combine a short-term notion of the continuity of physical supplies with long-terms notion of ''affordable'' prices, ''competitive'' prices'' or ''adequate prices''. The risk management approach to the security of energy supplies argues that supply security is an issue dependent on the risk-adverseness of consumers. Its focus is thus not the absolute level of energy prices but the size and impact of changes in energy prices".

On the other hand, some authors has mentioned about the dimensions of energy security. For instance, Sovacool and Brown (2010) emphasized on ''availability, affordability, energy and economic efficiency and environmental stewardship''. Likewise to Sovacool and Brown, Hughes (2012) has also stated the indicators of energy security as ''availability, affordability and acceptability''. Accordingly, Yao and Chang (2014) stated the dimensions of the concept as ''availability of energy resources; applicability of technology; acceptability by society; affordability of energy resources''. Moreover to the indicators of energy security, Martchamadol and Kumar (2012) determined them as ''energy demand; availability of energy supply resources; environmental concerns; energy market; energy price/cost/expenditure''. In order to provide a final sample on the dimensions of energy security from Winzer (2012), he titled them as ''sources of risk; scope of the impact measure; severity filter''.

An important dynamic of the energy security concept, the theory of interdependency has an important role in the relations of nations. The relationship between interdependence and power has been studied by Robert Keohane and Joseph Nye's book which was published in 1977 and titled as *''Power and Interdependence''* in which interdependence was defined as "situations characterized by reciprocal effects among countries or among actors in different countries", was linked to power through ''the concept of asymmetrical interdependence as a power resource'' and it was highlighted that "It is asymmetries in interdependence that are most likely to provide sources of influence for actors in their dealings with one another" meaning that there is a close relationship between the patterns of interdependence and power resources in a certain issue (Keohane & Nye, 1987, p.730, 728). Keohane's contribution to the IR theory on the issue of asymmetrical interdependence, which can be defined as the more the country possesses resources, the stronger it is and vice versa.

Back in the history, the roots of asymmetrical interdependence stretch back to 1844 when John Stuart Mill was one of the firsts to argue that the substantial profit derived from international trade is not essentially distributed equally between the trading parties and according to him interdependence generated by trade would or should lead to a peaceful cooperation between nations is, actually, the belief that the dependence of A on B is hardly the same as the dependence of B on A (Hirschman, 1980). Later in the twentieth century, Sir Norman Angell in 1914, Francis Delaisi in 1925 and Ramsey Muir in 1933 have put forward discussions on the

international interdependence concept, however the traces of the term of dependence go back to Machiavelli, and it can also be found in the writings of Montesquieu and Rousseau whom defined the dependence in terms of reliance to others that implies lack of self-sufficiency which in turn implies the second meaning of dependence that is defined in terms of benefits that would be overpriced for one or both sides to give up. Moreover in 1954 Karl Deutsch denoted interdependence in terms of the ''interlocking relationships'' rising from the division of labour between highly specialized political units, but he has separated this interdependence from a relationship of mutual responsiveness among political units that might not be dependent upon each other (Baldwin, 1980).

Nevertheless, the two important authors Keohane and Nye tried to address an important question; that is "What are the major features of world politics when interdependence, particularly economic interdependence, is extensive?" and this question is answered by defining two profoundly different classifications of the international system that are realism and complex interdependence. These different classifications are outlined in terms of three fundamental dimensions: (1) the degree to which states, performing as coherent units, are the main actors, (2) the extent to which military force is a viable and effective mechanism of governance, and (3) the extent to which foreign policy agendas is dominated by national military security and both realism and complex interdependence are labelled as ideal types, demonstrating two ends of a

spectrum with utmost real-life circumstances falling ‘’somewhere between the two extremes’’ (Baldwin, 1978).

According to Keohane and Nye’s theory model of complex interdependence, there are three statements in a huge number of issue areas (1) "actors other than states participate directly in world politics"; (2) "a clear hierarchy of issues does not exist"; and (3) "force is an ineffective instrument of policy". Correspondingly they assume that in issue areas characterized consequences will be formed by the allocation of resources and vulnerabilities in every distinct area; issues and agendas will have tiny relation to conventional security concerns or the complete structure of power; global relations of all types - international bureaucratic coalitions, nongovernmental transnational actors and coalitions - will develop to be fundamental aspects in decision-making processes; and international institutions, will set agendas, act as facilitators for international alliances, and allow weak states to accept initiatives and shape coalition (Michalak, 1979). In the meantime, there is an important uncertainty about the level of interdependency among the states and there have been three separate phases of interdependence that are (1) after the World War II, technology has reinforced the interrelationship between states: the world was narrowing down; technological, military and economic factors would create interdependence even amongst former opponents, (2) later on Karl Deutsch has challenged the first argument and stated that international transactions were declining relative to intra-national transactions and residents were looking up to the nation-state for the gratification of their

needs so that national economies were taking over international economies of the nineteenth century, and lastly (3) contrary to the previous statement, it has been argued that interdependence between states is definitely increasing (Rosecrance & Stein, 1973).

On the other hand, Buzan and Waever has developed the ''regional security complex theory'' and explained this theory in their book with the title *''Regions and Powers''* in which the definition of a security complex stated by Buzan in 1983 was: ''a group of states whose primary security concerns link together sufficiently closely that their national securities cannot reasonably be considered apart from one another'' (p.44) but in 1998, Buzan and Waever has reshaped this very definition and stated that ''a set of units whose major processes of securitization, de-securitization, or both are so interlinked that their security problems cannot reasonably be analysed or resolved apart from one another'' and according to them regional security complexes are described by enduring patterns of amity and enmity which take the form of sub-global and geographically coherent shapes of security interdependence where the patterns of amity and enmity can be comprehended by beginning the analysis from the regional level and enlarging it by involving the global actors on the one side and domestic factors on the other (Buzan & Waever, 2003).

International security can be best explained as how communities relate to each other with regards to threats and vulnerabilities as well as addressing the communities how to relate to natural environmental

threats and what is more is that all of the countries in the system are intertwined in the international web of security interdependence. Nevertheless, due to the easiness of political and military threats to travel throughout the short distances, insecurity was generally linked to closeness which causes states to fear most from their neighbours rather than far-off powers and this puts the normal pattern of security interdependence of the international system far away from being a uniform (Buzan, Waever, & de Wilde, 1998). In his book of 'People, States and Fear', Buzan states "security is a relational phenomenon. Because security is relational, one cannot understand the national security of any given state without understanding the international pattern of security interdependence in which it is embedded" (p.6) and he continues that amity and enmity relationship between states determine an outlook of friendship or alliances formed by fear which can be affected by a range of issues as ideology, ethnic lines, territory, and historical background (Buzan, 2007).

In order to provide an example for the security complexes, by keeping in mind that every state is able to put its security in relation to at least one complex, Israel's security is connected to its regional complex of the Middle East and vice versa since it undeniably ponders when considering its national security and thus, this situation puts forward the most essential issue about regional security which is the fact that regional security is a segment of the hierarchy of the security problem where it is placed between the domestic and international security that cannot be put

out of the picture and if any state choses not to take into consideration the regional security, the consequences could be devastating (Stone, 2009).

Concurrently, the regional security complex theory can be applied to energy security, thus regional energy security complex can be defined as ''energy related interaction between two or more states in a limited geographical area, which includes an energy dependency relationship between the states involved and perception of this dependency as a threat (*securitization*)''. Furthermore threats related to energy dependency are often more intense between countries that are in close proximity since in energy security complexes, the distribution of energy resources and regional dependencies of energy could be considered as analogous to the distribution of military power in political-military based security complexes (Palonkorpi, 2007, p.3). By looking at the disparities among the EU Member States' level of dependency on Russian energy resources, the assumption that threats travel more simply throughout short distances is appropriate and the statistical data represents that there is positive correlation between a state's geographical closeness to Russia and that state's dependency rate on its energy resources (Sharples, 2012). For example the dependency of Estonia, Latvia and Lithuania on Russian gas imports are more than 75%. At this point, the EU would be considered as an energy security complex and the interdependent relation with its neighbour Russia is perceived as a threat, which is caused by EU's geographically closest Members' high dependency on Russian natural gas imports.

An important effect of interdependence can be explained with using the concepts of *sensitivity* and *vulnerability*; that sensitivity can be described as ''the costs that each side suffers when the other state does not offer it the benefits it should get from their relationship'', for instance decrease in the energy supplies or suppression over the payments for the energy bought. On the other side, vulnerability can be explained as ''the degree of weakness of an interdependent state if the other attempts to terminate their interdependent relationship'', for instance if Russia stopped providing gas to Estonia, Estonia would face harsh problems because of the shortage of substitute sources (Proedrou, 2007). Therefore, the interdependency of energy between Russia and the EU can be titled as asymmetrical interdependency as Russia is depending more on the energy market of EU than the EU is dependent on Russian energy resources because the EU can substitute the energy resources more easily than Russia (Tichy & Kratochvil, 2013). At this point, EU's alternative sources can be named as Eastern Mediterranean Region, Caspian Region, North Africa and the production of renewables as the indigenous sources.

As a result with regards to the above-mentioned theories, the methodology of this study is to give reference to interdependency theory between the EU-Russia relations while reviewing energy security and the regional security complex theories on the relationships of energy between Russia and the EU considering recent developments. With respect to the theory of interdependency, this study will try to explain how will the

relations of Russia and the EU together with Sino-Russian and Turco-Russian relations in the area of energy will be affected in the aftermath of the Crimea dispute while taking into consideration the correlation between political issues and energy policies by emphasizing the important position of policies of energy within the bilateral relations of the states.

CHAPTER 3

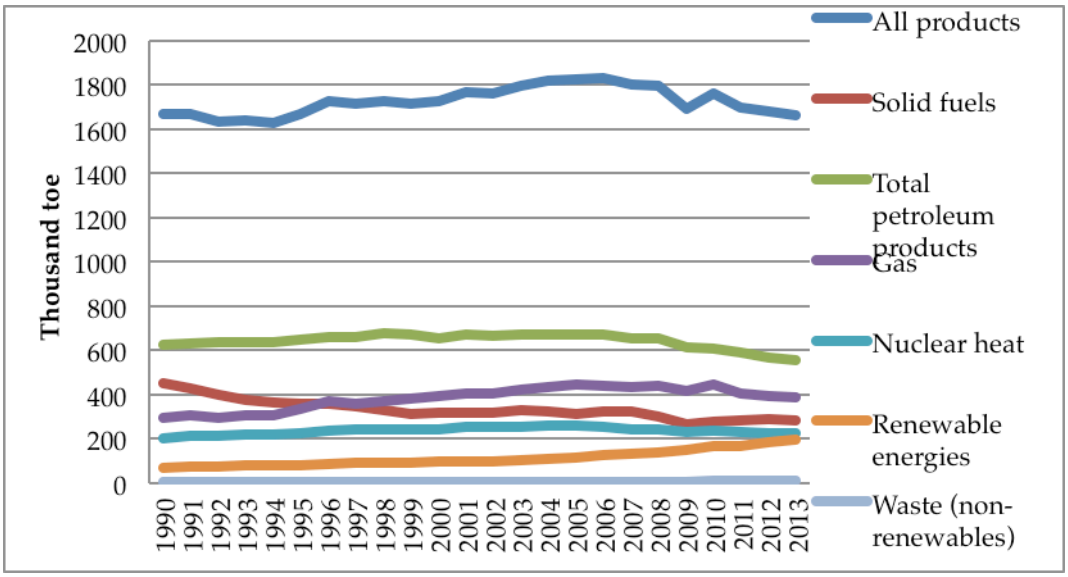
ENERGY PROFILE AND POLICY MAKING OF THE EU

3.1. Overview of the European Union's Energy Profile

The EU 28 countries, which will be overviewed in this chapter with regards to their statistics of energy production, consumption and import-exports are namely Belgium, Bulgaria, Czech Republic, Denmark, Germany, Estonia, Ireland, Greece, Spain, France, Croatia, Italy, Cyprus, Latvia, Lithuania, Luxembourg, Hungary, Malta, Netherlands, Austria, Poland, Portugal, Romania, Slovenia, Slovakia, Finland, Sweden and United Kingdom. The Eurostat data provided by the European Commission demonstrates that the EU 28 is 53.4% dependent on energy imports in total products and specifically EU 28 is 44.2% dependent on solid fuels imports, 87.4% dependent on total petroleum products imports and 65.3% dependent on gas imports in 2013. Thus, according to the given data, the EU 28 is considerately dependent on energy imports especially on oil and natural gas. The union's gross inland energy consumption in 2012 was 1% less than in 2011 and crude oil and petroleum products were

the utmost important sources of energy in the European economy while natural gas ranks as the second most important source of energy for the EU followed by solid fuels, nuclear hear, renewables and waste as graphed in figure 1.

Figure 1: Gross inland energy consumption by fuel type in EU 28, 1990-2013



Source: Eurostat Statistics

The gross inland energy consumption in EU 28 follows a stable condition in the period between 1990 and 2012 but a sharp decrease can be observed in the year 2009 as a result of the financial and economic crises where the decrease was mostly felt in solid fuels by 12%, natural gas and petroleum products with 6% respectively. However in 2012, consumption in renewable sources registered the biggest increase among other energy sources with 9% whereas petroleum products recorded a 4% decrease in the same year.

Table 1: Gross Inland Energy Consumption by Fuel Type (ttoe), 2013

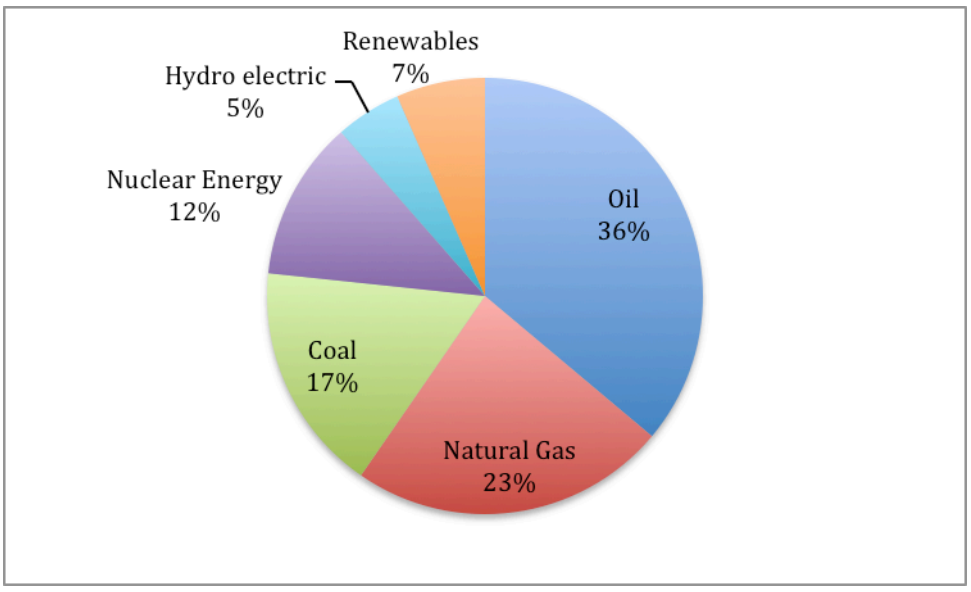
	Petroleum Products	Gas	Solid Fuels	Nuclear	Renewables	Waste (non-renewable)
EU 28	556,615.3	386,870,4	286,532.3	226,286.7	196,760.6	12,116.7
Belgium	23,086.5	14,395.3	3,223	11,000.2	3,489.6	704
Bulgaria	3,491.6	2,387.9	5,923.2	3,671.1	1,813.6	7.7
Czech Republic	8,577	6,946.4	16,381.6	7,955.5	3,568.6	215.8
Denmark	6,751	3,330.7	3,140.6	0	4,377.9	404.2
Germany	109,948.7	72,884.9	81,608.8	25,096.3	33,397.4	4,107.4
Estonia	1,079.1	554.9	4,421.8	0	851.2	104.4
Ireland	6,755.5	3,867.9	2,023.2	0	850.7	57.8
Greece	11,342.7	3,236.3	6,980.7	0	2,615.3	21.1
Spain	50,310.3	26,083.2	10,776.8	14,634	17,408.7	146.2
France	78,141.9	39,008.2	12,450.1	109,291.1	23,304.3	1,268.6
Croatia	3,206.1	2,281.9	674.6	0	1,268.1	8.7
Italy	57,494.6	57,386.7	13,993.9	0	26,370.6	1,138
Cyprus	2,053.8	0	0.1	0	134.3	1.1
Latvia	1,407.6	1,204.7	72.9	0	1,611.2	52.9
Lithuania	2,419.6	2,164.5	278.7	0	1,212.4	14.9
Luxembourg	2,782.1	893.7	47	0	156.6	32.9
Hungry	5,750.3	7,705.2	2,342.8	3,976.8	1,888.6	56.1
Malta	826.3	0	0	0	12.7	0
Netherlands	33,341.4	33,236.2	8,113.8	745.7	3,370.6	795.1
Austria	12,167.2	7,011.7	3,328.7	0	9,992.1	637.4
Poland	22,852.6	13,727.4	52,957.1	0	8,559.4	451
Portugal	10,483.2	3,755.9	2,650	0	5,314.1	170
Romania	8,381.7	9,739.9	5,755	2,996.9	5,550.9	41
Slovenia	2,396	691.9	1,350.5	1,367.2	1,131.1	34.7
Slovakia	3,343.7	4,814.4	3,454.3	4,106.3	1,409.3	125.5
Finland	8,393.4	2,859.6	5,104.1	6,089.3	9,918.8	209.2
Sweden	12,002.6	963.5	2,218	17,142.8	17,082.6	584.6
United Kingdom	67,828.8	65,683.5	37,261.1	18,213.6	10,099.8	726.5

Source: Eurostat, 2014

Nevertheless, the combination of fuels and their share in the consumption differs in each member country with regards to their available natural resources and domestic preferences in energy systems. For instance;

Luxembourg, Malta and Cyprus are recorded to own smallest share in the consumption of solid fuels whereas these three countries have the biggest share in the consumption of petroleum products as well. On the other hand, natural gas was an important energy source for the Netherlands, Lithuania, Hungary, Italy and the United Kingdom in 2012 with a share more than a third whereas nuclear energy was a significant source in France with a share of 42% in gross inland consumption and France was followed by Sweden with a share of 32% (Eurostat, 2014). Concurrently, according to BP Statistical Review of World Energy data, in 2013, coal has the largest place in primary energy consumption among other fuels with a share of 38%, followed by oil with 30%, natural gas with 22%, hydroelectric with 7%, nuclear energy with 2% and renewable energy sources with 1% as shown in figure 2.

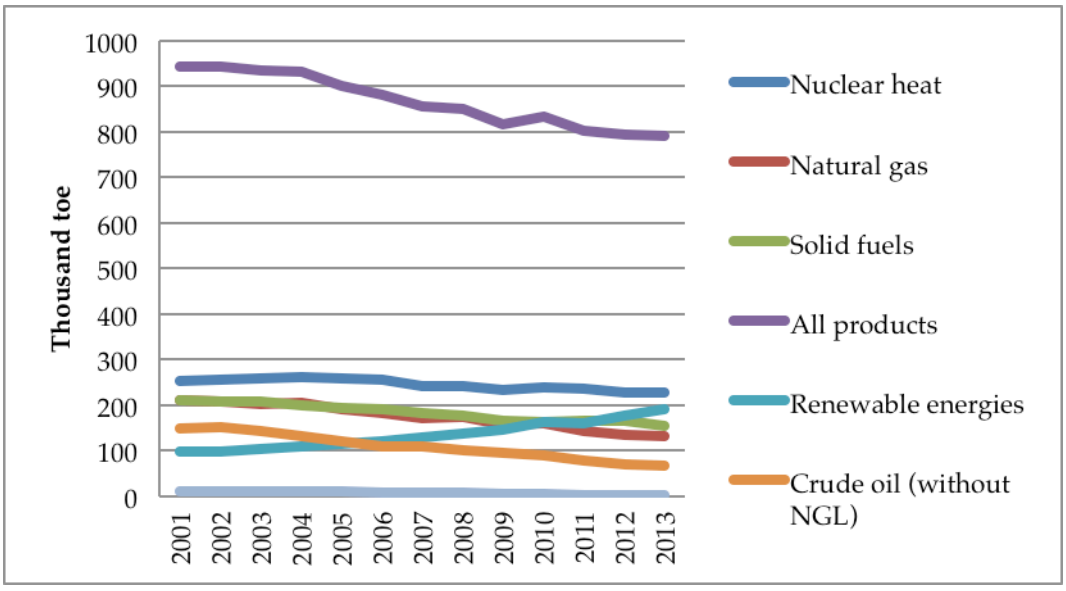
Figure 2: Primary energy consumption by fuel type in EU, 2013



Source: BP Statistical Review of World Energy, 2014

Concerning the primary production of energy within the EU 28 in 2012, it was again 1% lower than the amount produced in 2011. The highest reduction was in petroleum products with a rate of 10% and followed by the reduction in gas production with 6%, whereas the renewables were the only sources of energy that recorded an increase of 9%, however, the production of primary energy follows a negative trend over the past 10 years. In these years, the largest decrease was in petroleum products with 54% and natural gas followed the decrease in petroleum production with 35% (Eurostat, 2014). Within the energy mix of the EU, nuclear heat has the highest share in the EU's primary energy production with 29% in 2012, followed by renewables with 22%, gas with 17%, petroleum products with 10% and non renewable wastes with 2% as depicted in figure 3.

Figure 3: Primary Energy Production in EU 28, 2001-2013



Source: Eurostat Statistics Database

Furthermore, the production rates are following a descending trend, which may be due to draining supplies of raw materials or the considerations of producers in a sense that exploitation of limited resources is not economical. In terms of the primary production of energy among the Member States, France has the highest share of energy production with 18.8%, followed by Germany with 15.6%, and the UK with 14.6% and from the point of energy resources, nuclear energy production has the highest share of contribution with 28.7%, which is mainly taking place in France, Belgium and Slovakia; besides renewable sources is following nuclear energy in production with a share of 22.3%, solid fuels with 20.9%, natural gas with 16.8% and lastly crude oil with 8.9% (Eurostat, 2014).

Table 2: Production of Energy in EU 28 by Fuel (ttoe), 2013

	Nuclear Heat	Solid Fuels	Renewables	Natural Gas	Crude Oil
EU 28	226,286.7	155,822.4	191,960.5	131,754.9	66,206.6
Belgium	11,000.2	0	2,929.4	0	0
Bulgaria	3,671.1	4,782.3	1,825.5	224	27.3
Czech Republic	7,955.5	17,673.6	3,640.1	205.9	156.8
Denmark	0	0	3,239.7	4,281.9	8,696.7
Germany	25,096.3	45,054.7	33,679.5	8.865.7	2,608.5
Estonia	0	4,425.7	1,122.2	0	0
Ireland	0	1,291.6	765.5	154	0
Greece	0	6,728.3	2,486.7	5.8	70.5
Spain	15,634	1,762.8	17,277.3	5.8	368.7
France	109,291.1	0	23,072.9	49.8	807.1
Croatia	0	0	1,498.9	289.3	542.4
Italy	0	46.4	23,499.8	1,507.3	5,602.6
Cyprus	0	0	108.9	6,335	0
Latvia	0	2.4	2,137	0	0
Lithuania	0	23.5	1,288.4	0	87.2
Luxembourg	0	0	106.8	0	0
Hungary	3.976.8	1,611.7	2,074	1,544.3	582.1
Malta	0	0	9.5	0	0
Netherlands	745.7	0	4,293.9	61,767.3	1,141
Austria	0	0	9,466.7	1,124	846.1
Poland	0	56,834.8	8,511.5	3,823.1	956.7
Portugal	0	0	5,620.8	0	0
Romania	2,996.9	4,656.6	5,560.8	8,600.1	4,151.9
Slovenia	1,367.2	1,074.9	1,071.2	2.6	0
Slovakia	4,106.3	584.3	1,466.7	104.4	9.7
Finland	6,089.3	1,697.3	9,934.2	0	0
Sweden	17,142.8	186.3	16,769.5	0	0
United Kingdom	18,213.6	7,385.1	8,403.9	32,870.3	39,551.2

Source: European Commission, 2014

The downward trend in the primary production and the upward demand in the consumption of energy has caused an increasing reliance on primary energy imports in order to meet the demand and within the Member States the most populous countries are the greatest net importers of energy except the UK and Poland, whereas Denmark is the only net exporter of primary energy since 2004. The year 2006 was a turning point for the EU because Russia has taken the place of South Africa and became the leader in supplier of the Union. This was the time when the threat of depending on a small number of suppliers has emerged in the agenda of the EU. For example in 2012, 76.8% of the natural gas imports has originated from Russia, Norway and Algeria; 53.6% of the crude oil imports were from Russia, Norway and Saudi Arabia; 72,6% of solid fuel imports were coming from Russia, Colombia and the United States. Additionally in 2012, the highest share of dependency was on crude oil with 88.2%, followed by natural gas with 65.8%. Among the Member States, besides Denmark; Estonia, Romania, the Czech Republic and Sweden has the lowest rate of dependency, though Malta, Luxembourg and Cyprus are totally dependent on energy imports (Eurostat, 2014).

3.2. Energy Security Strategy Papers and Policies of the European Union

The first and most important document related to the EU energy security is ‘‘The Energy Charter Treaty (ECT)’’ that was based on the European Energy Charter of 1991, which highlighted the political intention to

promote East-West energy cooperation but the Energy Charter Treaty and the Energy Charter Protocol on Energy Efficiency and Related Environmental Aspects that were signed in 1994, is a legally binding multilateral instrument and based on the aims to build a legal foundation for global energy security founded on the principles of open, competitive markets and sustainable development that is engaged in interstate cooperation in the energy sector (Energy Charter Secretariat, 2004). The main issues considered in the ECT are listed as ''investment protection, trade in energy, energy products and energy related equipment, freedom of energy transit, improvement of energy efficiency, international dispute settlement, improved legal transparency'' and it purposes to establish an economical alliance between countries with diverse cultural, economic and legal backgrounds but all integrated in their assurance to accomplish common goals which are to support open markets and secure and diversify supply of energy; to promote cross-border investment and trade in energy; to help countries in economic transition in the development of their energy strategies (Energy Charter Secretariat, 2002). In 2009, Russia backed out from the provisional application of the ECT without withdrawing but Russia wants to increase its position in international energy governance neither without withdrawing nor with ratifying the treaty (Belyi, 2012). Moreover, Turkey is also a member of this treaty (Energy Charter Web Page)

Consequently, The Treaty of Lisbon, signed by the EU Member States in 2007, has put energy issues into a more remarkable and independent

position in EU policy-making since before the treaty, energy was an area of minor interest but now, energy policy in the EU has emerged to become a part of foreign policy, environmental and climate change policies and is also mentioned in the area of competitiveness (Gerigk, et al., 2012). The reason why energy holds a vital place in the EU policies is that the union has the world's second biggest economy and is consuming one fifth of the world's energy even though it hasn't got sufficient energy sources for its own (European Commission, 2012). The EU has been facing some difficulties in the area of energy, which are; increasing dependency on foreign import of resources; increasing energy prices; and insufficient investment in the energy sector (European Commission, 2013). As a beginning, in 2006, the EU had experienced a milestone with the release of a Green Paper in order to develop an energy policy for the Union, which was titled as ''A European strategy for sustainable, competitive and secure energy''. The paper highlights that if EU aims to obtain its economic, social and environmental objectives, it has to cope with major energy issues namely the increasing dependence on energy imports, unstable oil and gas prices, climate change, growing demand and barriers to achieve an entirely competitive internal energy market. In order to apply a European energy policy, the three principal objectives that are expected from the Member States to achieve an energy policy are ''sustainability, competitiveness and security of supply''. To fulfil the aim of creating an internal energy market, there are a number of fundamental areas that require precise attention, which are '' (1) a European grid, (2) priority interconnection plan, (3) investment in generation capacity, (4) clear-cut

unbundling of activities and boosting the competitiveness of European industry''. This specific Green Paper is a significant step to regroup the disparate range of energy policies into a common strategy for Europe and it also points the beginning of a public consultation phase throughout which a sequence of solid measures will be taken in the energy field (Commission of the European Communities, 2006).

Afterwards in 2007, the Commission of the European Council and the European Parliament has released a communication entitled as ''An energy policy for Europe'' and this paper aims to strictly constrain the EU to a low consumption economy founded on more secure, more competitive and more sustainable energy while preserving the fundamental objectives that are a well functioning internal energy market, security of supply, cutbacks in greenhouse gas emissions and EU's ability to act as one in the international arena. Thus, it is crucial for the EU to obtain a highly efficient energy economy with low CO_2 emissions by setting important energy objectives to achieve this goal. These objectives are the same with the previous Green Paper that are (1) establishing the internal energy market which is a competitive and interconnected one, (2) ensuring the security of energy supply, (3) decreasing greenhouse gas emissions with the help of energy efficiency and renewable energy, (4) developing energy technologies, (5) considering the future of nuclear energy, and finally (6) realising a common international energy policy (Commission of the European Communities, 2007).

Subsequently in 2008, the Commission to the European parliament, the Council, the European Economic and Social Committee and the Committee of the Regions has released the ''Second Strategic Energy Review: An EU Energy Security and Solidarity Action Plan''. This plan has established around five main points; (1) infrastructure requirements and the diversification of energy sources, (2) external relations on energy, (3) oil and gas stocks and response mechanisms towards crisis, (4) energy efficiency, and (5) producing the best out of EU's indigenous sources of energy. With the help of this plan, the EU has aimed to reduce energy consumption by 15% and energy imports by 26% by 2020 (European Commission, 2008). Following to this plan, in 2009, the regulation by the European Parliament and the Council has established a programme named as ''European Energy Programme for Recovery'' to promote economic recovery by yielding Community financial support to projects in energy field that are gas and electricity infrastructures, offshore wind energy and carbon capture and storage. This programme was introduced as a response to the energy and financial crisis in late 2008 and was a key element of European Commission's economic Recovery Plan (European Parliament and the Council of the European Union, 2009). Afterwards in 2010, Communication titled as ''Energy 2020 A Strategy for competitive, sustainable and secure energy'' has been released by the European Commission which indicated the Commission's energy strategy in the period to 2020 and was organised around 5 main concerns that are ''limiting the use of energy in Europe; constructing a pan-European integrated energy market; bracing the consumers and reaching the top

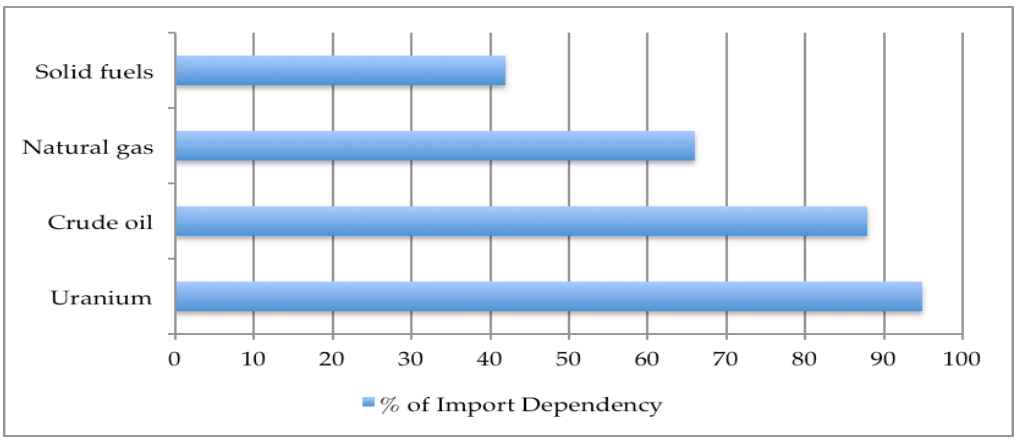
level of safety and security; enlarging Europe's leadership in the development of energy technology and innovation; and bolstering the external dimension of the EU energy market'' (European Commission, 2010).

Additionally, ''The Third Energy Package for Gas'', which became law in the EU in March 2011, is a set of documents aimed to alter the structure of the EU gas market and transform the gas markets into a single liberalised EU gas market by bringing major necessities that are ''(1) unbundling of transmission, (2) certification of transmission system operators meeting the unbundling requirements, (3) entry-exit organisation of access to transmission system networks, (4) development of 12 pan-European Network Codes'' (Yafimava, 2013). The implementation of this package will further help to rationalization of the EU's LNG capacity and therefore its capability to make use of other suppliers as well (Chow & Hudson, 2013).

The latest published energy security document by the EU is the ''European Energy Security Strategy'' paper that was released in May 2014, in response to the political crisis in Ukraine and general significance of a secure and plentiful supply of energy for the EU's citizens and economy. The strategy intends to suggest the Commission to launch ''energy security stress tests'' to fuel a disruption in the supply of gas for the following winter season. The purpose of this stress test is to control whether the EU's energy system can survive security of supply risks or

not and to foster emergency plans and back up mechanisms that would involve; ''increasing gas stocks, developing infrastructure such as reserve flows, reducing short-term energy demand and switching to alternative fuels''. This plan is a short-term measure, which aims to assist as a base to strengthen the current European emergency and solidarity mechanisms. On the other hand, the paper also highlights the medium to long-term challenges as well. These challenges require five key areas to be handled which are ''energy efficiency; enhanced energy production and diversification of sources and routes; establishment of the internal energy market and constructing lacking infrastructure links; unity in external energy policy and lastly emergency and solidarity mechanisms and security of critical infrastructure'' (European Commission, 2014). This strategy paper emphasizes a deep study on Member States' energy dependence, which is utmost important and vulnerable issue for the EU as a whole. When looked at the recent data provided by the European Commission, the EU is an importer body with a dependency rate of 53% for all the energy that is consumed. Figure 4 demonstrates the share of each energy source in the EU's energy mix that is being imported from abroad. The leading source of energy that is being imported to the EU is crude oil with 88%, followed by natural gas with 66%, solid fuels with 42% and uranium with 95%.

Figure 4: Dependency Rate of the EU on the Imports of Energy Sources



Source: European Commission

Given the fact that EU is highly dependent on foreign sources, this position could cause vulnerability to the external energy shocks. For instance among the Member States, six of them are entirely dependent on Russia for natural gas imports but the level of this extreme dependency may brought up the problems as gas shortages that have happened in the past due to the crisis that took place in 2006, 2009 and recently in 2014. Lately the EU has been working on establishing an energy union, which will ''ensure secure, affordable and climate-friendly energy for citizens and businesses and allow a free flow of energy across borders and a secure supply in every EU country, for every citizen'' (European Commission, 2015). By this, the EU may distribute and lower the share of dependency over Russian gas among the Member States. Therefore this study will try to analyse these crises in the following chapters and address whether these crisis are affecting factor of the interdependent relationship between Russia and the EU in terms of natural gas trade.

CHAPTER 4

ENERGY PROFILE AND POLICY MAKING OF RUSSIA

4.1. Russian Strategy over the Global Energy Agenda

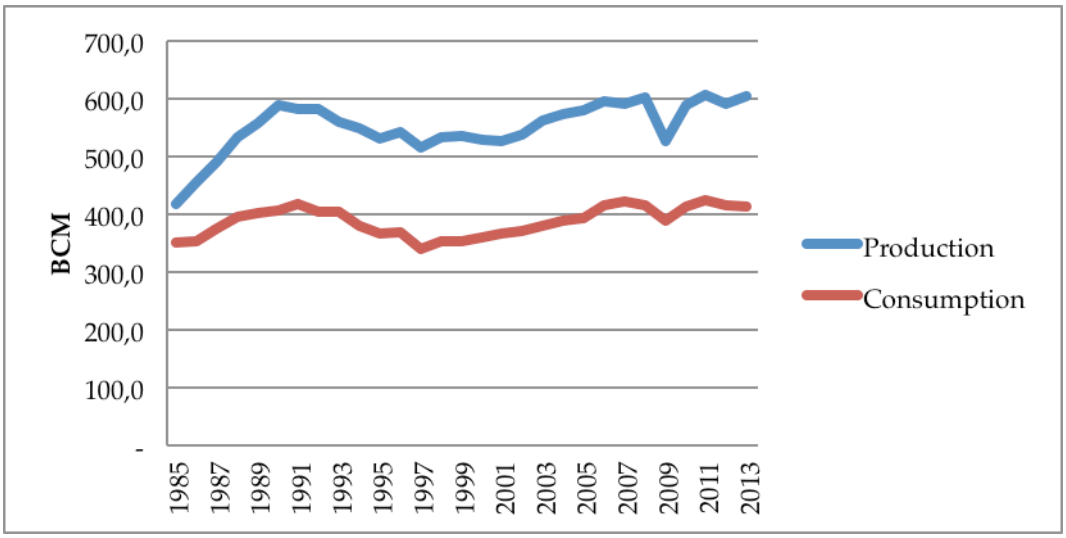
Russia is one of the world's biggest producers of oil and natural gas, which owns an economy that is heavily reliant on energy revenues and the economic growth is triggered by energy exports (EIA, 2014). According to BP's Energy Outlook 2035, Russia will continue to be the biggest exporter of energy by fulfilling 4% of global energy need with net exports of 736 mtoe by 2035 (BP, 2014). Apart from being a major energy producer country, the energy policy of Russia was determined by many different actors from both state and private sector up until mid-2003 but since then the energy policy has been unified and placed under Russian President's control, being Vladimir Putin, thus, from that time energy company executives could not take part in the process of decision making at government level and Russia has been using its energy deliveries as a foreign policy instrument towards countries (Fredholm, 2005). Russia perceives its vast energy sources as a tool for political and economic benefit while trading with other countries and therefore aims to gain

economic and political influence over those countries to use as leverage (Lough, 2011). Since 1991, Russia has been using energy as a leverage tool in order to place political and economical force on Estonia, Latvia, Lithuania, Ukraine, Belarus, Moldova, Georgia, which consequently had an affect on most of Europe and in the meantime, with its energy policy, Russia is aiming to stimulate growth, expand influence, avoid geopolitical and macroeconomic threats and decrease the threat of getting blackmailed (Larsson, 2006).

From the time when the Soviet Union has collapsed, the biggest firm in Russia has been the state owned natural gas company Gazprom, of which the government owns more than 50% of its shares and the company has a monopoly over pipelines in Russia, controls almost 90% of gas production as well as controlling banks, industrial holdings, farms and media outlets (Woehrel, 2009). At the end of 2013, Russia was the second country with the highest share of natural gas reserves and had 16,8% share of total natural gas reserves in the world right after Iran, which had a share of 18,2% of total and Russia has 51,7 years to go with the current natural gas reserves if the production rate stays the same (BP, 2014). Moreover, according to the very recent Statistical Review of World Energy by BP, Russian natural gas production and consumption demonstrate parallel trends over the years as depicted in figure 5 and the sharp downfalls in the trends on the years of 1998 and 2009 could be explained with Russian economic crisis and the gas crisis with Ukraine respectively (BP, 2014). The 1998 crisis in Russia was a result of a consistent budget deficit of 9%

of GDP, which hindered growth and thus the outbreak of a crisis was unavoidable that resulted Russia to adopt conservative and cautious macroeconomic policies for a decade, however after 2000, Russia has enjoyed constant and sizable budget surpluses (Åslund, 2009).

Figure 5: Russian Natural Gas Production and Consumption Trends, 1958-2013

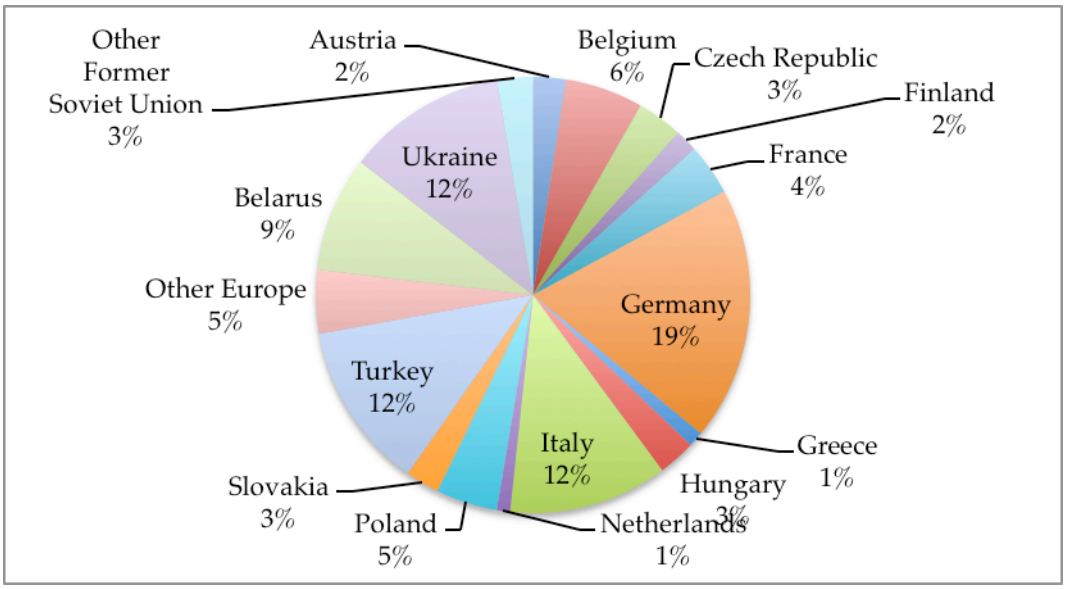


Source: BP Statistical Review of World Energy, 2014

While producing vast amounts of natural gas, Russia is also one of the biggest natural gas exporters in the world of which 76% of its exports are destined to Western European countries as Germany, Turkey, Italy, France and the United Kingdom via its export pipeline infrastructure that consists of the Yamal-Europe I, Northern Lights, Soyuz, Bratstvo, and Nord Stream pipelines, all transporting Russian natural gas to Eastern and Western Europe via Ukraine, Belarus and through the Baltic Sea, whereas Blue Stream, North Caucasus and Mozdok-Gazi-Magomed pipelines send

natural gas to Turkey and the east of Russia, namely the Former Soviet Union (FSU) countries (EIA, 2014). The share of natural gas export partners are graphed in figure 6 and as seen the biggest customer of Russia is Germany with 19% followed by Turkey, Ukraine and Italy with 12%, Belarus with 9%, Belgium with 6%, other European countries and Poland with 5%, France with 4%, Czech Republic, other FSU countries, Slovakia, Hungary with 3%, Austria and Finland with 2% and finally Netherlands and Greece with 1%.

Figure 6: Natural Gas Trade Movements of Russia in 2013



Source: BP Statistical Review of World Energy, 2014

In 2009, the Ministry of Energy of the Russian Federation has released a strategy paper titled as ''Energy Strategy of Russia for the Period up to 2030'' and this specific paper includes a number of issues in the energy sector that are (1) the chief developments and projections of Russian socio-economic development together with the interaction between the

economy and energy, (2) the demand outlooks of Russia's energy, (3) the key requirements of the state's energy policy with most vital elements, (4) the growth scenarios of Russian fuel and energy complex, (5) the anticipated results and application system of this strategy paper. According to this strategy paper, the aim of the Russian energy policy is determined as to strengthen the efficient use of natural energy resources and the potential of the energy sector to maintain economic development, develop the quality of life of the residents and stimulate reinforcement of foreign economic prospects of the country (Ministry of Energy of the Russian Federation, 2010). Following to this, in 2013, an outlook prepared by the Energy Research Institute of the Russian Academy of Sciences and the Analytical Centre of the Government of the Russian Federation, has pointed out some key findings in order to develop the competitiveness of Russian hydrocarbon exports in global markets which are reducing the seizures by the state and decreasing the companies' costs along the supply chain and to achieve that the chief goal should be a sharp reduction in the investment projects' costs.

While considering the Russian energy profile, the following parts of this section will explain the energy relations of Russia with both Turkey and China under the light of recent cooperation agreements deliberately in the area of natural gas trade.

4.2. Turkey-Russia Energy Partnership

Turkey is Russia's second biggest natural gas export customer and thus the parties are dependent on each other. With the recent development of Russia changing the plans of South Stream Project, the interdependency is expected to increase even further. So at this point, it is important to analyse the energy cooperation between Russia and Turkey due to the recent developments in the energy relations, which would be expected to effect Russia, Turkey and the EU. When it comes to energy security, Turkey aims to protect itself against supply interruptions and guarantee the flow of long-term supply of energy resources at satisfactory prices, which the same case applies to the European Union as well (Mozur, 2011). Thus the 2006, 2009 and 2014 crises of Russia and Ukraine were unfavourable for the energy security aims of both the EU and Turkey, so that it can be stated that the relationship of energy is a vulnerable area of politics within the global context. When looked at both countries' perspectives on energy flows, they consider those flows as a great advantage for their respective geopolitical positions most significantly in their relations with the EU. In order to enlarge the previous statement, the meaning of natural gas trade should be observed for both countries. In case of Russian perspective, it distinguishes the position that it holds towards the EU by being the major exporter of natural gas as a heavy impact foreign policy tool but nowadays this monopolistic position of Russia is in danger because of the current market conditions. On the other hand, for the case of Turkey, it aims to become a natural gas hub and thus

the next artery for Europe in supplying natural gas so the given energy framework of Russia and Turkey presents that there could never be a complete harmony over the natural gas relations between the countries (Baev, 2014).

There are plenty of milestones within the area of energy cooperation of Russia and Turkey and one of these milestones is (1) the Blue Stream agreement made in 1997 which was a unique step in the Turkish-Russian reconciliation and right after its launch in 2005, the dependency of Turkey on Russia has considerably increased as much as half of its natural gas supplies were originated from Blue Stream. Another milestone in the relationship between Turkey and Russia was (2) the possible construction of South Stream project, which was recently placed on the global agenda at the end of 2014. The third important remark within the energy cooperation is (3) the Samsun Ceyhan pipeline, which involves Russia to send its oil tankers to Samsun to be transported to the oil port of Ceyhan in Turkey, however Russia initially placed its hopes in the Burgas-Alexandroupolis Project in order to reduce its tanker passages through the Turkish Straits but Bulgaria's withdrawal from this project in 2011 raised the possibility of the construction of Samsun Ceyhan pipeline in the near future. The last milestone agreement between Turkey and Russia is (4) the nuclear cooperation that Russia will be constructing a nuclear plant in Mersin Akkuyu, in the end increasing the dependency of Turkey on Russia as well (Yalinkiliçli, 2012).

On the other hand, from the viewpoint of Turkey's energy agenda which could be said that is clashing with Russian strategies, Turkey aims to decrease its substantial dependence on energy imports via increasing the usage of indigenous sources of energy and energy market liberalization which also consists of increasing energy efficiency in the country. Moreover, as one of its energy strategies, Turkey also intends to guarantee the diversification of energy sources and the suppliers together with the routes of imported energy sources, which in the end will serve for Turkey's goal to become a more effective transit country and energy hub in the region where it is located in the middle of energy-producing countries to its east and energy-consuming countries to its west. Finally, including nuclear energy in its energy mix and gradually increasing its share is the third principle of Turkey in the context of its global energy strategy (Babali, 2012). However currently, the main concern of Turkey is to primarily satisfy its own energy demand and the motivations to be a major energy transit state or energy hub are the secondary concerns. Nonetheless, Turkey holds a vital position and could become a significant actor of a southern energy corridor, routed to the EU in hydrocarbon deliveries from Caspian and Gulf regions apart from the three other corridors that are running from Russia, Norway and North Africa, as an energy conduit (Winrow, 2013). In this context, in the very recent strategy paper published by Turkish Ministry of Energy and Natural Resources titled as ''2015-2019 Strategic Plan'', under the theme of Regional and International Activity, it has been stated that Turkey should be integrated to the regional energy markets and the position of Turkey as an energy

hub in the transportation of natural gas should be strengthened via realization of new projects related to transit pipelines. In order to do that Turkey should adopt the strategy of tracking of transit projects' developments and realization of any necessary structuring that would support those projects (Republic of Turkey Ministry of Energy and Natural Resources, 2014).

4.3. Sino-Russian Energy Partnership

The energy partnership between Russia and China roots back to 1994 when the Chinese President of that time has named the bilateral relations as constructive partnership and the partnership was raised to strategic partnership in 1996 when Russian president paid a visit to Beijing in 1996. Thus, for the purpose of reinforcing this strategic partnership The Sino-Russian Treaty of Good Neighbourliness and Friendly Cooperation was signed in July 2001 and in 2004 the parties signed the demarcation of the national boundaries agreement that was an historical movement contributing the reciprocal mistrust and conflict (Itoh & Kuchins, 2011). This relationship has recently involved a newly signed 30-year agreement to supply China with Russian natural gas through a new pipeline from far-eastern part of Russia which was an action as an answer to threats from Western world over the Ukrainian crisis although the negotiations has already been started a decade ago (Chang, 2014).

The purpose of the EU to reduce its dependency on Russian gas, most specifically after the recent Crimea crisis, has made Russia to seek ways to change the directions of gas supplies to the Asian energy markets. In May 2014, the state controlled Chinese company China National Petroleum Corp (CNPC) and Russian Gazprom has signed a $400-billion natural gas supply agreement, which has helped Russia to secure its security of demand as it has risked losing European consumers due to Crimea crisis (Anishchuk, 2014). The growing energy market of China, which is highly based on coal consumption, is in need of a cleaner source of energy so that this 30-year gas deal is expected to begin with a supply of 38 bcm of natural gas a year with the beginning of 2018 (Wan & Hauslohner, 2014). With this new agreement, Russia, while decreasing dependency on European markets, will rely more on China both economically and politically since the gas will account for more than 10% of Chinese domestic energy consumption by 2020 and China will replace Germany as Russia's biggest gas market once the gas will begin to be delivered (Paton & Guo, 2014). Moreover in November 2014, a new memorandum of understanding has been asserted between OAO Gazprom and China National Petroleum Corp., which states that Gazprom would provide 30 bcm of natural gas to northwest China for 30 years beginning in 2019, but this agreement hasn't been concluded yet (Oil and Gas Journal Editors, 2014). Due to the deteriorating energy relationship of Russia to the EU, this agreement is being viewed beneficial for China as a part of its wider struggle to enhance security collaboration with Russia, in the meantime of

defying US supremacy and impact over Central and East Asia (Koch-Weser & Murray, 2014).

The $400 billion agreement is aimed to flow 38 bcm of Russian natural gas to China in the years between 2018 and 2047 where the gas will be sent from Russian Kovyktin and Chanyadin fields in eastern Siberia to the metropolitan area of Beijing-Tianjin-Hebei in the northern China and the Yangtze River Delta in the east of which would expected to cover more than one-fifth of Chinese current natural gas consumption. However, one of the main reasons why there hasn't been an agreement between Russia and China for many years is that the parties couldn't agree on a pricing formula for the deliveries of natural gas since Russia wanted to charge the same high prices for China in order to afford its activities on developing new gas fields and building new pipelines but China would like to benefit from lower prices because Chinese negotiators are permitted to charge their domestic customers with low prices since they have been making losses in earlier gas imports due to the price controls of the state (Weitz, 2014). Moreover, there were many other reasons for the lack of a Russian-Chinese energy partnership. First of all, both Russian and Chinese energy industries are highly politicized and so the Chinese authorities are having second thoughts on trusting Russian natural gas imports since Russia is using energy exports as political means. Second of all is that there is a growing mutual mistrust between the parties since China is developing promptly in terms of economy, military and political power which in result gives Russia the fear of a shift in the balance of power between them

and China. Lastly the third and last issue is the above-mentioned lack of a price formula, which China prefers to buy Russian gas with a price formula based upon its domestic prices of coal whereas Russia wants to sell the gas with the same price level it charges to Europe (Bergsager, 2012).

Accordingly, what has changed in the terms of this new energy partnership can be explained by looking separately from Russian and Chinese perspectives. In case of Russia, there are four reasons in cooperating with China that are (1) the occurrence of shale gas and friction with Europe, (2) the equity stakes problem, which is the problem of the amount of Chinese acquisition in Russian energy projects, (3) domestic budgetary difficulties due to worsening relations of Russia with its European partners and finally, (4) the Eastern route, which enables Russia to avert its surplus natural gas to China from Europe and gives Russia the possibility of increasing its power of political bargaining towards China. On the other hand, in case of China, there also lie four reasons to come to an agreement with Russia. Primarily, (1) the projected natural gas shortage for China in the near future, (2) increasing prices and decreasing the Asian LNG premium which currently gives hard times for China to meet the domestic demand, (3) enhancing energy security and (4) slow progress on shale gas production in spite of having the largest amount of technically recoverable shale gas reserves in the world (Skalamera, 2014).

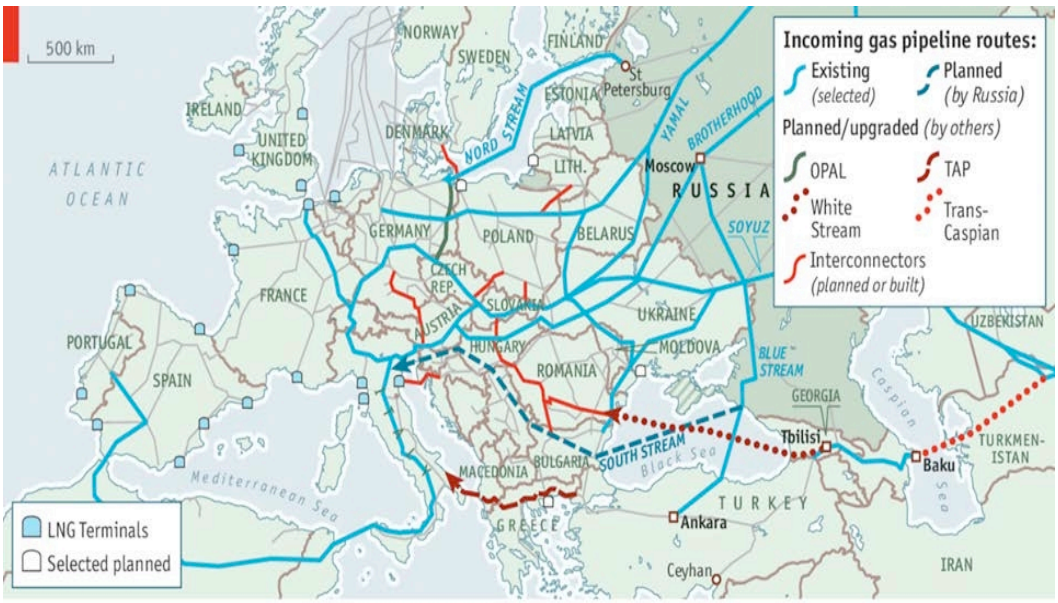
Therefore, it is important to both examine the energy profile and strategies of Russia and the EU in order to look at the greater picture more accurately. The high level of interdependency between them is said to be shaping their relations as well. Chapters 4 and 5 are aimed to provide the general framework on the Russian and European Union's energy agendas and deliberately focused on natural gas trade due to the fact that natural gas is the main important factor that has a great influence over the relations of both sides because of the heavy reliance of the sides on each other. This is why the theory of interdependency suits to explain the relations on energy of Russia and the EU and the following chapter will be providing insight on bilateral relations on natural gas trade between the two biggest actors of the global energy market.

CHAPTER 5

RUSSIA AND THE EUROPEAN UNION RELATIONSHIP IN TERMS OF NATURAL GAS TRADE

Natural gas in the European Union's energy mix has a very important role as a source of energy supply. Many EU countries are importing almost all of their supplies as mentioned in the previous chapters and these countries are heavily dependent on a particular source or a particular transport route for the majority of their gas supplies and in the whole Union, natural gas makes up about one quarter of all the energy used (European Commission, 2015). Thus in case of this heavy reliance, it is inevitable that disputes among the suppliers and the EU creates threats for the continuity of gas supplies which will be explained in the following chapter of this study. Therefore it is important for the EU to have a secure pipeline infrastructure and storage capabilities. The current pipeline – LNG infrastructure has graphed in the figure 7 below.

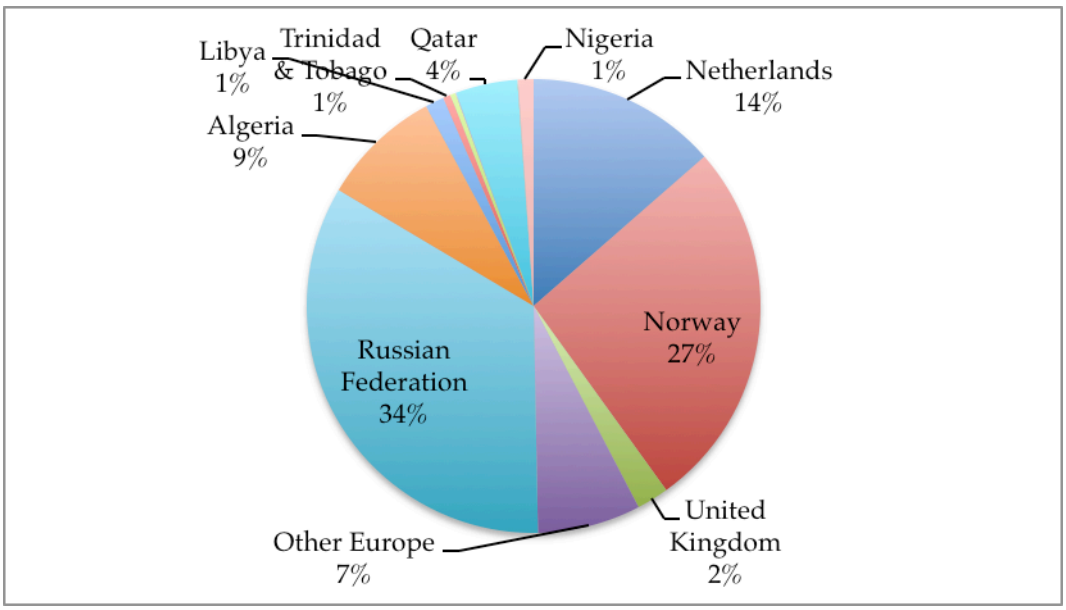
Figure 7: Major EU Pipelines and LNG Terminals



Source: Engerer et al., 2014

As graphed in figure 8, the share of Russia in European Union's natural gas and LNG imports is 34% followed by Norway with 27%, Netherlands with 14%, Algeria with 9%, other Europe with 7%, Qatar with 4%, United Kingdom with 2% and Nigeria, Libya, Trinidad & Tobago with 1%. Within its LNG importing partners, Qatar has the highest share with 46% followed by Algeria with 26%, Nigeria with 13%, Norway with 5%, Trinidad & Tobago with 4%, Peru with 3% and Egypt with 1% (BP, 2014). Moreover, the EU has 20 LNG terminals with a total capacity of 5.04 bcm in Spain, France, Italy, Belgium, Greece, Netherlands, Portugal and Sweden (Ratner et al., 2013).

Figure 8: EU's Natural Gas and LNG Imports by Country of Origin, 2013



Source: BP Statistical Review of World Energy, 2014

The notion of asymmetric interdependence suits the precise explanation of the energy relationship between Russia and the EU since both sides are dependent on each other in terms of gas trade where Russia for the income derived from gas exports and EU for the gas supplies to fulfil its demand. It is a fact that EU Member States are vulnerable to any kind of energy crisis given their level of dependency on Russian gas and the relationship would be considered as asymmetric for the states that are highly dependent on solely Russian gas since the cost of a conflict between Russia and the Member States is unevenly distributed given their level of dependency (Harsem & Claes, 2013). The level of dependency of EU Member States on natural gas imports are shown in table 3 together with the percentage of Russian natural gas in Member States' gas imports.

Table 3: EU Member States' Natural Gas Import Dependency and Share of Total National Extra-EU28 Imports of Natural Gas, 2013

Member State	Natural Gas Dependency (%)	Share of imports from Russia (%)	Member State	Natural Gas Dependency (%)	Share of imports from Russia (%)
Belgium	100.5	0-25	Lithuania	100	75-100
Bulgaria	93.2	75-100	Luxembourg	99.6	0-25
Czech Republic	100.2	75-100	Hungary	72.1	75-100
Denmark	-23.1	0-25	Malta	-	0-25
Germany	87.2	25-50	Netherlands	-86.8	0-25
Estonia	100	75-100	Austria	75.5	75-100
Ireland	95.9	0-25	Poland	74.2	75-100
Greece	100	50-75	Portugal	101.5	0-25
Spain	98.6	0-25	Romania	11.9	75-100
France	97.4	0-25	Slovenia	99.6	75-100
Croatia	31.8	0-25	Slovakia	95.6	75-100
Italy	88.1	25-50	Finland	99.9	75-100
Cyprus	-	0-25	Sweden	99.1	0-25
Latvia	115.6	75-100	United Kingdom	50.1	0-25

Source: Eurostat Statistics Database

Together the EU Member States are importing almost 55% of their energy supplies, around 84% of oil and 64% of natural gas and in 2012, 34% of European natural gas imports have originated from Russia but Norway was the biggest supplier of the EU in 2012 by accounting for 35% of total natural gas imports (Ratner, et al. 2013). However in 2013, the situation has changed among the natural gas suppliers of the EU. While Russia is preserving its dominant position as the leading gas supplier of the EU, share of Norway has degraded to 27%. The other suppliers are

Netherlands with 14%, Algeria with 9%, other Europe with 7%, Qatar with 4%, United Kingdom with 2% and Nigeria, Libya, Trinidad & Tobago with 1% as it can be seen in figure 8. When the trend in the gas import dependence has been examined, it is observed that the rate of dependency on natural gas import has been on a virtually continuous increasing trend from the beginning of the century when it was fewer than 50% compared to the level in 2012, which was 66%. Overall, 14 Member States are highly dependent on Russia with levels of 90% or more. But some other countries like Romania and Hungary, besides Bulgaria and Czech Republic which are less dependent on imports, have managed to decrease their gas import dependency levels while United Kingdom and Croatia have been increasing the dependency levels while their production rates are decreasing and making them to rely more on foreign imports (European Commission Directorate-General for Economic and Financial Affairs, 2014).

The energy dialogue between Russia and EU has been going on since the beginning of this century and it has been found out that the relationship of natural gas between two parties is based on resource-geographic dimension, which is also very strong. The routes of the gas trade way back to the intensely state-led Cold-War détente project but recently, the increasing dependence has led the EU to seek alternative suppliers to diverge from Russia has endangered Russia's security of market and thus the Russian side has interpreted this policy of diversification as a sign of distrust (Aalto, 2012). Most recently on March 2013, the coordinators of

the EU-Russia Energy Dialogue have signed the 'Roadmap EU-Russia Energy Cooperation until 2050' in Moscow which covers areas related to cross-sectoral issues, electricity, gas, oil, renewables, energy efficiency and cooperation with regards to energy scenarios and forecast by trying to be a living, forward looking and advisory document to enhance the cooperation of energy between EU and Russia over the following decades (European Commission and the Russian Government, 2013). The energy dialogue between the EU and Russia intends to develop the investment opportunities in the energy sector to guarantee uninterrupted energy production, to assure and enlarge transportation infrastructure together with decreasing the environmental impact, at the same time boosting the opening up of energy markets, assisting market penetration of more environmentally friendly technologies and energy sources and promoting energy efficiency and energy savings to lead the path to a low-carbon economy (European Commission, 2013).

Most recently an important event has occurred which is expected to affect the relations between Russia and the EU. This specific event is the decision of the cancellation of South Stream pipeline project by Russia, which was designed to transport Russian gas through Black Sea to Bulgaria, Serbia, Hungary, Slovenia and Austria (Gazprom, 2014). This pipeline project is meant to reinforce the European energy security but Russian president Putin announced on December 1, 2014 that the construction of the pipeline has been suspended and the direction of the pipeline route would be changed through to Turkey instead, also with a possibility of the

construction of a hub on the Turkish-Greek border that could ship the natural gas to southern Europe. The project was supposed to bypass Ukraine for the transit of gas to Europe and redirect the flow of Russian gas towards the Balkans and thus leave Ukraine with a deeper energy dependency on Russia with a diminished leverage power of Kiev over Moscow. Although it may seem as a success for the EU in the purpose of reducing the energy dependence on Russian gas, the EU members should now look out for alternative energy sources as compensation. The party that has gained favour in this circumstance is Turkey, which in result would have a bigger role in the Balkans, Central Europe and the EU by being the hub for Russian, Azeri and maybe even Kurdish gas (Jensen, 2014). In this case, it is expected that 63 bcm of natural gas will be transported to Turkey of which Turkey would buy 14 bcm and the remaining 49 bcm is aimed to be delivered to European market and thus Turkey would have a central role in the situation of these change of plans (Pflüger, 2014). The South Stream project was a $40 billion project and the commercial viability of the pipeline was unclear from the exact beginning together with an unnecessary expenditure on the construction of an additional supply route to Europe when looked from the technical point of view. Furthermore at this point, The Interconnector Turkey-Greece-Italy (ITGI) project, which has lost the competition to carry Caspian supplies to Europe from Azerbaijan's Shah Deniz field, holds the possibility to revive with the failure of South Stream project. Currently, Greece and Bulgaria are continuing with the construction of Interconnector Greece-Bulgaria

Pipeline, which is aimed to linked to the Trans-Adriatic Pipeline (Geropoulos, 2015).

Moreover, the demand curve of the conventional customers is not in favour of the construction of the pipelines, which in result has made Russia to overview and revise its current strategies especially to focus on prospective markets, namely China (George, 2014). Due to Russia's sudden change in the construction plans of South Stream project, the countries that would have been involved in the project have also affected negatively from this situation such as Serbia, Bulgaria, Hungary and Slovenia all lost high investment capitals and opportunities (Sputnik International, 2014). The aim of the EU to reduce its dependence on Russia has made Bulgaria, which was a part of South Stream project, to renounce on this project and thus Russia has turned to Turkey for the new route of the cancelled project. But it is an uncertainty that this new project would be favourable for Turkey because of the current level of dependency of Turkey on Russia and whether this dependency would increase in the future with this project or not, so it is important for Turkey to obtain more solid roles in this process in order to create mutual interdependence with Russia (Kobal, 2014).

Figure 9: Russia's Gas Transit Pipelines to Europe

Source: Pirani et al., 2014

In order to provide an understanding on the transit pipelines of Russia to Europe, figure 9 above represents the existing and proposed gas transit pipelines. From Russia to Europe, currently the active pipelines are Yamal-Europe I, which transports Russian gas to Poland and Germany via Belarus; Yamburg-Uzhgorod, Orenburg-Uzhgorod, Urengoy-Uzhgorod and Dolina-Uzhgorod are the pipelines that carry Russian gas to Western European countries, primarily Germany, France and Italy through Ukraine, whereas Nord Stream and South Stream are the pipelines that are designed to bypass transit countries and directly connect Russia to its customers (U.S. Energy Information Administration , 2014). Consecutively, table 4 is demonstrating the three main categories of exports pipelines from Russia to EU are Ukrainian corridor, Yamal-Europe and Nord Stream with their routes and capacities of natural gas exports.

Table 4: Export Pipelines from Russia to Europe

Name	From	To	Capacity (billion m^3)
Ukrainian Corridor	Russia	Ukraine	112
	Belarus	Ukraine	25
	Ukraine	Romania (to Bulgaria, Greece, Turkey)	36.5
	Ukraine	Hungary (to Serbia, Bosnia-Herzegovina)	19.5
	Ukraine	Slovakia	83
	Slovakia	Czech Republic	25.5
	Slovakia	Austria	57
	Austria	Italy	37
Yamal-Europe	Russia	Belarus	33
	Belarus	Poland	40
	Poland	Germany	33
Nord Stream	Russia	Germany	55

Source: Engerer et al., 2014

Therefore, under the light of the mentioned framework of the EU, the study will try to set forth the future of Russia-EU energy relations while considering the brand new relations between Russia-Turkey and Russia-China in the following chapters. However before addressing the future relations, the next chapter will cover the disputes over natural gas transit between Russia and the EU due to Ukraine in terms of their relationship of interdependency, since such kind of controversies could be really important given the fact that they are highly dependent on each other.

CHAPTER 6

RUSSIA AND THE TRANSIT COUNTRY UKRAINE TOWARDS THE EUROPEAN UNION: THE DISPUTES OF 2006, 2009, 2014 AND THEIR IMPACTS

The relations between Russia and Ukraine have been uneasy from the very beginning. In the times of the dissolution of the Soviet Union Ukraine and Russia seemed to act together against the president of the Soviet Union, but after the dissolution in 1991, Russia was not ready to accept Ukraine as an independent and equal state to itself whereas Ukraine was willing to develop relations with Russia on the basis of equality while maintaining and enhancing its own sovereignty. Therefore the relations were not easy among the countries, and within many major problems one was the Crimea, which belonged to Russia until 1954, became an autonomous territory inside Ukraine in 1992 and recently Crimea has shown a pro-Russian policy that led to the late dispute in 2013 (Kappeler, 2014). Aside from the very recent crisis, Russia and Ukraine have experienced two major disputes in the area of natural gas since Ukraine is an important transit country toward the European Union, which is the

biggest consumer of Russian natural gas. Therefore this section of the chapter will shed a light on the disputes between Russia and Ukraine and display the impacts of the crisis on the framework of Russia – EU energy relations.

6.1. The Natural Gas Dispute of 2006 between Russia and Ukraine

In the year of 2004, Ukraine was responsible for more than 80% of Russian gas exports towards Europe, and Russia was supplying 40% of European natural gas imports and accounted for 28% of gas demand in that year. Within this framework, throughout the 1990s, Russian and Ukrainian gas relations were shaped by the incompetence of Ukraine to pay the debt of natural gas to Russia that amounted up to 50 bcm/year and this in turn resulted in reduction in gas supplies from Russia to Ukraine for short periods of time which led to unauthorized reorientations of the volumes in transit to European countries (Stern, 2006). With the beginning of 2005, Gazprom has reported to open dialogues with Ukraine in terms of increasing the price of the natural gas but Ukraine has rejected the price increase to $230 per trillion cubic meters (tcm) on the grounds of the existing contract, which guaranteed a low price of $50 per tcm until 2009 and this in turn resulted in a loan offering from Russia to Ukraine to help pay the increased gas prices. However with the refusal from Ukraine to this offer, president Putin and Aleksey Miller, the head of Gazprom, agreed on cutting gas supplies to Ukraine, which in the end resulted in

Ukraine's usage of gas as a compensation of the cut, which was intended for European customers. As a result of this action of Ukraine, Gazprom has accused Ukraine of stealing and being an unreliable transit country (Nichol et al., 2006).

6.2. The Natural Gas Dispute of 2009 between Russia and Ukraine

The year 2009 has witnessed another natural gas crises between Russia and the transit country Ukraine due to high amount of Ukrainian debts and price increases in the trade of natural gas. At the end of 2008, Russia wanted a price increase for Ukraine to pay closer prices as the Europeans paid for Russian gas but while facing with economic crisis, Ukrainian president and prime minister were also going through political crisis. As a result of not reaching an agreement before the last day of 2008, Russia has cut off the supplies to Ukraine and a series of accusations were put forward by Russia and Ukraine, specifically Russia blaming Ukraine with theft of natural gas and not paying its debts while Ukraine was denying such accusations and blaming Gazprom with trying to obtain extreme prices and/or refusing a parallel rise in transit fees. This dispute resulted with a two weeks of gas stock out for the South-Eastern European countries while some other Western European countries faced with limited disruptions due to their capability of storage and access to other interconnections (Hafner & Bigano, 2009). By the time of January 19, an agreement was reached between Russian Gazprom and Ukrainian

Naftogaz in the area of gas supply and transit issues. The agreement seemed to benefit for Ukraine in terms of transit fees but Gazprom was in a more beneficial position than Naftogaz in the January 2009 agreement since Russia has accomplished to execute a pricing method that even under the circumstance of a low oil price in the long run assures a comparatively high gas price for the disadvantage of Ukraine (Westphal, 2009).

6.3. The Crimea Crisis of 2014 between Russia and Ukraine

In the previous disputes of 2006 and 2009 of Russia and Ukraine, the former crisis was solved by Gazprom by supplying Ukraine a full price Russian gas together with cheaper Turkmen gas when the supplies to EU were cut off for three days and the latter crisis was solved with European netback price with a one year discount of 20% when a 13 days full disruption happened (Sharples & Judge, 2014). Consecutively, not so long ago, in the first quarter of 2014, the pro-European protestors in Kiev' Maidan (Independence Square) in February have ousted the currently former Ukrainian President Yanukovych and it has resulted in Russia's seizure of control in Crimea which has caused violent unrest in Eastern Ukraine where Russia has gathered troops at the Russian-Ukrainian border, which has rushed tensions between the US and the EU on one hand and Russia on the other hand (Goldthau & Boersma, 2014). In order to clarify the actions of Russia in Crimea, it can be best explained with the consideration of Kremlin, which is if Russia wants to reclaim its position

as a global power, initially it must dominate its so called near abroad that indicates the states that emerged with the dissolution of the Soviet Union in 1991 because Russia does not hold an option of losing Ukraine to the Western world if it aims to strengthen its former scope of influence in its near abroad (Vişan, 2014).

The main event that burst the crisis was the actions of the Ukrainian president of which he said to be in to talks for a trade pact with the EU named as ''Eastern Partnership'' that aimed to promote political ties and trigger the economic growth of the country but instead, he decided to leave this deal and entered into a ''Customs Union'' with Russia that facilitated Ukraine to take advantage from sharp discounts on natural gas supplies from Russia together with an aid of $15 billion (Sabnavis & Mehta, 2014). Therefore under the light of these mentioned events, Crimea voted for divestiture of the regional government together with a referendum on the republic's extended autonomy, and in March Crimea has declared its independence from Ukraine, and the referendum was resulted with 79% of the Crimean population voting for independence and annexation to Russia, which has recognized Crimea as a sovereign and independent state (Pachiu & Dudău, 2014). In order to justify the annexation of Crimea, Russia has put forward two arguments, which were the threat presented by the new authorities on Russian-speaking citizens and the region's historical membership of Russia (Lepesant, 2014). By taking Crimea back in its hands, Russia has realized a big movement in restoring its dominance in the Black Sea area where Turkish Navy

happened to be the strongest power in the region after the collapse of the Soviet Union but now has lost its supremacy (Trenin, 2014). At this pointi the control of Russia over Crimea gives power for Moscow for an on-going access to the Naval base in Sevastopol that is the base of Russian Black Sea fleet, which is capable of tackling with naval threats from other states (Schwartz, 2014).

The relationship with Russia and Ukraine has been based on energy terms. Ukraine is a strategic transit country for Russia towards the EU since Russia supplies almost 30% of natural gas of EU members together with Turkey, Norway, Switzerland and the non-EU Balkan states and an estimated 16% of the total natural gas consumed in Europe is happened to pass transit through Ukraine via the pipelines graphed in figure 10 (Energy Information Administration (EIA), 2014). The Bratstvo pipeline is the biggest pipeline from Russia to Europe that is passing through Ukraine to Slovakia and supplying natural gas to northern and southern European countries whereas the Soyuz pipeline connects Russian pipelines to Central Asian natural gas networks and provides supplementary natural gas to central and northern Europe. Furthermore, the Trans-Balkan pipeline flows through Ukraine and transports natural gas to Balkan countries and Turkey (Bilych et al., 2014).

Figure 10: Chief Natural Gas Transit Pipelines through Ukraine

Source: U.S. Energy Information Administration (EIA)

As represented in table 5, Italy, Turkey and Germany are heavily dependent on Russian gas passing through Ukraine with 25.33, 13 and 11.71 bcm of gas respectively and followed by Czech Republic with 7.32 bcm, Hungary with 6 bcm, Slovakia with 5.42 bcm, France with 3.21 bcm, Bulgaria with 2.76 bcm, Greece with 2.63 bcm, Romania with 1.19 bcm, Serbia with 1.16 bcm, Slovenia with 0.54 bcm, Switzerland with 0.37 bcm, Bosnia-Herzegovina with 0.19 bcm and Macedonia with 0.04 bcm in 2013.

Table 5: Amount of Russian Gas Passing through Ukraine to European Countries

Countries	2013 (bcm of gas)
Italy	25.33
Turkey	13
Germany	11.71
Czech Republic	7.32
Hungary	6
Slovakia	5.42
Austria	5.23
France	3.21
Bulgaria	2.76
Greece	2.63
Romania	1.19
Serbia	1.16
Slovenia	0.54
Switzerland	0.37
Bosnia-Herzegovina	0.19
Macedonia	0.04

Source: Pirani et al., 2014

However some European countries have managed to plan and construct pipelines to bypass Ukraine such as Nord Stream towards Germany which passes under the Baltic Sea and South Stream through the Balkans but there has been change of plans in the South Stream project because Bulgaria stopped working on the project due to European Commission's objectives concerning the fulfilment of South Stream project with EU's energy regulations (Woehrel, 2014). The Crimean crisis has brought up the thoughts on the significance of rapid diversification due to the fact that highly dependent countries on Russian gas passing through Ukraine are more exposed to political pressure and increased gas prices, since Russia exports 65% of its gas supplies to EU, and the EU, as a whole receives one third of its gas requirements from Russia. Thus under these circumstances, the bypass pipelines gain more attraction to prevent any disruption or

price volatility in case of crisis (De Micco, 2014). The fact is that in the short term, Russia will continue to be the mainstay of European energy supply since the European Union has sufficient storage capacity to endure temporary disruptions caused by Ukraine transit, but in the medium and long term, Europe holds diversification opportunities that would additionally enlarge its foreign policy scope (Westphal, 2009).

On the other hand, the annexation of Crimea by Russia resulted in sanctions on Russia by the European Union, which does not recognize this annexation and these sanctions focused on travel bans against Russian and Ukrainian officials and asset freezes against the officials of Russia and Ukraine and many more sanctions were covering imports-exports, investments financial services, loans and so on (European Commission, 2015). Likewise, the US has also put out some sanctions over Russia due to the same reason which were to be executed on arms related activities, crude oil projects investments, foreign financial institutions (Wall et al., 2014). Therefore, under the light of the events mentioned in this chapter together with the previous ones, the following chapter will be covering the possible outcomes by referencing to the whole study. It is obvious that recent events jointly with the historic ones have affected the status of relationships between Russia and the EU. Thus, the next chapter will provide insight on the trends of both Russian and EU's future natural gas trade, while taking into consideration the new important actors in their relationship that are China and Turkey.

CHAPTER 7

ANALYSIS AND FINDINGS

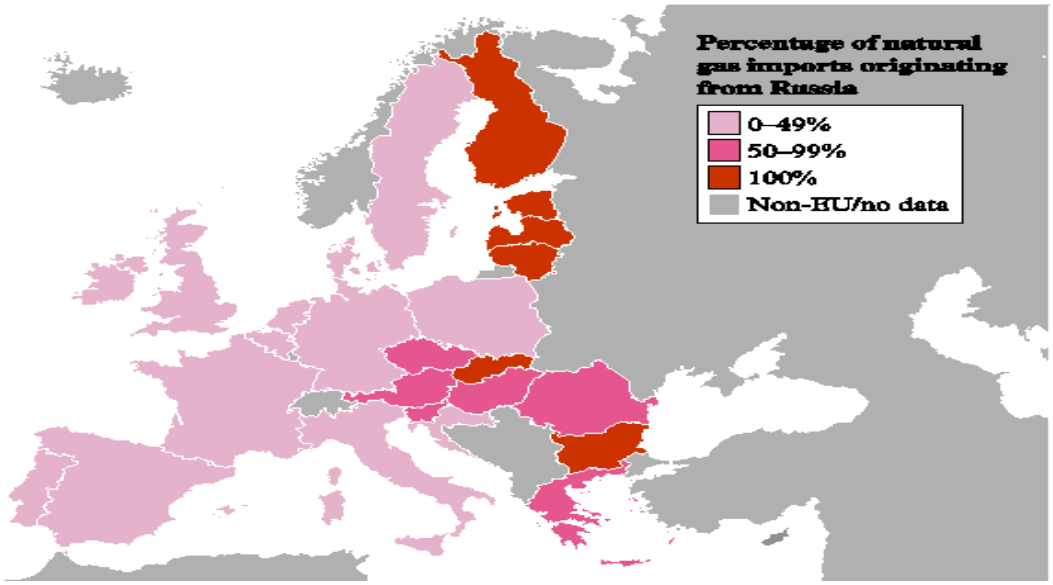
The ''Analysis and Findings'' chapter of this study will be addressing the predetermined research questions, which are stated in the introduction chapter while collating the given information in the main chapters together with referencing to the interdependency theory. As mentioned in the earlier chapters, Russia and the EU have been and still are important and strategic partners for each other in terms of energy and especially in the area of natural gas trade. Natural gas is the utmost source of energy for Russia since it is generating its government revenue from the exports of gas, which accounts for more than 50%of the federal budget revenues (EIA, 2014) and for EU as well since it prefers a rather cleaner source of energy besides the renewables. Thus, this specific trade creates interdependency between them and it puts their political relationship into a fragile position. The previous chapters have pointed out the significance of this interdependency and due to the fact of vulnerability, the crises and disputes play an essential part among the bilateral relations.

The first research question of the study is about the level of interdependency between Russia and the EU Member States, considering the natural gas trade. As examined in Chapter 5 of the study, natural gas trade is the ultimate important factor that is creating interdependency between Russia and the EU. As stated earlier, 34% of the EU's natural gas and LNG imports are originating from Russia, which accounts for 162,4 bcm of natural gas import to the EU. It has been declared by the International Energy Agency that the level of EU's dependency on Russian gas reached to a highest level of over 160 bcm in the year 2013 and it seems that the dependency has been increasing over time due to lack of encouragement of EU of its members to construct gas pipelines to other suppliers to supply alternatives of natural gas to Europe other than Russia; (1) Increase in the North African supplies in the short and medium term seems gloomy due to the effects of Arab Spring of 2011, (2) Eastern Mediterranean is a potential supplier for Europe due to the new developments in the offshore Israel and Cyprus which has considerably altered the region's energy outlook, from a long-term energy importer to a prospective exporter of natural gas who has a strategic position that is close to the European markets but there are uncertainties related to the realization of the projects due to the perceptions of Greek and Turkish Cypriots on the determination of their Exclusive Economic Zones in the Mediterranean Sea (3) Caspian Region, especially Azerbaijan and Turkmenistan, is also another alternative to Europe by creating the Southern Gas Corridor that is also including Turkey but there is an uncertainty on the perceptions of Caspian's position as a lake or sea

(Dickel et al., 2014). When the alternatives to Russian gas for EU is analysed, the EU Commission is focusing on four alternatives as (1) importing gas from Middle East and North Africa, (2) increasing the effort on the Southern Gas Corridor through Azerbaijan, Kazakhstan and Turkmenistan and (3) importing LNG from the US, Australia and East Africa. However there are many other alternative countries but there are constraints on their exports to the EU, which are Iran (international sanctions in place), Iraq (political turmoil), Algeria (limited project potential), Libya (political turmoil and lack of infrastructure), Egypt (political instability and increasing domestic demand), Israel (priority of national interest and exports to neighbours), Azerbaijan (best alternative for the EU), Turkmenistan (exports to China), Turkey (Russian pressure and bargaining tool towards the EU) (Tcherneva et al., 2015)

The failure of the Nabucco project which was aimed to supply Azeri gas to Europe, the postponement and change in plans of the South Stream Project designed to diversify gas routes and the gradual progress in the Trans-Adriatic pipeline project are all reasons for EU's incapability to diversify and reduce dependency over Russian gas (Urutchev, 2014). The figure 11 is demonstrating the percentages of EU members' imports from Russia in 2013. In 2013, energy supplies that are coming from Russia was equal to 27% of EU consumption of natural gas in that year whereas Russia has supplied 71% of its natural gas to Europe mainly to Germany and Italy which are Russia's biggest partners of gas export (UK Parliament, 2015).

Figure 11: Percentage of Natural Gas Imports Originating from Russia, 2013



Source: UK Parliament, 2015

It is a fact that Russia should recognize that Europe is longing to diversify energy sources, integrate the market, develop renewables sectors and amend its long-term contracts plus take-or-pay obligations and oil-indexed price clauses, in order to provide the Europeans more flexibility. Nevertheless, Russia has also asserted that it will turn to Asia to decrease its dependence on demand from EU and tried to expose its determination to build a gas pipeline towards China (Chow & Hudson, 2013). The recent developments show that the agreement on natural gas supply has been reached between Russia and China. Given the current conditions of the relationship between Russia and the EU, which is tense and fragile, both sides are determined to decrease the level of their dependency on each other in terms of natural gas trade but the past evolvement of relations between Russia and the EU makes it difficult for both sides to

straightaway decrease the levels of dependency. However the series of events are not guaranteeing that either side will give up on the efforts of decreasing dependency. As the German Chancellor Angela Merkel stated, "There are good reasons to continue the energy partnership with Russia", "It's not our goal to completely sever our dependency" and "Nevertheless, we have naturally to think about what we might have to change in the medium- to long-term as far as energy policies go if there is a continued violation of basic principles" (The Moscow Times, 2014).

Although there are many alternatives for the EU to diversify natural gas imports, only natural gas would not be sufficient to decrease dependency on Russia. Thus, another important factor to decrease the dependency over Russian gas is to rapidly increase the renewable energy sources since the levels of domestic natural gas production in the EU countries are declining except Norway, but it cannot solely be the source for all Europe instead of Russian gas. Hence, a strategy of developing the sources of renewable energy would be the turning point in becoming independent from Russian gas supplies to the EU (Fell, 2014).

The second research question of the study is about the role of interdependency in the energy policy making of Russia and the EU. As it was determined and stated in the ''Roadmap EU-Russia Energy Cooperation until 2050'', Russia is pursuing the following goals related to its natural gas industry: (1) an expansion in gas production via new deposits, which will additionally compensate the decrease in gas

production in current fields, (2) restoration of current and the promoted growth of added gas transport infrastructure to guarantee sufficient gas supplies onto the domestic market and for export (3) upgrade of geological exploration efforts in main gas-producing regions and on the continental shelf of the Russian Federation, (4) progress in the production and export of liquefied natural gas, (5) progress in the gas-processing and gas-chemical industries targeted at the reasonable utilization of valuable fractions of hydrocarbons, (6) liberalizing the gas market, the making of competitive environment and the advanced progress of non-discriminatory access to pipeline and other gas infrastructure for all business bodies. In the meantime the Russian strategy anticipates (1) the supply of gas to the European market en route with its demand would decrease whilst exports in the eastern route will increase drastically, (2) the slow, economically reliable, growth of the Unified Gas Supply System in the east of Russia, (3) the contribution of Russian companies in the growth of gas reserves in other countries and the building of new inter-regional gas pipelines, (4) a steady energy savings policy considering the gas production, transportation, processing and underground gas storage in Russia.

On the other hand, the goals of the EU related to its energy policy, which is specified by the European Heads of States and Governments, are ''to ensure safe, secure, sustainable and affordable energy contributing to European competitiveness'' together with the purpose of progressively decarbonising the EU economy, particularly post-2030. The future

insecurities related to the EU-Russia gas relations requires to be steadily informed on the long-term outlooks of the EU demand for Russian gas, involving the implementation of the EU low-carbon policies and EU best estimates of the implications for gas imports which is important for Russia when adopting decisions on resource depletion, infrastructure investment and its role in the EU gas market (European Commission, 2013). Although the EU is aiming to create a single energy market through liberalization, it faces challenges due to having 28 different national renewable energy subsidy schemes since each of them favour their national energy suppliers. At this point it would be suitable to mention that EU is trying to reach its goal of 20% usage of renewables by 2020. This situation related to the usage of renewable sources within the EU creates problems in respect to the EU's willingness to reduce dependency over Russian gas via usage of renewable energy (Wallace, 2015).

The third research question of the study is about the impact of the recent Crimea crisis together with the previous ones between Russia and Ukraine on the natural gas trade between Russia and the EU. The mutual attempt by Russia and Crimea to benefit from the internal conflict in Ukraine to dispossess the Ukrainian control over Crimea with holding a referendum and declaring Crimea's independence from Ukraine was a major event. Consequently, Russia's actions in the recent Crimea crisis has utterly affected the Russia-EU relations and in response EU has put out some sanctions over Russia related to the suspension of talks on visas and a new EU-Russia agreement together with the measures taken in the areas of

''access to capital markets, defence, dual-use goods and sensitive technologies (that includes those in the energy sector)'' such that there has been a prohibition on exports of certain goods and technology to Crimean companies or for use in Crimea (transport, telecommunications and energy sectors or the prospection, exploration and production of oil, gas and mineral resources) and the EU nationals and companies may no longer buy or sell new bonds, equity or similar financial instruments that belongs to 3 major energy companies of Russia. Given this condition of political crisis the UK's former climate and energy security envoy, Rear Admiral Morisetti stated "Recent events in Ukraine and the Middle East have served to highlight the vulnerability of our energy supplies and the political straitjacket that results from our over-dependence on fossil fuel imports from these volatile regions," in order to emphasize the fragility of relations between Russia and the EU (Neslen, 2014). The unease situation in the Middle East is likewise another factor for EU to go through hardship in potentially decreasing dependency on Russia by importing more from the region. Another important reason of Russia's motives on the annexation of Crimea is that Crimea holds vast offshore oil and gas resources in the Black Sea with an estimated amount of 4-13 tcm of natural gas and thus, Russia is also said to be holding aims on huge parts not only of Crimea's, but also of Ukraine's continental shelf and Exclusive Economic Zone (EEZ), which may utterly complicate the separation of the Black Sea continental shelf and EEZs with Romania and Turkey (Umbach, 2014).

The fourth and last research question of the study is about how would the recent geopolitical shifts such as the new Sino-Russian agreement on natural gas, cancellation of South Stream and newly emerged Turco-Russian cooperation on a new pipeline, recalled as Turk Stream, affect the future relationship between Russia and the EU, through energy security perspective. The recent developments related to these important changes are all over the news for a period of time. In the case of the South Stream project, which is now evolving into another phase by including Turkey in the plans, the project was originally meant to carry Russian gas under the Black Sea by passing the exclusive economic zones of Russia, Bulgaria and Turkey with a total offshore length of 930 kilometres and a design capacity of 63 bcm, whereas the onshore part was supposed to pass across Bulgaria, Serbia, Hungary, Slovenia and finish in Italy (Gazprom, 2015). However, the construction of a new pipeline towards Turkey through Black Sea is being discussed which is proposed to be a 660 kilometres long with a capacity of 63 bcm/y within the former corridor of South Stream. Gazprom will supposed to be responsible for the construction of the offshore pipeline while the Turkish gas transportation facilities will be joint projects. Alexey Miller who is the Deputy Chairman of the Board of Directors and Chairman of the Management Committee (CEO) Gazprom, stated that "We agreed to plan our work in such a way that would allow us to sign an Intergovernmental Agreement on the gas pipeline in the second quarter this year, therefore the first gas would come to Turkey in December 2016. In this respect, the first string's throughput capacity of 15.75 bcm will be exclusively intended for Turkish consumers.

Considering the state of readiness of the Russkaya compressor station and the pipeline's offshore section, this deadline is absolutely real." (Gazprom, 2015). Furthermore, the EU enlargement chief Johannes Hahn said in a press briefing at the bloc's Ankara mission stated as "We explicitly welcome if Turkey could become an energy hub for the region. For Turkey to supply and serve the European energy needs is part of our strategy to diversify sources, but also the different supply opportunities." (Peker, 2014). However, the executive chair of The Bosphorus Energy Club, Mehmet Öğütçü said on the issue of this new cooperation "Natural gas is a national security matter for Turkey. It is critically important for its ambitious economic-political projects, and if Turkey wants to become a regional hub beyond meeting its own gas supply requirements, we all agree that Turkey has to align its foreign policy with its energy policies, and never treat gas matters in isolation from geopolitics." (Leifheit, 2015).

On the other hand, the latest natural gas deal between Russia and China is another important event in the global natural gas markets that has also been on the news. The $400 billion worth natural gas agreement that will supply gas for China for 30 years with the amount of 30 bcm of gas with the beginning of 2018. This deal is important for both sides since it is the biggest natural gas agreement for Russia to help the country transfer from stagnant European markets to the huge and still growing market of China, which is also aiming to decrease the use of coal to reach its aim of reducing the CO_2 emissions and thus pollution (Gong, 2014). With this deal the possibility of Chinese energy companies to invest in Russian

upstream energy projects would now be feasible since Russia has been experiencing stagnation in production of natural gas due to diminishing reserves and the future reserves are to be extracted from colder, deeper and less accessible areas which Chinese investment would be helpful to exploit such reserves of natural gas (Weitz, 2014). Now that China is seeking alternatives to diversify its energy sources especially to expand the sources of imported natural gas, it is said to be increasing its bargaining power in the global energy markets due to its weighty political influence caused by its robust economic power (Lee, 2014).

CHAPTER 8

CONCLUSION

In order to show the general framework of the natural gas bilateral relations of the world's biggest suppliers and demanders of natural gas, the ''Conclusion'' chapter will deliberately cover the main question of the study that is whether the series of crises caused by Ukraine are the triggering factors of the alterations in the status of relationship between Russia and the EU or not, while taking into consideration the recent state of relationship between Russia-China and Russia-Turkey and how it would affect the highly interdependent relationship of Russia and the EU in the future. As provided in the ''Literature Review'' of the study, on the theory of interdependency, Keohane and Nye asserted, "It is asymmetries in interdependence that are most likely to provide sources of influence for actors in their dealings with one another." The statement justifies the leverage power of Russia against the countries that are importing its gas. Nonetheless, as the theory of interdependency states that *sensitivity* and *vulnerability* are two important concepts, former of which *sensitivity* is defined as ''the costs that each side suffers when the other state does not

offer it the benefits it should get from their relationship'', and the latter *vulnerability* can be described as ''the degree of weakness of an interdependent state if the other attempts to terminate their interdependent relationship''. Under the light of these two concepts of the interdependency theory, given the fact that Russian economy is based on energy revenues, although both sides are highly sensitive in terms of their position in the energy trade, Russia is more sensitive that the EU incline towards any action related to decreasing the dependency on another but on the other hand some EU member states creates the vulnerable position of the EU.

Having an economy solely based on incomes generated from a single sector is the main stake that puts Russia in sensitive position against the EU. That is why at this point, Russia could be criticised about not investing more in any other sector than energy if it wants to decrease its economic dependence on the EU as its single biggest consumer of gas. At this point, the agreement with China seems a supporter for Russian economy to continue revenue generating from the trade and investment of natural gas. It is an important question that if the recent Crimea crisis has affected Russian or European authorities to accelerate the process of considerations related to diversification and thus declining dependency. When regarding the recent Russian actions in the area of its relations between China and Turkey, and the sanctions applied by the EU on Russia due to its actions in Crimea, it can be said that the crisis has played a vital role in accelerating the actions of both parties on turning to other

alternatives. While Russia has sealed a deal with China and turned the direction of the South Stream project from Europe to Turkey, the EU has also prepared some scenarios in the aftermath of the Crimea crisis. These scenarios are including compensation plans in case the EU is suddenly forced to cut ties with Russia. But these are long term plans and their accuracy have to be looked over carefully. However, the Crimea crisis could be seen as an opportunity and a chance for the EU to fasten the policies and scenarios to be taken in order to reduce dependency over Russian gas or in the long term, it will continue to be dependent on Russian supplies without a common energy policy since the dependency is caused not by all members but by a number of them. At this point, an energy union would be appropriate for Member Countries to trade energy across borders and thus the members with low dependency over Russian gas would help the ones with higher dependency. Nevertheless, it is a fact that the process would require courageous actions by the EU. In case of Russia, which is getting ready to enter a new market that is China, it is a question that if China would be a big market as the EU and if Russia could obtain the same level of dependency on it as well. Finally, if Russia is going to be threatening the region as it did in the Crimea crisis, it is not far from probable that the EU would take the necessary urgent actions and policies of diversification on Russia in terms of natural gas dependency.

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