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ENERGY SECURITY DILEMMA IN THE EURASIAN GAS MARKET

ABSTRACT

Energy security has become one of the most important components of the contemporary states' national security. However, within the literature dealing with energy topics there is no specific definition of the energy security dilemma. The main goal of this paper is to define the energy security dilemma and compare its manifestations and outcomes to the classic security dilemma, using the Eurasian gas market case study. We point to three different manifestations of the energy security dilemma for states, regarding their role in the gas market (whether they are exporting, importing, or transit states). We end with a conclusion that in the long run, the energy security dilemma has the opposite outcome to the classic security dilemma – it encourages cooperation among states, instead of curbing it.

Key words: energy security dilemma, Eurasian gas market, importers, exporters, transit states, pipelines

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1. INTRODUCTION

Survival and progress of any contemporary society depend greatly on the availability of energy resources. For this reason, states reserve for themselves the decisive role in the energy market, which makes them the main actors to be considered. Energy market is anarchical, regionally divided and volatile in terms of supply, demand and prices, which by definition makes cooperation between states more difficult. The situation is even more drastic in the gas market, given the lack of institutionalization.³ This implies presence of the energy security dilemma, similar to the classic security dilemma which operates in the international system. However, in the available literature dealing with many issues in the energy security field, the energy security dilemma is rarely mentioned. Even when analyzed, it is done from the importing countries standpoint.⁴ From our viewpoint, this is unjustifiable, because the energy security dilemma has its significance not only to importing countries (which are interested in stable supply), but also to exporting (which are interested in stable demand) and transit ones (which are interested in financial benefits they enjoy from allowing energy flow across their territories). Our goal is to define and analyze this specific sort of security dilemma, comparing it to the classic one. We use the Eurasian gas market as a fair example of how the energy security dilemma unfolds and is in the long run expected to produce outcomes predicted in theory.

In the next chapter we deal with the theoretical concept of security dilemma the way it is presented in works of neorealists, who significantly rely on game theory in their analyses. Then, we turn to the energy security dilemma and present our theoretical model of it, which pays attention to the different roles states play in the energy market (importers, exporters and transit countries), and to diversification as the non-cooperative means unilaterally used by states to improve their position in the market. From these differences between the energy security dilemma and the classic one, we predict more optimistic outcomes than neorealists do with the classic dilemma. Finally, we illustrate how this works in the Eurasian gas market, trying to avoid some stereotypes regarding Russia's role in it. We conclude with the assessment of the usefulness of our theoretical model for the prediction of future developments in the Eurasian and the global energy market.

³ Unlike OPEC in the oil market, the Gas Exporting Countries Forum (GECF) does not play a role of a cartel in the gas market yet.

⁴ See Andrew Monaghan, "Russian-EU Relations – An Emerging Energy Security Dilemma", Internet, <https://www.carnegieendowment.org/files/EmergingDilemma1.pdf> 15/3/2012; Jelena Radoman, „Sekuritizacija energije kao uvod u energetske bezbednosne dileme“, *Bezbednost Zapadnog Balkana*, br. 4, januar-mart 2007, str. 36–43.

2. CLASSIC SECURITY DILEMMA

Robert Jervis defines the security dilemma by saying that “many of the means by which a state tries to increase its own security decrease the security of others”.⁵ In an anarchical environment, where there is uncertainty about the intentions of others, states unilaterally employ security measures to increase their own security, causing other states to behave the similar way, which leads to an arms race and eventually to war. In the long run, all finish less secure than they would be have they not employed such measures. According to Jervis, anarchy would impede cooperation even if all states wanted to maintain *status quo*, because there would always be a possibility that some of them will cheat.⁶ Neoclassical realist Randall Schweller criticizes this part of the concept, saying that if all states were really *status quo*, there would not be a security dilemma at all – what unfolds the security dilemma is the states’ awareness that there are always revisionist (predatory) ones among them.⁷ “Predatory states motivated by expansion and absolute gains, not security and the fear of relative losses, are the prime movers of neorealist theory”.⁸ Without them, there is no security dilemma. No matter if we agree with Jervis or Schweller, the essence of security dilemma lays in states’ uncertainty about the real goals of others’ security measures – whether they are employed for defensive or offensive purposes.

Jervis and some of the other neorealists try to explain how the security dilemma works and what outcomes it produces, using several models previously established in game theory.⁹ In considering how to increase chances for cooperation, Jervis uses models of “stag hunt” and several times repeated “prisoner’s dilemma”, also mentioning “chicken” game as an appropriate model under some circumstances.¹⁰ Following offense-defense theory, we add that it can easily be decided which specific form of the security dilemma corresponds to each of these models.¹¹ In a situation where offense

⁵ Robert Jervis, “Cooperation Under the Security Dilemma”, *World Politics*, Vol. 3, No. 2, January 1978, p. 169

⁶ *Ibid*, p. 167.

⁷ Randall L. Schweller, “Neorealism’s Status Quo Bias: What Security Dilemma?”, in: Benjamin Frankel, ed, *Realism: Restatements and Renewal*, Frank Cass, London and New York, 1996, p. 91.

⁸ *Ibid*, p. 119.

⁹ See Charles L. Glasser, “The Security Dilemma Revisited”, *World Politics*, Vol. 50, No. 1, Fiftieth Anniversary Special Issue, Oct. 1997, pp. 171–201.

¹⁰ Robert Jervis, “Cooperation Under the Security Dilemma”, *op. cit.*, pp. 170–183.

¹¹ Offense-defense theory is formulated by Stephen Van Evera, who relied on Jervis for the concept of offense-defense balance. See *Ibid*, pp. 186–214; Stephen Van Evera, “Offense, Defense, and the Causes of War”, *International Security*, Vol. 22, No. 4, Spring 1998, pp. 5–43.

has an advantage over defense and/or it is difficult to make a difference between offensive and defensive weapons, the security dilemma is likely to correspond to “prisoner’s dilemma” model, in which non-cooperation is dominant strategy. In a situation where defense has an advantage and/or it is possible to differentiate between offensive and defensive weapons easily, it corresponds to a “stag hunt” model, where there is no dominant strategy, but mutual cooperation is the best option for both players. In crisis situations, with a limited period of time for players to make decisions, the security dilemma corresponds to “chicken” game. In this model there is also no dominant strategy, but mutual non-cooperation leads to the worst outcome for both players.

Avoiding negative consequences of anarchy and establishing a stable cooperation among states are the easiest in situations which correspond to a “stag hunt” model, or if it is possible to play “prisoner’s dilemma” for several times. States can signal peaceful intentions to others and learn about the benefits of disarmament and the costs of an arms race.¹² However, if we follow Schweller’s remarks on revisionist states, we may conclude that cooperation between them and *status quo* states is difficult to achieve disregarding these signals, because revisionist states are keen on expansion and their goals are simply opposed to those of *status quo* states.¹³ Therefore, in the analysis of the security dilemma, we should always keep in mind states’ goals first, and means they employ after. That is the way we continue to analyzing the energy security dilemma.

3. ENERGY SECURITY DILEMMA

Before we define the energy security dilemma, we have to deal with energy security. International Energy Agency describes energy security as “the uninterrupted physical availability (of energy) at a price which is affordable, while respecting environment concerns”.¹⁴ This definition is applicable only to energy importers, who are concerned about continuous supply. What about energy exporting states, is their energy security absolute only because they have surpluses of energy? No, for their whole economies depend on energy exports and revenues they acquire. They need continuous demand, which requires stable

¹² About possibilities for cooperation under anarchy, see Robert Jervis, “From Balance to Concert: A Study of International Security Cooperation”, *World Politics*, Vol. 38, No. 1, Oct. 1985, pp. 58-79; Charles L. Glaser, “Realists as Optimists: Cooperation as Self-Help”, *International Security*, Vol. 19, No. 3, Winter 1994-1995, pp. 50-90.

¹³ For the whole concept, see Randall L. Schweller, “Bandwagoning for Profit: Bringing the Revisionist State Back In”, *International Security*, Vol. 19, No. 1, Summer 1994, pp. 72-107.

¹⁴ Internet, http://www.iea.org/subjectqueries/keyresult.asp?KEYWORD_ID=410316/3/2012.

markets. So, if we agree that energy security is not a concern to those who import energy only, but of all states in the energy market, we may divide these states in three groups by their role in the market, and show what the energy security dilemma means for each of these groups.

There are three types of countries in the gas market: importers, exporters and transit countries. Importing countries are those whose demand for energy is significantly beyond the amount of scarce energy reserves they possess. Exporting countries are those who have sufficient energy resources beyond their own needs, so they can export surpluses. Transit countries would be those through whose territories energy flows from exporters to importers – this amount of energy is bigger than the amount these countries use for their own needs, or produce themselves. The role of transit countries is especially important in the gas market, because unlike oil that can be transported by tankers also, pipelines are essential for the transport of natural gas. For energy importers, the energy security dilemma unfolds when they start to fear for a stable supply of amounts of energy sufficient for normal functioning of their economies, or – if the supply is stable – when they are concerned about disproportionate dependence on only one exporting country, that could result in too high prices. For exporters, the energy security dilemma unfolds when they start to fear they will lose markets on which they can have a stable demand for their energy in order to use profit for their own economies, or – if the demand is stable – when they are concerned about competition with rival exporters that could decrease prices. Transit countries are also in the energy security dilemma; they fear their territories could be bypassed in the case when some alternative routes are preferred by both importing and exporting states, which would deprive them of significant financial benefits they earn from energy transit.

As in the case of the classic security dilemma, states that face it employ different strategies to increase their energy security, which their counterparts see as threatening to their own security and respond with similar moves. The common strategy is *diversification*. When facing a problem *vis-à-vis* a specific exporter, an importing country diversifies its supply by finding alternative states to import energy from. Exporting countries diversify demand by finding alternative markets, and both importers and exporters try to find alternative transit routes when facing problems *vis-à-vis* transit states. For transit states, opportunities for diversification – allowing alternative exporters or importers to establish routes over their territories – are more limited and depend on their geographic position and interests of importers and exporters for establishing new routes.

What are the differences between the energy and the classic security dilemma? We see that for all three groups of states in the energy market, the energy security dilemma has similar meaning to the classic security dilemma

– fear from being exploited by others. But the very nature of this fear and the means that states consequently employ are different to the classic dilemma, for one main reason. The classic security dilemma is present in an anarchical international system, where states differ from each other not by the roles they play, but by their respective capabilities.¹⁵ Of course, states can have different goals they want to achieve in the international relations, but according to neorealism, other states can never be certain about these goals. Here comes the dilemma. Situation in the energy market is different to the one in the international system by the very fact that states here have different roles also – they could be importing, exporting, or transit countries. From one state's role, we can derive what its goals in the market should be, and we have already mentioned these goals in considering energy security.

Therefore, if in the energy market there is no uncertainty that produces the classic security dilemma, then how the energy is dilemma possible at all? The answer is simple. With the classic security dilemma, state A does not know whether state B has aggressive goals; with the energy one, state A *knows* what the state B's goals are, but exactly because of that it cannot be sure about the outcomes of their cooperation – different roles (and consequently different goals) are essential for the cooperation here, and one cannot know in advance whether this cooperation will benefit both parties, or one of them will find itself exploited (exploitation can be also political, not only economical). What makes the energy dilemma more prominent is the fact that we have three types of states here (unlike the classic dilemma, where we can talk about two types – *status quo* and revisionist ones); for example, an importing state A should not worry only about its bilateral cooperation with exporting state B and transit state C, but also about relations between B and C.

Given that it stems from certainty regarding others goals, but uncertainty regarding the outcomes of cooperation, the energy security dilemma firmly corresponds to a “stag hunt” model. If the outcome of the stag hunt is not sure, and a rabbit is within the grasp, then why not catch it? The strategy of diversification is in fact catching the rabbit, which provokes others to give up on hunting the stag and chase rabbits themselves. And here comes our main point. After all of the hunting party participants catch their rabbits, they soon realize they have secured their minimum meal; now they can reunite with each other in the stag hunt to acquire more food, but now without fear of being exploited by others. This is exactly how the energy dilemma develops in the long run – by creating a network of diversified routes, all of the states in the market can now cooperate with each other without the concerns they had in the beginning. Therefore, the energy dilemma in the long run has a

¹⁵ Kenneth N. Waltz, *Theory of International Politics*, Addison-Wesley, Reading, Massachusetts, 1979, pp. 93–97.

positive outcome – securing cooperation between states - unlike the classic one which normally corresponds to a “prisoner’s dilemma” or a game of “chicken” model, and only under restrictive circumstances to a “stag hunt” (the advantage of defense which enables *status quo* states to signal peaceful intentions to each other).

Now we can define the energy security dilemma as *the situation in which the means that (importing, exporting and transit) states in the energy market employ to increase their energy security provoke similar reactions from the others, which in the long run encourages cooperation without jeopardizing anyone’s energy security, thus stabilizing the market.*

4. EURASIAN GAS MARKET

According to statistical data, most of the gas trade in the world takes place throughout the Eurasian space (North Africa included).¹⁶ USA is one of two leading producers of natural gas in the world, but not a significant exporter also. Countries of Africa and Latin America are not important actors in the world gas market yet. For this reason, we limit our analysis to Eurasian market. For the reason explained in Introduction, among all the actors that participate in the market, we deal with states only. The main states would be:

- Exporters: Russia (the biggest exporter), several Arab League members – especially Algeria and Qatar, Iran and countries from the Caspian region;
- Importers: European Union (as a whole), some of its members - especially Germany, France and Italy, East Asian states;
- Transit states: Ukraine, Belarus, Turkey, countries of the Caucasus, Central and Southeast Europe.

Most of the analyses of the conflicts in the gas market single Russia out as a cause of most of the problems.¹⁷ Such analyses, as we have shown, if they mention the energy security dilemma at all, are concerned only with the EU’s energy security. In our previous chapter, we have shown that the other actors

¹⁶ See Internet, <http://yearbook.enerdata.net/2010-natural-gas-balance-trade-in-the-world.html> 16/3/2012.

¹⁷ For example, see Roman Szul, „Gas Pipelines, LNG and Shale Gas in the Political Game within Euro-Russia (with a Special Reference to Poland)”, Internet, http://conference.osu.eu/globalization/publ2011/338-345_Szul.pdf 16/3/2012; Jaroslaw Wisniewski, “EU Energy Diversification Policy and the Case of South Caucasus”, *Political Perspectives 2011*, Volume 5 (2), pp. 58-79; Andreas Heinrich, “Under the Kremlin’s Thumb: Does Increased State Control in the Russian Gas Sector Endanger European Energy Security?”, *Europe-Asia Studies*, Vol. 60, No. 9, November 2008, pp. 1539-1574.

also, including Russia as the main exporter, have their own concerns about energy security, so we shall treat all these actors equally.

The energy security dilemma firstly appeared during the oil crisis which started in 1973. Some authors say that this crisis brought to light several problems, which were recognized by the EU (then the EC), most important of which was the need to devise strategies that would protect Europe from similar situations in the future, where it could find itself vulnerable from energy producers who would use energy as an economic and political weapon.¹⁸ International Energy Agency (IEA) – an instrument for supervision and analysis of the world energy markets – dates from this period. It is interesting that the European states, endeavoring to diversify oil supply, identified Russia (then Soviet Union) as a new supplier. Now, in the gas market, we have an opposite situation – in order to decrease its dependence on Russia, the EU once again seeks alternative suppliers. The EU today imports 50 percent of its gas from Russia, which is enough to call this relation dependence.¹⁹ In the future, it is expected that the overall energy imports of the EU will rise.

The policy of diversification has been set as one of the priorities in the EU agenda since winter 2005/2006, when the first gas crisis – the complete halt of gas deliveries to the European customers – broke out. In January 2006, Gazprom (the biggest Russian gas producing company) for the first time cut the delivery through the pipeline which passes across the Ukrainian territory. It was a reaction to president Yuschenko's refusal to pay the higher prices which Russian side had proposed. The crisis was short – until a new agreement on prices is signed (January 2006) – but European official's concerns about stable energy supplies were serious. High Representative Javier Solana made a statement in which he referred to Russia and Ukraine as "unstable regions and suppliers" and called for a focus to alternative suppliers and routes in the Caspian region.²⁰ The second huge crisis broke out in 2008, culminating in a "gas war" in January 2009, which lasted for 20 days. Ukraine and EU countries were cut off once again, which provoked new diversification initiatives aimed at strengthening European energy security. Proposed construction of the Nabucco pipeline from Erzurum, Turkey to Baumgarten, Austria is among these initiatives. This pipeline would connect the European customers to suppliers in the Caspian region (like Azerbaijan and Turkmenistan), decreasing dependence on Russia and bypassing territories of unreliable transit states like Ukraine. The intergovernmental

¹⁸ Paul Belkin, "The European Union's Energy Security Challenges", CRS Report for Congress, Congressional Research service, 2008, Internet, <http://www.fas.org/sgp/crs/row/RL33636.pdf> 17/3/2012

¹⁹ Andrew Monaghan, "Russian-EU Relations – An Emerging Energy Security Dilemma", op. cit.

²⁰ Jaroslaw Wisniewski, "EU Energy Diversification Policy and the Case of South Caucasus", op. cit, p. 59.

agreement between the countries on the planned route of this pipeline was signed in Turkey, in July 2009.²¹ This corresponds to our theory prediction about diversification as a measure which importing states employ to increase their energy security. What about exporting and transit states?

Facing a possible loss of its share in the European gas demand and blaming it on unreliable transit countries, Russia made an agreement with Germany to construct the Nord Stream pipeline across the Baltic Sea, which would directly connect Greiswald in Germany to Vyborg in Russia.²² The first line of this pipeline is already functional, and the second one is planned to be until the end of 2012.²³ Another example of Russia's diversification policy aimed at bypassing states like Ukraine and Poland is the proposal of the South Stream pipeline – reaction to the Nabucco proposal.²⁴ The first leg of this pipeline would run under the Black Sea, and then continue through the Balkans to Austria and Italy. Besides new pipeline projects to ensure its presence in the European market, Russia's diversification policy also encompasses seeking new customers. China is among the most attractive. Chinese impressive economic growth and improvements in life standard of its population increased its hunger for energy resources.²⁵ The inclusion of China as a customer could make the energy security dilemma in the Eurasian market more complex in the future, diverting our attention from Russia-EU relations to an emerging gas network with a few more backbone actors.

The role of transit countries in the Eurasian gas market strongly corresponds to our theory prediction that they are limited in diversification options regarding their geographical position and interests of the main actors (importers and exporters). For example, countries like Poland and Ukraine are damaged by diversification moves of both Russia and stronger EU states (Germany, Italy and France) – for Nord and South Stream, as well as Nabucco, are planned to bypass their territories.²⁶ On the other hand, states

²¹ Ibid, p. 61.

²² On Russia's position in the Eurasian gas market, see Gawdat Bahgat, "Russia's Oil and Gas Policy", *OPEC Energy Review*, September 2010. pp. 162-184

²³ Internet, <http://www.nord-stream.com/pipeline/19/3/2012>.

²⁴ See Pavel K. Baev and Indra Overland, "The South Stream versus Nabucco Pipeline Race: Geopolitical and Economic (Ir)rationalities and political stakes in mega-projects", *International Affairs*, 86:5, 2010, pp. 1075-1090.

²⁵ But it also encourages China to look for alternative, environment friendly energy resources. See Karl Hallding, Guoyi Han, and Marie Olsson, "China's Climate- and Energy-security Dilemma: Shaping a New Path of Economic Growth", *Journal of Current Chinese Affairs*, vol. 38, no.3, 2009, pp. 113-139.

²⁶ Former Polish minister of defence even compared Nord Stream to Molotov-Ribentrop Pact. Bendik Solum Wist, "Nord Stream: Not Just a Pipeline", FNI Report, 15/2008, Internet, <http://www.fni.no/doc&pdf/FNI-R1508.pdf> 19/3/2012, p. 18.

like Turkey and Bulgaria managed to profit by opting in rival pipeline projects at the same time.

The Eurasian gas market also serves as an example of the connection between the energy and the classic security dilemma. The price of energy is often not only economic, but political; energy can be used as a political weapon; states often have political considerations when making deals on energy trade. As we could see, most of the problems in Russia-EU energy relations are caused by the fact that between Russia and Germany - the strongest economic power in Europe, interested in stable cooperation with Russia - lay countries like Poland, Ukraine, and the Baltic states, which have political animosities toward Russia, suspecting it of the wish to renew an empire. There is also the South Caucasus region. There are those who say the energy - namely the position of Georgia as the transit state on the route from Caspian producers to Europe - was among the sources of Russo-Georgian war in 2008.

Now that we have shown how the security dilemma operates in the Eurasian gas market - with the diversification strategy, search for new suppliers/customers and alternative pipeline routes, utilizing its geographical position, and the connection to the classic security dilemma - we ask ourselves what about the our final theory prediction, that the energy security dilemma in the long run has positive outcomes, unlike the classic one? For this hypothesis to be verified, we will have to wait until the already ongoing processes finish. We speak of finishing proposed pipelines construction and the full inclusion of new producers (like Caspian states, or Iran) and customers (like China) in the market, which would mean the complete implementation of diversification policy of both EU states and Russia. For the time being, we might have some hints that this would lead to the stabilization of the gas market and the energy security of states involved, as well as to the reduction of the classic security dilemma. After all, both gas crises (in 2006 and 2009) were resolved promptly and have not repeated yet, not to mention the inconceivability of a military clash between Russia and Ukraine. Already established East European gas network as well as the very proposal of alternative routes, contributed to this. Contrary to this, the South Caucasus region where such gas network is not firmly established yet, witnessed the war in 2008 and is still war-prone.²⁷ Stabilization is expected when all the pipelines are in place to connect all the potential suppliers with their customers.

²⁷ See Mohammad Mousavi, "Some Notes on the Caspian Energy and Ethnic Conflicts in the Caucasus", *Iran and the Caucasus*, Vol. 14, 2010, pp. 159-168.

5. CONCLUSION

The Eurasian gas market is a good example of how theoretical model of the energy security dilemma works in reality, although its main prediction – that this dilemma will eventually result in a stable cooperation among states in the market – is yet to be fully confirmed. We still have to wait until all the players “catch their rabbits” in order to see whether they will perform a successful “stag hunt” afterwards. For now, it is important to monitor some of the ongoing processes, such as the construction of the new pipelines and the inclusion of the new suppliers into the market, and see if the outcomes of these processes fit into the model. However, we should also be aware of the limited time horizon which could render the energy security dilemma as we have presented it useless. Natural gas is a nonrenewable resource – according to some predictions, if this trend of consumption continues, its known reserves will be exhausted by 2068 (for oil reserves, this date is even closer – 2047).²⁸ As we get closer to this date, alternative energy resources will have to be employed, which will have impact to the very existence of energy market, not to mention our theoretical predictions. This is a clear warning – although liberal theories about economic interdependence and peace can prove true in many cases, they are not fully reliable, because they depend on the state of changing economic environment. On the other hand, the realist assumptions about patterns of conflict and cooperation of states in the anarchical international system proved to be more durable, and they will certainly endure, at least as long as this anarchy exists.

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²⁸ Liana Jervalidze, “Conflict or Coincidence of Interest of Main Oil and Gas Importing, Exporting and Transit Countries”, *Security Policy Library*, 4–2011, Internet, http://www.atlanterhavskomiteen.no/files/atlanterhavskomiteen.no/Documents/Publikasjoner/Sik.po1.bibliotek/2011/SPB%204-2011_3.pdf 19/3/2012, p. 4–5.

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