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Evaluating Energy Security in the Context of Political and Economic Aspects of International Political Economy with Novel Ideas in Energy Security Concept: Example of the Baltic States

Graduation Thesis

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INTRODUCTION

It is strongly in the view of everyone, that the energy infrastructure and its potential vulnerability are an important part of a national security of any sovereign state, as it is also described already in the work of Amory B. Lovins and L. Hunter Lovins[1]. At the same time, energy is understood to be essential in modern life, which is why it is politically and economically highly influential subject. Considering the fact that the Baltic States have similar historical-political background with being previously connected only to the former soviet energy system, it makes it obvious why the region is a great example for explaining both the difficulties and advances evident in energy security field[2]. Therefore the overall objective of the current graduation thesis is to give assessment to the energy security in the Baltic States and to find out exactly in which questions either economic or political aspects of international political economy[3] prevail over the other. The topicality of the subject lies in the ongoing challenge of sometimes colliding sides of economic and political aspects of the energy security, whilst understanding the overall concept of energy security, which in recent years has changed a lot. However, because of the limited volume of the thesis, the author will only assess the issues related to natural gas as one of the most essential energy resource.

To give the work a starting point, the author has constructed a hypothesis, which states, that Baltic States focus on diversification projects which are not always responding to economic needs and do not always have an economic rationale. This all results in the fact that the decisions could be potentially be more beneficial when taking the economical aspect of international political economy more into consideration. In order to reach the goal that has been set for the thesis, the author has also set some guiding issues requiring research, which are also the starting points for the work process: (a) In which fields of energy security can one or the other dimension – political or economical aspect – have greater advantages over

[1] Lovins, Amory B., and L. Hunter Lovins. 2001. *Brittle Power: Energy Strategy for National Security*. Massachusets: Brick House Publishing, 7

[2] 24th Economic Forum. 2014. *Baltic Countries: Energy Connectivity and Regional Cooperation*. http://www.forum-ekonomiczne.pl/24th-economic-forum/baltic-countries-energy-connectivity-and-regional-cooperation/?lang=en#.VKfzjyusWgw (Accessed 3.01.2015)

[3] Kuzemko, Caroline *et al.* 2012. „Introduction: Bringing Energy into International Political Economy." In *Dynamics of energy governance in Europe and Russia*. ed. Caroline Kuzemko *et. al.* Basingstoke: Palgrave Macmillan, 1-5

the other?; (b) Which new challenges in energy security as a conception, explained in novel energy security theories, should also be taken into consideration when talking about the energy security namely in the Baltic States?; (c) Which contradictions and convergences between two dimensions of the international political economy theories can be presented if applied to the Baltic States?

The author will address the subject by analyzing both the aforementioned aspects of international political economy which also deal with energy as one factor, as well as the new challenges that are considered to be as important part of understanding the concept of energy[4] securit in the first major chapters of the thesis. The goal is formulate the uniform multi-dimensional frame for evaluating energy security related to natural gas. Due to the limited volume of the paper, the author will only take those elements into consideration from the novel energy security evaluation instrument which will add value to the political and economic aspects. The third part of the thesis will consist of the empirical research about the Baltic States. The third major chapter will give us an understanding of where the basic contradictions and convergences between the two dimensions also in the light of the new energy-related challenges lie.

The research part will therefore be a qualitative case study of the Baltic States energy security, based on the deductive investigation strategy, where the comparative approach to different aspects of the dimensions of energy security and those that prevail or on the opposite – have marginal sense – will be brought out and evaluated. The empirical part of the graduation thesis on the other hand will first and foremost be based on the research of scholars; recent studies, which show the energy security and natural gas administration related challenges of the countries and topical developments, seen in timely articles. The issues, which may arise with the empirical part, are that the energy security studies have been conducted in somewhat different times, so that the data and records would be slightly more difficult to compare and analyze. Nevertheless, this would not lower the reliability considerably, because of the reality, including the political *versus* economic decisions, will not change in so little time as the energy security concept and its challenges does.

[4] Vivoda, Vlado. 2010. „Evaluating Energy Security in the Asia-Pacific region: A Novel Methodological Approach." In *Energy Policy*. 38(9): 5258-5263, 5259

1. ECONOMIC AND POLITICAL ASPECTS OF INTERNATIONAL POLITICAL ECONOMY IN THE ENERGY SECURITY FIELD

The doctrine of international political economy consists of several contradictory and interdependent theories, which try to explain how markets should be managed. However, energy in these debates has mainly been in the background, even though questions about energy governance should certainly have more importance, given the fact that energy and its infrastructure are one of the most important fields in the national security of a state[5]. Theorists have now also started to reach the perception that energy as a factor should not be left out from the traditions that are explored as part of the sub-fields of international political economy, namely the debate of market *versus* geopolitics[6]. For example, when talking about environment as a factor in liberal *versus* neo-liberal approach, we can see *environment* as one of the central topics throughout time. Strangely, energy, as one of the key factors in environmentalism, will not be dealt with.[7]

In economic terminology *energy* as a principal concept, it is usually known to be something that consists of energy commodities and energy resources. Furthermore, *energy commodity* can be explained through these explicit examples – gasoline, electricity, coal, fuel, natural gas or propane, with *energy resources* meaning the unsustainable or renewable resources, which will be the substance for producing the commodities, e.g. crude oil, natural gas, coal, biomass, hydro, uranium, wind, sunlight or geothermal deposits.[8]

1.1 International political economy and three major trends in the discourse

International political economy is a way of explaining the reciprocal relationship between state and market, namely how the economic and political factors interact, with in the theory – neither one of them is or should be absolutely primary[9]. When the ideal should be that the two stand completely on its own, then the reality differs in great amount. International political economy discourse is guided by two assumptions. Firstly, every resource,

[5] Lovins, Amory B., and L. Hunter Lovins. 2001. *Op.cit.* 7
[6] Also meaning the debates between *realist* and *geopolitical* or *liberal* and *neo-liberal* approaches.
[7] Kuzemko, Caroline *et al*. 2012.*Op.cit.* 2-3
[8] *Ibid*, 2-3
[9] Gilpin, Robert., and Gilpin, Jean M. 1987. *The Political Economy of International Relations.* Princeton: Princeton University Press, 9

including energy related resources, is finite. Secondly, there are several different opinions, which try to argue, how these available resources should be used.[10] It is possible to see a lot of interdependencies in the debates that try to find an answer to these challenges. When the economic factors are more dominant in how things are organized, then it will lead to a situation where nation-state borders will be marginalized. It will be evident that the political factors prevail over the economic actors, when self-sufficiency and domestic self-management are at the highest level.[11]

When talking more specifically about the energy relations generally and in the context of international political economy, the overall discourse can be explained from three major trends where either the political or economical factors prevail and determine exactly in which way the trend will follow. The concepts, of how energy policies can be directed, are a) integration, b) liberalization and c) diversification. The first idea of integration is applied when mutual benefits in cooperation prevail, being complementary to all of the parties and therefore increasing the interdependencies. Liberalization can be found in the fields where cooperation will bring the most economic benefits. Therefore liberalization usually means the attempt to achieve the highest possible independence level from state interventions. Finally, diversification as a concept refers to the state where everything is driven by the ambition for limited resources.[12] This idea of three possible trends will give the following assessment and introduction to political and economic aspects in international political economy a starting point.

1.1.1 Political aspect and approach in the international political economy discourse

The first and foremost is to understand, that state and markets are interconnected in modern world, meaning that the political decisions affect also the market activities, defining the nature and distribution of property rights as well as determining the rules that have to be

[10] Oatley, Thomas. 2004. *International Political Economy: Interests and Institutions in the Global Economy*. New York: Pearson Longman,
[11] Cohen, Benjamin J., and Charles Lipson. 1999. "Preface." In *Issues and Agents in International Political Economy.* eds, Benjamin J. Cohen and Charles Lipson. Cambridge (Mass.); MIT Press, 1-3
[12] Tichy, Lukaš, and Petr Kratochvil. 2014. „The EU-Russia Energy Relations under the Prism of the Political Discourse." In *Perspectives: Central European Review of International Affairs*. 22 (1): 5-32; 1, 13-15

followed in market transactions[13]. As seen before, the political aspects are mainly based on the concept that is lead by principles of territoriality, loyalty and sovereignty in the legitimate use of power. Therefore the absolute state, where only political factors exist, can be presented in autocracy,[14] which of course, is not quite common in the real life nowadays. Nevertheless, this idea can be best illustrated and recognized in the contemporary realist perspective of international political economy. Political factors are more important in the decision making process, when greater governmental intervention is believed to ensure growth and mitigation of inequalities. States purpose should be providing the framework for market trades and transactions both in the domestic as well as the international level through laws and regulations.[15] What is more, the political factors will therefore be based on the considerations of general security of the whole state with the objective to provide regulation and organization for sufficient amount of self-sufficiency to the state as a whole in international community and market[16].

In the energy sector the political aspects will therefore be evident in the aforementioned discourse of diversification. Also the discussion will involve geopolitics as one factor that definitely can be brought out for example. Energy dependence is therefore seen as jeopardy to national security. It is argued that states as agents are thus threats to one another also in the energy security field.[17] Thereby the objective of nation-states should be to create a framework by regulations or other internal and external measures to govern trade, foreign investment and other international level cooperation, which will ensure protection from outside impact of factors. What is more, the political factors can also be evaluated in the context of diversity or uniformity in import of energy resources. Strategies that allow to assess potential external energy relations threats and indicate the alternative solutions to them in order to provide stable and secure energy supplies in case of a potential disruption,

[13] Gilpin, Robert., and Gilpin, Jean M. 1987. *Op Cit.* 10
[14] Gilpin, Robert. 2003. „The Nature of Political Economy." In *International Political Economy: State-Market Relations in a Changing Global Order*, eds. C. Roe Goddard, Patrick Cronin and Kishore C. Dash. Boulder; London: Lynne Rienner, 11-13
[15] Frieden, Jeffry A., and David A Lake. 2003. „International Politics and International Economics." In *International Political Economy: State-Market Relations in a Changing Global Order*, eds. C. Roe Goddard, Patrick Cronin and Kishore C. Dash. Boulder; London: Lynne Rienner, 26-28
[16] Tichy, Lukaš, and Petr Kratochvil. 2014. *Op.cit*. 13-14
[17] *Ibid*. 14, 21-23

assure that the states policy is guided by political factors by creating the frame for reorganize[18].

1.1.2 Economic aspect and approach in the international political economy discourse

Economic aspects on the other hand are illustrated mainly by Marxism or the liberalist approach to international political economy. When the political factors were the ones, defining the distribution of wealth, than the market is mainly the overall distributor of (political) power influencing the political outcomes. By saying that, it is also important to acknowledge that for the market, the elimination of all social, physical and other obstacles – such as territorial boundaries – is of a great essence. Absence of boundaries in accordance with higher level of integration cause markets to act in peace and cooperation in between otherwise competitive states in the view of some theorists.[19] Furthermore, the ideas of functional integration, contractual relationships and interdependence between actors, illustrate the situation where economic aspects prevail over the political considerations[20]. Theorists from both of these perspectives argue that because of the fact that agents are guided by the aspiration for wealth, transnational cooperation and cross-border markets will ease the achievement of that objective, meaning that the decisions made in regulating the order of a state, should only deprive from the supply and demand interdependences[21]. This idea is accompanied by the liberalization and integration concepts, in order to ensure the tendency of the same goods having the same overall price everywhere – one can assume that it is beneficial at least to the domestic households, because of the fact that no particular supplier could not influence the market terms of exchange individually[22].

As it was seen before, liberalization is aimed to reach highest possible level of non-interference by the states governments. Also, the idea is to move further away from the reasoning that is related to security considerations. Moreover, integration as a concept

[18] Khasson, Viktoriya. 2009. *Discourses and Interests in EU-Russia Energy Relations.* Leuven: Institute for International and European Policy. https://soc.kuleuven.be/web/files/11/74/WP35-Khasson.pdf (Accsessed 25.01.2015)
[19] Gilpin, Robert., and Gilpin, Jean M. 1987. *Op. Cit.* 10-12
[20] Gilpin, Robert. 2003. *Op. cit.* 11-12
[21] Oatley, Thomas. *Op. cit*. 37
[22] Gilpin, Robert., and Gilpin, Jean M..1987 *Op. cit*. 18-19

assumes that potential associates are trustworthy and reliable, even though complete lack of regulation for these interactions is not profitable likewise.[23] The idea of lower level of regulation by the state increases the competition between market actors, which therefore leads to higher extent of advantage to those interested in productive efficiency and technology.

When placing the idea in the energy infrastructure and security context, we can conclude, that economic factors can for example bring higher level of cooperation within the international and also regional level. Also, there exists a need for exploring the values and norms of states as well based on the integration concept. In the international political economy theory, the economic factors enhance the significance for multilateral contracts in addition to foregoing. For example, in the energy security field therefore, the economic factors can prevail in the decision making when energy related infrastructure is constructed regionally with having in mind everyone´s interests with also possibly resulting in the "law of one price". What is more, Benjamin J. Cohen and Charles Lipson have argued in their work that economic factors influence usually the transactions costs, market structures, and technological developments at the domestic and international levels[24].

1.2 Political and economic factors in the debate between market *versus* geopolitics

As seen before, the political factors and realism paradigm are mainly aimed at gaining a higher level of independence and self-sufficiency, with the assumption that external factors also in the energy security field are therefore potential threats for national-state sovereignty and interests. Whilst economic factors in the international political economy and liberalist ideas are based on the objective for gaining the most economic wealth also by cooperation with other agents, namely states in the context of this work.[25] Market guided factors tend to oversee the national boundaries related issues – e.g. security of the state – in order to integrate societies providing the higher level of profitability and productivity. This is also illustrated by the idea of the debate between market *versus* geopolitics, whereas the

[23] Tichy, Lukaš, and Petr Kratochvil. *Op. Cit.* 13, 18-24
[24] Cohen, Benjamin J., and Charles Lipson. 1999. *Op. cit.* 2-3
[25] Cohen, Benjamin J. 2009. "The Multiple traditions of American IPE." In *International Political Economy (IPE); IPE as a Global Conversation,* ed. Mark Blyth. USA; Canada: Routledge, 29-31

geopolitics refers to the importance of political factors and market to the economic ones, when the market driven ideas prevail and leave security considerations on the background.

Seeing therefore, that the political factors of international political economy and economic factors are colliding in their sense and purpose – whilst the political considerations are aimed at lowering possible risks from outside factors, then the economic aspects on the other hand can be aimed at the opposite, when the cross-border cooperation (e.g. losing the boundaries) for example could be more beneficial. Therefore the assumption in liberal market economy revolves around the tendency of people buying more if the price falls and less if the relative price increases[26].

The crossover between both the economic and political factors can be found in the valuation of norms and values with overall any possible framework, which is related to regulating the energy sector issues. However the ideal level of norms set by the states themselves, differ in the concepts. As seen before, when political aspects prevail, then everything should be prescribed for the agents, whereas the economical factors still are aimed mainly for the liberalization of the market and therefore lower level of state established norms.[27] The table, situated under, illustrates the following frame for the analysis and approach to separate aspects to international political economy theories based on these conclusions. This will be accompanied by the energy related issues, explained in the next chapter of the thesis.

Table 1 Framework for the analysis based on the discourse of International Political Economy[28]

	Way of communication in the international field	Theory from International Political Economy
Political factors	Diversification / Low level of Integration	Realism
Economic factors	Liberalization / High level of Integration	Liberalism

[26] Gilpin, Robert., and Gilpin, Jean M..1987 *Op. cit*. 29
[27] Tichy, Lukaš, and Petr Kratochvil. 2014. *Op.cit*. 13, 18-24
[28] Gilpin, Robert., and Gilpin, Jean M..1987 *Op. cit*. 29

2. ENERGY SECURITY CONCEPT: NOVEL IDEAS WITH NEW CHALLENGES IN THE ENERGY SECURITY FIELD

To achieve the highest possible level of energy security has been the objective of every states energy policy in the context of economic efficiency and environmental safeguards to ensure the overall security of the nation-state[29]. When discussing the overall topic and decisions made in the energy security field of any particular state only by addressing the political and economic factors of international political economy, would leave the approach one-sided. Therefore it is also equally important to take into account the concept of energy security and its potential vulnerabilities, as seen in the eyes of more practical approaches. For example, over the years, it can be seen, that in addition to the states, the supranational institutional organizations (e.g. European Union) have greater role and significance in regulating the energy security field[30]. Furthermore, the general understanding of energy security has so far only involved the concept of security of supply "the uninterrupted availability of energy sources at an affordable price" with the focus on potential threats to the e.g. natural oil, oil or electricity supply[31]. However, the recent theories of energy security concepts have evolved in the sense that the so far existed energy security conceptions are insufficient, because of the discount of for example the environmental, socio-cultural and technological factors that also affect the subject. Therefore the following sub-chapters will illustrate firstly the concept of security of supply and then adding the novel ideas to the traditional understandings in order to achieve all-embracing framework for energy security assessment, adding into the above described theory of conflictual political and economic means.

2.1. The concept of security of supply

The concept of security of supply is regarded nowadays as a traditional understanding of what energy security as a whole should consist of. It is more restricted than the concepts

[29] Kiriyama, Eriko, and Kajikawa Yuya. 2014. "A multilayered analysis of energy security research and the energy supply process." In *Applied Energy*. 123 (6): 415-423, 416-417

[30] Belyi, Andrei V. and Talus, Kim, eds. 2015. *States and Markets in Hydrocarbon Sectors*. Basingstoke: Palgrave Macmillan, 5-6

[31] International Energy Agency (IEA). 2014. Energy Security Supply 2014. http://www.iea.org/media/freepublications/security/EnergySupplySecurity2014_PART1.pdf (Accsessed 4.02.2015), 13-14

prevailing more nowadays. As said before, energy security debates have so far circled around the concept of security of accessible, affordable and reliable sufficient supply of energy resources at the reasonable price. The main focus will therefore be directed to the energy supply chains that are corresponding to the demand of a resource being also free from possible major disruptions.[32] Supply chains are meant to illustrate either the external or internal subsequences of energy resources. Therefore, the most important factor in the concept of the supply chains is to find out and map potential vulnerabilities in both the demand and supply, which can break the chain for providing any of the energy resources. In addition, the concept also focuses on energy infrastructure, conservation and energy carriers as part of the chains.[33] Threats to these chains may lie in stability of global energy markets, diversification of the resources or even in global terrorism.[34] To conclude, we can say that the security of supply usually circles around two important subjects: (1) crisis management, and (2) decrease in the vulnerabilities[35].

2.2. Methodology based on the novel ideas of energy security challenges

Security of supply of reliable supplies of energy at reasonable prices has always historically been used as a political instrument, because of the fact, that energy security also is closely linked to the states´ domestic economy and industry subordinating from the demand, as illustrated above.[36] As said in the work of Nikolay Kaveshnikov – "energy security should be defined as the elimination of a threat that in the longer run the energy factor would become a potential barrier to the economic development of a country"[37], meaning that the energy security concept has a high importance with being possibly the factor reducing the chance of balance between political and economic aspects in the international political economy. We can therefore draw inclusions that energy security is certainly the aspect,

[32] Kaveshnikov, Nikolay. 2010. "The issue of energy security in relations between Russia and the European Union." In *European Security*. 19(4): 585-605, 585
[33] Mansson, André, and Bengt Johansson. 2014. „Assessing Energy Security: An Overview of Commonly Used Methodologies." In *Energy*. 73(8): 1-14, 3-5
[34]Salem El-Badri, Abdalla. 2008. *Energy Security and Supply*. Chatham House Conference "Middle East Energy 2008", 4th February. http://www.opec.org/opec_web/en/862.htm (Accessed: 8.02.2015)
[35] Vivoda, Vlado. 2010. *Op.cit.* 5259
[36] Dorian, James P. *et al.* 2005. „Global Challenges in Energy." In *Energy Policy.* 34(15): 1984-1991, 1985-1988
[37] Kaveshnikov, Nikolay. *Op. Cit.* 588-589

which allows us to evaluate the aforementioned considerations of the international political economy theory.

Nevertheless, for theoreticians the concept is outdated and does not involve significant amount of aspects, which also affect the security level of any state. The novel ideas, which accompany the so far recognized concept, are best described by the work of Vlado Vivoda, who has taken into account the ideas of several theorists and incorporated them into formation of a new instrument for assessment to energy security level of any state. The evaluation of energy security related issues should be based on a lot more than a mere political instrument of energy security of supply. Vivoda has created an instrument as an evaluation methodology for energy security, which consists of both quantitative and qualitative dimensions, with reference on the work of Von Hippel and Sovacool[38]. What is more, the instrument of 12 national energy security and 46 global aspects also allows to make comparisons over the countries concerned. The credibility will be therefore mainly increased because of the fact that the methodology allows to establish a framework for comprehensive analysis for regional energy security research.[39] All of these aspects will be taken into consideration, from which the relevant and previously not incorporated challenges will be added to the framework for the analysis.

The need for renewed and improved assessment instrument originates mainly from the diversification of global energy markets, increase in transnational political tensions as well as from technological and other environmental, economic and international considerations resulting in issues in (1) environment, (2) technology, (3) demand-side management, and (4) domestic socio-cultural and political factors. These aforementioned factors will be considered as part of the improvement of the security of supply concept.[40] Vivoda goes even further, with arguing that there are also challenges related to (5) human security, (6) international level, (7) public relations, and (8) policy-making that all show the need for new concept and the overall changed reality in the energy security field.[41] The author of the

[38] Sovacool, Benjamin K. 2011. "Evaluating energy security in the Asia pacific: Towards a more comprehensive approach." In *Energy Policy*. 39(11): 7472-7479
[39] Vivoda, Vlado. 2010. *Op. cit.* 5259-5262
[40] Von Hippel, David *et al.* 2009. „Energy Security and Sustainability in Northeast Asia." In *Energy Policy*. 39(11): 6719-6730, 6719
[41] Vivoda, Vlado. 2010. *Op. cit.* 5259-5262

current graduation thesis will only add some dimensions to the framework described in the first chapter which also add some value to the considerations seen in the first part. Otherwise the concept will be duplicating some parts and therefore make the overall framework off-balanced, as the work of Vlado Vivoda already cover preceding approaches in this field, making the framework overly and unnecessary complicated.

2.3. Framework consisting of the new challenges with colliding factors of international political economy

As said before, the present thesis will be based on both the discourse of International Political Economy, with only the supplementation of some dimensions, explained as new challenges in the energy security field. Therefore the analysis of Baltic states energy security will also be considered with aspects, described in dimensions of a) military security; b) public relations; c) technological; d) international aspects.[42] What also has to be explained is that the analysis in the current thesis will not go into giving actual calculations to all those aspects in aforementioned dimensions qualitatively. The aspects will only be as a starting point for making the overall frame and conclusions made in this work more comprehensive. Military security of these aspects with also the factor of public relations are corresponding to the considerations seen in the political factors of international political economy – we can assume the military aspect of energy security[43] is supporting the idea of decreasing possible negative impacts and threats as a precaution and reference to the international level circumstances. Furthermore, it simply could not fit into the idea presented beforehand. If the main idea, in the situation where economic factors of international political economy prevail, is to base everything in self-operating and self-regulating system without limiting borders to transactions, then military security and international level considerations are hard to imagine in this field[44]. Because of the focus of energy security is in its concept aimed at reducing possible vulnerabilities to foreign threats then these two aspects are therefore inherently related to the considerations[45].

[42] *Ibid.* 5259-5262
[43] *Ibid.* 5259-5262
[44] Gilpin, Robert., and Gilpin, Jean M..1987 *Op. cit*. 18-19, 29
[45] Von Hippel, David *et al.* 2009. *Op. cit.* 6721

On the other hand – technological and public relations related aspects are mainly adding value to economic aspects of international political economy. Whilst the ideal of a market economy, where there aren't any limiting boundaries and regulations had the assumption of "law of one price"[46], the innovation obviously acquires more importance. When every market actor is aimed at gaining the highest possible profit through the negotiation between buyers and sellers[47], then leverage becomes important and gives the chance to ask higher price comparing. Therefore technology and productive efficiency[48] are something that should be taken into consideration when talking for example about energy infrastructure and new innovative ways in transportation or storing the resources.[49] Moreover, public relations as a novel idea in the energy security concept relates also to the economic side of international political economy, as the cooperation and integrated market presumably raises the possibility to increase economic growth and profit by developing joint systems and infrastructure in energy supply field, lowering the overall prices per market actor.[50]

Table 2 Framework for the analysis based on the discourse of International Political Economy and the energy security concept related issues[51]

	Way of communication in the international field	Theory from International Political Economy	Energy security concept related issues
Political factors	Diversification / Low level of Integration	Realism	a) military security; b) international aspects
Economic factors	Liberalization / High level of Integration	Liberalism	c) technological d) public relations

[46] Gilpin, Robert., and Gilpin, Jean M..1987 *Op. cit.*. 18
[47] *Ibid*. 18
[48] *Ibid*. 20
[49] Vivoda, Vlado. 2010. *Op. cit.* 5259-5262
[50] Gilpin, Robert., and Gilpin, Jean M.1987 *Op. cit.* 18
[51] *Ibid*. 18 and Vivoda, Vlado. 2010. *Op. cit.* 5259-5262

3. ENERGY SECURITY OF THE BALTIC STATES IN THE CONTEXT OF POLITICAL AND ECONOMIC ASPECTS OF INTERNATIONAL POLITICAL ECONOMY WITH NOVEL IDEAS IN ENERGY SECURITY CONCEPT

The analysis of the current reality related to the decisions made in the natural gas supply and infrastructure field in the Baltic States will be divided into separate sub-sections by addressing separate topical problems in this energy security field. Furthermore, the analysis will also explore whether the alternatives would be possible when taking into account the political and economic aspects of international political economy. This part of the thesis will therefore focus on four different natural gas related topics in order to answer the main question set forth in the thesis, giving overall assessment to these problems and making the conclusions based on them. The first important subject, which needs to be addressed in the natural gas sector, is questions related to Baltic States and the European Union dependence on Russia. Furthermore, the author of the thesis will also address more far-reaching questions concerning some issues related to retorting gas and liquefied natural gas also known as LNG[52] and its infrastructure, giving every issue a ranking on a scale of "high-neutral-low". As the hypothesis, set forth in the beginning of the thesis, presumed economic factors of international political economy to be low, then the ranking will be based on the level of economic factors in the decisions discussed.

3.1. Natural gas dependence on Russia

3.1.1. The case of Gazprom OAO

Firstly, the problem of all the Baltic States obviously has been the dependence on the energy resource supply from Russia. All of the states have their contract for natural gas supply with the state-controlled and also only company who produces and exports natural gas from Russia – Gazprom OAO[53]. As the Russian Federation holds the largest share in the company[54], it is evident, why the company can be considered to be a political mean in

[52] Liuhto, Kari. 2012. „A Liquefied natural gas terminal boom in the Baltic Sea region?" *Electronic Publications of Pan-European Institute* 5 (9): 1-37, 2

[53] Energiatalgud. 2012. Joint Risk Assessment of Security of Gas Supply of Estonia, Latvia, Lithuania, http://www.energiatalgud.ee/img_auth.php/4/44/Joint_risk_assessment_of_security_of_gas_supply_of_Estonia_Latvia_Lithuania.pdf, 23-25 (Accessed: 27.02.2015)

[54] 38,37 % according to the information on Gazprom site. Gazprom. 2015. Investors/Shares http://www.gazprom.com/investors/stock/ (Accessed: 28.02.2015)

the international level. Therefore the current developments have shown that mainly because of the fact of building one´s own LNG terminal, Lithuania can be seen as the state that is the most distanced itself from the gas supply from Russia. On the other hand – Estonia also is evidently trying to reduce the energy supply percentage that is imported from Russia with the LNG terminal and agreement with Finland[55]. The following map describes best the current interconnection of the natural gas energy grid of the Baltic States to the Russian Federation[56].

Table 3. Natural Gas Grid of the Baltic States[57]

The current situation in Latvia though, can be described as follows. As seen before, even though e.g. Lithuania has successfully departed from the dependence on Russian energy supply, 100% of the natural gas to Latvia still comes from two Russian entities – Itera and Gazprom.[58] And when we take into consideration predicted increase in every states' and the

[55] Kustova, Irina. 2014. *Op. Cit.*
[56] Bryza, Matthew, and Tuohy, Emmet. 2013. „Baltikumi Energiaühenduste kaardid" [„Maps of the Baltic States Energy Grid"] In *International Centre for Defence and Security*. http://www.icds.ee/fileadmin/media/icds.ee/failid/baltic_oil_gas2.pdf (Accessed: 16.05.2015)
[57] *Ibid*
[58] Pakalkaite, Vija. 2011. *Gazprom and the Natural Gas Markets of the East Baltic States*. Regional Centre for Energy Policy Research.

overall energy consumption of the world, it shows exactly the high dependence on Russia´s supply of natural gas. Latvia's only positive side in the energy dependence of all the Baltic States field so far is its gas storage which is located beneath the surface, but the supply is still imported from Russian suppliers. Inčukalns Underground Gas Storage Facility is used firstly to ensure balance of supply in the heating and the warm season of the year. The capacity of the gas storage facility at the moment reaches up 2.3 billion m^3. For comparison – the overall natural gas consumption in the Baltic States altogether in 2013 was 4.8 billion m^3. This shows that the storage facility can meet almost half of the demand of the Baltic States.[59] Moreover, the second important aspect and objective of the facility is to be a measure in case of emergency and disruptions in the energy supply chains.[60] Moreover, it is potentially a way to assure the stability in all of the Baltic States, by supplying Estonia and Lithuania and also Pskov and other Russian borderline districts from the storage also in the heating season[61].

3.1.2. Effect of Ukrainian gas disputes in 2009

The threat of being entirely dependent on Russia's gas import is the fact that the state is the company's controlling stake-holder. This means that the state can mainly decide whether to lower or to raise the gas prices. As seen from recent years – the Baltic States were preferential up until 2008, when the prices set by Gazprom, were below their usual cost. But on the other hand, in 2010 the preferential treatment stopped.[62] It is also obviously the result of Gazprom being a political mean. This sort of course of events is apparent now in the Ukrainian situation. By gas crisis, which prevailed in 2009, it has made the decision-making instances in Europe think more about reducing their interconnection to Russia in energy import field. The risk of possible gas disruptions and the connected problem with

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http://www.academia.edu/3575015/Gazprom_and_the_natural_gas_markets_of_the_East_Baltic_States (Accessed 30.04.2015)

[59] McAleavey, Emma. 2015. „Baltic Gas Diversification" In *Energy Global*. http://www.energyglobal.com/downstream/gas-processing/19012015/Baltic-gas-diversification-087/ (Accessed 15.05.2015)

[60] JSC "Latvijas Gāze". 2014. *Natural Gas Supply in Latvia*. World Energy Council http://weclmc.lza.lv/images/stories/energetika/GAZe.pdf (Accessed 1.03.2015)

[61] Barnes, Trevor J., Perera, Nihal, and Doel, Marcus A. 2013. „Baltic Region Energy Security—The Trouble with European Solidarity" In *Baltic Security and Defence Review*. 15 (1): 144-184, 153-154

[62] Grigas, Agnia. 2013. *The Politics of Energy and Memory Between the Baltic States and Russia.* United Kingdom: Farnham; Burlington; Ashgate, 103-104

fluctuations in energy resource price can only be overcome by both finding alternative resources and also building new infrastructure.[63]

3.1.3. Alternative to Russian gas supply

Russian gas supply, namely Gazprom provided energy resource has therefore several risks that need to be taken into consideration when talking about energy security. Furthermore, in the context of security of supply by adding the factors from novel energy security ideas to the discussion seen in the second major part of the current thesis – mainly military, international, public relations and domestic sociocultural issues may arise. Therefore it should be clear, that the topical discussion would be talking about alternatives to somewhat unstable energy supplies provided by the Baltic States' eastern neighbor. With the potential of building the gas storage facilities underground in Latvia to the capacity of 50 billion m^3 [64], the question could be to reduce the potential vulnerability to the natural gas system. This of course would not be absolute alternative to the Russian supply, but of course it could decrease the risk for potential disruptions in the supply chain. It can all be seen as a result and also the evidence of globalization as new perceptions and the related novel energy security ideas[65], with assuring security to the energy supply system by the already available means. The gas storage facility will therefore give more time to address the issues which may arise to the supply chains.

3.1.4. Conclusions and evaluation of the Russian gas dependence related issues

Dependence of the Russian gas supplies, namely the supply from Gazprom OAO gives the basis for the first issue related to natural gas in the Baltic States. Being almost absolutely state-controlled, the natural gas supply can be used as a political mean, as seen from the events described before for example in Ukraine[66]. Economical aspects of international political economy will therefore give evidence of improting natural gas form Russia, even though the aspiration is aimed to achieve the highest possible level of independency. Therefore actions and decisions carried out, can nevertheless be described by the

[63] Barnes, Trevor J., Perera, Nihal, and Doel, Marcus A. *Op. Cit.*, 147-148
[64] JSC "Latvijas Gāze". *Op. Cit.*
[65] Belyi, Andrei V. and Talus, Kim, eds. 2015. *Op. Cit.* 6-7
[66] Grigas, Agnia. 2013. *Op. Cit.* 103-104

considerations of political aspects. As an alternative to supplies from Gazprom OAO, there has been implicatons and examples of Inčukalns Underground Gas Storage Facility of providing stability to Estonia and Lithuania in the heating season. Therefore even though we can see cross-border cooperation in this sense, the overall aspiration is for higher level of political factors, which is why we can evaluate that the political factors prevail in this field, giving the ranking of economic factors in this question "low".

Considerations concerning the price fluctuations like it was evident in the case of Ukraine-Russia gas disputes are probably the key element in order to be more inclined towards political aspects of international political economy. Therefore the effect of the example of Ukrainian gas disputes should also be ranked "low".

Taking alternative steps though, in order to reduce the dependence of Russian energy resource supplies could all amount to the discussion between security or military and self-sufficiency considerations in the context of international political economy.[67] On the other hand, as it is in the interest of Russia to ensure the natural gas supply for the Kaliningrad, Pskov and Leningrad oblast through Latvian gas storage facility, we can be assured that at least the supply for Latvia probably would not negative influences, as it would be disadvantageous to Russia itself. This will overall reduce the vulnerability to Latvian supply chains and evolve therefore around the positive outcomes of economic ideas of international political economy[68].

3.2. Influences from the European Union to the Baltic States natural gas related questions

3.2.1. Reality evident in the sense of effects from European Union

All of the Baltic States have been members to the European Union for quite some time and as Robert Gilpin points out in its work – the first and foremost idea in moving towards the greater amount of integrity in the union has been lead after postwar Europe by the political means. Nevertheless there can be pointed out also largely the economic means to make European Union economy more efficient and competitive comparing other regional

[67] Gilpin, Robert., and Gilpin, Jean M..1987 *Op. cit*. 18-19, 29
[68] *Ibid.* 18-19

markets.[69] Therefore it is also important to address state regulated aspects of internal state affairs from the supranational side, as the Union itself can now see the problems arising from Ukraine-Russian disputes and the potential vulnerabilities from excessive dependence on Russian supplies[70]. As an illustration of political aspect of international political economy discourse, the European Union has also discovered the importance of diversification in resources and reducing its dependence from Russian supplies. The overall objective should be creating new system within the Union, in order to increase supply-market stability and balance the gas import prices.[71] Nevertheless it is also the field in which Latvia, Lithuania and Estonia are routed to act according to the political considerations rather than the economic ones, being part of the Union.

3.2.2. Evaluation on the effect of European Union level decisions

With the aforementioned objective of the European Union to not only increase the self-sufficiency in grass-root level[72], but also to the whole Union, it can be understood, why this kind of liberalization should be politically important[73]. On the other hand, the idea given by the leaders of the European Union is opposed by market actors. This is mainly because of the fact that when balancing the energy import prices, the market aspect to it would lose its value – therefore, the idea is simply anti-competitive when it comes to enterprises that are currently in energy field. The only way to assure one fixed price to the resource is to make European Union buyer of the imported resource.[74] Even though the idea is politically important, it would hurt the economic considerations side of the international political economy. This is because the free-market rules would therefore be left on the background reducing the overall conception of supply and demand price regulations which of course are

[69] Gilpin, Robert. 2000. "European Regional Integration." In *The Challenge of Global Capitalism: The World Economy in the 21st Century*. Princeton; New Jersey: Princeton University Press, 193

[70] Chyong, Chi-Kong, and Tcherneva, Vessela. 2015. „Europe' s vulnerability on Russian Gas." In *European Council on Foreign Relations*. http://www.ecfr.eu/article/commentary_europes_vulnerability_on_russian_gas (Accessed: 14.04.2015)

[71] Beckman, Karel. 2015. *The Energy Union: it's now or never for a European energy policy*. http://www.energypost.eu/energy-union-now-never-european-energy-policy/ (Accessed 15.03.2015)

[72] Kanapinskas, Virginijus, and Urmonas, Algimantas. 2011. "Changes of Legal Regulation on Natural Gas Market in the Context of the Third European Union Energy Package" In *Jurisprudencija*. 18 (1): 233-249, 246-247

[73] Gilpin, Robert. *Op. Cit.* 11-13

[74] Evans, David (ed). 2015. „EU Energy Boss Says Joint Gas Buying Would Have to Be Voluntary" In *Reuters*. http://uk.reuters.com/article/2015/02/02/eu-energy-poland-idUKL6N0VC3KQ20150202 (Accessed 15.03.2015)

directly linked to making profit, giving evidence of politically driven decisions in the European Union aspect and therefore ranking the economic factors also "low" comparing to the political means.[75]

3.3. Liquefied natural gas related issues

3.3.1. Description of the problems evident in the field of liquefied natural gas

Liquefied natural gas is a condition in which the natural gas has been converted to in order to simplify the transport of the resource, which however requires special infrastructure for the transportation and storing it[76]. What is more, recent years in the Baltic States have evolved over the question of where and if the LNG terminal should be built. What needs to be mentioned here is that Lithuania has already made the decision – the terminal of LNG in Klaipeda with jetty, floating storage, regasification unit and 18 km long connection started their operation in December 2014, with the maximum capacity of 4bcm/a[77]. There were several intertwined reasons for it: a) shutdown of Ignalina Nuclear Power Plant in the end of 2009; b) increase of dependence of the natural gas supply from Russia through the Republic of Belarus; and c) Lithuania lacks similar alternatives as Estonia (retorting gas) or Latvia (hydroelectric power) has.[78]

The fact that Lithuania has already developed its LNG terminal does not mean though, that the other Baltic States have not thought about building one. The intergovernmental discussions between e.g. Estonia and Finland of whether there should be a terminal in either one or the other state have now reached to a conclusion to build LNG terminal in Finland. This will be done by connecting the two states it with a pipeline (Baltic connector) across

[75] Lin, Cheng-Chang, and Wu, Yi-Chen. 2014. "Combined Pricing and Supply Chain Operations Under Price-Dependant Stochastic Demand" In *Applied Mathematical Modelling*. 38(5-6):1823-1837, 1823
[76] Liuhto, Kari. 2012. *Op. cit*, 3-4
[77] Mäe, Andres. 2013. *Liquefied Natural Gas (LNG) Terminal for Eastern Baltic*. www.geopolitika.lt/?artc=6077 (Accessed: 10.05.2015)
[78] Matulionis, Tadas. 2013. *LNG Terminal in Lithuania: Security of Gas Supply*. Gas Naturally Event, Brussels http://www.gasnaturally.eu/uploads/3._Presentation_for_Gas_Naturally_COMPLETE_AND_FINAL_KLAPEIDOS_NAFTA.pdf (Accessed: 21.02.2015), 3-4

the Gulf of Finland, with also building a smaller LNG terminal just for ensuring smooth distribution in Estonia[79].

What is more, as diversification of one's energy resources supply seems to be common issue for all of the Baltic States, then it is understood why Lithuania thought about the infrastructure and possible challenges in transporting natural gas from its terminal to Latvia and Estonia. The gas consumption in the Baltic states in 2011 was divided as follows: Lithuania 3,4 bcm, Latvia 1,6 bcm and Estonia 0,6 bcm. It means that when the already existing Lithuanian LNG terminal is working on a full load, it is able to provide 75% of the gas, which is needed in the Baltic States.[80] Recent events assure that the reality is nevertheless opposite – even though Lithuania has shown its readiness to provide liquefied natural gas to Latvia and Estonia through the gas terminal in Klaipeda, as seen from the project of developing it, Latvian Gaze, on the other side, has expressed their opposite view. It can be seen that Latvia is blocking the development of the infrastructure and adopting regulations, which preclude consumers from receiving gas from Lithuania.[81] Estonian LNG supplier, on the other hand, signed an agreement for infrastructural cooperation – but the contract is only a small-scale[82], giving evidence of yet again the aspiration for a separate LNG terminal and cooperation only in the distribution capacity part.

3.3.2. Issues related to liquefied gas in the context of the framework

The decisions to either built the terminal or not may therefore raise the capability for natural gas transportation means diversification in the supply of country´s energy resources, which as seen before, is evident as a fact of political factors of international political economy. Nevertheless, new terminal means that the limited circle of consumers and

[79] Kustova, Irina. 2014. „Baltic Times: Estonia And Finland Agree On Construction Of Two LNG Terminals" In *Natural Gas Europe*. December 7. http://www.naturalgaseurope.com/estonia-finland-construction-lng-terminals (Accessed 28.02.2015)
[80] Matulionis, Tadas. *Op. Cit.* 6
[81] Chestney, Nina., and Baird, Jane. 2014. Latvian Gas Storage Site Could Hold Back Baltic Market for Years" In *Reuters*. http://www.reuters.com/article/2014/12/02/latvia-gas-idUSL6N0TH4V320141202 (Accessed 16.04.2015)
[82] Elta EN. 2015. „Estonians Want to Use Klaipeda's Future LNG Disribution Station" April 15 http://en.delfi.lt/nordic-baltic/estonians-want-to-use-klaipedas-future-lng-distribution-station.d?id=67712764 (Accessed 20.04.2015)

therefore the overall level of demand need to be taken into consideration[83]. The aforementioned furthermore confirms the lack of economic aspects in the decisions made, because every Baltic States aspires for its own LNG terminal, without considering cooperation seriously and common solution. This all results in ranking the level of economic factors of international political economy "low".

When talking about the existing LNG terminal in Klaipeda and the reasons of building one, then we can see, that one of the main factors prevailing in the decision to build the terminal was diversification and distancing oneself from supply provided by Gazprom then we can talk about generally the new energy security concept related issues of public relations as well as international level aspects[84]. Therefore it is evident that even if states do not directly take into account the new and changed policy of energy security, then indirectly the political sphere does effect the decisions so much that unconsciously these factors are still considered. What is more, these new geopolitical considerations are again related to political factors of international political economy.

As said before, concerning to the existing LNG terminal however, we can see low level of integration which as seen from the framework set forth in the first two major part of the thesis relates to the economic factors[85] and international aspect of novel energy security[86] ideas related to the latter. When Latvia for example would have decided more based on economic aspects of international political economy in the current question of LNG terminal without trying to block by regulations the natural gas import from the terminal in Klaipeda, then the integration level between the states in energy field would have increased, lowering the costs for natural gas to consumers as well as the states.

What is more, the aforementioned small version of a LNG terminal, which will be built in Estonia, might be profitable to Estonia in a long-term perspective. In the future, when the Latvian storage capacity could expand, Estonia might be able to get gas from Latvian

[83] Mäe, Andres. 2013. „Mitut gaasiterminali vajab Läänemere idakallas?" [How many gas terminals do the eastern shore of the Baltic Sea need?]. In *Diplomaatia* 118/119
[84] Gilpin, Robert. 2003. *Op. Cit.* 11-12
[85] *Ibid* 11-12
[86] Vivoda, Vlado. 2010. *Op. cit.* 5259-5262

storage[87]. The problem therefore is not having one intra-regional infrastructure for transporting natural gas, giving also some sort of relief in the decrease of dependence, but the current pipelines and gas storage in Latvia are co-owned by Russia, which makes the decisions a lot harder.[88] Therefore it is evident that even though Estonia and Lithuania have been successful in deferring their natural gas infrastructure from the influence of Gazprom, then the cooperation and supply from Latvian storage to either of these states will not able to balance the political and economic factors, because of the fact that the infrastructure in Latvia is so interrelated to Russia[89].

When drawing some further conclusions, it would be more useful to the other Baltic States to import gas from Lithuanian terminal by increasing the level of cooperation, which would balance the political and economic factors. It will result in both the objective of diversification energy resources and also providing lower energy prices as it is estimated that the liquefied natural gas prices could thereby reduce by 10-12% in Lithuania[90]. Cooperation in the sense of public relations described by Vlado Vivoda in his work of novel energy security ideas and challenges[91] evolves in accordance with the technology and innovative ways increasing the effectiveness and therefore the chance to lower the costs and increase the profits as seen in the economic factors of international political economy[92]. We can therefore theorize that if Baltic States would have come to an agreement in cooperation to develop joint system in LNG terminal and its infrastructure, then there would also come some sort of protection of possible threats and negative considerations aimed in the political factors sphere, because of the idea of "law of one price" as seen before in the first part of the thesis[93].

3.4. The cooperation between the Baltic States and Poland

According to the proposed roadmap, the development of the gas interconnection between Poland and Lithuania should conclude in 2023. In 2014, the precentage of natural gas that

[87] Kustova, Irina. 2014. *Op. Cit.*
[88] Barnes, Trevor J., Perera, Nihal, and Doel, Marcus A. *Op. Cit.*, 150-151
[89] Chestney, Nina., and Baird, Jane. 2014.*Op.cit.*
[90] Klaipedos Nafta. 2012. LNG Terminal Project in Lithuania. Presentation at Energy Security Conference http://www.lei.lt/energy-security-conference/index_files/Masiulis.pdf (Accessed 25.02.2015),12-13
[91] Vivoda, Vlado. 2010. *Op. cit.* 5259-5262
[92] Gilpin, Robert., and Gilpin, Jean M. 1987. 18
[93] *Ibid.* 18

was imported from Russia to Poland was 59% of the overall supply[94]. Therefore Gas pipeline would therefore be somewhat alternative for all of the Baltic States when it comes to the so far dependence only on the supply of Gazprom, giving also again the acknowledgment to political factors of international political economy and military security with reference to international level aspects of energy security conception issues[95], as the idea itself is also supported by the European Union for diversifcation the energy supplies and reducing the dependence from Russia. Making a new gas interconnection obviously diversifies the supply-chains, reducing the chance of extensive disruptions to the energy security sphere. And as seen from the Poland's own consumption of Russian energy – it would be only partial solution though.

However, international level cooperation is of course also the example of economic factors of international political economy discourse. With developing this kind of energy infrastructural unit, it is evidence of removal of the national boundaries – seen as obstacles to free market. Interdependence between Poland and Lithuania gives greater extent to supply-demand market regulation to the resource price, which as seen before is an assurance of possible growth of wealth. Therefore this subject will be considered to be as "neutral" when assessing whether the economic or political aspects prevail. This is different from the aforementioned, because of the fact that the cooperation between Poland and Lithuania (with the aspiration to give benefits also to the other Baltic States in the nearest future) is cross-border from the Baltic States.

3.5. Overall conclusions to the natural gas related questions in the Baltic States in the context of political and economic aspects of international political economy with novel ideas in energy security concept

Decisions that are driven by political aspects of international political economy are aimed at gaining a higher degree of self-sufficiency and also protection of one's energy supply[96], which relates to the military security of energy security conception[97]. Alternative events should lead to higher cooperation between the Baltic States e.g. in order to work out

[94] Carney, Sean. 2014. „Europe Braces as Russia Tightens Fuel Taps" In *Wall Street Journal – Eastern Edition.* 264(63):A8-A8
[95] Vivoda, Vlado. 2010. *Op. cit.* 5259-5261
[96] Gilpin, Robert., and Gilpin, Jean M. 1987. *Op Cit.* 20
[97] Vivoda, Vlado. 2010. *Op. cit.* 5259-5262

sufficient infrastructural development plan to lower the costs for it per country and therefore bring more economic aspects into the considerations, which would be profitable and therefore preferable to markets. The following table shows and reassures that the hypothesis, set forth in the beginning of the current thesis was confirmed – Baltic States are lead mainly by the political aspects of international political economy when it comes to the energy security and natural gas, because the level of economic factors are mainly "low" in these questions. Therefore it can be said that the international political economy discourse and its aspects of political and economic considerations are in fact diverging from one another in these issues addressed.

Table. Conclusion of the balance between economic and political factors of international political economy in the energy security field in the Baltic States

Issues related to the natural gas and energy security in the Baltic States*	**Level of economic factors of international political economy in the related decisions**
Russian dependence	- low
Effect of Ukraine gas disputes	- low
Effect of the European Union influence	- low
Liquefied natural gas related issues	- low
Poland-Lithuanian interconnection	- neutral

- **The selected issues evident, were addressed in the Thesis p 3.1, 3.2. and 3.3. by the scale of high-neutral-low level of economic aspects of international political economy**

In the light of the Ukraine gas disputes we can therefore draw even further conclusions, by saying that external conflict in the international level, being also one of the elements of novel energy security issues, does not affect the willingness to pay for conducting studies and finding potential new ways for cooperative diversification of energy resources in the Baltics. States are therefore willing to invest more in order for the political considerations of international political economy to prevail. The willingness to pay more for the resource is probably lead by the fear and aspiration for self-sufficiency in order to reduce the dependence of Russian supplies. Nevertheless – these events does not show that the Baltic States realize that the aspiration is cross-national, because of the fact that every state stands for their own interests.

Furthermore we can mainly see political factors of international political economy prevailing over the economic ones also when talking about liquefied natural gas. In this

field, the aspiration and main aim for every Baltic State has been the same as said before – diversification of the energy resources supply. Evidently, there lacks cross-border cooperation and therefore the state borders can be considered as boundaries to the energy market and regulations. Baltic States are aimed therefore to their own separate self-sufficiency, which overall gives acknowledgment to the international level and military sphere of the new energy security challenges,[98] with the fear of being interrelated and dependant on some other state with probably seeing the dependence as a potential vulnerability, deferring from economic aspects.[99] Possible cooperation between the states in order to gain higher level of economic factors and benefits to the markets, are held back because of the fact that as seen before – even though the aspiration is to lose dependence from Russian supplies, neither Latvia nor Finland has not been able to reduce the influence of Gazprom to their LNG infrastructures.

When talking about what could have been the alternatives to these decisions, then the answer might be going over to alternative fuel or in the example of Estonia – invest in producing retorting gas. With investing only in the retorting process technology, the retorting gas that nevertheless extracts in the production process, gives a good alternative to reduce the dependence of natural gas supplies from Russia, giving the chance for economic factors to prevail.[100] Furthermore economic factors[101] are evident in the case of possible reduction in natural gas consumption, which means, that the suggested alternative would be great variant in the energy resources context, making it easier to balance the political and economic aspects of international political economy.

The author therefore suggests an alternative to the liquefied gas related issues. One alternative, increasingly used in Baltic States is Cogeneration of Heat and Power (CHP) from local biomass, in order to reduce Gas consumption. In addition, more innovative technologies could be exploited. Jelena Pubule *et al.* have found in their case study that the

[98] Vivoda, Vlado. 2010. *Op. cit.* 5259-5262
[99] Von Hippel, David *et al.* 2009. *Op. cit.* 6721
[100] Mölder, Leevi. 2004. „Estonian Oil Shale Retorting Industry at the Crossroads.“ In *Oil Shale*. 21 (2): 97-98, 98
[101] Oatley, Thomas. *Op. cit.* 36-38

best solution would be to further develop biowaste management systems[102]. This will also take into consideration the new challenges of energy security – the study involves similarities in socio-cultural aspects as well as provisions from European Union as international factor[103]. Nevertheless, it would be rewarding in meeting the European Union set directives and also in the example of Estonia this is the best solution for the region[104]. Furthermore, it would be more profitable also in one state as a whole, because of the lower transportation costs, technological developments and international level subsidy.[105] What has to be taken into consideration though is that firstly, the development of municipal solid waste management systems and incineration plants would be more time-consuming alternative in Lithuania and Latvia as they are the most developed in Estonia [106]. Also the fact that by reducing the demand for natural gas could make us as a region less attractive to alternative natural gas suppliers.

Either way, technological developments are one of the key elements of the novel ideas that have been brought in the energy security concept[107] and therefore, when ignoring the alternatives that have more economic considerations, then the governments also discard addressing the new challenges. These ideas also correlate to the economic considerations seen in the discourse of international political economy. As described before, "law of one price" is for the market sides therefore something, that can be avoided through innovation – by changing and evolving, the goods would not be the same anymore, allowing leverage to price formation through negotiation between supply and demand actors[108].

[102] Pubule, Jelena, *et al.* 2014. „Finding an Optimal Solution for Biowaste Management in the Baltic States" In *Journal of Cleaner Production*. 88 (2): 214-223, 215
[103] Vivoda, Vlado. 2010. *Op. cit.* 5259-5262
[104] For example, European Parliament and European Council. 2006. Directive on Waste 2006/12/EC. http://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:32006L0012 (Accessed: 28.02.2015)
[105] Cohen, Benjamin J., and Charles Lipson. 1999. *Op. cit.* 2-3
[106] Pubule, Jelena, *et al. Op. Cit.* 219-221
[107] Vivoda, Vlado. 2010. *Op. cit.* 5259-5262
[108] Gilpin, Robert., and Gilpin, Jean M. 1987.*Op. cit.* 18

CONCLUSION

The objective of the current graduation thesis was to give assessment to the energy security in the Baltic States. The framework for the analysis was combined from the discourse of international political economy and also the novel energy security related issues, explained in the work of Vlado Vivoda with reference to Benjamin K. Sovacool and David Von Hippel. The hypothesis set forth in the beginning of the thesis creates a question of delimiting the interconnection, dependence and self-sufficiency between the aforementioned states in the natural gas field. It was stated that diversification projects which are not always responding to economic needs and do not always have an economic rationale may be not as beneficial as the decisions made could be. By thoroughly analyzing important issues in the natural gas section, it was possible to draw far-reaching conclusions with recommendations for gaining higher energy security in the fields.

By addressing the international political economy discourse and the additional novel energy security ideas, the framework allowed to find out that the economic factors and political factors in the decisions made in the issues concerned are diverging. Both the political and economic aspects of international political economy have their own advantages when prevailing. Roughly said, whilst the political aspects ensure namely the security of a nation-state, the economic factors on the other hand, will grant the market lower costs for the resource and making it more profitable to lose the restrictions for cross-border cooperation. Also, by admitting that the so far understood concept of energy security – meaning the security of supply – has been worn out, the thesis took also into consideration four factors of novel energy security ideas, which complemented the discourse of international political economy. It was found, that when the aspects of international political economy interrelated, it was seen tough, that the political aspects prevailed mainly, resulting in the fact that economic considerations were left in the background.

Furthermore, the research showed that the decisions made in the energy security field question related to natural gas, were driven probably by the history and depending overly on the supplier from Russia with the example of the situation in Ukraine. Also the effect from the European Union level gave acknowledgment to the fact that this international factor in the energy security was driven mainly from political aspects of international

political economy – this is why it is not surprising that the markets opposed the anti-competitive aspirations. The overall objective is to yet again increase the self-sufficiency as a whole in the Union. Finally the political factors prevailed in the liquefied gas related issues, with the main focus on LNG terminal and infrastructure. It was seen, that every state in the Baltic region is aspiring to diversify their supply on their own, with low level of cooperation also in this field, even if "low of one price" from the international political economy would be beneficial to more actors.

Adding to these considerations, it was found that the hypothesis was confirmed. The focus of Baltic States in the decisions related to natural gas is inclined to the political considerations, with economic dimension of international political economy being left underestimated. Therefore it was evident that in four out of five issues analyzed, the level of economic factors of international political economy was assessed "low". Only in the issue related to Poland-Lithuanian interconnection the level between political and economic considerations was balanced. It was seen, that Poland-Lithuanian interconnection had the aspiration to diversify firstly the possible natural gas supply chains – resulting in the political means of decreasing the dependence of Gazprom. On the other hand, however, it could be also seen as a way of clearing potential boundaries between markets, which correlates to the economic factors of international political economy. Therefore the four additional subjects nevertheless confirmed the assumption, meaning finally that the Baltic States are willing to increase the costs and lower the dependence of one another in order to gain higher level of self-sufficiency and delimiting possible threats and negative impacts from outside factors.

KOKKUVÕTE

Rahvusvahelise poliitökonoomia keskmes lasub diskursus, mille raames kõrvutatakse poliitilisi ning majanduslikke aspekte teatud valdkonnas otsuste tegemisel. Käesoleva bakalaureusetöö teema ning uurimisküsimuse seisukohalt tähtis valdkond on Balti riikide energiajulgeolek – täpsemalt maagaasiga seonduvate küsimuste valguses. On selge, et energiajulgeolek on iga riigi julgeoleku ning toimimise alustala, olles samaaegselt ka potentsiaalne koht, millest seda haavata. Seejuures on ilmne ka uuenenud julgeolekuolukord, mistõttu seni kehtinud energiajulgeoleku kontseptsioon tarnekindlusest on iganenud. Seega võeti antud uurimustöö aluseks olevaks raamistikuks üheaegselt nii rahvusvahelisest poliitökonoomiast tuntud diskursus poliitilistest ja majanduslikest aspektidest kui ka uuenenud ideed energiajulgeoleku konseptsioonis. Uurimistöö eesmärgiks oli välja selgitada ning anda hinnang sellele, kas vaatlusalustes küsimustes prevalveerivad pigem poliitilised või majanduslikud aspektid.

Töö algstaadiumis seatud hüpotees, et Balti riikide otsused maagaasiga seotud energiajulgeoleku osas, on kantud valdavalt poliitilistest aspektidest rahvusvahelise poliitökonoomias, leidis kinnitust. On näha, et protsessid, millega üritati õigustada ressursside osas mitmekesistumist ning n-ö julgeoleku tõstmist, päädis sellega, et majanduslikud aspektid jäeti tahaplaanile. Esmalt selgus, et nii poliitilised aga ka majanduslikud kaalutlused on mitmetel põhjustel eri valdkondades põhjendatud. Üldjoontes võib mainida, et poliitiliste aspektide esile toomise peamiseks eesmärgiks on riikliku energiaalase iseseisvuse ja sõltuvuse vähendamine, mis päädib seega julgeoleku taseme tõstmisega. Samas on majanduslikud kaalutlused märk sellest, riik peab silmas liberalistlikke kaalutlusi, millega seonduvad seejuures uutest energiajulgeoleku probleemidest tehnoloogia areng ja riikidevaheline suhtlus. On selge, et piirideülene koostöö, milles eemaldatakse kõik võimalikud tehinguid piiravad takistused, tagab turgudele suurima võimaliku kasumi. Lisaks oli oluline juba eelöelduna hindamisel lähtudagi lisaks veel neljast teema puhul olulisest ning rahvusvahelise poliitökonoomia diskursust täiendavast ideest. Küll aga nähtus lõppastmes, et küsimustes, kus poliitilised ja majanduslikud kaalutlused eksisteerisid, olid peamisteks lähteallikateks siiski poliitiliste aspektidega seonduvad tulemid – seetõttu saab öelda, et vaatlusalustes küsimustes

kaugenesid poliitilised ja majanduslikud rahvusvahelise poliitökonoomia teoorias sisalduvad argumendid üksteisest.

Kokkuvõtvalt võib järeldada, et kuivõrd algselt seatud hüpotees leidis kinnitust, näeme, et Balti riigid on valmis riskima turgude ja sealsete tegurite n-ö pahameelega, kuivõrd otsuste tegemisel lähtutakse valdavalt poliitilistest kaalutlustest, jättes majanduslikud rahvusvahelise poliitökonoomia mõjud arvesse võtmata. Viiest käsitletud suuremast probleemist vaid ühes valdkonnas – s.o. Poola ning Leedu vahelise ühenduse osas – on selge, et plaanid tehti tasakaalus mõlematest kaalutlustest, kuivõrd selles otsuses võib samaaegselt näha püüdlust tarneahelate mitmekesistumiseks ja seega kaugenemiseks Venemaalt imporditavast maagaasist ning majanduslike aspektide mõttes piiriülese koostöö edendamist ja suhtlust limiteerivate piiride kaotamist. Ülejäänud probleemikohtades anti küsimustele hindeks „madal“ majanduslike aspektide tase, mistõttu tulebki tõdeda, et hüpotees leidis kinnitust – Balti riikide otsustused maagaasiga seotud küsimustes lähtuvad peamiselt riskide vähendamisest, jättes majanduslikud kaalutlused tahaplaanile. Poliitilised ja majanduslikud rahvusvahelise poliitökonoomia aspektid on seetõttu üksteisest kaugenevad energiajulgeoleku vallas käsitletud regioonis.

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