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**Turkey's role in the European Union's energy security - Potentials in  
natural gas transit for Ankara**

**THESES OF THE DOCTORAL (PhD) DISSERTATION (THESIS BOOK)**

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## **1. Description of the research problem**

The access to energy is an essential requirement for the functioning and managing of modern economies, due to this, energy security became a central security policy issue for all states, which led to the 'securitization' of fuels. Although it is the easiest to explain energy security by the supply or dependency of a given state, the issue needs a complex security policy approach: geostrategic position, population, historical traditions, political and economic relations are collectively determining the importance and role of energy security in a given state or region. The dependencies related to energy supply or shortages are decisive points of conflict in contemporary international relations.

Natural gas plays an important role in EU's energy security and the role of Russian gas supply in it is indisputable, providing approximately 40% of EU's natural gas imports. Prolonged outages of Russian gas would cause serious crisis in both political, social and economical dimensions in Europe. Transportation of Russian natural gas is mainly done through pipelines, with the lines in Ukraine being one of the most important transit lines, making Ukraine's gas transit critically important for European energy security. This problem gained prominence in EU's energy political thinking first in 2006 and again in 2009, when Gazprom decided to halt transits to Ukraine – impacting many EU member states. Despite these events did not cause any real crisis among the EU members, they highlighted the potential of using natural gas as a political weapon and made the European states aware that they needed to reconsider their energy policies.

Approaching the main trends of the European Union's natural gas security from this perspective, two trends are visible. One is the Russian aspiration to retain Gazprom's position as the main supplier of the European market. The other is the EU's ambition to find alternative transit routes and suppliers. From the Russian perspective, bypassing Ukraine means transit through – and buliding - North Stream 2 and Turkish Stream. From the EU's viewpoint the alternative is the Southern transit route, the Southern Gas Corridor, which would transport Caspian – and on the long run even Middle-Eastern – gas to Europe. The intersection of Russian export - and the EU's import diversification aspirations is Turkey, as a transit country.

A significant amount of literature accumulated recently, arguing that Turkey can gain a significant role in European energy security in the future. European gas dependency and Turkey's geographical location is logically linking the two together. One of the main

questions related to this topic is the EU's energy policy, which includes diversification as a goal, but to put this into practice, a mutual commitment would be mandatory. The next important aspect is Turkey's geographical location, which on the one hand gives unique opportunities, on the other hand grave threats, if energy policy is influenced by the regional security environment. The third important issue are the dynamics of Turkey – EU relations, which can have an impact on energy security relations as well. A further important problem relating the feasibility of the Southern Gas Corridor is whether there is enough gas – if its a real alternative for the EU.

## **2. Statement of Research**

During my research and drafting of my dissertation, it was crucially important to me to understand what exactly energy security means, what are the common links with security studies and how does it influence – if it does – individual states' security perceptions, and to what extent can it impact the events related to international security.

The dissertation tries to answer if energy transit and/or energy trade can be a breakthrough point for Turkey, a state which is classified as an insulator according to the Regional Security Complex Theory. In this context I would like to look at the factors facilitating or impeding becoming a transit country (Turkish energy strategy, Turkish-Russian energy relations, available volume of natural gas exported, characteristics of EU's gas market, EU's energy policy, regional challenges). The paper will mainly focus – narrowing the broad topic of 'energy' - on natural gas related events, projects and opportunities for Turkey's aspirations in energy transit and energy trade.

In order to understand what roles Turkey can have in European gas security and to what extent can it contribute to the improvement of the security of gas supply, I would like to present the recent changes in energy security and within that, gas security, which had an impact on both the global and European – regional – gas market in the last decade.

Besides, I consider it important to present the role and importance of natural gas in contemporary European energy security, and also the opportunity, which can help Turkey to become a gas transit country.

An important purpose of the paper is to analyse Ankara's opportunities in gas pipeline transit and the main factors positively or negatively impacting them.

## **3. Hypotheses**

In line with the aim of my research I developed the following hypotheses:

1. With regards to the European Union's energy security in the middle- and long term, natural gas import is a determining factor.
2. The Southern Gas Corridor and Turkish Stream transit lines, by which Turkey can become a transit country, greatly increases Turkey's internal energy security.
3. The impact of Turkish transit on EU's energy security in the near and middle term is overall less significant, however it can result in changes in the South-Eastern European Region's gas market.

My first hypothesis is based on the current role of natural gas in global and European energy security. Changes in the global gas market had a positive effect on the world's gas trade. The shale gas revolution – in which the United States is the leader – and the spread of LNG, with its more flexible solutions are important factors of the mentioned changes, positively influencing even the European Union's natural gas market. In the recent years, gas import dependencies increased in the EU states due to decreases in their own extraction, despite the fact that gas imports slightly decreased in the same period and an ambition exists to increase the share of renewables in EU's energy mix.

A basis of my second hypothesis is the fact that the last pipeline of the Southern Gas Corridor, the Trans Adriatic Pipeline (TAP) will be certainly finished in 2020, so there will remain no obstacles to transport Azeri gas to Europe. The second aspect of the hypothesis is the Turkish Stream, which started operations in January 2020, transporting gas from Russia directly to Turkey, while the second line is under construction from there towards the European countries. All these are in support of the concept that Turkey should become a transit country –an idea that has great influence on Turkish energy policy.

The third hypothesis is based on the presumption, that the volume of imported gas will not increase significantly with the new pipelines. The annual European capacity of the Southern Gas Corridor is currently 10 BN cubic meters, which is insignificant compared to the annual 500 BN cubic meters gas consumption of the EU. And the Turkish Stream line was constructed to replace the Trans Balkan Pipeline (TBP) on the long run, so the operation of the Turkish Stream does not mean more gas in the region, only a different route, but not even diversification, since the pipes will transport Russian gas. TANAP could be a real alternative for the Southeast European countries if the affected states (Greece and Albania) will choose to

diversify their markets in the future and purchase transported gas. However the two new pipelines can be important in that, they change the direction of gas flow in the region and in connecting hitherto unconnected gas markets.

#### **4. Research methodology**

I used mainly the already existing and time-tested, fundamental theories of security studies during the research for my dissertation, namely the Copenhagen School (Copenhagen Research Group), Sectorial Security, Securitization and Regional Security Complex Theory, all developed by the School's researchers. I applied the Regional Security Complex Theory during both my research related to energy security and to understand Turkey's international embeddedness. Due to the multidisciplinary nature of the research subject, besides security studies I tried to apply theories of international relations, highlighting the difference between the realist and liberalist schools.

Energy security related research basically show *two directions*. One is the geopolitical, which focuses on World War II, experiences of the oil crises, historical facts, centered around the relations of the USA and the oil rich Arab countries. The geopolitical school currently focuses on Eurasia and researches energy supply through the relations of the former Soviet states and European countries. The other direction focuses on the role of international *organisations, regimes and markets* and – different than the geopolitical school – giving more importance to the nongovernmental organisations and actors. While the former direction focuses on the relations of power connected to resources, and sees political alliances as important, the latter school sees global interdependence as a basis of research.

I will use both approaches, because the European and Eurasian energy security dynamics are greatly impacted by geopolitical considerations, on the other hand, among the aspects of EU's energy security, the Union puts emphasis on regulating the energy market and supporting the market mechanisms of gas markets.

The possibilities for interpretation related to energy security made it possible for me to differentiate between energy importer, energy exporter and transit countries. Analyses of transit countries are a relatively new field of energy security research. Energy security literature generally focuses on the relations of energy supply and demand. Transit countries are usually only considered because of the problematic relations with exporters and their importance in security of supply of importers. Transit countries in energy security are

generally important in regard to their capacity to influence the supply and demand sides' energy-diversification. Energy transit is always geographically determined, influenced by a combination of economical and geopolitical aspects. The basic components of energy transit are security of supply, security of demand, and pipeline-specific issues.

I will present the European Union's energy security through the analysis of energy security related documents, the EU - Russia gas trade, and the characteristics of the Southern Gas Corridor. I will try to present the EU energy security documents including the external factors (Russian gas import and the global market).

Employing several methods together made it possible to present Turkey's role in energy transit. In this regard my analysis merges information from current Turkish energy policy, statistics, relevant information from the pipelines' websites and news related to pipeline projects.

## **I. 5. Structure of the dissertation**

The paper starts with the description of the problem and the justification of the choice of topic. These are followed by my hypotheses and presentation of the research methods. The next section is the literature review.

The second chapter of the dissertation presents the theoretical background, those known theories, which are relevant to my topic and the field of security studies. In this chapter – based on the research of the Copenhagen School - I will briefly present the theories of sectorial security, securitization, regional security complex theory, the role of energy security in sectorial security theory and in different international relations schools (realist, liberal). The chapter also covers Turkey's role according to the regional security complex theory, which can facilitate the understanding of the country's energy security strategy. Among the theories probably the most important in terms of my topic is the *regional energy security complex theory*, which greatly contributed to my understanding of the various energy pipeline projects' influencing on the regional energy security dynamics.

In the third chapter I look at the concept of energy security, besides attempts to define the theoretical concept, the chapter also includes many practical aspects, actualities and a narrower segment of energy security, security of supply of natural gas. The chapter presents the history and evolution of the concept of energy security from the times of global spread of oil to today. The review of this evolution is important in order to understand the meaning of

contemporary energy security, and the events that shaped the concept. To understand the concept of energy security, it is crucial to know, what criteria can be used to define it, which factors influence it, what are the latest trends of the topic, which knowledge goes beyond 'traditional' theoretical frameworks.

The fourth chapter introduces the main characteristics of European Union's gas security, mainly based on the strategies and directives that shape and influence the EU's gas market. I present the concept of Southern Gas Corridor in this chapter and the stages of its realization. Turkey is a constant geopolitical factor in EU's gas diversification projects since the concept was born. In the chapter I also present the EU - Russia gas trade relationship, conflicts and in what aspects can Turkish transit be an alternative to EU – or a smaller European region – in gas imports, and for Russia in gas exports.

The fifth chapter looks into Turkey's possibilities and capabilities of natural gas transit and trade, and analyzes its possible effects on EU's gas security and the gas supply of Southeast Europe. The chapter presents in detail the possibilities and limitations, which Turkey faces. I analyze the realization of the new Turkish gas strategy primarily through the above mentioned two new pipelines. Besides, I also present the gas transport and export potential of those states, which have the possibility to join the Southern Gas Corridor pipe system and become a gas transport country. I also present the main characteristics of Turkish gas market, its infrastructure and large-scale investment projects.

This is followed by the conclusions and scientific results of the dissertation.

## **Summary of conclusions**

The theoretical framework – security studies and international relations theory – was not able to fully keep up with the changes and dynamics of energy security, resulting in the lack of a generally accepted definition of the concept of energy security. My research resulted in the conclusion, that energy security related analyses mainly demonstrate the approach of states that are energy importers.

From EU gas security perspective, changes in the global gas market and increases in supply influenced EU gas trade positively. The European Union's energy security related documents specify two main directions for action relating gas imports: diversification and improving internal efficiency. European gas diversification is tightly connected to overdependence on Russian gas. Besides LNG the Southern Gas Corridor is an important factor in EU's diversification. The realisation of Souther Gas Corridor is a success for EU – if

it starts operation by the end of 2020 – but currently has more of a political value, since the pipeline’s capacity is insignificant on a European scale.

During my research related to energy security and natural gas security I came to the conclusion, that gas security is greatly determined by gas pipelines, but influenced by other market characteristics, like gas market regulations, conditions of gas trade agreements, market actors and relations of trade partners.

This is especially true if we take into account the motivating factors that appear in EU’s and Energy Community’s energy policy. Regional energy security complex theory provides a stable framework for analysing Turkey’s role in gas transit. According to the theory, the threat among states resulting from energy dependency is considerably larger when they are geographically located closer, since this proximity serves as the basis for interregional dependence. Palonkorpi’s theory has some limitations, on the one hand, while it focuses mainly on security of supply, one of energy security’s arguably most important field, it neglects other areas of energy security like physical security of supply, energy affordability, energy security related sustainability. Besides these it is impossible to incorporate the diversity of energy sources into this theory, which means that fuels supplying certain countries or regions can originate from different sources, meaning one state does not necessarily belong to only one energy security complex, but at the same time can belong to multiple complexes, which situation the theory can not handle. However, the theory – as the author notes – can provide an important and useful framework to analyse regional dependency relations related to one single energy source – in our case natural gas.

Turkey’s geopolitical environment offers a good opportunity for energy transits. My paper analyses from several perspectives the effects of the two pipelines, which have an essential role in Turkish gas transit. Their combined effect with TAP and TANAP lines and Turkish Stream, will likely have a significant influence on regional gas transportation. The construction of TANAP line is a success of Turkish energy policy and a crucial element of the Southern Gas Corridor. TANAP currently significantly contributes to the strengthening of Turkish internal energy security, its transit role through gas transports to EU could start from the end of 2020. Currently the Southern Gas Corridor does not provide great volumes of alternative gas to the EU, but has an significant political and diversification role. The other transit pipeline, Turkish Stream, much like TANAP, greatly contributes to Turkish energy security, besides it can be a new gas transport line to Southeast European countries.

In the recent years, changes in Turkish energy policy resulted in the appearance of the energy hub concept besides energy corridors. For this Turkey will need to meet such criteria



as balanced energy structure, market transparency and sufficient infrastructure. The macroeconomical effects of developing into a hub, the rising competition among suppliers and the increasing sources of supply provides the Turkish economy with multiple advantages. One of the main challenges is the necessity to comply with EU gas market regulations, but also transport reliability – which has primary importance in security of supply – and the possibility to use energy policy as a tool for political leverage. If Caspian gas reserves become available to EU via Turkey, it would become a coherent member of European gas trade. The strategic partnership with Azerbaijan is a basic precondition to increasing Turkey's role in gas transports. In this context the Azeri-Turkish relations provide Turkey with a geopolitical advantage.

An emphasis is given to the role of European gas transit in Turkish energy policy rhetoric. Security of energy transit is always an important aspect of energy security, and at the same time can be a tool to gain political leverage. The analysis of Turkey and neighbouring states' geopolitical developments shows us that the impact of Turkish transit on European energy security is by no means positive in all cases.

The main actor of Turkish gas security is currently Russia, which showed in several cases, that it is ready to use gas trade as a tool for political pressure. Turkey's asymmetric dependence from Russia can influence its energy security and European energy transits through Turkish Stream.

Turkish reactions of EastMed project – which are in sharp contrast to increasing EU's gas security – lead to several, especially aggressive moves in Turkish foreign policy – maritime agreement with Libya, starting of gas and oil exploration drilling near Cyprus. According to the Turkish Ministry of Foreign Affairs the most economic and safest gas route from the region to European customers is through Turkey. Turkish officials blame the Greek-Cypriot-Israeli EastMed project for aiming to insulate Turkey.

Besides the above mentioned, other factors influencing Turkish-EU energy relations are not directly connected with energy policy, like the stuck Turkish EU accession process or Turkish foreign policy changes towards EU relating immigrants.

## **VI. 2. Scientific results**

My research in the topic of the dissertation, based on structuring, analysis, comparing theory and practice produced the following scientific results:

1. I proved, that security of supply of natural gas is one of the main priorities EU's energy security thinking and official documents. Many aspects of EU's energy policy – from regulation to specific activities – show, that gas imports and securing a continuous gas supply are strategic issues in the European Union.

2. I proved in my paper, that Turkish gas transit is largely determined by geopolitics. Regional political conflicts generally have a negative influence on transit security dynamics, and on the other hand, Azeri-Turkish relations and EU's gas diversification ambitions have positive effect on Turkey's transit security.

3. In my dissertation I proved, that Turkey is a key actor in regional energy security, as a transit country connecting EU, Russia and Azerbaijan, leaving the door open for the Caspian and Middle-Eastern hydrocarbon producing states.

4. In my paper I proved, that energy transit plays an essential role in the energy security of a transit country and determines the main priorities for its energy policy. The two Turkish transit pipelines – TANAP and Turkish Stream – greatly improves the country's gas security. TANAP line realised not only the East-West energy corridor, but also increased Turkish gas security and brought the Turkish-Azeri energy-alliance to a higher level. Also Turkish Stream directly transports the Russian gas, which so far arrived through TBP pipeline via a transit route through Ukraine.

5. I verified in my dissertation, that the new pipelines can result in new – differing from current - gas market conditions in the Southeast-European gas market, which can have a positive effect on this quite periferic gas region.

### **VI. 3. Recommendation for further research**

Hungarian language literature dealing with energy security is currently very limited and usually focuses on a specific subfield or issues related to a specific country. The dissertation has a complete chapter dedicated to aspects of energy security, as well as an extensive list of the elements of contemporary energy security concept. My research related to energy security can be of value for students of the International Security Studies and International Relations programs of the National University of Public Service, and every student interested in one of the most important challenges of the 21th century.

Further research of the regional energy security complex theory, or making it more visible in regional security complex theory, can contribute to the research of different,

regional level energy security issues, and widen the horizon of security theory related theoretical research.

The analysis and research of Turkey's role in regional or European energy security through the effects of the Southern Gas Corridor and Turkish Stream, will provide several actualities in the coming years, since the European line of Turkish Stream has still limited operability, and the Southern Gas Corridor starts gas transports to the Italian shores by the end of 2020. The effect of these gas transports can be important in the future in regards to the European Union's Southeastern members' gas supply, this being my main field of research in the future. One of the main questions concerning the Southern Gas Corridor is the future impact on Gazprom's energy policy resulting from the appearance of Azeri gas on the European market. The effects of further construction of the Turkish Stream line will be worthy of research, especially in relation to the region where the pipeline will be (Bulgaria, Serbia, Hungary). If the Turkish Stream will reach Hungary, it will certainly have an impact on Hungarian gas security, providing grounds for further research.