

Original Article

Energy economy in the Era of New Globalization : the Case of the Balkans and Greece

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Abstract - A geo-economic development analysis in the Balkans under the perspective of the interests of Greece is useful to conceive better the ever-increasing tense framework of globalization's restructuring. Both the study of the different sources of energy (petroleum and, increasingly, natural gas) and the numerous new geopolitical changes demonstrate the existing tensions within the contemporary international strategic relations. The energy security of the Balkans region presents an excellent case to study and realize the contradicted interests at the national, regional, and supranational levels.

Keywords - Energy and the Balkans, new globalization, contemporary geo-economic analysis, energy security, energy policy

I. INTRODUCTION

The debate we introduce in this paper is about the geo-economic view of energy in the era of 'new globalization'. When we refer to globalization we mean the continuous process of structured unification and systematic incorporation of the various functional elements of the international economy. These globalization dynamics are synthesized from the socioeconomic flows (products, services, capital, entrepreneurship, symbols, mechanisms, etc.) and from every other incoming flow that gets transformed by the participant socioeconomic systems and organisms, giving as output always new flows. Therefore, as these globalizing dynamics are a constant flow of developments and structural transformations that spread globally, the nature and function of the participant agents of globalization are continuously changing [1]–[5].

Throughout the past years, specifically, globalization seems to enter a new, particularly complex and synthesizing, phase of evolution; there is a 'new globalization' that gets shape progressively [6]–[12]. This scientific discourse is largely interdisciplinary and initiates its research from the greater notion of crisis and the current restructuring phase of globalization [13]–[15].

In advance, it seems that a growing number of scholars and decision-makers are acknowledging the crisis and restructuring framework of globalization as an interdisciplinary scientific field [16], [17]. This spread of interdisciplinarity is capable to create deep conceptual progress in the broader field of social sciences and calling for the design of new political practices.

We define, therefore "global crisis" [18]–[20] as the socioeconomic phase of planetary reach (of the various institutional, spatial, sectoral, and functional levels) that all balances, the health and unimpeded reproduction of the global system are questioned. Accordingly, global crisis signifies an epoch when old problems and dysfunctions appear to spring up, to get reinvigorated, and to spread rapidly, while no effective and viable long-term solutions manage to deal with them [21], [22].

This new global phase represents a move towards the 'newborn', where everything requires new adaptations and adjustments according to the evolutionarily different socioeconomic rules that are progressively acquiring shape. Only if this 'newborn' develops and establishes its presence, by opening a new era of relative balance and stability, there will be adequate, better than the past, global peace and economic prosperity (Figure 1).

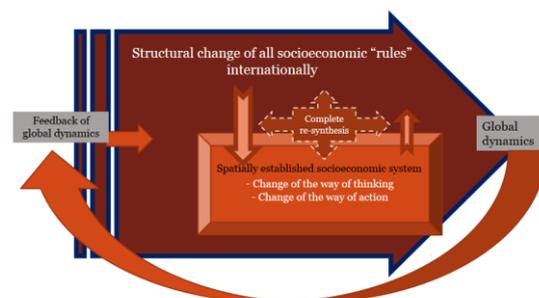


Fig. 1 The meaning of adaptation and adjustment in the new framework of global dynamics (new globalization)

In this context, the contemporary geopolitical and geo-economic analysis are facing new conceptual challenges [23]–[25]. More particularly, when contemporary geo-economics [26]–[28] is studying all the spatial, temporal, institutional, and political



aspects of economies and resources, then the issue of security and, more specifically, energy security, acquires great significance. This is also the case with territories that are sensitive and geo-strategically important such as the Balkans and Greece that we will geo-economically analyze in this paper.

II. BASIC ASPECTS OF ENERGY SAFETY AND GEO-ECONOMIC ACTIVITY IN THE BALKANS

The Balkans region, an area of insignificant own energy resources, constitute a potential energy corridor that is predicted to be, along with Nord Stream (and possibly with Nord Stream 2) the main energy arteries, which will be covered adequately and safely the transport of energy raw materials from the broader Caspian region and possibly other areas the needs of European Union –the world’s largest importer of energy raw materials and hydrocarbons. Even though all Balkan nations hold a pro-European stance, the energy sector of the EU is largely uncoordinated given the fact that each member-state has relatively differentiated interests and also different capabilities to satisfy the ambitions related to energy matters [29].

All Balkan nations are demonstrating as strategic advantage their geographic location while trying to highlight their specific ‘virtues’ that could attract the preference of the great geopolitical players that could attach to the smaller nation some key role in the region [30]. In fact, the entire Balkan Peninsula constitutes an East-West and North-South crossroads. Only Turkey, Greece, Bulgaria, and Serbia have though specific geographic advantage, while Romania, Moldova, Bosnia & Herzegovina, Albania, FYROM, Kosovo, and Montenegro are lagging behind as peripheral (compared to Turkey’s corridor) or small in terms of territory countries that can be bypassed. However, the location on the map alone is not enough, as it seems. A regional complex environment such as the Balkans requires alternatives, which can cover the goals of energy for securing a supplying dispersion, energy security, high-leveled specialized consulting support, adequate energy infrastructure design, specialized investment incentives, all within an appropriate to the recent developments legal framework [31].

The priority of every Balkan State is to ensure its energy security (see Figures 2 and 3) which, as defined by the Energy Information Administration [32], means to ensure an unimpeded supply of energy resources at acceptable prices [33], [34]. The notion of energy security in the Balkans implies the seek for implementing a strategy of diversified producers and routes of energy supply, while the Eastern Mediterranean as a production field and the Balkan Peninsula as a transit area increase their geo-economic significance when there is ongoing research for reservoirs to the Exclusive Economic

Zones (EEZ) of the Republic of Cyprus and Israel [35].

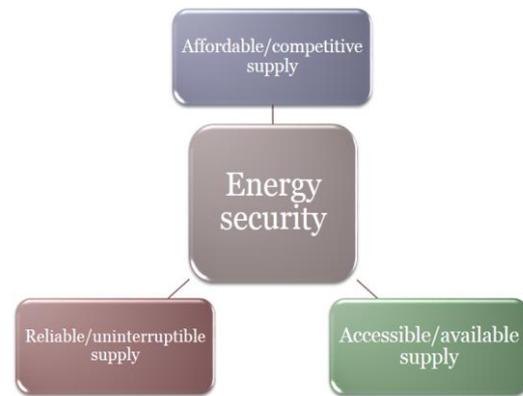


Fig. 2 Defining energy security. Source: [33]

Short term strategies	Long term strategies
<ul style="list-style-type: none"> • The way energy market can ensure the secured energy supply • Enhancement of energy coordination between the EU member-states • Strengthening the role of the EU’s GAS COORDINATION GROUP to monitor developments in the natural gas supply 	<ul style="list-style-type: none"> • Increase of energy performance • Increase of energy production • Diversification of supplying countries and supply routes • Integration of internal energy market • Construction of connection infrastructure • Develop a common foreign energy policy • Protection of vital energy infrastructure

Fig. 3 Energy security strategy. Source: [33]

Specifically, Greece in order to accomplish its energy goals have to, within the framework of its ongoing efforts, increase its energy autonomy and improve its cooperation with the other Balkan countries in all sectors, to have a clear energy policy taking advantage of the advantages and linking them appropriately with the various issues that concern its Balkan surroundings, so that Greece can ultimately be able to exert meaningful influence by directly or indirectly intervening in decisions that are of significant interest. Balkan crude oil and natural gas transport networks, which are also the key strategic levers in the ongoing energy game between the West and Russia, are particularly important for the Balkan countries’ energy policy [36].

A. Oil Pipelines

The pipeline serving the Greek energy goals, the Burgas-Alexandroupolis, of 35 million tons of Russian crude oil per annum transport capacity, from underwater Novorossiysk to Burgas and further to Alexandroupolis to distribute mostly to the international markets, has been rejected by the Bulgarian government after pressures exerted by the US, while the chances of the project’s revival, considering the energy restrictions set to Russia by the West, are negligible. Shareholders of that pipeline would be Russians (51%), Bulgarians (24.5%), and Greeks (24.5%) [37]. It is also noticed that, despite the signing of various memoranda of understanding, Russia had never determined any minimum quantities to ensure the pipeline’s competitiveness [38].

Another pipeline that has possibly frozen indefinitely is the construction plan of the Pan-European Oil Pipeline (PEOP). Five nations (Romania, Serbia, Croatia, Slovenia, and Italy) had signed in 2007 a declaration to create a pipeline that would transport Caspian crude oil from Constanța through Serbia, Croatia, and Slovenia to Trieste. That pipeline, not only would reduce the number of oil tankers that supply Trieste, but it would also directly supply six refineries along its path (two per Romania, Serbia, and Croatia) [39], [40].

The only completed oil pipeline project, however insignificant for the international market, which was built recently and operated in the Balkans, is the 210km long Thessaloniki-Skopje pipeline. It was related to the business plans of a particular enterprise, the Hellenic Petroleum SA, to cover the needs of its own built refinery ('OKTA') in the city of Skopje. Since 2013, though, the refinery has been inactivated because FYROM proceeded to legal actions against the 'OKTA' in 2012.

B. Natural Gas Pipelines

Natural gas, as a desired source of energy, is being acknowledged as highly valued because of the depleted coal reserves globally and because crude oil is increasingly linked to serious environmental issues. With respect to the recent developments of natural gas production and transport in the Balkans, we observe a growing activity. The connection of the natural gas networks between Greece and Turkey, based on a 2003 bilateral agreement, was achieved in 2007. There is a pipeline (the extension of Baku-Tbilisi-Erzurum) that starts at Karacabey in western Turkey and finishes at the Greek city of Komotini.

In advance, on April 2009, Greece and Bulgaria signed a deal to establish a natural gas interconnector (the IGB pipeline) to connect the Greek National Natural Gas System (NNGS) from Komotini with the respective Bulgarian at Stara Zagora. This 180km long pipeline is high on the US diplomacy agenda since it contributes to the effort of minimizing the energy dependency on Russia. This pipeline will flow from both sides and will supply Bulgaria with at least 30% of its annual energy consumption. It is estimated that transport of 5 billion cubic meters in total per annum would forward flow from Greece to Bulgaria, while 1 billion of stable reverse flow would be transported from Bulgaria to Greece. Accordingly, IGB has been connected to the interconnector pipeline IBR Ruse (Bulgaria) – Giurgiu (Romania), also of both directions, which is predicted to operate within 2018 [41].

The inability to reach an agreement on the construction of the Nabucco pipeline (a route that that was to bypass the Greek territory) led the Azerbaijani SOCAR, together with the Turkish BOTAS, to build a substitute natural gas pipeline: the TANAP (Trans-Anatolian Pipeline). The transport capacity on the initial phase is 16 billion cubic meters

of natural gas and is projected to start at Azerbaijan, to cross Georgia and Turkey, ending up in central Europe. All information about TANAP was revealed in 2011 and if everything goes as planned the construction will be finished by 2018. Additionally, in 2013 an announcement was released that, besides SOCAR (58%) and BOTAS (30%), BP also takes a 12% share of the project.

The extension of TANAP is the 550km long TAP (Trans Adriatic Pipeline), on Greek territory, of annual capacity of 10 billion cubic meters and with a projected increased capacity of 100%, belonging to a consortium of the energy companies SOCAR, Snam, BP, Fluxys, Enagás, and Axpo. This pipeline is an investment of about 1.5 billion euros that is going to create immediately 2,000 new jobs in Greece, while it is estimated also to spawn 8,000 indirect job positions and 400 other jobs of archaeological interest. At Fier (Albania), TAP is projected to bifurcate and cross Adriatic underwater towards Italy, while will be also heading onshore north to Croatia, by crossing Montenegro and Bosnia & Herzegovina as the Ionian Adriatic Pipeline (IAP). TAP might also facilitate the strengthening of the Greek-Albanian cooperation which is facing obstacles because of the 2009 signing of the bilateral agreement between Greece and Albania on the delimitation of the continental shelf and other maritime areas.

The construction plan of ITGI (Poseidon) that was to transport Russian natural gas through Turkey and Greece to Italy, did not result positively (despite the warmth demonstrated by the Greek and Italian side) because both the US and the European Commission weren't in favor of it, due to the fact that it could lead to further energy dependency to Russia and competitive relation to TAP [42].

The construction of the much-debated South Stream natural gas pipeline was agreed upon in 2007 between the Russian Gazprom and the Italian ENI. Having as a starting point the city of Novorossiysk, the pipeline of the 63 billion cubic meters per annum capacity, would cross the Black Sea to Burgas (Bulgaria), then it would be directed towards central Europe through Serbia, while another single branch would start from Bulgaria running up to Thesprotia (Greece), by crossing subsequently the seafloor all the way to Italy. After President Putin announced in December 2014 the termination of South Stream due to obstacles erected by the European Union, Russia subsequently announced the construction of the Turkish Stream, as well as the construction of a natural gas distribution center that would be established on Turkish ground (adjacent to Greek borders) and effectively channel natural gas in Europe using pipelines that have been previously paid with European money.

The TurkStream, of 31.5 billion cubic meters annual capacity, is going to flow in two directions: every line of the pipe would transport 15.75 billion cubic meters of natural gas per annum. One pipe is

going to supply the Turkish market with those quantities that are currently arriving in Turkey from Bulgaria, while the second is projected to arrive in the Greek-Turkish borders and subsequently to Greece and further to other neighboring countries. Based on the agreement, the underwater section of the pipe is going to be funded by Russia, under the full jurisdiction of Gazprom. Onshore, the pipe's first line (for internal consumption) is going to the full authority of BOTAS while the second is equally distributed to BOTAS and Gazprom. The second line is projected to begin in 2018 after the required proceedings [43].

The cancellation of the South Stream project, a pipeline that would grasp firmly the Balkans to the Russian interests, might increase the geopolitical significance of TAP. If finally TAP and Turkish Stream pipelines being built and become operable, then Greece will acquire an upgraded energy role in the Balkans, therefore making Greece an energy hub of strategic importance because IGB in Komotini enhances the security of energy supply, not only for Bulgaria but also for the broader Balkan region. Within an uncertain geopolitical environment, Greece is estimated to be upgraded, acquiring a stabilizing role and being also a useful factor in covering the energy needs of Europe [44].

As a consequence of the Turkish Stream deal, the conditions also changed for the Greek Stream plan, which is the extension of the Turkish Stream on the Greek territory that could be extended all the way up to Hungary, crossing FYROM and Serbia as Tesla Stream. It is interesting that while Tesla Stream was initially approved by the European Commission as a Project of Common Interest (PCI), beginning in Nea Mesimvria (Greece) and running up to the Baumgarten (Austria) intersection, the section between the Greek-Turkish borders to Macedonia (Greece) remains uncovered and, as expressed by the Russian Foreign Minister Sergei Viktorovich Lavrov on November 2016 at Athens, only a Brussels approval could help to extend the TurkStream [45].

It is therefore possible for an alternative solution that will connect Tesla Stream to be drafted (either through the TAP or the ITGI, or we cannot tell how it otherwise might happen at the moment), which is projected, like IGB, to flow from both sides. Already by October 14th, 2016, an agreement memorandum was signed between the Hellenic Gas Transmission Operator (DESFA) and the respective company that manages the energy resources of FYROM to build a 160km long interconnection line to transport natural gas from Nea Mesimvria (Greece) to Stip (FYROM) [46].

If an energy hub is created at the Greek-Turkish borders, while Greece will act as an entrance gate for the Russian gas in Europe, then Turkey will also get upgraded, since both Europe and Russia will be more dependent on a more demanding and aggressive neighbor of Greece. In case Greece refuses (for any

reason) to allow the extension of TurkStream on the Greek ground, then Bulgaria is the only alternative since Bulgaria vehemently seeks for becoming a gateway of natural gas in the Balkans.

With respect to the Greek energy matters, Bulgaria is an equally important geostrategic player to Turkey. Bulgaria holds a 2,200 km natural gas distribution network that is connected to Greece, Turkey, and FYROM, while the planned connection to Serbia was halted when the South Stream project stopped. A Russian-Bulgarian agreement back in 1998 ensured for Bulgaria the supply of natural gas up to 2010 (from the country's only supplier, Gazprom, which holds a share also to the gas supply network) and facilitated the supply of natural gas at Turkey, Greece, and FYROM [47]. Both Greece and Bulgaria are large energy-dependent to Russia while appearing as competitors in some cases, e.g. with respect to the planned pipeline routes because the Turkish energy corridor will inevitably utilize at least one of the two nations (Greece and Bulgaria). Although, they have agreed upon mutually beneficial cooperation, based on the IGB pipeline that is under construction.

Also, in terms of the Greek interests, the energy sufficiency should not be totally dependent upon Turkey, therefore alternative sources of supply should be examined. It is reminded that after the end of 2018 Greece can no longer supply itself from Ukraine. Accordingly, within the context of Greece differentiating its own energy resources, it should support the construction of a natural gas hub in Varna (Bulgaria), since this gas would arrive directly from Russia and not via Turkey. The gathering of pipelines crossing the Turkish ground increase the commitment and dependency to Turkey for the receiving countries, including Greece. Especially within the present-day tense political scenery, when Turkey gradually turns into a totalitarian state that threatens both its big and small allies, no energy projects that would stimulate the Turkish conceit should be exploited. Based on that, given also the fact that the European Union has high consumption demands (approximately 450 billion cubic meters per annum) it would be beneficial for Greece the intended link between Russia and Germany via Nord Stream 2, which would feed smoothly the European energy market and would decrease, because of the greater interdependence, the tensions between Russia and Europe in favor of the Balkan states that locate themselves in the front geographical line against Russia. Assuming the alleged positive factors the Bulgarian side is putting forward regarding the Varna project, the negative stance of the Borisov administration should be also taken into account, that decided to freeze three very important energy plans of Russian participation and interest (the Belene nuclear power plant, the South Stream natural gas pipeline and the Burgas-Alexandroupolis oil pipeline), projects that were signed with great excitement back in 2008 with three intergovernmental agreements by

the Bulgarian and Russian presidents, Putin and Parvanov, only a year after Bulgaria was accessing the EU, that demonstrate the high degree Bulgaria is dependent upon the West. These examples demonstrate also the power of energy diplomacy, which was especially applied by the West on Russia, having, as a result, a disproportionate weight on the weaker Bulgarian shoulders, Bulgaria which is worth noticing that covers its energy needs largely from Russia (crude oil 90%, natural gas 95%, and nuclear fuels 100%).

The influence of Gazprom (the largest conglomerate of natural gas globally, which owns almost all Russian deposits of natural gas) and Lukoil (the second largest company in Russia) is firmly established in the Balkans. Both in Bulgaria and Romania, Lukoil has significant presence for many years now. It is the owner of the huge Neftochim (at Burgas) refinery, while Romania ensured its monopolistic power in the natural gas market since 2001 when it became the sole supplier of the state-owned Rom-Gaz. At Ploiești (Romania), Lukoil owns the Petrotel refinery. But Romania, although big in terms of land size and market, compared to the other Balkan states depends on little to imported energy raw materials, while it serves as an intermediate nation of the Russian natural gas via Ukraine, to Bulgaria, Turkey, and Greece.

Intense diplomacy actions by the Russian side were put forward in the 2000s in an attempt to turn Serbia fully dependent to the Russian energy raw materials, combined also with Russian investments in the Serbian energy sector where two natural gas companies are operating, SrbijaGas, which is being supplied only with Russian natural gas up to 2021 since a binding agreement took place, and Jugoros Gas, which falls under the ownership of Gazprom. As Serbia and Russia are both Slavic and Christian orthodox countries, Russia had developed cooperation initiatives to exploit the back then European diplomatic exclusion of the enclosed and economically weak Serbia. A key role for Russia-Serbia relations plays the fact that Russia as a permanent member of the UN Security Council has been blocking Kosovo's UN membership. In January 2008, just before Kosovo declared its independence, an agreement was carried through for the 51% purchase of the state-owned hydrocarbon company (Naftna Industrija Srbije, NIS) by Gazprom, priced at 400 million euros, obliged, therefore, the Russian conglomerate to invest 500 million euros until 2012 on the Serbian energy sector, while a month later a new agreement was signed between Russia and Serbia for the participation of Serbia in South Stream. A few months later new agreements followed that predicted a joint venture established for an underwater gas storage facility at Pancevo, near Belgrade. Afterward, because the Bulgarian participation in South Stream was canceled due to

American pressures, the Russian-Serbian agreements were never implemented [48].

An analogous penetration was achieved by Russia, ensuring majority stakes at two refineries and one oil company, in Bosnia & Herzegovina, which has previously signed as well an agreement to participate in South Stream.

Because of the multi-dispersed clientele of Gazprom, there is a lack of bargaining power that could be reduced by energy alliances, something that seems practically impossible due to the, often imposed by geography, current enter Balkan competition and the insignificance of the Balkan market in global terms. If the European Union could negotiate in the name of every member-state, then Russia and Gazprom could face difficulties since the giant-customer, because of its size and demand for natural gas, could impose and 'blackmail' solutions by putting forward as well another issue on the negotiating table [45]. Respectively, the Russian 'giant' (and it is giant' company, Gazprom) ensures its interests by negotiating bilaterally with the smaller and weaker in terms of bargaining power nations and can threaten them with the benefits it can get from third parties, e.g. to abandon Bulgaria in favor of Turkey. A single European Union voice could possibly tell Russia to 'take it or leave it, in times when no single member-state, either big or small, can prevail over Russia in the negotiating table.

In this particular case, Turkey has an advantage over Bulgaria because of its market size. The Turkish territory is a natural corridor for the necessary energy flows from the Caspian to Western Europe, therefore Turkey tries to exploit its position on the map by putting forward demands that can fulfill its own priorities (e.g. its accession to the EU). Turkey, furthermore, is significant for the effort of neutralizing Russia. Russia, although, by benefiting from bilateral cooperation with Turkey removes bargaining power from Turkey's competitors that are relying on Turkish advantages as alternatives to every Russian energy offer to the West. Bulgaria does not meet the requirements to fulfill the current role of Turkey, since it can be bypassed easily, notwithstanding its insignificant market size.

On the Balkan energy scenery, after the relatively recent findings of large natural gas quantities at East Mediterranean –and despite the Cyprus-Egypt agreement– there is the capability of constructing the East Med Pipeline, which is designed to serve Israel, Cyprus, and Greece by transporting 8 to 10 billion cubic meters of natural gas per annum in Europe via Crete and Peloponnese, up to the interconnection point of 'Poseidon' pipeline (extension of the ITGI) at Thesprotia (Greece). In particular, the discovery of large natural gas fields in the maritime area between Cyprus, Lebanon, Israel, and Egypt in 2001 signified new geopolitical balances on that examined Complex. Both Cyprus and Israel have enrolled in negotiations for the possibility of building a future pipeline called

East-Med that could link the two natural gas fields to Greece and Italy and further to the EU and that could possibly constitute an alternative competitive supplying solution in relation to Russia.

The construction of East-Med pipeline and also the extra supply it can get from the Caspian areas, Iran, Egypt, and the Persian Gulf, will abolish the Russian monopoly as the sole EU supplier and will diminish Turkey's geopolitical power as an energy hub, which is something that Turkey definitely do not want to [49].

It is a fact that an increase of movement in the energy sector of the Southeastern Mediterranean is observed, both because of the Israeli's EEZ pipeline that will run to Greece and because Turkey is exerting pressures to solve the Cyprus dispute in order to control the natural gas transport to Europe [50].

High-level contacts have taken place between the EU, Italy, Greece, Cyprus, and Israel to prepare a Summit between these four countries' Ministers of Energy in Israel, focusing on the ways to transport gas from the Leviathan gas field to Europe. The four Energy Ministers met on 4 April 2017 in Tel-Aviv and signed a Joint Declaration recognizing the project of East Med pipeline as a strategic priority for exporting to Europe that part of the existing Eastern Mediterranean sea gas reserves. The next major goal of the pipeline promotion is the intergovernmental agreement since it was decided by a four-party working group to begin operations to monitor and support the East-Med pipeline project. The examined pipeline's alternative routes to Turkey, or with liquefied form (LNG) via Egypt, might be a lot more economically efficient, however, they bring forward increased political risks [51].

With respect to Italy, Enel, which is a formerly state-owned electricity company that privatized in 1990 (the Italian government holds now a 25% share), is interested in the East-Med pipeline construction venture. During an energy conference in Abu Dhabi, in a meeting with the Israeli government, Enel declared interest to source natural gas from Israel and distributing it to the Italian market. Italia has declared interest to be supplied natural gas from Israel as an alternative to the ever-decreasing North Sea quantities.

The EU supports the project, which is included in the funded Projects of Common Interest, seeing to the Southeastern Mediterranean Complex a potentially new, diversified source of supply that could limit the dependency from Russia, which is calculated to cover currently 42% of the annual European needs of natural gas. In this case scenario, Greece will have to play an upgraded role in the area, since if TAP, IGB (interconnection to Bulgaria), and a plan for the construction of a new LNG terminal station at Alexandroupolis are finally implemented, then Greece could possibly emerge as a new energy hub [52].

In conclusion, the entire project is planned to be funded and operated from private enterprises, however with the support of the EU and the funding of the European Investment Bank.

III. RECENT DEVELOPMENTS

Three specific moves are currently underway in the energy sector, with the EU and the US support, which are enhancing and upgrading the role of Greece and Cyprus on the energy map of the broader Southeastern Mediterranean area. However, the factors influencing these moves could possibly lead to provocative actions by Turkey, which seeks for presenting Greece and Cyprus with fait accompli, especially about the Cyprus EEZ issue.

Specifically, during September-October 2018, will arrive at the Greek parliament the concessions granting hydrocarbon exploration and drilling rights on the two sea blocks south and southwest of Crete. The blocks have been bid and won by the consortium made up of Hellenic Petroleum (HELP) and the two petroleum conglomerates Total and Exxon Mobil. In September 2018 in Chania, Greece is possibly scheduled an intergovernmental agreement to be made for the construction of the natural gas pipeline EastMed. The companies DEPA Group and Edison are promoting the pipeline construction, which will extend to 1,872 kilometers and bring gas from the Israeli, the Cypriot, and the Crete fields to Europe, by crossing Western Greece to Italy. The third move is unfolding in the Cyprus area, since the multinational oil and gas corporation ExxonMobil, together with Qatar Petroleum, has announced that it will carry out two exploratory drillings in block 10 of Cyprus Exclusive Economic Zone (EEZ). Both Washington and Brussels are pledging their full political support to Athens and Nicosia as well as to Tel Aviv (EastMed).

The explorations of finding natural gas deposits underwater as well as the construction of a pipeline to transport them in Europe serve the EU's interest, on the one hand, for alternative natural gas supply, to ensure the energy sufficiency of its member-states, while, on the other, satisfy the US diplomacy, which is against Russia and focuses on reducing the political influence exerted by Moscow in energy matters [53]. The EU is largely dependent on Gazprom fuels. The choice made by Brussels and Washington to implement this particular energy policy is also demonstrated by the activity in the area of the French company Total and the American Exxon.

IV. CONCLUSION AND POLICY IMPLICATIONS

The recently planned pipelines, which would cross the Balkan countries to facilitate the international markets of energy raw materials and local needs, have been either abandoned or frozen, or lie at the early stages of implementation [54], reflect the

continuous change of contrasting interests (by powerful nations and corporations, multinational leaders, and regional powers) that influence and overturn political decisions [55]. We observe that the Balkan countries succumb generally to the blackmailing sovereign pressures [56], and cannot influence the Balkan geopolitical chessboard. Additionally, all the critical decisions for the multibillion investment energy projects are made by consortiums of energy conglomerates, according to the expected facilitation of their interests, as specified by the commercial value of the pipelines [57].

Also recently in the Balkan area, we have been seeing some ambitious and multi-spending energy projects stagnate, compared to smaller-scale projects that achieve gradually the much-needed energy interconnection of neighboring nations, silently laying down the ground for an interconnected energy market [58].

The energy policy can be in fact a spear, although always the specific correlations are forming the field-based not only on the conjuncture but also on the short-medium-macro term projected developments and established alliances, both corporate and transnational, always related to the particular goals and potential of the participant 'players' [59].

When Russia and Iran hold more than 50% of the world's gas reserves, no Balkan nation can move into unilateral energy diplomacy and negotiations with the energy giants, in a time also when either the NATO or the European Union, or the US and Germany, are exerting stifling political pressure [60].

Since the energy sufficiency of the Balkans is built on the coals (lignite), their radical decline in reserves necessitates a move into the substitute natural gas in the near future [61]. Although more dependency on fewer suppliers results in higher prices because it gives the opportunity for monopolistic or oligopolistic price policy to sellers, the closest source of sufficient quantities is only Russia for the time being and therefore, despite the EU efforts to depend less on Russia by projecting alternative pipeline networks, Russia cannot be totally substituted for practical reasons (including transport costs) in the Balkans, except a relatively small percentage from countries such as Azerbaijan and Iran, while Turkmenistan, which has, in theory, sufficient quantitative capabilities, has prioritized the supply of China [62]. Despite its certain reserves, Azerbaijan is facing difficulties to extract natural gas, something that correlates to gas' low prices in the international markets [63].

In the forthcoming future, the European energy dependency on Russia and Gazprom is going to continue, based mostly on the increased European demand [64, p. 2017]. Therefore, this dependency upon Russia delimits the freedom of the European Union's strategic options [65]. This particular geopolitical reason lays the ground for the continuation of European efforts to gradually

decrease that dependency with all possible means (alternative sources of energy, alternative pipelines of western interests, LNG, etc.) [66]. Based on that European pursuit a new frame of options for Greece is opening, on the ground of exploiting the Eastern Mediterranean underwater reserves. The Greek diplomacy should now have reasonable arguments to persuade the European Union that the Eastern Mediterranean hydrocarbons should not be promoted by Turkey (the European Union must not pass in the arms of Turkey another blackmailing weapon). And if indeed, these reasonable arguments are combined with the appropriate joint ventures of energy conglomerates, then it is possible within some favorable international developments (like supposedly the present-day developments) for the Greek side to increase its socioeconomic benefits [67].

A. Suggestions for the Greek Diplomacy within the Geo-economic Framework of Globalization

The first and foremost claim of Greek energy diplomacy (and not only that diplomacy) should be a valid and timely seek for the right information about every direct or indirect aspect linked to energy developments, with priority to the Balkans and the Near and the Middle East [68]. This requires therefore an organized institutional network of information, while the relevant information should be cross-checked, timely dense, and as detailed as possible. Better fit for excavating such information abroad are the members of the Greek economic diplomacy, which serve at the economic departments of Embassies. The Greek energy interests should be represented by the appropriate diplomats to the international energy forums and the multilateral energy conventions especially in the European Union and NATO.

Initiatives also should be carried through, by the joint coordination of the Ministry of Foreign Affairs and the Ministry of Energy, to support those projects that serve as a priority for the Greek interests and on a second level for the broader area of Balkan's interests, preferably those projects that can be attributed as Projects of Common Interest that can insure significant funding from the European Community [69].

Because the investment in energy is of sociocentric nature, the government should enact special investment incentives that offer, under special circumstances, multiannual tax exemption to investors and therefore to target the creation of new jobs, so instead of spending to unemployment benefits to tax the formerly unemployed.

Energy diplomacy should be supported by rationally examined government priorities, based on the matters of energy security, economic budgets, a mixture of utilized energy, the environment, innovative applications, etc.

Greece should support that nation or plans that serve the greatest interests. Based on the constant and big threat that Turkey poses for Greece, it is normal that Greece should obstruct any upgrade of Turkey and contribute anything that could possibly degrade its geostrategic role. This sound strategic choice should not, though, risk Greece's exclusion from major energy projects, because of some sterile policy of denial only focused on the non-participation of Turkey and by 'placing the bet' on unrealistic solutions-projects. Special attention should be also attributed to avoiding some 'sterile' energy competition with neighboring Bulgaria as well, towards a rather counter-productive and dangerous conflict that aims at the complete elimination of the opposite side [70].

In conclusion, initiatives should be taken to co-develop with neighboring countries' collective and allied activities and projects that serve common interests and the negotiation against third parties. At the same time, our experience proves that projects of lower reach and cost are implemented more easily, therefore the Greek attention should be channeled towards less ambitious projects of common interests and energy interconnection between neighboring countries. Priority should be also steadily given to cooperating with the Republic of Cyprus, especially on energy issues of the broader Eastern Mediterranean area [71].

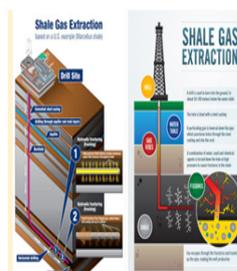
We think that the above considerations belong to the more general notion of geo-economics and therefore, within the present-day intense framework of the restructuring globalization, provide useful suggestions to enhance the energy security in the Balkans.

REFERENCES

- [1] J. Adda, *La Mondialisation De L'économie, Genèse Et Problèmes*. Paris, La Découverte, (2006).
- [2] F. Braudel, *La Dynamique du Capitalisme*, Paris, Flammarion, (2014).
- [3] D. Cohen, *La Mondialisation et ses Ennemis*. Paris, Grasset, (2004).
- [4] J.-L. Mucchielli, *Multinationales et Mondialisation*. Paris, Seuil, (1998).
- [5] R. Palan, *Global Political Economy, Contemporary Theories*, 2nd ed., New York, Routledge, (2013).
- [6] A. Ahmad, *New Age Globalization*. New York, Palgrave Macmillan US, (2013).
- [7] A. Bhattacharya, D. Khanna, C. Schweizer, and A. Bijapurkar, *The New Globalization, Going Beyond the Rhetoric*, BCG Henderson Institute, (2017).
- [8] I. Bremmer, *The new rules of globalization*, Harvard Business Review, International Business, no. January-February Issue, (2014).
- [9] E. Margulesku, *Old and new economic globalization, Challenges of the Knowledge Society*, 5(1) (2015) 739–742.
- [10] B. Milanović, *Global inequality, a new approach for the age of globalization*. Cambridge, Massachusetts, The Belknap Press of Harvard University Press, (2016).
- [11] M. S. S. E. Namaki, *Neo-globalization, premises, processes and the future*, Scholedge International Journal of Business Policy & Governance, 4(7) (2017) 71–77.
- [12] C. Vlado, N. Deniozos, and D. Chatziniolaou, *The possible paths of a new globalization*, International Journal of Development and Sustainability, 7(9) (2018) 2310–2333.
- [13] P. Dardot and C. Laval, *La Nouvelle Raison du Monde, Essai sur la Société Néolibérale*. Paris, La Découverte, (2009).
- [14] A. Orléan, *De L'euphorie à la Panique, Penser la Crise Financière*. Paris, Rue d'Ulm, (2009).
- [15] P. A. Laudicina and E. R. Peterson, *From Globalization to Islandization*, ATKearney, (2016).
- [16] T. Augsburg, *Becoming Interdisciplinary, An Introduction to Interdisciplinary Studies*. Dubuque, Iowa, Kendall/Hunt Pub., (2010).
- [17] P. Weingart and B. Padberg, Eds., *University Experiments in Interdisciplinarity, Obstacles and Opportunities*. Bielefeld, Transcript, (2014).
- [18] M. Aglietta, *La Crise, Le Voies de Sortie*, Paris, Michalon, (2010).
- [19] A. Greenspan, *The Age of Turbulence, Adventures in a New World*. London, Penguin, (2008).
- [20] H. Overbeek and B. van Apeldoorn, *Neoliberalism in Crisis*. Houndsmills, Basingstoke, Hampshire [England]; New York, Palgrave Macmillan, (2012).
- [21] C. Perez, *Technological revolutions and techno-economic paradigms*, Cambridge Journal of Economics, 34(1) (2010) 185–202.
- [22] C. Vlado, N. Deniozos, and D. Chatziniolaou, *Global crisis, innovation and change management, Towards a new systemic perception of the current globalization restructuring*, International Business Research, 11(8) (2018) 9–29.
- [23] A. Chauprade, *Géopolitique, Constantes et Changements dans L'histoire*, Paris, Ellipses, (2007).
- [24] P. Claval, *Géopolitique et Géostratégie, La Pensée Politique, L'espace et le Territoire au XXe Siècle*. Paris, Nathan, (1996).
- [25] N. J. Spykman, *America's Strategy in World Politics, The United States and the Balance of Power*. New Brunswick, NJ, Transaction Publishers, (2007).
- [26] E. Luttwak, *The theory and practice of geo-economics, The international system after the collapse of the east-west order*, (1994) 220–236.
- [27] E. N. Luttwak, *From geopolitics to geo-economics, Logic of conflict, the grammar of commerce*, The National Interest, 20 (1990) 17–23.
- [28] C. Vlado, N. Deniozos, and D. Chatziniolaou, *Dialectical prerequisites on geopolitics and geo-economics in globalization's restructuring era*, Journal of Economic and Social Thought, 6(2) (2019) 65–92.
- [29] International Energy Agency, *The history of international energy agency, The first twenty years*, OECD, Paris, 1994.
- [30] N. Deniozos, *Geopolitical aspects of maritime transportation*, Civitas Gentium, 5(4) (2017) 83–96.
- [31] S. Aksit, *An alternative of embedded in the mainstream, Political economy of Turkey's involvement in the Balkans*, Gediz University, Department of International Relations, Izmir/Turkey.
- [32] Energy Information Administration, *International energy outlook*, US Department of Energy, Washington DC, (1999).
- [33] D. Buchan, *Europe's energy security—caught between short-term needs and long-term goals*, Oxford Institute for Energy Studies, (2014).
- [34] V. S. Gira, *Modernisation of Ukraine's natural gas transportation system, Ukraine as an energy hostage syndrome*, Eastern Pulse analytical newsletter, Eastern Europe Studies, 5 (2010) 33.
- [35] J. Bielecki, *Energy security, Is the wolf at the door? The Quarterly Review of Economics and Finance*, 42(2) (2002) 235–250.
- [36] Aegis Advisory, *Russia's twin-track South Stream strategy*, Aegis Advisory, Strategic Risk Alert, London, 24 (2013).
- [37] D. Greene and N. Tishchishyna, *Cost of oil dependence, A 2000 update*, Transportation Quarterly, 55 (2001).
- [38] Asia Pacific Energy Research Centre, *Emergency oil stocks and energy security in the APEC region*, Tokyo, (2000).
- [39] K. Aleklett, *Peak oil and the evolving strategies of oil-importing and exporting countries, Oil Dependence, Is Transport Running out of Affordable Fuel*, (2008) 37–114..

- [40] T. Gustafson, Putin's petroleum problem, How oil is holding Russia back-and how it could save it, Foreign Affairs, vol. 91 (2012) 83.
- [41] R. Fullenbaum, J. Fallon, and B. Flanagan, Oil & Natural Gas Transportation & Storage Infrastructure, Status, Trends, & Economic Benefits, Washington, IHS Global Inc, (2013).
- [42] C. C. González, Francisco J. Ruiz, The Gas Labyrinth in Eurasia, Projects, Facts, and Geopolitics Consequences, Instituto Espanol de Estudios Estrategicos, Analysis Document, 30 (2012).
- [43] K. I. Antal, Public Consultation of the extension of the major Trans-European transport axes to the neighboring countries and regions, Brussels, (2015).
- [44] N. Haase and H. Bressers, Newmarket designs and their effect on economic performance in European union's natural gas markets, Competition and Regulation in Network Industries, 11(2) (2010) 176–206.
- [45] M. Hafner, Russian Strategy on Infrastructure and Gas Flows to Europe, Brussels, Polinares, 73 (2012) 43.
- [46] International Energy Agency, Global gas security review, 2016, 2016.
- [47] G. Gromadzki and W. Konończuk, Energy game, Ukraine, Moldova, and Belarus between the EU and Russia, Energy Security in Central and Eastern Europe, (2007) 19.
- [48] J. Gaventa, Gas lock-in, Strategic meaning of gas, gas infrastructure and promotion of LMNG, E3G. (2015).
- [49] Ι. Παρίσης, Η καθ' ημάς θάλασσα, Γεωστρατηγική ανάλυση της Μεσογείου. Αθήνα, Εκδόσεις Λιβάνη, (2013).
- [50] K. G. Gkonis and H. N. Psaraftis, Caspian-Black Sea-SE European Gas Corridors and the LNG parameter, A scenario bundles approach, in This paper is based on a broader research work conducted in the context of a doctoral thesis, and it is written in support of a presentation under the same title at the 10th IAEE European Conference, Energy, Policies, and Technologies for Sustainable Economies, Vienna, Austria, (2009) 7–10.
- [51] V. Nedos, Greece, Cyprus, Israel to discuss East Med gas pipeline plans in Nicosia | News | ekathimerini.com,(2018). [Online]. Available, <http://www.ekathimerini.com/228410/article/ekathimerini/news/greece-cyprus-israel-to-discuss-east-med-gas-pipeline-plans-in-nicosia>. [Accessed, 29-Sep-2018].
- [52] Χ. Λιάγγου, Ενεργειακό σκάκι στη ΝΑ Μεσόγειο | Κόσμος | Η ΚΑΘΗΜΕΡΙΝΗ, (2017). [Online]. Available, <http://www.kathimerini.gr/890772/article/epikairotha/kosmos/energeiako-skaki-sth-na-mesogeio>. [Accessed, 29-Sep-2018].
- [53] C. Calderón, E. Moral-Benito, and L. Servén, Is infrastructure capital productive? A dynamic heterogeneous approach. The World Bank, (2011).
- [54] International Energy Agency, World Energy Outlook , (2016).
- [55] D. H. Meadows and Club of Rome, Eds., The Limits to Growth, A report for the Club of Rome's project on the predicament of mankind. New York, Universe Books, (1972).
- [56] International Energy Agency, Agreement on an international energy program, OECD, Paris, (1974).
- [57] Federal Energy Regulatory Commission, Critical Energy/Electric Infrastructure Information (CEII), (2018). [Online]. Available, <https://www.ferc.gov/legal/ceii-foia/ceii.asp>.
- [58] US Geological Survey, World energy outlook, OECD, Paris, (2000).
- [59] A. Giamouridis and S. Paleoyannis, Security of Gas Supply in South-Eastern Europe, Potential Contribution of Planned Pipelines, LNG, and Storage. Oxford, The Oxford Institute for Energy Studies, (2011).
- [60] European Commission, Green Paper, Towards a European strategy for the security of energy supply, Brussels, (2000).
- [61] International Energy Agency, Oil supply security, The emergency response potential of IEA countries in 2000, OECD, Paris, (2001).
- [62] International Energy Agency, Electricity Information, OECD, Paris, (2000).
- [63] International Energy Agency, Agreement of an International Energy Program, OECD, Paris, 1998.
- [64] International Energy Agency, Key world energy statistics, (2017).
- [65] International Energy Agency, Governing board communique, OECD, Paris, (2000).
- [66] J. M. Godzimirski, European Energy Security in the Wake of the Russia-Ukraine Crisis, Strategic File, 27 (63) (2014) 1–5.
- [67] International Energy Agency, Energy policies beyond IEA countries, Eastern Europe, Caucasus and Central Asia, (2015).
- [68] I. Sotiropoulos, The geopolitics of energy in the South-East Mediterranean, Greece, European energy security and the Eastern Mediterranean pipeline, presented at the Joint Partnership Projects Repositioning Greece in a Globalizing World, (2014).
- [69] P. Grujicic, Developing gas infrastructure-regional approach in the Energy Community, Infrastructure development for SEE, Energy Community Secretariat, (2012).
- [70] G. Rodotheatos, G. Tsaltas, and T. Bourtzis, Προοπτικές Εκμετάλλευσης Υποθαλάσσιων Φυσικών Πόρων στη Νότιο-ανατολική Μεσόγειο με Έμφαση στην Περιοχή Ανάμεσα σε Ελλάδα - Κύπρο - Τουρκία (Underwater Natural Resources Exploitation Prospects in the South-East Mediterranean Sea Region, and Especially between Greece-Cyprus-Turkey), Social Science Research Network, Rochester, NY, SSRN Scholarly Paper ID 2611020, Jun. (2010).
- [71] Ν. Φαραντούρης, Ενέργεια, Δίκτυα & υποδομές. Αθήνα, Νομική Βιβλιοθήκη, (2014).
- [72] Albania Energy Association, LNG in Europe, An Overview of European Import Terminals in 2015, AEA-Albania Energy Association, (2016).
- [73] A. Cohen, Europe's strategic dependence on Russian energy, Backgrounder, 2083(5) (2007) 1–13.

APPENDIX

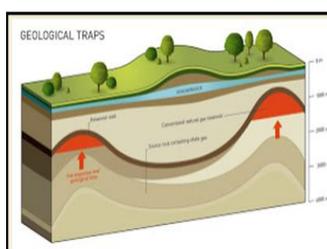


Natural gas could cover up to 30% of planet's demand on energy until 2025. Shale gas, a promising but controversial energy source, refers to gas deposits which are located in subsol layers.

Advantages:

Shale gas pumping can increase gas stocks and decrease EU's dependence from other outer energy sources. The development of new gas sources will increase business competition, decrease gas prices and increase the safety of EU's supply.

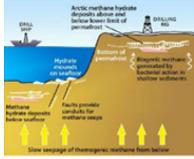
Appendix 1: Shale gas (1)



The use of such quantities by exercising great pressure creates pollution risks, when water aquifers are used, which cause pollution. Also the technique of breaking up soil is well known that causes seismic activity.

The environmental problems that gas pumping causes are known. The breaking up soil technique demands a great mass of water, up to 4000 cubic meters for the opening of only one source and up to 14000 cubic meters for shale fracturing and gas pumping

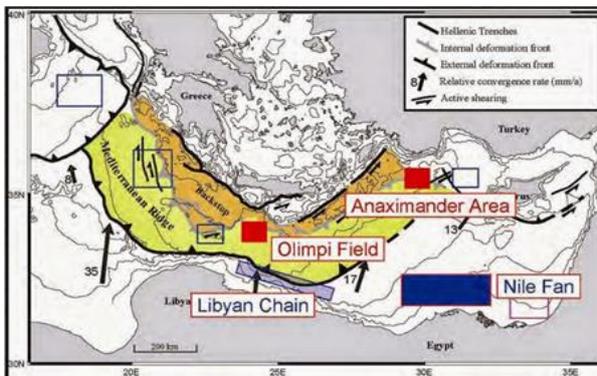
Appendix 2: Shale gas (2)



The hydrates have been found in the Caspian Sea, in the Barents Strait, in the Eastern Mediterranean Sea, Eastern of Rhodes, south of Antalya bay, in Anaximander area and in Kasterlorizo.

There have been investigations in Anaximander area in Southeast Mediterranean Sea, where hydrate samples were collected from depths of 40-80cm under the sea floor, 2000 meters under the sea surface. Also two mud volcanoes were investigated which named "Athens" and "Thessaloniki".

Appendix 3: Methane hydrates



Appendix 4: Eastern Mediterranean sea study area



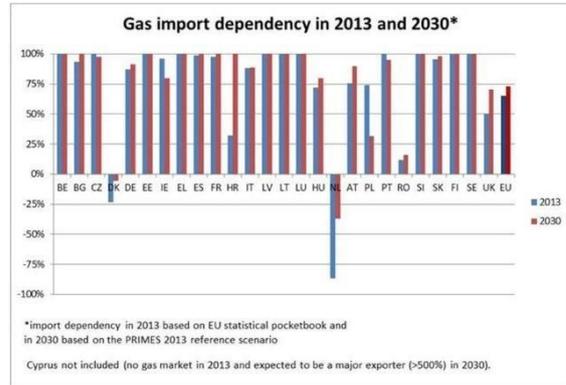
Appendix 5: Map of present and planned natural gas pipelines, except TurkStream, in the broader Balkan region. Source: [48]



Appendix 6: Map of the recently planned natural gas pipeline TurkStream. Source: [72]



Appendix 7: Map that shows in black the route of TurkStream, the Greek Stream in yellow, and the Tesla Stream in red. Source: [72]



Appendix 8: Gas import dependency in 2013 and 2030. Source: [73]