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Energy Security of Southern Europe Countries and Crude Oil Prices

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ABSTRACT

This paper examines the development of oil prices in the last years and its impact on energy security of the southern Europe countries. The development of oil prices in the last years has a potential impact on all economies. Indeed the impact was positive for crude oil importing economies but in the other hand, negative impact on crude oil exporting economies. According to our analysis, the impact was positive on all southern Europe economies, regardless the scale of the impact. Off course the low crude oil prices improves the affordablity of energy supply, but for the energy security of southern Europe countries should be insured by other alternative energy resources, among them natural gas and renewable energy resources.

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Introduction

Energy security is defined by the EIA "as the uninterrupted availability of energy sources at an affordable price. Energy security has many aspects: long-term energy security mainly deals with timely investments to supply energy in line with economic developments and environmental needs. On the other hand, short-term energy security focuses on the ability of the energy system to react promptly to sudden changes in the supply-demand balance"[1].Since energy resources are considered as crucial factor of economic growth and esential service or commodity for modern human being, all countries ether developed or least developed trying to insure uninterrupted supply of energy commodities with affordable prices. In the last years crude oil prices have been dramatically fluctuated and the impact of that development on the global economy has been visible particularly on net importing and exporting countries of this commodity.

Many countries including Balkan countries, which are more or less dependent on import the major part of energy commodities have benefited from the relatively low oil prices in the last years by reducing deficit of their current account and enhancing economic growth.

Many southern Europe countries are engaged to improve their energy security by finding new alternative resources of energy and diversification the supply side of energy commodities. Using their strategic position as a transit corridor for several pipelines in the new world and particularly European energy scene.

This paper is divided to main two sections: in the first section we examine the development of crude oil prices in the wold market and analyse the impact of low oil prices in the last years on the Balkan economies. The second section we are trying to analysing the last development of building pipelines through the southern Europe region and consequences that could result of all alternatives for this region.

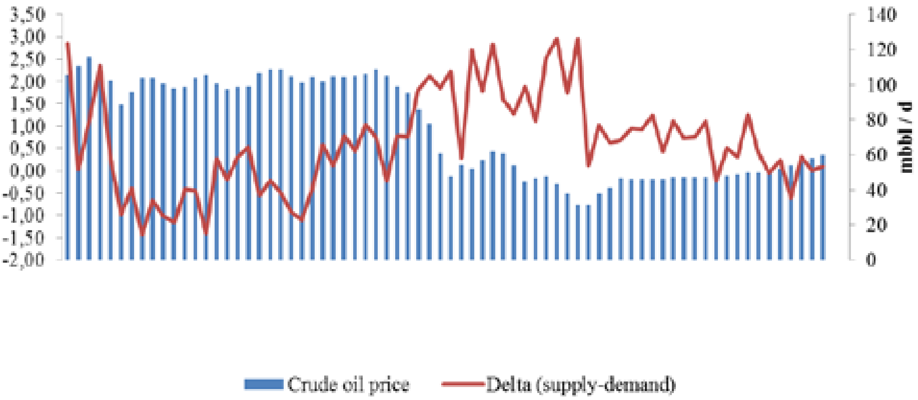
1. The development of world oil prices

One of the world cure oil benchmarks for pricing oil in Brent. The price of Brent crude oil in the period 2010 – 2014, has fluctuated within a narrow range from 100 to 110 USD/bbl. This relatively stable, while the high price of oil, which should be called new normal, was remarkable, especial-

[1] EIA, *Energy security*, 2017. In https://www.iea.org/topics/energysecurity/.

ly because several shocks, which at that time affected the world economy and the demand and supply of oil – geopolitical unrest in the Middle East and North Africa, international sanctions against Iran, or adaptation of new technologies in mining in the USA and the associated notable expansion of production of oil and natural gas in the USA. As we presently know, to break this stability it occurred in June 2014 when the price of oil began to fall as a result of the growing imbalance between supply and demand. This development accelerated the decision of OPEC to unchanged the extraction quotas in November 2014. In addition, the imbalance in the oil market also contributed by other factors, such as the increase in oil production in some OPEC countries (Saudi Arabia, Iraq, Nigeria and production recovery in Libya) and outside OPEC (Russia Mexico and increasing production of shale oil) and high oil stocks in OECD countries, slowdown in the economies of the major importers of energy commodities[2].

Figure 1. Crude oil price in recent years, USD/bbl



Source: Authors calculation based on BP database, 2016.

The subsequent stabilization of oil prices at the level of 50–60 USD/bbl in the first half of 2015 was not maintained and the continued imbalance in the market pushed the price of oil (Brent and WTI) to the price of USD 27/bbl (WB, 2016) and the price basket of OPEC to 23 USD/bbl in mid-January 2016. Oil prices have since increased slightly and the average level in the second quarter of 2016, according to IMF data varied in

[2] S. M. Obadi, *The development and perspectives of the world economy: High risks and larger uncertainties*. Ekonomický ústav SAV vo vydavateľstve VEDA, 2016.

the range 40–50 USD/bbl. While temporarily they stabilized at the higher limit of the range. The decline in oil prices between June 2014 and January 2015 by 70%, however, is also the third largest collapse in oil prices in recent thirty years after the previous collapse in prices between 1986 and 2008. As crude oil with a share of 32.9% maintained in 2015 its first place in the global energy mix and its international trade value has 786 billion USD accounts for nearly 5% of the world exports of all merchandise trade, analysis of the implications of its development is an absolute necessity for understanding what is happening in the overall global economy. In this chapter we focus on the clarification of the reasons for price developments in the last year through the analysis of supply and demand and its impact on the global economy and particularly on Southern Europe economies[3].

1.1. Factor of supply

High oil prices in the period 2010 – 2014 represented the perfect environment to increase investment in oil production. Because of the long cycle of implementation of such investments, the results started to implement in recent years. The result was the launch of the new mining deposits, as well as slowing down the natural rate of decline in mining for existing mining areas. In 2015, as most of the major oil producers increased their production despite the 47% fall in average oil prices in the world. According to data from BP (2016), the average price of oil in 2014 was USD 99/bbl compared to USD 52.4/bbl in 2015. As Maugeri[4] emphasized, a situation where countries and oil companies announcing massive cuts in investment in mining crude oil and its production continues to grow, may persist even in the year 2016, and partially in 2017. In spite of that, the capital investment and operating costs decreased in 2015 by approximately 150 billion USD. A more detailed analysis points to the fact that the pledged investments were mainly in exploration and mining projects already initiated will be completed, as the oil companies will seek to have the fastest possible return on invested capital. Therefore, according to Fattouh[5] bought only newly started projects in 2014 outside OPEC additional capacity

[3] *Ibidem*.

[4] L. Maugeri, *The Global Oil Market: No Safe Haven for Prices*, Policy Brief, Cambridge 2016.

[5] B. Fattouh, *Adjustment in the Oil Market: Structural, Cyclical or Both?* Oxford Institute for Energy Studies (OIES) – Energy Comment, Oxford 2016.

of around 1.4 million bbl/d, which in turn in 2016 will rise to 2 million. bbl/d, and even in 2017 it should launch projects approved at the time when the price of oil reached 100 USD/bbl, will bring to the oil market additional 1.7 million. bbl/d. These investments would be offset natural decline in production from existing production capacities and eliminate significant correction on the supply side of non-OPEC[6].

Table 1. Oil production in selected countries

Milión bbl/d	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**	**% zmena**
USA	*7,26*	*7,55*	*7,85*	*8,88*	*10,06*	*11,72*	*12,70*	*8,4%*
Kanada	*3,20*	*3,33*	*3,51*	*3,74*	*4,00*	*4,28*	*4,39*	*2,5%*
Severná Amerika	**13,45**	**13,84**	**14,31**	**15,54**	**16,93**	**18,79**	**19,68**	**4,7%**
Brazília	*2,03*	*2,14*	*2,19*	*2,15*	*2,11*	*2,35*	*2,53*	*7,7%*
Venezuela	*3,03*	*2,84*	*2,76*	*2,70*	*2,68*	*2,69*	*2,63*	*-2,2%*
Južná Amerika	**7,32**	**7,35**	**7,40**	**7,32**	**7,34**	**7,60**	**7,71**	**1,4%**
Nórsko	*2,35*	*2,14*	*2,04*	*1,92*	*1,84*	*1,89*	*1,95*	*3,1%*
Ruská Federácia	*10,14*	*10,37*	*10,52*	*10,64*	*10,78*	*10,84*	*10,98*	*1,3%*
Ve¾ká Británia	*1,48*	*1,36*	*1,12*	*0,95*	*0,87*	*0,86*	*0,97*	*12,9%*
Európa a Euroázia	**17,76**	**17,70**	**17,39**	**17,12**	**17,17**	**17,21**	**17,46**	**1,5%**
Irán	*4,25*	*4,42*	*4,47*	*3,81*	*3,61*	*3,74*	*3,92*	*4,9%*
Irak	*2,45*	*2,49*	*2,80*	*3,12*	*3,14*	*3,29*	*4,03*	*22,7%*
Saudská Arábia	*9,66*	*10,07*	*11,14*	*11,63*	*11,39*	*11,50*	*12,01*	*4,4%*
Blízky Východ	**24,72**	**25,83**	**28,16**	**28,53**	**28,18**	**28,56**	**30,10**	**5,4%**
Lýbia	*1,65*	*1,66*	*0,48*	*1,51*	*0,99*	*0,50*	*0,43*	*-13,3%*
Nigéria	*2,23*	*2,53*	*2,48*	*2,43*	*2,32*	*2,39*	*2,35*	*-1,5%*
Afrika	**9,89**	**10,14**	**8,55**	**9,33**	**8,71**	**8,37**	**8,38**	**0,1%**
È ína	3,81	4,08	4,07	4,16	4,22	4,25	4,31	1,5%
Ázia a Pacifik	**8,04**	**8,42**	**8,29**	**8,38**	**8,25**	**8,31**	**8,35**	**0,4%**
Svet spolu	**81,18**	**83,28**	**84,10**	**86,22**	**86,59**	**88,83**	**91,67**	**3,2%**
OPEC	34,00	35,15	36,06	37,54	36,62	36,65	38,23	4,3%

Prameň: BP (2016).

Investment reduction, which will bring an immediate drop of oil production can be observed only in the case of US oil producers from low-permeability sands and shale. Even in the case of the decrease was slower than originally expected. Technological advances, hedging prices and concentration of activities on the most profitable deposits led to the fact that US oil production, which reached thirty-year peak in April 2015 at the level of 9,694 bbl/d, was reduced only gradually and in April fell to 8,933 bbl/d – the level it reached in September 2014. This evolution was also influenced by the launch of new conventional wells, which are not so sensitive to price fluctuations (eg. new projects in the Gulf of Mexico, according to EIA (2016), has increased petroleum production to 265,000 bbl/d).

[6] *Ibidem.*

It is also important to add that the fall in oil prices was not for the US oil producers painless, as from 2015, has get bankrupt more than 130 American oil companies.

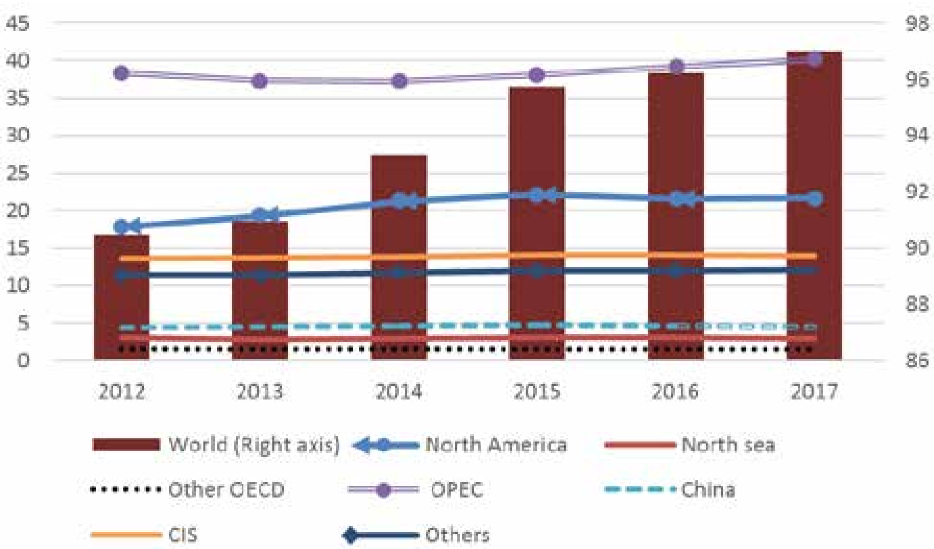
Low oil prices have significantly influenced the development of oil production in Canada; it even increased in 2015 and exceeded the limit of 4 million bbl/d. The main credit for this development was the extraction of oil sands in Canadian Alberta, from which came in 2015 to 2.3 million bbl/d of oil compared to 0.6 million bbl/d in 2000. However, in 2016, according to the prediction of the National Energy Board of Canada to stop new investment basically a lot of change and total production will be significantly affected by weeks outages of production capacity amounting to more than 1 million bbl/d as a results of fires in the Canadian province of Alberta.

The effect of high oil prices on investment is clearly manifested in Europe in the North Sea, which production from the late 90s due to the exhaustion of resources gradually decreased, but the investment from the years 2011 to 2014 led in 2015 to a temporary reversal of the trend and annual growth of production reached about 150,000 bbl/d. Another country that year after year, denies analysts' expectations of unsustainable logging, is the Russian Federation, which in 2015 with the extraction of 10.8 million. bbl/d reached a new post-Soviet record production despite low prices and the imposition of international sanctions. The application of modern methods of extraction could reverse the trend of declining extraction on existing deposits and given the low level of their workload (in average is estimated at around 25%) can be expected to maintain this state also in the next few years.

Overall, the increase in oil supply from countries outside OPEC grouping concentrated mainly in the first quarter of 2015, reaching 2.3 million. bbl/d and gradually reflected a fall in oil prices, to 0.4 million. bbl/d in the fourth quarter; During the first three months of 2016 actually declined by 0.3 million. bbl/d. It was the first decline after three and a half year period of growth.

Prediction of EIA (2016) for 2016 and 2017 have clearly documented the effects of low prices when the expected decline in production in non-OPEC of 0.6 million. bbl/d in 2016, a further reduction of 0.2 million. bbl/d is expected in 2017. The determining factor for this development is the production of oil from low-permeablitiy sands in the USA due to the already mentioned characteristics of this type of mining. Under another decline in mining development will be signed in the North Sea, China and at least the year 2016 has been marked through the aforementioned shutdown of mining in Canada.

Figure 2. Oil supply – development and the forecast for the coming years



Source: Authors based on EIA (2016) database.

Development of oil supply in the countries of OPEC have, despite the ongoing military unrest, relatively stable upward trend in 2015 contributed to the growth of 1.3 million. bbl/d. While the majority of the increase came from Iraq and Saudi Arabia, which accounted for 1.1 million. bbl/d. Saudi Arabia, whose decision was not for a reduction in production quotas OPEC started falling prices continue to successfully pursue their strategy for gaining market share. On the other hand it must be recognized that the fall in oil prices affect substantially the economy of this country. Saudi Arabia had after the slump in oil prices to considerable fiscal consolidation and announced a plan to diversify the economy and eliminate subsidies on energy already in the horizon until 2030, as well as sell a minority share of the national oil company Saudi Aramco. Given that over 80% of government revenues represent the revenues from oil.

Therefore, the need for such action is necessary, although the possibility of their implementation is more than questionable[7].

Iraq's production increased from about 3.4 million bbl/d at the beginning of the year to 4.5 to 4.6 million bbl/d at the end of 2015, despite the ongoing military conflict with Daish (called Islamic state-ISIS). This organization has been concentrated mainly in the northern and southern parts of the country where production is concentrated, and up to 95% of the country's exports. This conflict does not impinged directly. Iraq despite record rate of extraction in 2015 reduced its forecast of further growth, due to the aforementioned complications and consequences of low oil prices, which led to 42% yoy decline in revenues from exports of oil, and complicated its ability to repay its obligations to investors, as declining of oil revenues previously filled up to 93% of government budgets.

Military conflicts in the Middle East to a far greater extent affected oil production mainly in Yemen and Syria, whose combined output at the beginning of the millennium reached more than 1.1 million. bbl/d and in 2015 it was only slightly over 70 thousand. bbl/d. Even greater production capacity shortfall recorded Libya, which has lost more than 1.4 million. bbl/d as a result of political developments in the country.

Oil supply by OPEC, according to EIA projections (2016) were to increase by 1.1 million. bbl/d in 2016 and 1 mil. bbl/d in 2017, mainly due to Iran, that has in the medium-term plan for the January abolition of sanctions intended to attract investment into the country for 100 billion USD. This would help Iran raise the planned export up to 4 million bbl/d from the current 2.2 million bbl/d. During this period, according to the EIA does not expect any coordinated action to reduce the production from other producers and a possible reduction in mining that can be expected as a result of riots in Nigeria, Libya and Iraq, that produced for example in May 2016 up to 2.6 million bbl/d. In terms of supply may therefore be concluded that the country non-OPEC countries are a major source of the reduction in respect of previous investment, however, it is only a gradual process. In contrast, the countries which are members of OPEC have the option, its offer continuous increase in the period of low prices in order to maintain market share and acquisition. It is critical both in terms of settlement of the oil market becomes demand side.

[7] J. Beukel, *Saudi Arabia needs realism – not a 2030 vision*, "Energy Post", 2016, <http://www.energypost.eu/saudi- arabia-needs-realism-2030-vision>.

1.2. Factor of demand

The collapse in oil prices in 1986 due to falling demand and growth in supply from non-OPEC countries, together with uncoordinated action by Member States of OPEC has led to decrease its importance and called for a significant change in pricing, while the period of low prices persisted during the 80s and part of the 90s. Also reactions of oil-producing countries to fall in prices in 1998, which has been stemmed from the Asian crisis and overproduction by Venezuela, were not immediate. However, the eventual agreement between producer countries confirmed the importance of OPEC. In 2008, during the global financial crisis, which led to a large fall in oil prices, OPEC has been able to respond to the temporary fall of oil prices by sharp decrease in production, which resulted in an efficient and prices as well as demand quickly returned to its original trajectory. As mentioned in the previous section analyses the current case shows markedly different characteristics and response to the current surplus production can be expected mainly from the demand side.

According to the IEA (2015) Annual oil demand Between 2000 – 2007 grew by 1.8% per annum, representing approximately 1.43 million bbl/d. Strong demand growth, which in the period amounted to 10 million bbl/d came from all regions except Europe, in particular from Asia and the Middle East; who were responsible for 66% of incremental growth of consumption. Demand in OECD countries grew by 3% (1.6 million Bbl/d) and in the years 2004–2007 even was more than 50 million bbl/d. Much faster growth in demand in emerging countries, whose consumption during the period went up by 29% (8.4 million Bbl/d) and the total demand has had a 43% share compared to 37% at the beginning of the millennium. Development of demand in the years 2008 – 2010 was significantly affected by the crisis; due to that global demand initially for two consecutive years has decreased by 0.6 million. bbl/d, followed by 1 million bbl/d, then in 2010 rose sharply by 3.1 million bbl/d. During the crisis years, it was only the decline of the OECD member countries, as consumption in developing countries during the same period increased by 1.1 million bbl/d. A similar trend can also be seen in the same time period 2011 – 2014. Consumption in OECD countries fell compared to 2010 by 1.4 million bbl/d and compared to a peak of 2005 up to 4.7 million bbl/d. Developing countries on the other hand continued to grow strongly, which in 2014 accounted for the consumption of 47 million bbl/d and for the first time, with 51% share outpaced OECD countries.

2. Energy security of Southern Europe countries

According to EIA, energy security is defined “as the uninterrupted availability of energy sources at an affordable price. Energy security has many aspects: long-term energy security mainly deals with timely investments to supply energy in line with economic developments and environmental needs. On the other hand, short-term energy security focuses on the ability of the energy system to react promptly to sudden changes in the supply-demand balance”[8].

The development of oil prices in the last years, especially in the period 2014 – 2016 were in favour of oil importing countries rather than oil exporting countries. The major of Southern Europe countries are oil importing countries. Thus, these countries have gained from the declined of oil prices by decreasing the import value of crude oil and petroleum products in 2015 in comparison with 2011, from 38 per cent in Turkey up to 57 per cent in Albania. This development was clear in their deficit of trade balance and current account.

Table 2. Import of petroleum and petroleum products, in Million USD and% change

Country	2011	2015	% change 2015/2011
Albania	629	271	-56.9
Bosnia Herzegovina	1691	860	-49.2
Bulgaria	5684	3258	-42.7
Croatia	3793	1972	-48.0
Greece	18319	11224	-38.7
Montenegro	289	165	-43.0
Romania	6572	3930	-40.2
Serbia	1999	1207	-39.6
Turkey	15246	9554	-37.3
TFYR of Macedonia	1057	456	-56.8
Total	**55278**	**32897**	**-40.5**

Source: Own calculation based on Comtrade database, 2017.

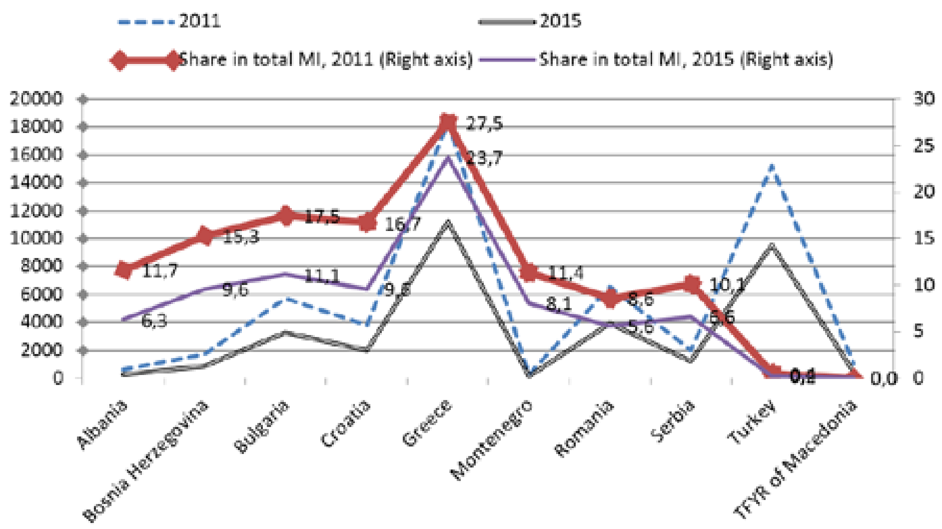
In majority the whole region of southern Europe has profited from the oil price decline in the last three years, when the import value of petro-

[8] http://www.iea.org/topics/energysecurity/.

leum and petroleum products has been decreased from 55.3 billion USD in 2015 to 32,9 billion USD in 2011, which accounted about -40 per cent change comparing with 2011 (see table 2).

It is important to emphasize that effect of the decline of oil prices in 2014 and 2015 was different among southern Europe countries because of the different share of crude oil import value in total merchandize import. While the value of Turkeys import of petroleum and petroleum products accounted in 2011 about 0.4 per cent of total Turkeys merchandize import, the value of import of the same commodity for Greece accounted about 27.5 percent of total Greece merchandize import.

Figure 3. The value of import of petroleum and petroleum products of Southern Europe countries, Value in Million USD and % share

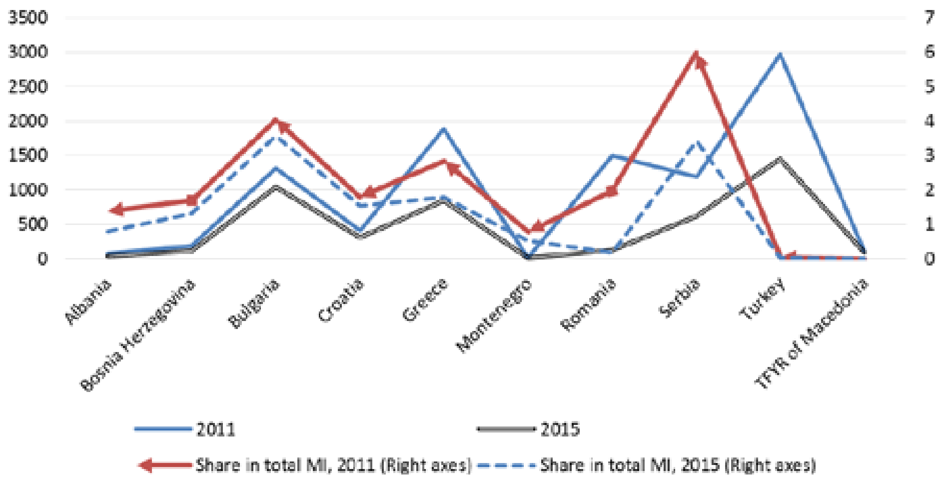


** Total MI= Total merchandize import.

Source: Own based on Comtrade database, 2017.

Natural gas is until now is not as an important as crude oil for Southern Europe countries at least in their trade balance. While in Turkey and TFYR Macedonia the import of natural gas accounted in 2011 about null and in 2015 about 0.4 per cent, in Serbia and Bulgaria accounted about 6 per cent and 4 per cent respectively.

Figure 4. The value of import of Gas, natural and manufactured of Southern Europe countries, Value in Million USD and % share



** Total MI= Total merchandize import.

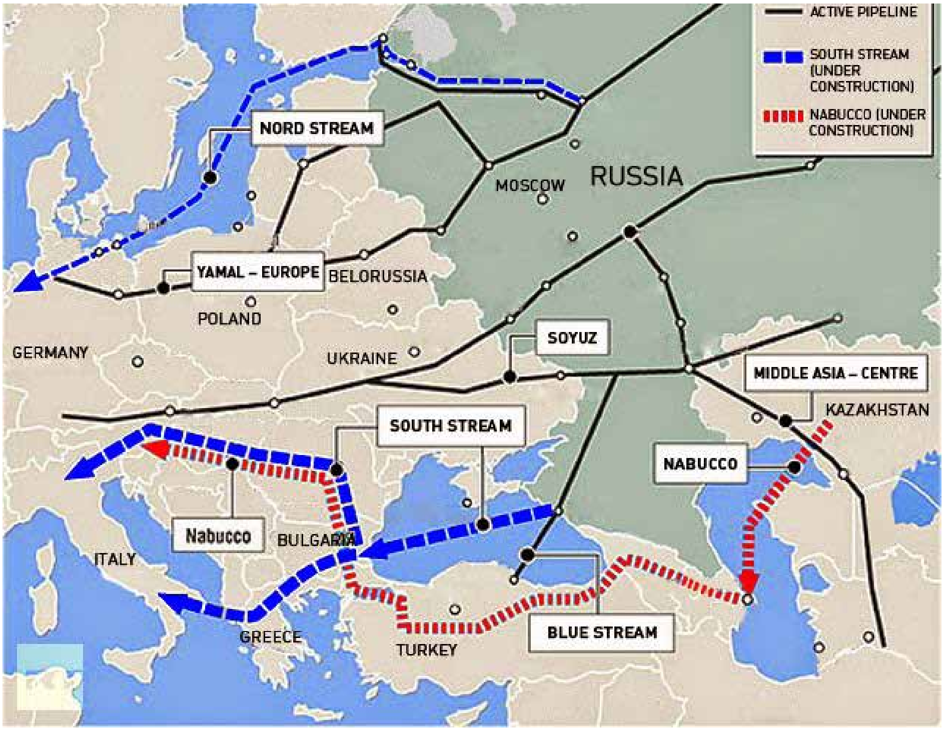
Source: Own based on Comtrade database, 2017.

2.1. Natural gas pipelines and Southern Europe energy security

Natural gas is became as a competitive substitute of crude oil in terms of its price, affordability and its low carbon emission comparing to crude oil, many countries trying to diversify their energy resources by raising network of pipelines in the existed or in the planned to be build. While the energy security has gained more importance in terms of economic and political power of countries.

Given that energy is the crucial indicator of economic growth, countries, which do not have energy resources, regardless the economic development, have to find diversified energy resources to insure their energy security. Turkey is one of the most important countries in this region, which do not have sufficient resources for its emerging economy and trying to diversifying energy resources by joining many projects of new natural gas pipelines through Turkey land and sea.

Map 1. Active and planned gas pipeline through Southern Europe



Source: Ponto a Porto, 2014, http://pontoaporto.blogspot.sk/2014/10/russian-and-eur-asian-gas-pipelines-to.html.

The project TAP (Trans Adriatic Pipeline) to be connected to an existing TANAP (Trans-Anatolian Pipeline) in Antalya, Turkey and Greece through Albania and pours in Italy. In end point of the pipeline has the capacity to reach ten billion cubic meters. The European Commission has thwarted the plans for South Stream, which could transmit Russian gas to south-eastern Europe via the Black Sea. According to some EU officials, Russia plans to double the capacity of the Nord Stream pipeline to Germany, EU countries have to advert the tight grip on the north and from the south[9]. The planned gas pipeline NABUCCO, which is considered as a project

[9] *Únia dostala studenú sprchu, Gazprom chce vstúpiť do plynovodu TAP*, https://euractiv.sk/clanky/energetika/unia-dostala-studenu-sprchu-gazprom-chce-vstupit-plynovodu-tap/?utm_source=traqli&utm_medium=email&utm_campaign=19 (accessed 22.02.2017).

of EU with cooperation with Russia and its realization is question could be connected to Blue Stream Gas pipeline and Baku-Tbilisi-Erzurum gas pipeline which are through Turkey. Apart from the project of South Stream, many other gas pipelines from Eurasia to Europe transited by Turkey.

Conclusion

In the last years crude oil prices have been dramatically fluctuated and the impact of that development on the global economy has been visible particularly on net importing and exporting countries of this commodity. Indeed the impact was positive for crude oil importing economies but in the other hand, negative impact on crude oil exporting economies. As the majority, the impact for world economy was positive, which has been projected in 2016 by International monetary fund about 0.7 percent growth of world economy. For the Southern Europe countries, according to our analysis, the impact was positive on all Southern Europe economies, regardless the scale of the impact. The positive impact was clear on the trade balnce of all Southern Europe countries, for example in 2015 they registered a significant decrease in their deficit of trade comparing to 2011.

For the energy security of Southern Europe should be insured by other alternative energy resources, among them we can say natural gas and renewable energy resources. Southern Europe Countries can benefit from their strategic position as alternative transit gas countries to wes and north Europe and cooperate with european Union to be part of the present and future projects of energy resources diversification in the base of mutual benefits. One of the first steps to do for stabilization energy market and improving energy security is diversification of energy mix and deversification of suppliers of energy commodities.

References

1. Beukel J., *Saudi Arabia needs realism – not a 2030 vision*, "Energy Post", 2016,: http://www.energypost.eu/saudi- arabia-needs-realism-2030-vision.
2. BP, *Statistical Review of World Energy 2016,* http://www.bp.com/en/global/corporate/energy-economics/statistical-review-of-world-energy/downloads.html.
3. EIA, *Short Term Energy Outlook. June 2016,* http://www.eia.gov/forecasts/steo/report/>.

4. Engdahl F. W., *The Illusion of Balkan Energy Security*, http://journal-neo.org/2016/04/23/the-illusion-of-balkan-energy-security/ (accessed 23.04.2016).
5. Fattouh B., *Adjustment in the Oil Market: Structural, Cyclical or Both?*, Oxford Institute for Energy Studies (OIES) – Energy Comment, Oxford 2016.
6. Maugeri L., The Global Oil Market: No Safe Haven for Prices, Policy Brief. Cambridge: Belfer Center for Science and International Affairs, 2016.
7. Obadi S. M., The development and perspectives of the world economy: High risks and larger uncertainties, Ekonomický ústav SAV vo vydavateľstve VEDA, 2016.
8. Ponto a Porto (2014), *Russian and Eurasian gas pipelines to Europe: Nord and South Stream,* http://pontoaporto.blogspot.sk/2014/10/russian-and-eurasian-gas-pipelines-to.html
9. *Únia dostala studenú sprchu, Gazprom chce vstúpiť do plynovodu TAP*, https://euractiv.sk/clanky/energetika/unia-dostala-studenu-sprchu-gazprom-chce-vstupit-plynovodu-tap/?utm_source=traqli&utm_medium=email&utm_campaign=19 (accessed 22.02.2017).
10. World Bank, *Commodity markets outlook*, 2016, http://www.worldbank.org/en/research/commodity-markets.

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