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## **Full Length Research Article**

### **ANALYSIS OF ENERGY TRADE BETWEEN THE EUROPEAN UNION AND RUSSIA**

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#### **ABSTRACT**

The international sanctions are imposed against Russia following Russia's annexation of Crimea and the Russian military intervention in Ukraine. This paper aims at analyzing the impact of sanctions on Russian economy and on energy security of European Union (EU) countries. The focus is energy trade between the EU and Russia. Energy security is always one of the most important problems for the EU. With regard to acute political and economic situation in Eastern Europe, with the EU and Russia on mutual economic partial blockade, has become very topical, what is the position of energy in the European countries. What are the prospects for a partial boycott of resources? What you can expect from Russia? How are you doing Russian foreign trade and business? Have it has affected the sanctions or boycott? That's what we look at on the basis of the European Union and Russia to first quarter 2015. That's why we look at the beginning of the whole economy, and then external trade. We analyze Russia, which has the EU largest energy suppliers. What are the prospects for a partial boycott of resources?

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#### **INTRODUCTION**

The sanctions are imposed against Russia following Russian military intervention in Ukraine. Starting with the 2014 Crimean crisis, soldiers of ambiguous affiliation began to take control of strategic positions and infrastructure within the Ukrainian territory of Crimea, which Russia then annexed. (Russia's rouble, 2015; Morello, 2014; BBC, 2015) On 4 March, during his press conference, Putin denied Russian troops interfered (Vladimir, 2014) but then admitted on 17 April that Russian troops had been active in Crimea and said this had laid the ground for the Crimean status referendum. (BBC, 2015; Putin, 2014) President Putin said Russian forces had been active in Crimea in order to support local defence forces, the first time he has admitted deployment of Russian troops on the Black Sea peninsula. After the annexation of Crimea, demonstrations by pro-Russian groups in the Donbas of Ukraine escalated into an armed conflict between the separatist forces and the Ukrainian government. Russia supports separatists of personnel and battle technique. Russian president Putin denies this.

(Vladimir, 2014) Ukrainian crisis has made several governments to apply sanctions against individuals and businesses from Russia and Ukraine from March 2014. Sanctions were approved by the United States, the EU and other countries and international organisations. Sanctions against Russia are multi-round. Russia has responded with sanctions against a number of countries, including a total ban on food imports from the EU, United States and in other countries. Both these sanctions applied to Russia and Russian import bans in response have contributed to the collapse of the ruble and caused in 2014–15 Russian financial crisis (Council, 2014; Update 4-Obama, 2014; Ukraine, 2014; NATO, 2014; US, 2014; Ukraine, 2015; Ukrainian, 2015; Ukraine, 2014; EU, 2014; Overview, 2014). The continuing financial Russian crisis and the associated shrinking of the Russian economy is the result of the collapse of the Russian ruble beginning in the second half of 2014. The crisis has affected the Russian economy, both consumers and companies, and regional financial markets, as well as Putin's ambitions regarding the Eurasian Economic Union. These sanctions applied to Russia and Russian import bans in response have contributed to the collapse of the ruble and the 2014 - 2015 Russian financial crisis. The European Union was established on 1993, when the Maastricht Treaty came into force. The treaty also gave the name European community to the EEC, even if it was referred

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as such before the treaty. The EU is a politico-economic union of 28 member states that are located primarily in Europe. If it were a country, the EU would come first in nominal GDP and second in GDP (PPP) in the world. 19 member states have also joined a monetary union known as the Euro area, which uses the Euro as a single currency (Political, 2015). Russian Federation (Russia) is a country in northern Eurasia. Following the dissolution of the Soviet Union in 1991, the Russian SFSR reconstituted itself as the Russian Federation and is recognized as the continuing legal personality of the Union state. At 17 million km<sup>2</sup>, Russia is the largest country in the world. Russian economy ranks as the ninth largest by nominal GDP and sixth largest by PPP in 2014. Russian extensive mineral and energy resources, the largest reserves in the world, have made it one of the largest producers of oil and natural gas globally. Russia has the largest stockpile of nuclear weapons in the world. It has the second largest fleet of ballistic missile submarines and is the only country apart from the United States with a modern strategic bomber force. (Status, 2014)

### Methodology and theoretical base

The techniques definitions used by the authors have been specified in OECD (Definition, 2015) and Eurostat (Methodology, 2015). Definitions are presented by tables and figures. All figures are the authors' illustration. The economic background of his countries and in more detail theoretical foundations are given in earlier publications of the authors (Tanning et al, 2015 a,b,c,d; Tanning et al, 2014 a,b,c,d,e,f,h,g; Tanning et al, 2013 a,b,c,d) and in other authors' works (Górski, 2015; Jawetz et al, 2015; Kong et al, 2015; Overland, 2015; Ryggvik, 2015; Science, 2015; Syrquin, 2015; Pavlovskaja, 2014; Idiata et al, 2014).

### Analyses of global economic development

As follows we look at the world and EU economic power. The growth of the whole economy is measured by gross domestic product (GDP), it will be seen as a background. In background reviewed to the global economic power situation, the EU, United States, China and Russia economic development. The focus of Western civilization is in the competition in Asia, especially China, India and other emerging economies of developing countries, so that today's developed countries of Western civilization are not left in the future subordinate, economically, and politically, is highly dependent on China, India and other developing countries of today. It is also important economic competition of the United States and the European Union. When in 2013 was leader U.S. with 16 720, second EU 15 850 and then China 13 390 billion USD, then in 2014 there has been principle change - the world's economic (GDP by PPP) leader has increased China. The basis of GDP by official exchange rate was in 2014: EU 17.42, U.S. 17.42 and China 10.36 trillion USD. In 2013 was GDP real growth rate of U.S. 1.6%, of EU 0.1% and of China 7.7%.

In 2014 was GDP real growth rate of U.S. 2.4%, of EU 1.4% and of China 7.4% (Country, 2015; Indices, 2015). Based on current prices and exchange rates of the euro, the EU is still low superiority in front the United States. Russian economic stagnation was in 2000 and a great crisis in 2009 (GDP = -7.8%). GDP (purchasing power parity) Russia was in 2013 2.553 trillion USD; in 2014 2.568 trillion USD; country comparison to the world: seventh. Russian economy (GDP) almost stopped in 2014 (+ 0.6%) and decreases strongly in the following years (Country, 2015). The world political situation is tense: EU-Russia mutual sanctions, the situation in Ukraine and the expansion of international terrorism.

### International trade of European Union

Next, we look the EU and Russian foreign trade, with an emphasis on energy resources. International trade statistics cover any movements of goods between the EU Member States and non-member countries (extra-EU trade), and from one Member State to another (intra-EU trade). The product breakdowns available in Newcronos / Euro-indicators are based on aggregates derived from the BEC classification and the SITC (Methodology, 2015). From 2002 to 2014, extra-EU27 imports (all products) increased from 937 billion to 1680 billion EUR or 1.8 times. However, there were also decreases: 2003 = -2 billion and 2013 = -116 billion, but particularly strongly in 2009 = -349 billion EUR. Even in 2010 had not yet reached 2008 level (54). In 2009, the three major groups of extra-imports declined: mineral fuels (mineral fuels, lubricants and related materials) = 160 billion; machinery (machinery and transport equipment) 72 billion and other goods (other manufactured goods) 79 billion EUR. In 2013 declined mineral fuels 50 billion EUR. The one hand, it is natural that the economic downturn is also required fewer imports of goods. Also, the crisis will force companies to greater savings. So in 2009 declined of raw materials extra-import 37%.

The table shows the share of extra-EU27 trade by product group (SITC1), expressed in value terms and in % of the total flow (Extra-EU28, 2015). In 2009 increased share of imports by product (%) almost all product group, except raw materials and mineral fuels. Since Russia ban imposed an EU exports of food products, then will be its impact in recent months. Total extra-EU28 exports was in Jan-Mar 2015 427.4 billion EUR, but in Jan-Feb 2014 408.5 billion EUR. It growth was 5%. Extra-EU28 exports food & drink goods were in Jan-Mar 2015 27.1 billion EUR (+6%). In Feb 2015 was growth 2% (News 86/2015). In 2013 was trade exports to United States 288,239 million, to Switzerland 169,591 million, to China (except Hong Kong) 148,269 million, and to Russia 119,775 million EUR. From 2002 to 2013 share of exports of USA declined from 28% to 16.6%, then China share increased from 4% to 8.5%, and Russia share from 3.9% to 6.9%. Share of extra-EU28 exports to USA in 2013 was 16.6% (Extra-EU28, 2015).

**Table 1. GDP growth of Russia, % change year over year [GDP, 2015; Country, 2015]**

1999	2000	2001	2002	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
6.4	0.0	5.1	4.7	6.4	8.2	8.5	5.2	-7,8	4.3	4.3	3.4	1.30	0.6

Table 2. Extra-EU27 imports trade, by product group. Million EUR [Extra-EU27, 2015]

	2002	2008	2009	2012	2013	2014
Food, drinks	58,124	80,820	73,755	92,994	93,418	98,498
Raw materials	44,543	75,542	47,534	81,102	76,391	73,279
Mineral fuels	149,112	458,038	298,445	547,113	497,293	442,360
Chemicals	80,757	124,299	112,523	163,165	157,602	164,853
Machinery	329,057	425,435	352,810	452,353	434,297	451,238
Other goods	244,268	375,019	296,500	388,172	382,307	408,554

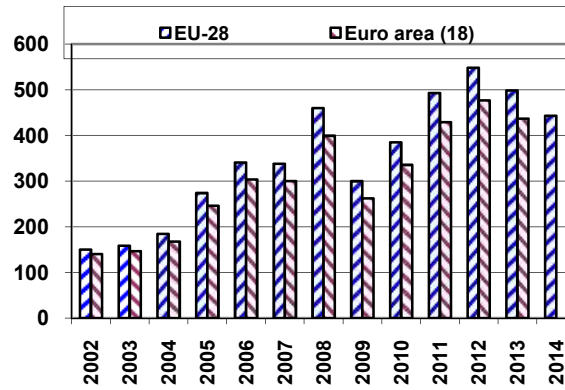


Figure 1. International imports of mineral fuels (SITC 3), Million EUR. [International, 2015]

Table 3. Extra-EU28 trade imports of mineral fuels (SITC 3), by main partners. Million EUR. [Extra-EU28, b]

	2002	2008	2009	2010	2011	2012	2013	2014
Russia	39,267	126,064	89,002	121,298	153,495	164,369	160,606	136,183
Norway	24,782	56,379	37,603	44,821	54,807	55,721	49,612	47,087
USA	1,825	10,282	7,807	10,017	17,053	19,705	18,930	16,175
Algeria	10,728	20,008	17,047	20,328	27,173	32,023	31,391	28,412
Nigeria	4,328	14,975	9,585	13,480	23,237	32,044	27,765	27,201
Saudi Arabia	9,608	18,838	9,460	12,567	23,993	29,983	25,116	24,285
Libya	9,212	31,770	20,565	28,800	10,269	32,722	22,938	12,281
Kazakhstan	3,331	15,403	9,735	14,285	20,959	22,693	22,308	22,263
Azerbaijan	1,290	10,555	7,458	9,971	15,381	14,152	14,209	13,004
Iraq	2,748	9,163	6,364	7,124	9,703	12,719	10,586	11,586

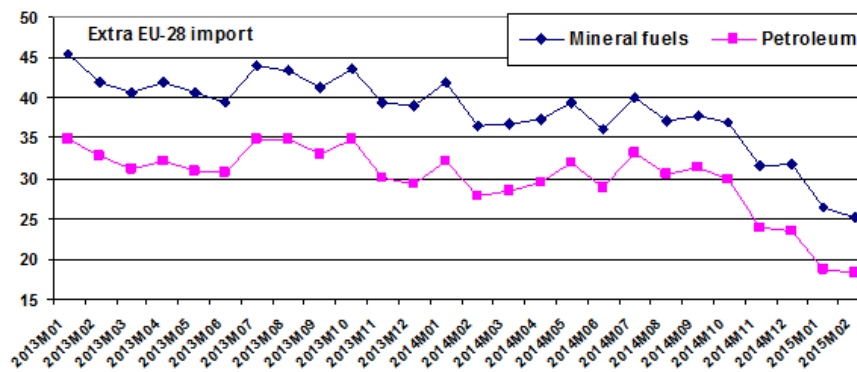


Figure 2. Total extra EU-28 import mineral fuels and petroleum [44]

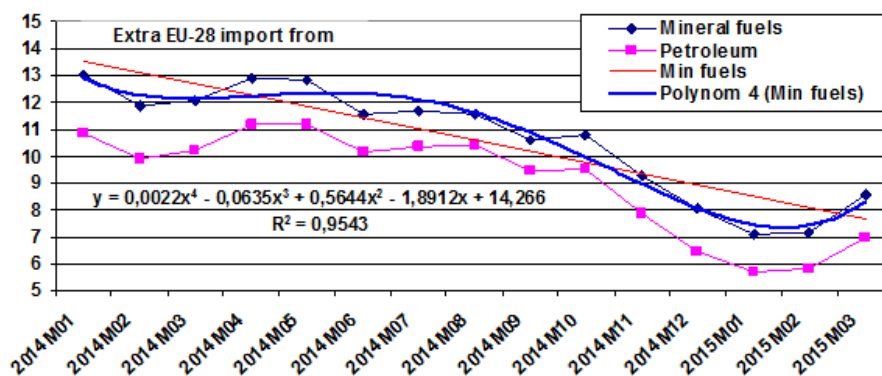


Figure 3. Total extra EU-28 import mineral fuels and petroleum from Russia [44]

Table 4. External trade of the Russia. Billion USD [Export, 2015]

	2000	2005	2008	2009	2010	2012	2013	2014	2015 IQ
Exp	103.1	241.5	467.6	301.7	397.1	524.7	523.3	496.7	89.1
Imp	33.9	98.7	267.1	167.3	228.9	317.2	341.3	308.0	45.4

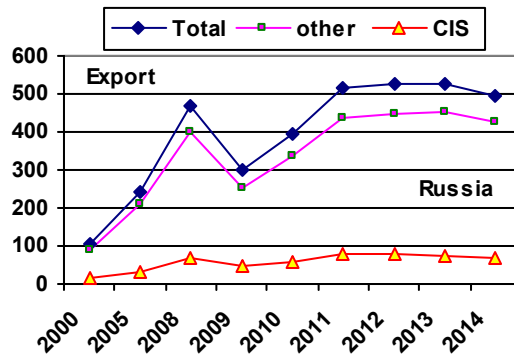


Figure 4. Export of the Russia. Billion USD [Export, 2015]

Table 5. Exports of the Russia. Billion USD [Export, 2015]

	2000	2008	2009	2010	2011	2012	2013	2014	2015 IQ
Total	103.1	467.6	301.7	397.1	516.7	524.7	526.4	496.7	90.1
other countries	89.3	397.9	254.9	337.5	437.3	445.5	452.9	428.6	77.2
CIS countries	13.8	69.7	46.8	59.6	79.4	79.2	73.5	68.1	11.9

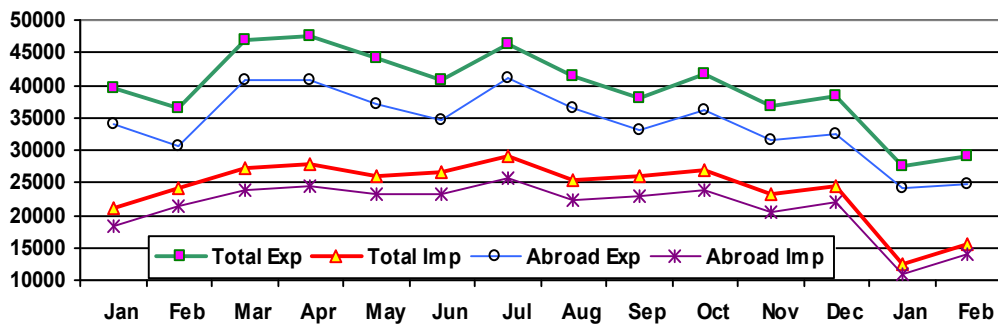


Figure 5. Dynamics of total and with far abroad countries export and import of Russia, thousand USD, Jan 2014 – Feb 2015 [Dynamics, 2015]

Table 7. External trade of the Russia, billion USD [External, 2015]

	Mar 2015	Feb 2015	Jan 2015	Dec 2014	Nov 2014	Oct 2014
Turnover	49,8	44,7	40,3	62,9	59,8	68,4
Export	32,4	29,2	27,5	38,4	36,8	41,5
Import	17,4	15,6	12,5	24,5	23,1	26,8

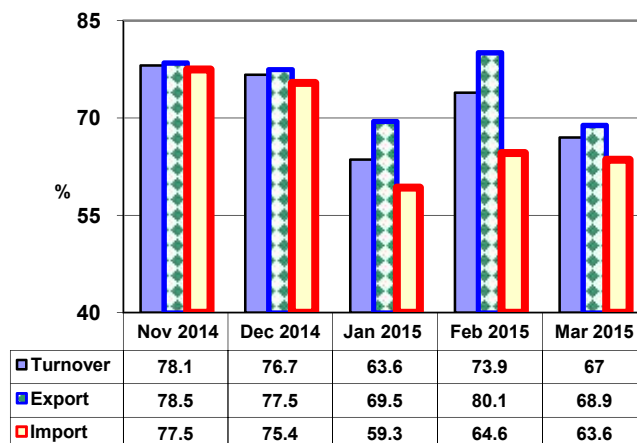


Figure 6. External trade of the Russia, compared to the same period of the previous year, % [External, 2015]

Table 6. Basic Exports from Russia to Other Countries [Basic, 2015]

	Jan – Mar 2015		
	Million USD	% of Jan – Mar 2014	% of total
Exports:	90153	73,5	100
fuel-energy goods:	58956	66,4	65,4
Crude oil	22726	58,5	25,2
Natural gas	11483	65,0	12,7
metals:	8804	97,4	9,8
ferrous metals	4733	85,7	5,2
non-ferrous metals	3855	118,6	4,3
machinery	5216	107,9	5,8
chemical products	6497	94,0	7,2
Import:	41849	62,5	100
machinery	18810	60,2	44,9
food products	5897	58,1	14,1
chemical products	7499	72,2	17,9

In 2013 was trade balance with United States 92,250 million, with China (except Hong Kong) -131,786 million, with Russia -86,702 million and with Switzerland 75,325 million EUR (Extra-EU28, 2015). The crisis year 2009 decreased trade of mineral fuels, but in next year was although the growth, but the pre-crisis level was exceeded only in the 2010th. Is fuel consumption growth good or bad? In 2013 was trade imports from China (except Hong Kong) 280,055 million, from United States 195,989 million, and from Russia 206,478 million EUR. From 2002 to 2013 share of extra-EU28 imports of USA declined from 19.5% to 11.6% and of Japan from 7.9% to 3.4%, then China share increased from 9.6% to 16.6%, and Russia share from 7% to 12.3% (Extra-EU28, 2015). In Jan-Mar 2015 was total extra-EU28 exports 427.4 billion EUR (5%) and extra-EU28 imports 423.6 billion EUR (2%). Energy goods were accordingly 20.3 billion EUR (-28%) and 80.9 billion EUR (-30%). At the same period was EU28 exports to Russia 17.0 billion EUR (-34%) and EU28 imports from Russia 33.7 billion EUR (-31%) (News 86/2015).

The EU has five points in its energy policy: increase competition in the internal market, encourage investment and boost interconnections between electricity grids; diversify energy resources with better systems to respond to a crisis; establish a new treaty framework for energy cooperation with Russia while improving relations with energy-rich countries; use existing energy supplies more efficiently while increasing renewable energy commercialisation; and finally increase funding for new energy technologies. (Tanning et al, 2015 a,b,c,d; Tanning et al., 2014 a,b,c,). Imports are expressed in value terms and measured *cif* (cost, insurance, freight). Exports are expressed in value terms and measured *FOB* (free on board). Balance = export - import (Definition, 2015; Methodology, 2015). The biggest fall of EU-28 imports of mineral fuels was in 2009 year – 160,286 million EUR or 34.8%. But in 2013 decline was EUR 49,820 million or 9.1% compared to the previous year. In 2014 were international imports of mineral fuels of EU-28 443,524 million EUR. Both trend lines run almost parallel. Of euro area not subject the superpower the UK buys a little, since it himself can be from the North Sea oil and gas. Extra-EU28 trade balance of mineral fuels (SITC 3) shows, that the money outflow from the EU is high, particularly in Russia (2013 = 159,483 million EUR) and Norway (2013 = 46,636 million EUR). In 2002 - 2013 it has risen four times in Russia and in Norway two times.

The biggest extra-EU28 exporter of mineral fuels is the United States, in 2013 was 17,331 million EUR and share 14.3% (Extra-EU28, b). In 2013 was share of mineral fuels imports of Russia 32.2%, of Norway 9.9%, of Algeria 6.3%, of Nigeria 5.5%, of Saudi Arabia 5%, of Libya 4.6%, and of Kazakhstan 4.4% (Extra-EU28, b). In 2014 was share of mineral fuels imports of Russia 30.7%, of Norway 10.6%, of Algeria 6.4%, of Nigeria 6.1%, of Saudi Arabia 5.5%, of Libya 2.8%, and of Kazakhstan 5.0% (Extra-EU28, b). Of crude oil production of EU has declined during the period 2002 - 2013 2.3 times and the natural gas 1.7 times. The EU energy security, especially in times of crisis, it is important imports of mineral fuels. The key here is Russia. If there is a partial economic blockade of Russia, it may be said that 2013 is face of history. Now, it is important information the last months. Both curves run almost parallel, that is with identical regularities. Trend lines show, that decrease the extra EU-28 import mineral fuels and petroleum is legitimate. It also shows a simple rectilinear graph. Specifically characterizes it a complicated 4-degree polynomial, where  $R^2 = 0.9543$  is very high.

**Conclusion** - past few months is significantly reduced imports of mineral fuels compared to the same month last year.

#### External trade of the Russia

Russian foreign trade is divided into far abroad or other countries and into CIS countries. (Export, 2015)

#### External trade to 2014

In 2013 of export of Russia was 86.0% to other countries and only 14.0% to CIS countries.

**External trade** of the Russia with other countries, 2013 (million USD) (External, 2015)

**Exports:** including by EU countries: Germany 37028, Italy 39315, Netherlands 70126, Poland 19582, United Kingdom 16449, Finland 13308, France 9203, Belgium 7727, Denmark 1480, Sweden 4476 and other countries: China 35631, Switzerland 8878, Republic of Korea 14868, India 6886, USA 11196, Turkey 25500, Japan 19649 million USD.

**Imports:** Germany 37916, Italy 14554, France 13012, Poland 8334, United Kingdom 8106, Denmark 2177, Finland 5409,

Sweden 3917, Norway 1754; China 53212, USA 16537, Japan 13563, Republic of Korea 10315 million USD.

In total volume of exports of Russia the largest share accounted for the other countries: the Netherlands - 13.3%, Italy - 7.5%, Germany - 7.0%, China - 6.8%, Turkey - 4.8%, Japan - 3.7%, Poland - 3.7%, United Kingdom - 3.1%, Republic of Korea - 2.8%, Finland - 2.5%, USA - 2.1%, France - 1.7% and Switzerland - 1.7%.

Shipments from the following countries predominated in imports: from China - 16.7%, Germany - 11.9%, USA - 5.2%, Italy - 4.6%, Japan - 4.3%, France - 4.1%, Republic of Korea - 3.2%, Poland - 2.6%, United Kingdom - 2.6%, Turkey - 2.3%, the Netherlands - 1.8% and Finland - 1.7%. (External, 2015)

**Share of turnover of Russia stayed** in Jan - Feb 2015 compared to Jan - Feb 2014 in %: total 71.3; other countries 72.7 (share of total turnover 88.4%); EU 65.7 (share 45.9%); Italy 79.0 (7.0%); Germany 64.7 (7.9%); Netherlands 69.3 (8.6%); France 57.4 (2.0%); Finland 70.4 (2.1%); China 71.2 (11.8%); South Korea 67.8 (3.3%); United States 93.6 (3.8%) and Turkey 91.2 (5.5%). Only rose to the level in Japan to 116.7% (4.8% share). CIS countries was total only 62.3% (share 11.6%); Belarus 58.8 (4.0%); Kazakhstan 78.1 (2.9%) and Ukraine 45.0 (2.9%). CIS countries decline was larger than the EU countries: 62.3 < 65.7 (!). Also Belarusian decline was greater than in most EU countries (Basic, 2015). Chare (% of total) in 2013 of Russian exports of mineral products was 71.6% or 377 billion USD from total exports 526 billion USD and of imports - machinery, equipment and transport means 48.6% or 154 billion USD from total imports 318 billion USD (Dynamics, 2015). In 2013 export of Russia to other countries was 453 billion USD (100%), including mineral products 341 billion USD (share 75.3%), metals 47.1 billion USD (10.4%), chemical products 23.1 billion USD (5.1%) and machinery 16.4 billion USD (3.6%) (Commodity, 2015).

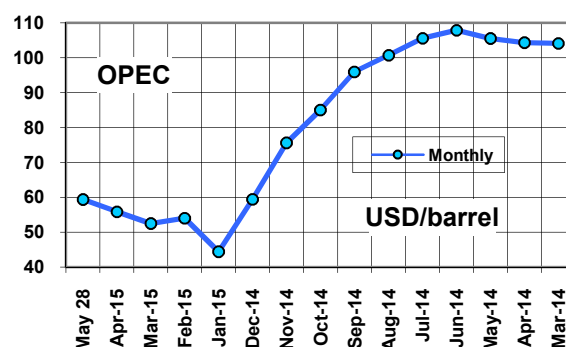
In 2013 export by commodity structure of the Russia to other countries: coal 128 million ton, crude oil 208 million ton; petroleum products 141 million ton; natural gas 138 billion m<sup>3</sup>; electric power 12890 million kWh; wood in the rough 18.5 million m<sup>3</sup>; iron ore and concentrates 21.9 million ton; pig irons 16078 million USD; steel-making iron 3930 thousand ton; copper 212 thousand ton, crude nickel 238 thousand ton and crude aluminium 3259 thousand ton. Structure of exports of the Russia to other countries chare (%) in 2013 of Russian exports were mineral products 73.3% or 341 billion USD from total exports and of imports were machinery, equipment and transport means 50.8% or 140 billion USD. (Commodity, 2015)

### External trade in 2015

The figure shows that the trade balance (export - import), despite the large decline export, remains relatively stable, circa 15 billion USD per month. Foreign trade turnover (export and import) of CIS lands is very small compared to far abroad countries. The trend of Russian foreign trade is - so going to trade with far abroad countries, so it is total trade. The sharp decline in food imports is caused Russian boycotts of Western goods, which especially painfully affected EU countries. So stayed in Jan - Feb 2015 share of imports compared to Jan - Feb 2014: fresh and frozen meat 44.4%; fresh and frozen poultry meat 55.5%; frozen and fresh fish; cheese and curd 39.4%; butter 31.0% and so forth. In March 2015 share of imports compared to March 2014: meat and meat products 53.0%, including beef 54.6%, pig 43.2%, poultry 37.4%, fish 44.7%, dairy produce 19.7%, alcoholic and non-alcoholic beverages 45.5% and so forth (Basic, 2015). In 2013 the major part of Russian exports account for fuels (75.3%) and other raw materials. Share of machinery, equipment and transport means is very small (3.6%) and it is twice the period under review decreased. Consequently, it is vital for Russia fuel and other raw materials exports.

**Table 7. Dynamics of exports and imports to the corresponding period of the previous year [Foreign, 2015]**

	Non-CIS (other) countries				CIS member states			
	Exports		Imports		Exports		Imports	
	million USD	growth %	million USD	growth %	million USD	growth %	million USD	growth %
Jan 2014	34162	104,1	18356	99,2	5438	90,3	2566	79,9
Jan 2015	24136	70,7	10888	59,3	3374	62,0	1575	61,4
Jan-Mar 2014	105489	98,7	63680	96,5	17523	96,1	8823	83,4
Jan-Mar 2015	77191	73,2	40350	63,4	11881	67,8	5097	57,8



**Figure 7. Monthly Basket oil price of OPEC [OPEC, 2015]**

For oil and gas production requires knowledge of other, and in particular the equipment. Ranking place of Russia in 2012 in the world by crude oil (including gas condensate), natural and associated gas was two. (Russia, 2015) Consequently, it is essential to other countries.

Dynamics of Russian foreign trade in recent months: (Nov 2014 - Jan 2015) (Foreign, 2015)

Exports to the corresponding period of the previous year: Nov 2014 = 78.3; Dec 2014 = 75.9; Jan 2015 = 69.5 million USD. Foreign trade turnover to the corresponding period of the previous year: Nov 2014 = 78.3; Dec 2014 = 75.9; Jan 2015 = 66.0.

When January 2014 was foreign trade turnover 60 522 million and exports 39 600 million USD, but in January 2015 was according to 39 973 million (66.0%) and 27 510 million USD (69.5%).

Foreign trade turnover in January 2015 amounted to 39.0 billion USD. Exports amounted to 27.6 billion, including the non-CIS countries - 24.5 billion and in the CIS member states - 3.2 billion USD. Imports amounted to 11.4 billion, including from foreign countries - 9.9 billion, of the CIS member states - 1.5 billion USD.

External trade of Russia in the first quarter 2015 were with other (non-CIS) countries only 71.0%, with EU 63.4% and with CIS 60.6% (!) to the corresponding period of the previous year.

#### External trade to 2014

In 2000 was Russian average export prices of crude oil 175 USD per ton, in 2012 754 USD per ton and in 2014 493 USD per ton. Russian average export prices of natural gas was in 2000 85.9 per 1000 m<sup>3</sup>, but in 2013 already 342 per 1000 m<sup>3</sup>. From 2000 to 2013 increased price of coal 3.2 times and of petroleum products 4.1 times. (Average, 2015)

When January 2014 was average export price of the Russian oil 743.9 USD / ton, but in January 2015 was 399.9 USD / ton. (On, 2015)

Very high price increase of raw material, particular crude oil price rise is strongly increased volumes of Russian export financing. Thus, the cash flow the country and its economic rise.

Basket oil price of OPEC were in Jun-14 (max) 107.89, in Jan-15 (min) 44.38, in 14 Apr 2015 55.91 and in 28 May 2015 59.33 USD/barrel.

Yearly Basket oil price: 2003=28.10; 2012=109.45; 2013=105.87; 2014=96.29; 2015=50.27 USD/barrel (OPEC, 2015)

More than twice the decrease in oil prices in the world market highly effective for the Russian economy.

Currency exchange rates EUR/ RUB were in 01 Jan 2013 40.24, in 01 Sep 2014 48.98, in 16 Dec 2014 (max) 91.52 and in 30 May 2015 58.01. Exchange rates of USD / RUB was in 30 May 2015 52.97. (Euro, 2015; Central, 2015)

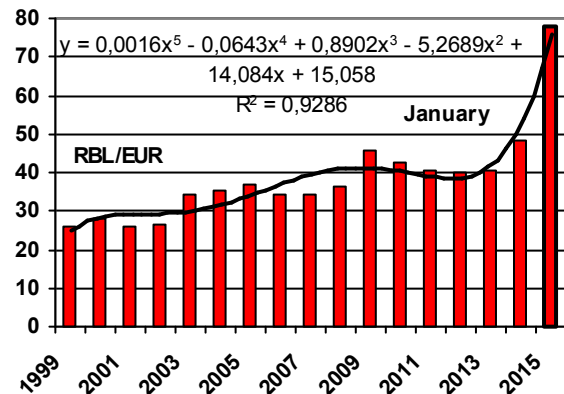


Figure 8. Currency exchange rates EUR/ RUB [Euro, 2015; Central, 2015]

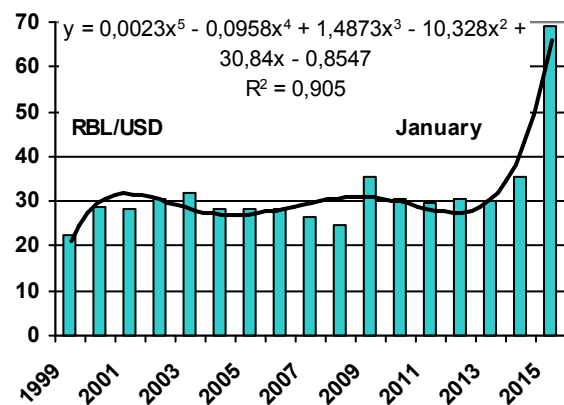


Figure 9. Currency exchange rates USD / RUB [Euro, 2015; Central, 2015]

More than twice the decline in the exchange rate of the ruble against the euro and the USD severely weakened the Russian economy.

In recent months, oil prices and the exchange rate has improved for Russia.

Taking into account this publication and the previous work of the authors (Tanning et al., 2015 a,b,c,d; Tanning et al., 2014 a,b,c,d,e,f,h,g; Tanning et al., 2013 a,b,c,d) and other authors' works (Górski, 2015; Jawetz et al, 2015; Kong et al., 2015; Overland, 2015; Ryggvik, 2015; Science, 2015; Syrquin, 2015; Pavlovskaia, 2014; Idiata et al., 2014) have made the following conclusions and suggestions.

## DISCUSSION AND CONCLUSIONS

- In 2014 there has been principle change - the world's economic (GDP by PPP) leader has increased China.
- The economy of the USA has generally developed quicker than that of the EU. The EU would come first in nominal GDP and second in GDP (PPP) in the world.

- The EU-28 and the euro area emerged from the crisis, as evidenced by the positive GDP growth.
- Russian economy (GDP) almost stopped in 2014 (+0.6%) and decreases strongly in the following years.
- In energy policy of the EU: establish a new treaty framework for energy cooperation with Russia while improving relations with energy-rich countries of Asia and Africa.
- With 12 years, extra-EU27 imports (all products) increased 1.8 times.
- In 2009 increased share (%) of imports of EU by product almost all product group, except raw materials and mineral fuels.
- In 2013 was trade balance with United States +92,250 million and with Switzerland +75,325 million, but with China -131,786 million, and with Russia -86,702 million EUR.
- In 2013 were trade imports from China 280,055 million, from United States 195,989 million, and from Russia 206,478 million EUR. From 2002 to 2013 share of extra-EU28 imports of USA declined from 19.5% to 11.6%, then China share increased from 9.6% to 16.6%, and Russia share from 7% to 12.3%.
- The biggest fall of EU-28 imports of mineral fuels was in 2009 year 34.8%. But in 2013 decline was 9.1% compared to the previous year.
- The money outflow from the EU is high, particularly in Russia and Norway. In 2002 - 2013 it has risen four times in Russia and in Norway two times.
- In 2013 was share of mineral fuels imports of Russia 32.2%, of Norway 9.9%, of Algeria 6.3%, of Nigeria 5.5%, of Saudi Arabia 5%, of Libya 4.6%, and of Kazakhstan 4.4%.
- In 2013 of export of Russia was 86% to other countries and only 14% to CIS countries.
- Crude oil production of EU has declined during the period 2002 - 2013 2.3 times and the natural gas 1.7 times.
- The EU energy security, especially in times of crisis, it is important imports of mineral fuels. The key here is Russia.
- Russian main export partners in 2013 were the Netherlands, Italy and Germany, and import partners China, Germany and USA.
- The major part of Russian exports account for fuels (75.3%) and other raw materials. Share of machinery, equipment and transport means is very small (3.6%) and it is twice the period under review decreased.
- Consequently, it is vital for Russia fuel and other raw materials exports. For oil and gas production requires knowledge of other, and in particular the equipment.
- In recent months (Nov 2014 - Mar 2015) were Russian foreign trade decreased by over one third compared to the same months last year.
- In the first quarter 2015 decreased EU28 exports to Russia 34% and imports from Russia -31%, extra-EU28 imports energy 31% and imports of mineral fuels (Jan-Feb) of EU-28 37% compared to the same period last year.
- In the first quarter 2015 external trade (turnover) of Russia were with other (non-CIS) countries only 71.0%, with EU 63.% and with CIS 60.6% (!) to the corresponding period of the previous year.
- More than twice the decline in the exchange rate of the ruble against the euro and the US dollar and twice falling

oil prices on the world market severely weakened the Russian economy.

- In recent months, oil prices and the exchange rate has improved for Russia.
- Consequently, the EU and Russia business need each other. Disturbances of commerce and boycotts resonate both badly.

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