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## Gazprom – threat to Europe?

**Abstract:** The dominant part of production and dispatch of natural gas goes through Gazprom, a company controlled by the state authorities of Russia. We analyze the threats resulting from the strengthening economic and political position of Gazprom. We analyze the most important symptoms of Gazprom's increasing market power (international price discrimination, elimination of competitors, overtaking companies on the related markets) making it a natural monopolist on the European market of natural gas and its dispatch. We analyze Gazprom's ownership structure demonstrating increasing interdependence between the firm and Russia. We discuss potential scenarios of using Gazprom's supplies of gas as a weapon against European countries.

**Keywords:** imperfect competition, international market of gas, multinational firm.

**JEL codes:** F12, F52.

Natural gas burns, erupts and poisons. Not only these characteristics make it as dangerous as weapon. The dominant part of production and dispatch of natural gas is concentrated in the hands of Gazprom, a company controlled by the state authorities of Russia, the heir of the superpower Soviet Union. Below we analyze the threats resulting from the strengthening economic and – being its consequence – political position of Gazprom, both in Russia and in Europe. We discuss economic activities undertaken by this company, which is a natural monopolist on the European market of natural gas and its dispatch. We demonstrate increasing interdependence between Gazprom and Russia. We discuss potential scenarios of using Gazprom's supplies of gas as a weapon against European democratic countries.

As information about Gazprom's activities and Russian economy and society is relatively poor and partial – we not always present compatible data. We analyze data from 2007 wherever it is possible, but if it is not available we supplement it with older statistics (from the years 2005–2006).

The remaining part of this paper is organized as follows: in section 1 we analyze Gazprom's position in the world economy. In section 2 we discuss Gazprom's posi-

tion on the European market of natural gas and its dispatch. In section 3 we present the most important symptoms of Gazprom's increasing market power (international price discrimination, elimination of competitors, overtaking companies on the related markets). Section 4 contains analysis of Gazprom's ownership structure. In section 5 we analyze Gazprom's relations with the state authorities of Russia and potential political threats resulting from the use of natural gas as a weapon in struggle against West Europe. Finally, section 6 contains conclusions.

## 1. Gazprom in the world economy

In the microeconomic theory, a monopolist is the only producer in the market<sup>1</sup>. It has a strong market position which results in controlling prices and sales conditions. A monopoly usually sets a price of its product on the level that maximizes profit (see e.g. Perloff 1998, pp. 376–367). Users/consumers of the monopolist's product either accept the monopolist's conditions or resign from using of the commodity. Under monopolies a special place is taken the natural ones. Their position usually results from such a structure of costs that allows them to minimize their average cost with a quantity of product being close to the quantity satisfying the whole demand on the respective market. Very often such cost characteristics result from a relatively high initial/fixed cost prior to starting their production. This initial cost can be caused by building of a costly plant (e.g. in the case of resources extraction) or a net from a producer to users (e.g. supply of gas or water, railway). Even stronger are monopolists who discriminate on the basis of prices. Their profit maximization strategy requires setting different prices for separate groups of purchasers split by their willingness to pay for the monopolist's goods<sup>2</sup>.

Gazprom's monopolistic position is not derived from any special characteristics of its product. It exploits and controls the majority of Russian gas resources but it is not the only gas producer in the world. Gazprom's position results from controlling the most pipelines transporting gas to its users in entire Europe and in various parts of Asia<sup>3</sup>. Gas dispatch is a network industry with monopolistic position

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<sup>1</sup> In practice companies meeting this condition are very rare. For this reason the condition about the sole producer is slightly relaxed. If a firm has a substantial market share, it is regarded as the monopolist. A firm that offers a product which has no close substitutes or a company operating on a market with high barriers to entry is seen as a monopolist as well.

<sup>2</sup> We are interested only in pure price discrimination defined as offering the same goods (with the same production costs) to different groups of purchasers at different prices. Therefore we omit price differentiation resulting from the existence of different costs of e.g. supply to different groups of purchasers resulting from e.g. different transport cost.

<sup>3</sup> Another possibility is to ship gas, but it is both more costly (and therefore less efficient) and more constrained in quantity.

derived from the existence of one system of transport. This is the case of Gazprom, with the dominant part of its production cost created by the cost of pipeline system. In consequence, competition is naturally eliminated because of an extremely high cost of entering the market<sup>4</sup>. In Russia Gazprom possesses 463 000 km of pipelines (Paniuszkin and Zygar 2008, p. 7). It still constructs the new ones in Russia as well as abroad (even outside Europe).

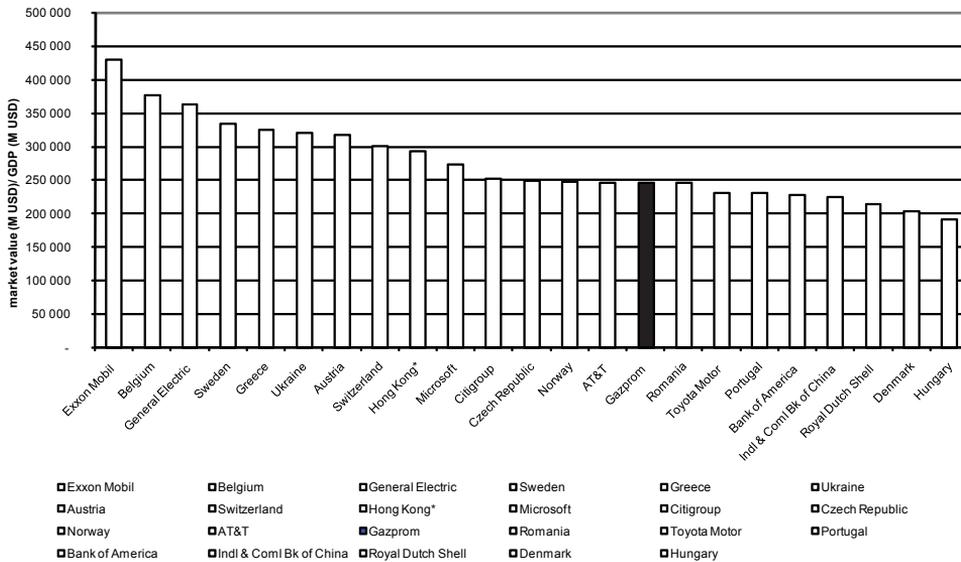
**Table 1. Ten companies with largest market values in the world in 2007, in M USD**

Global rank 2007	Global rank 2006	Company	Country	Market value in M USD	Sector
1	1	Exxon Mobil	US	429 566,70	Oil & Gas Producers
2	2	General Electric	US	363 611,30	General Industries
3	3	Microsoft	US	272 911,70	Software & Computer Science
4	4	Citigroup	US	252 857,30	Banks
5	37	AT&T	US	246 206,30	Fixed Line Telecommunications
6	10	Gazprom	Russia	245 911,40	Oil & Gas Producers
7	9	Toyota Motor	Japan	230 177,60	Automobiles & Parts
8	6	Bank of America	US	228 177,30	Banks
9		Indl & Coml Bk of China	China	224 787,60	Banks
10	7	Royal Dutch Shell	UK	214 018,40	Oil & Gas Producers

Source: Financial Times, FT Global 500, [http://media.ft.com/cms/ac6bbb8c-2baf-11dc-b498-000b5df10621,dwp\\_uuid=95d63dfa-257b-11dc-b338-000b5df10621.pdf](http://media.ft.com/cms/ac6bbb8c-2baf-11dc-b498-000b5df10621,dwp_uuid=95d63dfa-257b-11dc-b338-000b5df10621.pdf).

Market position of Gazprom is shown in Table 1 and Figure 1 and 2. Table 1 presents ten largest companies in the world (selection is based on their market value). Gazprom's market value is only a little smaller than GDP (measured in purchas-

<sup>4</sup> E.g. constructing of 1 km of pipeline on the ground costs ca. 1,7 M USD and under the sea 1,5–1,8 M USD. This cost is only an imperfect approximation of the whole initial cost because in this case it is not enough to calculate a unit cost. Gas should be transported to its final users, though it is not reasonable to build a few kilometers of pipeline. Its construction is not effective until it connects producer and users. The real initial cost depends on the length of the pipeline. The information about cost of construction pipeline on the ground is based on Maghreb-Europe Gas costs (see: <http://www.eia.doe.gov/emeu/cabs/tbl4c.html>) whereas information about the cost of gas dispatch with a pipeline under the sea is based on Skanled offshore pipeline costs (see: <http://www.pb.pl/Default2.aspx?ArticleID=f994ebf0-44d6-4b7d-91d6-d87b0fcad9a9&readcomment=1>).



**Figure 1. Ten companies with largest market values and GDP of selected countries (adjusted with PPP) in 2007, in M USD**

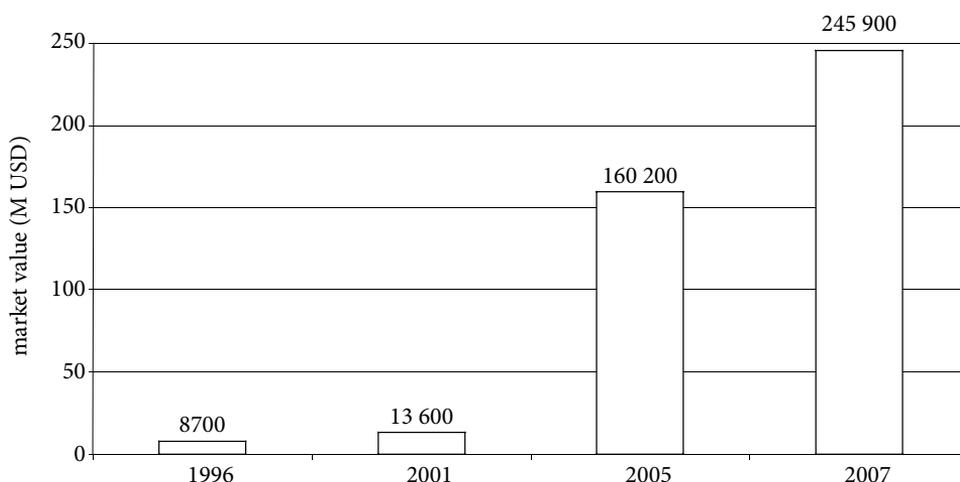
Source: Financial Times, FT Global 500, [http://media.ft.com/cms/ac6bbb8c-2baf-11dc-b498-000b5df10621,dwp\\_uuid=95d63dfa-257b-11dc-b338-000b5df10621.pdf](http://media.ft.com/cms/ac6bbb8c-2baf-11dc-b498-000b5df10621,dwp_uuid=95d63dfa-257b-11dc-b338-000b5df10621.pdf); International Monetary Fund, <http://www.imf.org>

ing power parity – PPP) of Norway and larger than respective GDP of Romania<sup>5</sup> (Figure 1).

Dynamics of Gazprom’s growth is even more impressive (Figure 2). During the period 1996–2007 its market value increased almost 30 times (at the same time GDP of Russia increased by 68%<sup>6</sup>). In 1996, Gazprom was a large company with the market value of USD 8.700 M, but it was not internationally recognized. Since 2006 it has been placed among ten largest companies in the world (Table 1). In 2006 it was the tenth largest firm and only one year later with the market value of USD 245,900 M it improved its position, thus becoming the largest European company and the sixth largest in the world (the bigger ones were only American giants: *Exxon Mobil*,

<sup>5</sup> We are aware that comparison of market values of companies and GDPs of countries is a simplification. However, we believe that this comparison is a proper visualisation of the position of the largest companies in the world economy.

<sup>6</sup> Since the mid of 90. of the 20th century Russia experienced unstable GDP growth rates, caused a. o. by financial crisis (in 1996 and 1998 the total domestic production declined by – respectively – 3.6% and 5.3%, whereas in 1997 and 1999 it rose by 1.4% and 6.4%). After 1998 economic growth rates of Russia increased steadily. The economy is recovering especially because of high international prices of oil and gas reaching above 6% of growth in recent years. Gazprom expanded after Russia coped with its financial crisis.



**Figure 2. Gazprom's increase in market capitalization in 1996–2007, M USD**

Source: [http://www.gazprom.com/documents/Investor\\_Day\\_31.10.2006.pdf](http://www.gazprom.com/documents/Investor_Day_31.10.2006.pdf); Financial Times Global 500, [http://media.ft.com/cms/ac6bbb8c-2baf-11dc-b498-000b5df10621,dwp\\_uuid=95d63dfa-257b-11dc-b338-000b5df10621.pdf](http://media.ft.com/cms/ac6bbb8c-2baf-11dc-b498-000b5df10621,dwp_uuid=95d63dfa-257b-11dc-b338-000b5df10621.pdf)

*General Electric, Microsoft, Citigroup and AT&T*)<sup>7</sup>. It outdistanced a.o. *Toyota Motor, Royal Dutch Shell* and *BP*.

In 2005 Gazprom opened up the US liquefied natural gas (LNG) market<sup>8</sup> (in September the first LNG carrier arrived at the Cove Point re-gasification terminal in Maryland). LNG was delivered under contracts signed with *British Gas* and *Shell*. In November 2005, Gazprom negotiated the first deal with *Gaz de France* providing for the swap of gas transported in the mains for liquefied gas (Gazprom delivered gas to Europe through a pipeline and received a shipment of LNG from *Gaz de France's* joint ventures in exchange). In August 2006, Gazprom first entered the Asia-Pacific market through LNG supply to Japan. October 2006, its first LNG cargo reached the Republic of Korea. In September 2006, Gazprom and *British Petroleum* agreed on cooperation in LNG deliveries to the Atlantic Basin market. Over 2005 through 2006 Gazprom sold about 0.9 (American) billions cubic meters (bcm) of LNG to the USA, the UK, South Korea, Japan, Mexico and India.

Gazprom is not only active in extracting and dispatching of gas but it also owns many companies in Russia and abroad (especially in recipient countries). It expands by establishing joint venture subsidiaries, purchasing companies or shares in Russia

<sup>7</sup> According to *Bloomberg*, after the 2008 change in the president's office and it resulted in Gazprom's share prices increase, this company with the market value of 340.000 M USD became the third largest in the world (after Chinese concern *PetroChina* and American *ExxonMobil*) – see: Kublik (2008).

<sup>8</sup> All information about Gazprom's LNG sales see: <http://eng.gazpromquestions.ru/index.php?id=4>.

and abroad and by making successful takeovers. It owns *Gazprombank*. It is a partial owner of *Mosenergo* (a company supplying power in Moscow) and *BelTransGas* (grid in Belarus, partly sold to Gazprom for unpaid debts<sup>9</sup>). Gazprom is becoming more and more a conglomerate. It possesses electroenergetic companies, newspapers, TV-channels, airlines, banks, securities and sport clubs. It is even owner of an orthodox church (see: Paniuszkin and Zygar 2008, pp. 7 and 16). It becomes better known as a brand-name using different marketing techniques. It is a general sponsor of German football team *Schalke 04* and finances football club *Zenith St. Petersburg*, expressing its desire to improve its image.

## 2. Gazprom on the European market of natural gas and its dispatch

Gazprom's market position in Europe is improving as a result of large and growing demand for natural gas. In 1996 Gazprom sold 123,5 bcm and in 2001 its sales increased slightly to 126,1 bcm. However, a really huge increase in sales occurred in the next years. In 2006 Central and Western Europe purchased from Gazprom 156,1 bcm of gas (see: [http://www.gazprom.com/documents/Investor\\_Day\\_31.10.2006.pdf](http://www.gazprom.com/documents/Investor_Day_31.10.2006.pdf)). The increasing consumption of gas results from the fact that natural gas has become a substitute for more and more expensive crude oil.

With an increasing demand for natural gas dependence of the EU on the import of natural gas is growing rapidly (Figure 3). In 2005 41% of the EU demand for gas was covered with its own production. Soon more than half was imported. After the next ten years, in 2015, import dependence of the EU will have been as large as 75%.

European dependence on natural gas sold by Gazprom can be derived from the information about the overall share of gas import (Figure 4) and about intensity of gas supplied by Russian pipelines (Figure 5). In Figure 4 we can see that from 21 EU-countries<sup>10</sup>, only the UK to a dominant extent (90%) relies on its own supply. Other countries depend on imports to a different extent (from 100% in the case of a.o. Finland, Baltic countries and Slovakia to 68% for Poland).

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<sup>9</sup> *BelTransGas* 50% shares are to be bought by Gazprom (currently Gazprom holds only part of Belarussian pipeline system). Pursuant to the agreement enacted on December 31, 2006 between Russia and Belarus, within 4 years Gazprom will buy 50% of *BelTransGas* (12,5% annually).

<sup>10</sup> In Figure 4 there are omitted data concerning dependence on gas import of Denmark, Cyprus, Malta and the Netherlands. Those countries are relatively small in comparison with the EU as a whole therefore absence of their data does not change much in the result (especially as e.g. Denmark is using other gas sources).

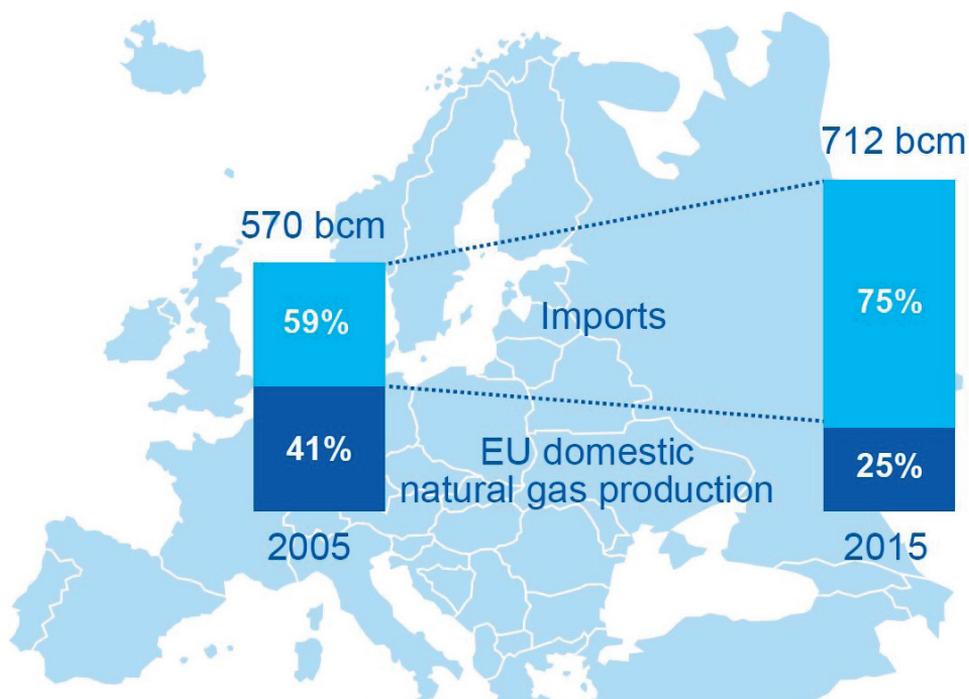


Figure 3. EU – gas production and import in 2005 and forecast for 2015, in bcm

Source: <http://naftagaz.pl>

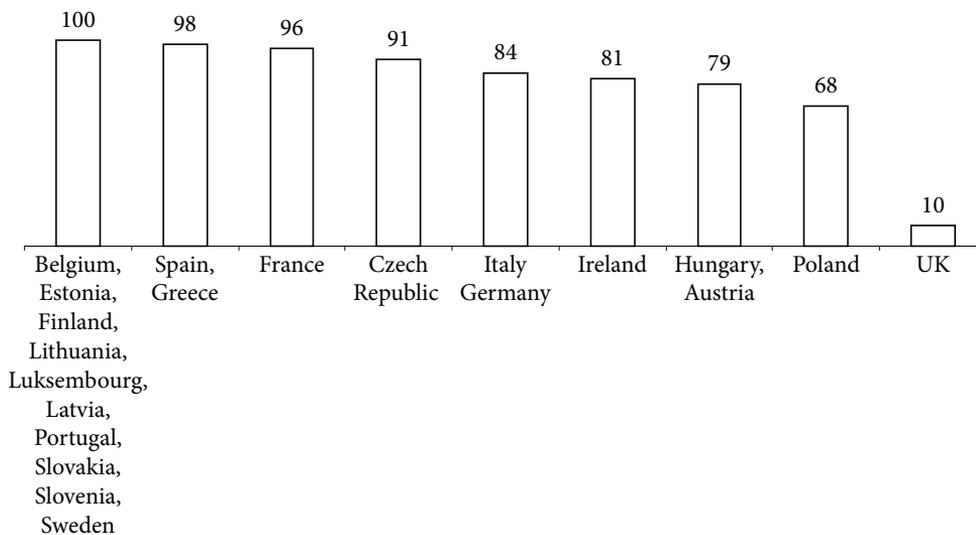
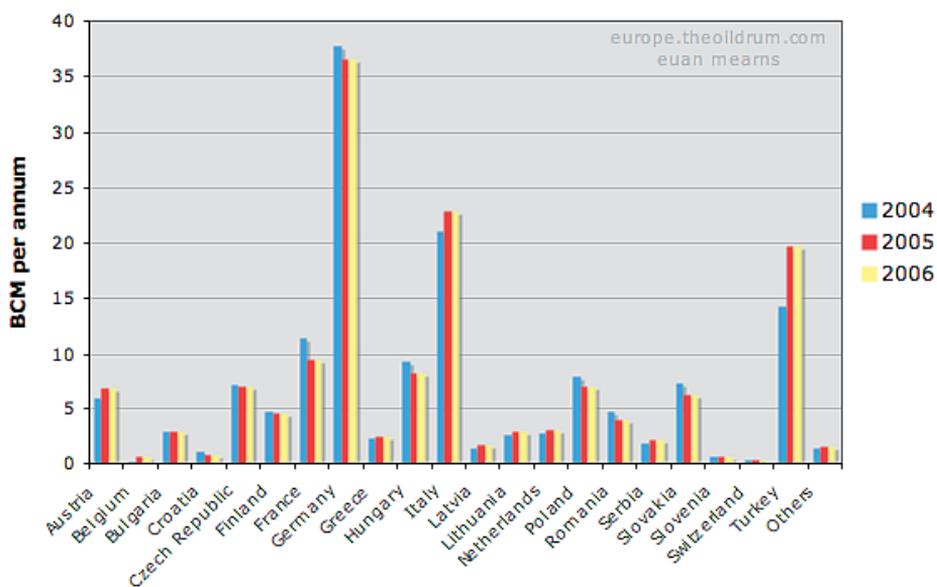


Figure 4. Dependence on import of natural gas in chosen EU – countries in 2006 (in %)

Source: Eurostat



**Figure 5. Russia gas exports pipeline destinations (in bcm per annum)**

Source: <http://theoil Drum.com>

The biggest importer of Russian gas (among all shown in Figure 5) is Germany, though its gas import was decreasing in 2004–2006. The second largest was Italy which caught up with Turkey whose imports of Russian gas grew considerably in the last two years of the analysis, to almost 20 bcm annually. Considerable imports are also directed to France, Hungary, Czech Republic, Poland, Slovakia and Austria. Among the mentioned biggest importers only Slovakia fully relied on Russian gas.

### 3. Gazprom’s monopoly behavior

The main objective of Gazprom is to control the entire supply chain “from drill to grill”. Firstly, it overtakes the upstream control by takeovers of Russian oil and gas sources. The examples are: *Sahalin-2* taken cheaply from *Shell*, or *Kowykta*, bought cheaply from *BP*’s subsidiary. These actions were assisted by the Russian state authorities responsible for the environment. Secondly, it takes the midstream control, by takeovers of transit pipelines. The example is a case of *BelTransGas*, which is partly taken over as mentioned before. The other, but unsuccessful takeover concerns *EuRoPolGaz*. Gazprom attempted to fall the transit company into bankruptcy in order to cheaply buy its assets. A documented case of *EuRoPolGaz* forced by

Gazprom (its shareholder and cooperant) to set prices of gas dispatch in Poland 25% lower than prices justified by costs supplemented with normal profit (Kuchciak 2007). The price level proposed by Gazprom could lead *EuRoPolGaz* to bankruptcy. With lower revenues *EuRoPolGaz* would fall (in the short run due to limits in pipe capacity and contracted gas annual volume one could not expect an increase in demand making up for losses occurred because of lower prices of dispatch). As *EuRoPolGaz* was established with credits from Gazprom's subsidiary *Gazprombank*, the bank could take over a grid in Poland for unpaid debts and make it another subsidiary of Gazprom.

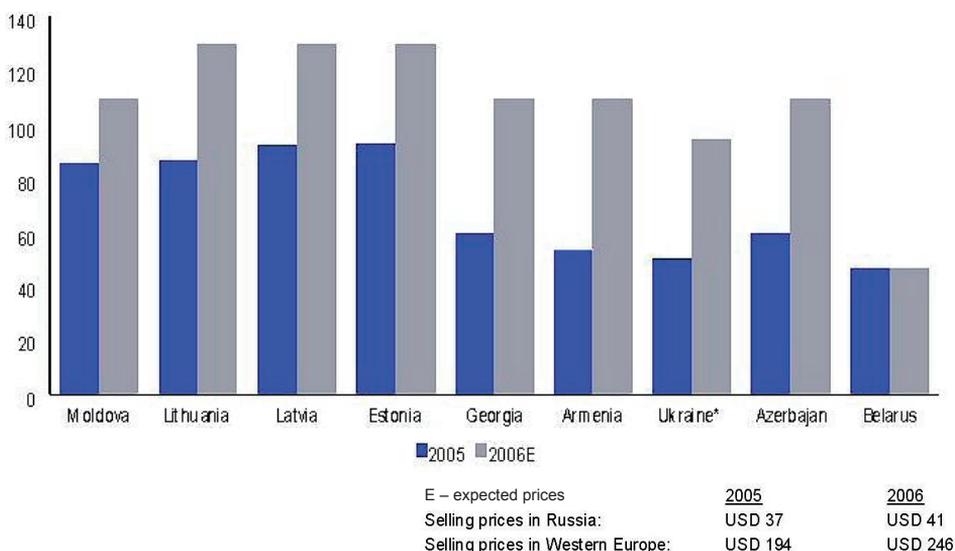
Gazprom also tries to control downstream activities consisting in supplying gas to the final consumer. It has some subsidiaries, like *Wingas*, which supply German consumers. Elimination of competitors lead to a higher level of vertical and horizontal integration of Gazprom and its subsidiaries. It makes this company stronger not only on the gas market but also on other (only weakly related with gas dispatch) markets.

Gazprom also strengthens its position through deterrence of potential challengers. Even if dispatching gas with *Nordstream* would be more expensive than with the traditional pipeline on the ground, it is a way to forbear its potential rivals to enter the market of natural gas and its dispatch. Constructing *Nordstream* signals readiness and power to fight against potential rivals. By building *Nordstream*, Gazprom signals its determination in out-passing the transit countries as well. It should force them to resign from e.g. increases in transfer fees and make them accept higher gas prices. It also helps Gazprom to win full control over gas supplies for almost the whole of Europe.

Gazprom is a price discriminator. This statement can be proved from a various approaches. In the first one we compare prices of natural gas set by Gazprom in the selected countries, constituting the former Soviet Union, and changes in these prices in the period of 2005–2006 (Figure 6). Data in Graph 6 convince that the former Soviet Republics in 2004 accessing the EU (Lithuania, Latvia and Estonia) in 2005 as well as in 2006 paid the highest prices for gas which does not seem to be justified with any special costs (transport costs are comparable in all of the considered former Soviet Republics). It means that these countries, after relieving themselves from political and economic bonds with Russia and engaging in close cooperation with the EU, were punished economically with the increase of gas prices. A similar case is Ukraine, developing towards Western Europe after “The Orange Revolution” in 2004. Simultaneously, the lowest gas prices in both analyzed years were paid by Russia-loyal Belarus. The gas price in Belarus was approximately as high as in Russia. Additionally, Belarus was the only country not suffering from any price increase in the analyzed period<sup>11</sup>. Armenia was confronted with the highest

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<sup>11</sup> Also in the future Belarus will be treated in a special way: in 2009 first quarter r. it will pay USD 119 for 1000 m<sup>3</sup> of Russian gas, in spite of December 2007 rise of gas price for Ukraine, from



**Figure 6. Gazprom's selling prices in the former Soviet Republics**

Source: <http://naftagaz.pl>

price increase, where gas price doubled. It was followed by Ukraine, Azerbaijan and Georgia, where price increases made up more than 80%. In spite of 2006 increase, their prices remained still far below those paid by Baltic countries.

The second way to prove Gazprom's price discrimination is to compare gas prices in Russia and Western Europe. In 2005 they were equal, respectively: USD 37 and 194 and in 2006 – USD 41 and 246 (see: <http://naftagaz.pl>). In the period 2005–2006 the price increase in Russia was less than 11%, whereas in Western Europe it made up almost 27%. That is a potential signal of price discrimination because there seems to be no other justification of such differences in price changes (even if part of potential profit is flowing out to the transit countries). Gazprom is still keeping a relatively low gas price on the internal market. It means, that Europeans pay high gas prices to maintain Russians using gas. However, the company's objective is to eliminate internal subsidies by 2011<sup>12</sup>.

USD 130 up to 179,5 for 1000 m<sup>3</sup>. According to the Agreement Belarus shall pay 67% of West Europe gas price. If USD 119 had been the base for calculation, the price for Russian gas for Europe could have been USD 178 USD for 1000 m<sup>3</sup>, while it has already amounted USD 300 (see: <http://wyborcza.pl/1,76842,4768974.html>).

<sup>12</sup> As the gas production in Russia does not increase significantly (see gas production quarterly data in : Country Report Russia (June 2007, p. 34) because of high costs of necessary investments, and demand for gas becomes bigger, particularly in Western Europe, Russia starts having problems with satisfying its own needs. It cannot stop exporting, as gas export makes a significant part of the Federation's budget (see footnote 16). Thus gradual gas price increases on the domestic market are expected. No restrictions on gas supplies for individual customers are expected, still, the biggest recipi-

The next way to reveal price discrimination practices of Gazprom to analyse the cost of gas dispatch. The cost of dispatch of 1000 m<sup>3</sup> of natural gas across the distance of 100 km through the pipeline in Poland is equal to 6,98 PLN (ca. 3,5 USD). If we treat it as an average cost then prices in e.g. Germany and Italy adjusted with an estimated transport cost<sup>13</sup> would be close to 111 USD in Berlin and 160 USD in Rome. The real price in Berlin is 130 USD higher than the price justified by a transportation cost (for Rome it is by 86 USD higher). This mark-up can as well be seen as a measure of the monopolistic power of Gazprom<sup>14</sup>.

Gazprom's intention is to expand not only in gas and oil supplies, but also in other areas concerning energy supplies. It intends to operate in gas, liquefied natural gas (LNG), oil, chemistry, electricity and nuclear power industries. Already in 2005 the then Gazprom's vice-president Alexander Medvedev declared to transform Gazprom from the world leading gas company to the world leader in energy sector (Potocki 2006). He stated that this company would not only operate in Europe and Russia, but also in North America, where it intends to take a leading position in LNG supplies. As we mentioned in part 1 of this paper Gazprom started already to supply LNG to many European, American and Asian countries.

#### 4. Gazprom as a state owned enterprise

Gazprom is a very special company because of its legal form and ownership. It is a state-owned enterprise. The Russian government controls more than a half of Gazprom shares (50,002%)<sup>15</sup>. The remaining 48,998% of shares are dispersed among Russian or foreign individual owners. The Russian authorities as the main shareholder, control the firm, influencing its decisions. On the other hand Gazprom not

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ent, UES, the energy producer, will suffer a lower supply. W. Putin, the then President, in his speech from 26.04.2007 declared the switch of energy sector to coal – see: Country Report Russia (June 2007, pp. 20–23).

<sup>13</sup> We approximate transport cost with the price of dispatch of 1.000 m<sup>3</sup> of gas per 100 km multiplying this by the distance between Moscow and the capital of the respective country. We calculate price based on Russian selling price in 2006 and on transportation costs (counted as a transportation fee times distance between Moscow and selected capitals of European countries). Such a calculated price is compared with the real prices set by Gazprom for Western Europe.

<sup>14</sup> Monopoly power (or more generally market power) is measured a.o. as the difference between price and cost e.g. in Lerner index (more see e.g. Perloff 1999, pp. 380–382).

<sup>15</sup> In April 2008 the then Russian president Putin ensured a formal control of the state over Gazprom, simultaneously increasing the company's property (the state owned then 49,11% of its shares). Pursuant to president Putin's decree, 78 gas enterprises have been removed from the list of entities liable for privatisation. By state owned holding *Rosnefttiegaz* their assets will be transferred to Gazprom in exchange for missing less than 1% of its shares (see Kublik 2008).

only accomplishes objectives of the Russian economic policy but also represents the Russian *raison d'état* on the international level – see the next part of this paper.

The state ownership of Gazprom brings about its profits, constituting a considerable part of Russian budgetary payments<sup>16</sup>. At the same time Gazprom's investments can be financed with public money or with (hidden or open) support of the Russian administration. Also the Russian privatization policy supports the giant. The most impressive result of state ownership is a huge increase in the market value of Gazprom. Growth of its property was started directly or indirectly by the state authorities of Russia (and its predecessor, the Soviet Union). As a consequence Gazprom became a state owned national monopoly. Of special importance was integration/nationalization of the oil and gas industry carried out by the Russian Federation. This action strengthened Gazprom's position in the country, where it overtook other firms. Simultaneously, Gazprom's takeovers gave the authorities control over the whole Russian gas industry (effect of sector's integration is visualized in Figure 2; only in 2005 the firm's size increased 2,5 times per one year (see: Kublik 2008; Potocki 2006). The next stage of nationalization was clearly seen in recent years, when Russian resource fields, previously bought by foreign companies, were cheaply recovered by Russian authorities. Additionally, the new explored gas fields are given to Gazprom, without any auction procedures. What is more, the authorities are able to assist Gazprom in acquiring a gas field by cancelling the auctions of the gas fields. Such a case took place in 2004, when the auction for *Sachalin-3* gas field, won previously by *Exxon Mobil*, was cancelled by the government, and afterwards this gas field was given to Gazprom (Kublik 2008). The Russian administration also helps to eliminate rivals in many spheres of Gazprom's activities<sup>17</sup>.

Afterwards Gazprom expanded abroad. At the beginning of the 21<sup>st</sup> century Russian gas market experienced many takeovers. It became more and more horizontally and vertically integrated. Gazprom's potential increased considerably as a result of political/administrative decisions of the Russian authorities.

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<sup>16</sup> Gas prices are internationally tied with oil prices. Similar is true for Russian taxes and duties, though Gazprom enjoys special treatment (as we in detail describe in this paper). At the beginning of 2008 federal taxes from oil (export duty plus resource tax) accounted for over 70% of oil export revenues (export duty was as large as 275 USD per tonne and ca. 130 USD per tonne in resource tax (see: Country Report Russia (March 2008, pp. 20-1)). The share of oil and gas in Russia's GDP more than doubled from 12,7% in 1999 to 31,6% in 2007. Natural resources account for 80% of Russian exports (see: Smoke and mirrors, *The Economist*, 1-7.03.2008 p. 27).

<sup>17</sup> A. Sharonov, who left the Russian Ministry of Economy in 2007 stated: "We have turned our back on healthy competition. The system rewards those who are closer to the centre of power, not those who work better. It is easier to get a competitor into jail than to compete with him." (see: Briefing Russia's economy in *The Economist*, 1-7.03.2008, p. 26). Pietraś (2002, p. 101) stated that Russia had enough power to break commonly accepted rules of private propriety to achieve its goals on international arena.

Tight connections of the company with the Russian government were noticed e.g. when A. Medvedev, as a candidate for a presidency, took part in the ceremony beginning gas extraction in Siberian *Juzhnyj Sibirsk*. Lately, the former president of Russia, Putin as well as the new one Medvedev persuaded Bulgaria and Serbia into the agreement concerning the construction of a pipeline transporting gas from Central Asia. The authorities not only fully supported Gazprom's interests, but also represented the company in foreign affairs (e.g. negotiating contracts with the EU - countries). Additionally, on Gazprom's request, the Russian government held tax rate on gas at a relatively low level, enabling Gazprom to increase its profits, which helps to make new investments and increase the market value of this company.

## 5. Political threats connected with dependence on Russian gas

The EU, and parallel Russia, or rather Eurasian Economic Community<sup>18</sup>, dependence on Gazprom gas supplies calls for the analysis of the potential threats to national security (Romm 1993, pp. 51 and the following) of each dependent state as well as to all Europe, as a result of Gazprom's position.

Such a prognostic analysis is certainly nothing new, however it aspires not only to objectively assess threats but also to combine economic and political analyses. To that aim, the studied phenomenon is examined from three distinct positions, namely:

- Polish standpoint, or Central and East European states position dominated by historically conditioned fear of Russian imperialism with its ruthless pursuit of tasks accomplishment;
- West European position, dominated by German social democracy with its tendency to relativise threats and to adopt a policy responsive to Russia, characterised by potential threats admittance a day following a pessimistic forecast fulfilment<sup>19</sup>;
- Russian standing torn by centuries-long tradition of conspiracy thinking accompanied by blind faith in state authority infallibility<sup>20</sup>.

From the European perspective, Europe being the natural gas recipient, there are some potential risks. Their analysis is conducted on the assumption that Russia controls Gazprom and may use it for its revisionistic aspirations, especially for re-

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<sup>18</sup> Eurasian Economic Community, includes except Russia, Belarus, Kazakhstan, Kyrgyzstan, Tajikistan and, since 2006 also Uzbekistan.

<sup>19</sup> In German political thinking an idea "better red than dead" was often considered virtuous.

<sup>20</sup> It is an opinion close to the old one that the Tsar always meant well, and the Boyars are to blame for disasters. Russia is not alone in its cult of power. After III Reich fall opinions that Hitler did not know about SS concentration camps were spread in occupation zones of the then divided Germany.

gaining its superpower position or even to alter the cold war outcome. What is more, it may happen that substituting the Russian administration, Gazprom will evolve into a substitute of the state, challenging states and international institutions and will act as a new entity of the 21th century international relations, aspiring to imperial domination<sup>21</sup>.

Firstly, gas may be used as a weapon to strike a hard blow. The use of "gas weapon" would mean a complete, immediate embargo on sales of gas. A stimulus to use such an arm, analysed in the second part hereby, is a complete *de facto* dependence of Europe on Gazprom supplies. Secondly, gas can be a weapon of long-term influence. In this case no embargo on supplies is imposed, but a gradual price increase implemented carefully to avoid reaction, still significant enough to result in European economies weakening and making them financially unable to undertake steps to diversify both energy suppliers and energy sources.

Embargoes, as economic warfare, have been known to Europe for the last two hundred years<sup>22</sup>. Still longer is a tradition of mono-cultural economic dependence<sup>23</sup>. However, in this case it is a matter of a quasi-monopoly on an indispensable product, non-substitutable when embargoed. Gas shortage would affect economies, and in consequence, result in the collapse of entire societies. It is both the inability to substitute gas with another energy source and Gazprom with another supplier.

The current idea of embargo on exports of resources as a weapon commenced in 1935–36 with debates within the League of Nations on imposing sanctions on Mussolini's Italy. However, the imposed sanctions proved ineffective due to non-League, mainly the USA, actions supplying the embargoed product to Italy (Stern 2005). In 1941 the gas weapon was effectively used by the USA against Japan in retaliation for its aggression and occupation of China<sup>24</sup>. On June 22, 1948 the Soviet Union decided to blockade Berlin in order to increase its hold of this city<sup>25</sup>. The blockade however, proved counterproductive, as the free world rebuilt its political identity, defined and verified its will and capacity of effective defence.

That experience urged the USA, in 1950 to acknowledge that diversification of energy resources and suppliers is an indispensable condition for national security (Parra 2004). The idea was implemented by subsequent administration to become the priority of Nixon presidency (Stern 2005). Legal instruments of market security

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<sup>21</sup> Gazprom has all attributes to play such a role. "September 11" war initiated by Al Qaida shows the scale of actions possible for such new subjects. More on methodological foundation of Gazprom as an empire, see: Negri, Hardt (2000).

<sup>22</sup> British continental blockade during Napoleonic wars makes a good example.

<sup>23</sup> In the past, China's silk monopoly or Brasilia's coffee monopoly.

<sup>24</sup> Japan depended in 80% on American supplies. Embargo left no other way than war, as German and Italian aid proved insufficient.

<sup>25</sup> From many years Berlin Blockade used to be considered the first volley of WW III – for more see: Kissinger (1996, p. 686).

were commenced then (US Trade Act 1974)<sup>26</sup>. The 1973<sup>27</sup> OPEC<sup>28</sup> implementation of an increasing (5% monthly) embargo on oil supplies to the USA, the Netherlands, Portugal, Rhodesia, South Africa and Israel positively verified the diagnosis. Arab countries made oil supplies their weapon: embargoing some countries and rewarding others (Spain, France and Great Britain) by continuing the same trade terms (Pearson and Rochester 1988, pp. 66–71; Kuźniar and Halizak 2006, pp. 197–198).

Economic sanctions after the Cold War have been used pursuant to decisions of international organisations (e.g. the UN) against Iraq or former Yugoslavia. Embargo proved ineffective in any case, as there was no collapse of any sanctioned state.

Those very different but all discouraging experiences do not allow for an answer whether Russia/Gazprom may consider boycott, the gas weapon, a potentially effective mean to fight Europe.

Free Europe experience of contending the Soviet Union opt for the second scenario. The USA under Reagan managed, by combining high wheat prices and arms race, to accelerate the fall of the Soviet Union. A long term character of gas contracts<sup>29</sup> however, discourage this scenario, as it allows for the recipient's reaction. Undertakings to create an international gas cartel, OPEC - like, speak for that scenario's implementation. Such a cartel would drastically lower the potential of effective gas resources diversification.

Considering both scenarios feasibility it is worth analysing the objective of Russian/Gazprom use of gas weapon within the next 5–10 years. Assuming the gas weapon use, it is only sensible to rationalise if remembering about Russian non rejection of Clausewitzian dictum of a war as a policy tool. Had it not been for a delayed reaction to the offended (by the Soviet Union's fall) pride, Russia would have resorted to war. Thus, a desire to construct an empire makes the only possible reason for using the gas weapon.

Definitely, even if Russia/Gazprom have lot of imperial characteristics, they lack one of its essential attributes – an expansive, attractive ideology able to exert influence inwardly (in order to win social acceptance for cost increases) and outwardly (to accept the conquest, being considered a lawfully authorised power executed by

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<sup>26</sup> The objective of national security happens to be met by economic instruments protecting the domestic market, so a policy of protectionism (strategic objectives are the main reason for protectionism instruments implementation).

<sup>27</sup> Reacting to Arab countries defeat during Yom Kippur war against Israel.

<sup>28</sup> The Organisation (established in 1960) already in 1972 controlled 41% of oil production and 47% of its supplies to West Europe.

<sup>29</sup> European importers are committed to longterm agreements with Gazprom. *Gaz de France* has renewed its gas import contract until 2030, *E.ON Ruhrgas* and *Wintershall* (both Germany) – until – respectively – 2035 and 2030, *Gasum* (Finland) – until 2025, *RWE Transgas* (Czech Republic) – until 2035, *ENI* (Italy) – until 2035. Contract extensions and new arrangements were agreed on with Austrian *EconGas*, *GWH* and *Centrex*. A contract for 2010-2030 was concluded with Romania's *Conef Energy SRL*. For details see: <http://eng.gazpromquestions.ru/index.php?id=4>.

those having higher position in the social hierarchy). Both Russia and Gazprom lack such ideology.

So, Russia is a country/society of pre-state phase, proceeding a national state concept, the state united by a system of common values. Russia/Gazprom makes a structure of *Gesellschaft* characteristics, still lacking *Gemeinschaft* qualities (Tonnies 2008). The lack of binder marks relation of passengers – staff – aircraft rather, than the structure of citizen – civil society - authority – state makes Russia/Gazprom war against the West hardly possible.

Another, equally unlikely scenario seems to be not explicitly named, still present in Polish reflections on the Ribbentrop-Molotov Pact, is a prospect of dividing the West following the “salami slicing rule”. According to it, Russia would regain their immediate neighbours guaranteeing to stop expansion on the Oder River. This scenario, even if considered attractive by Russia, is impossible to implement, as was proved Americans defending the blockaded Berlin. There is no sense listing all factors decisive for defending the vassal states-nations of the former Soviet Union, and Russia seems unlikely to try it (after Korea war, Berlin blockade or Iraqi attack on Kuwait).

The level of threat higher than in other scenarios results from Russia’s inner situation negatively influenced by Gazprom’s significance for the Russian economy and society. For many years, although Afghanistan marks a breakpoint, Russia has been evolving towards a *failed/collapsed state*<sup>30</sup> potentially able to transform into *rogue state* (Blum 2000). The Soviet Union’s breakdown merely revealed the process range. It was the only state that collapsed having NBC weapons and technology of their production. For many years the West was supporting Russia with all accessible instruments of finance and politics, considering it the last resource preventing the breakdown of worldwide non-proliferation regime and the lack of control of weapons and *know-how* in Russia itself. Increasing profits from gas and oil have altered the situation in Russia making it a relatively rich but still a collapsed state (Brzeziński 2008).

Some analyses of Human Development Index (HDI) list Russia among Third World countries, because of a relatively poor base of its economic development and alarming social indicators. Russia’s rapid economic growth results from the rocketing world oil and gas prices rather than investments in industry or services. The Russian economic structure is outdated, with unclear economic principles. A relatively low volume and rather non standard geographic structure of FDI inflowing to Russia prove the thesis (Table 2). In 2006 FDI in Russia came dominantly from

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<sup>30</sup> Failed/collapsed are states where central authorities cease to perform basic state activities due to internal circumstances. They are states lacking society, with no socially approved system of common values and objectives, with people manifesting lack of minimal level of confidence in administration and its representatives, lacking legitimate public authorities. They are states with privatized public institutions.

Cyprus, much ahead of FDI from Great Britain, the Netherlands and Luxemburg. Cyprian FDI were about twice those of German, three times bigger than French and outgrew American six times. Virgin Islands and Switzerland were among biggest investors, both commonly considered liberal towards capital source surveillance, *de facto* not at all performing any control. So dirty money inflows those countries and is to be invested abroad. It is highly probable that a substantial part of FDI coming from Cyprus or Virgin Islands originate from Russia and other post Soviet Union states<sup>31</sup>. Those funds derive, to a large extent, from criminal activity, so it is sheer money laundering. That sort of capital has no chance for being appropriated legally in industrialised countries for formal and legal reasons. It is possible too, that funds owners had gained their capital from transformation of state enterprises and are not able to carry on economic activity in a democratic, law abiding state with market economy. For that reason they are interested in investing their capital in economies founded on changeable and not fully transparent rules. Such FDIs provide neither technological progress nor development of the privatized enterprises. Another disadvantage is preventing or at least slowing down reforms in Russian economic and political systems, as this is the way to safeguard capital against alteration of political and economic conditions. Assumption of a reasonably high probability can be made that such investments represent capital owners' conviction that ways to get richer will continue to be like those in the Soviet Union or at the empire crackdown (Stiglitz 2004, pp. 127-153; Besançon 1984, pp. 40 and the following). A substantial part of dirty money invested in the economy may discourage decent investors, being rightly afraid to compete against criminals in non-transparent conditions destining them to fail.

Unfortunately, the Russian FDI from industrialised countries do not change the situation as among the leading exporters are Switzerland and the Netherlands. Yet, the non-Swiss capital flowing from Switzerland, like capital from Cyprus or Virgin Islands, comes from grey market or straight from criminal activities also in the post-soviet area. The Netherlands is also considered a state of fairly liberal rules of capital investment. Thus, Dutch FDI flowing to Russia may be at least partially, of money laundering character.

Among social indicators the most disturbing are: shorter life expectancy, pandemic of infectious diseases (tuberculosis and AIDS) and increasing alcoholism. In this context, a decreasing number of population and populating Russia-China border with foreigners seem important (see Tables 3 and 4). Table 3 proves that the years 1996–2007 saw the shortening of life expectancy (among male population higher than average). The examined period shows a negative population growth rate. Both factors resulted in the Russian population's decrease by 7 m people.

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<sup>31</sup> About cooperation of illegal organizations laundering dirty money internationally. See Madej 2004, p. 236.

**Table 2. Origins of foreign investment into Russia (%)**

	1995	2000	2002	2003	2004	2005	2006	3Q2007
UK	6	6	12	16	17	16	13	24
Netherlands	3	11	6	6	13	17	12	20
Cyprus	1	13	12	14	14	10	18	14
Luxembourg	0	2	6	8	21	26	11	9
France	4	7	6	13	6	3	6	5
Germany	10	13	20	15	4	6	9	4
Virgin Islands (UK)	1	1	7	5	2	2	4	2
Switzerland	15	7	7	4	4	4	4	9
USA	28	15	6	4	5	3	3	2
Others	33	25	19	17	15	15	28	23

Source: Eurostat, [http://ec.europa.eu/economy\\_finance/publications/publication10969\\_en.pdf](http://ec.europa.eu/economy_finance/publications/publication10969_en.pdf).

**Table 3. Main indicators of Russia**

Russian indicators	1996	2000	2007
GDP growth rate	-3,6%	10,0%	8,10%
Life expectancy at birth, total (years)	66,2	65,3	65,94
Population growth (annual %)	-27,2	-0,4	-0,5
Population, total	147 739 000	146 303 000	140 702 000

Source: [www.worldbank.org.ru](http://www.worldbank.org.ru), <https://www.cia.gov/library/publications/the-world-factbook/geos/rs.html>.

Table 4 shows deteriorating health conditions of Russian Federation citizens. Male life expectancy indicator seems alarming in particular, as men are more affected by alcoholism and occupational diseases. An increasing number of tuberculosis incidents, in spite of progress in medicine, seems significant. Health deterioration of Russians seems even bigger, as data from 1990 refer to the Soviet Union and not only to Russia, so it is an average encompassing very low indicators coming from most underdeveloped Soviet Republics. Data concerning Russia from 1990 would have been more optimistic, thus deterioration is more profound than information presented in Table 4.

After the Soviet Union collapse neither the state nor its institutions have been restored. A lack of institutional safeguarding against *coup d'état* proves this situa-

**Table 4. Main health indicators of Russia**

Indicators	1990*	2000	2003	2006
Adult mortality rate (probability of dying between 15 to 60 years per 1000 population) both sexes	218	313		300
Adult mortality rate (probability of dying between 15 to 60 years per 1000 population) female	117	161		158
Adult mortality rate (probability of dying between 15 to 60 years per 1000 population) male	318	451		432
Deaths due to tuberculosis among HIV-negative people (per 100 000 population)	9.0	20.0		16.0
Deaths due to tuberculosis among HIV-positive people (per 100 000 population)	0	0		1
Healthy life expectancy (HALE) at birth (years) both sexes			58.0	
Healthy life expectancy (HALE) at birth (years) female			64.0	
Healthy life expectancy (HALE) at birth (years) male			53.0	
Life expectancy at birth (years)	69.0	65.0		66.0
Life expectancy at birth (years) female	74.0	72.0		73.0
Life expectancy at birth (years) male	64.0	59.0		60.0
Prevalence of HIV among adults aged $\geq 15$ years (per 100 000 population)				775**
Prevalence of tuberculosis (per 100 000 population)	72.0	168.0		125.0

\* data for all Soviet Union,

\*\* 2005

Source: WHO, [http://www.who.int/whosis/database/core/core\\_select\\_process.cfm#](http://www.who.int/whosis/database/core/core_select_process.cfm#).

tion<sup>32</sup>. Russia, having in its modern history a sole short democratic episode (July till November 1917 – government of Kierensky) eliminated even such elements of the soviet democracy as separation of the army and political departments (at that time a transfer of leading position from party to army was possible, but not the other way round) or party circles selecting and controlling the government. Those rules ceased to exist and after Boris Yeltsin the procedure of appointing succeeding presidents has not adopted democratic principles<sup>33</sup>.

For the citizens a particularly painful symptom of the state collapse was the central government insolvency. Gazprom financing Russia's functioning has taken over

<sup>32</sup> Within last two decades Russia has experienced a number of *coup d'etat* attempts. Janajev's putch was hardly a mock version. General Lebedz attempt was among the most dangerous. (Lebedz established a military republic at Dniestr, died when his helicopter crashed in suspicious circumstances).

<sup>33</sup> In democratic states both the voters and the observers may not know the winner, but they are aware of his power. In Russia elections are not forged, but programmed in details. Voters simply have no choice. Political rules of Russia are not constitutionally clarified, but set by an elite mostly anonymous. For more see Applebaum (2008).

the role of the public power. As the process pursued, limits of Gazprom and the State effaced. Owing Gazprom money from gas trading, Russia has become a state capable to bear costs of its existence, that however, like in the case of 16-th century Spain financed with money from American conquest, may lead to the decline of the state and its economy.

Russia is not a democratic state and Gazprom is not an enterprise acting under market conditions (Applebaum 2008). Thus, there is a unique, because of its scale, situation that what is good for Gazprom is good for Russia and vice versa. Making the state dependent results in all disturbances in the gas market and the resulting profit decrease affects Russia with the domino effect causing reciprocal disturbances in the gas market. Russia and Gazprom's close relations result in transferring the enterprise difficulties to the State causing disturbances which subsequently affect Gazprom.

Gazprom monopolistic position and unmarked character do not encourage the enterprise either to rationalise costs or to look for new profit sources<sup>34</sup>. Gazprom is a monoculture duplicated into a monoculture state (it does not create even the structure of Korean chaebol or Japanese keiretsu – the successor to the pre-war zaibatsu). It is hard to accept that the situation may be a permanent one, with no breakdowns in the middle range perspective. In this case even a temporary breakdown of Russia-Gazprom hybrid may cause disturbances of gas supplies to Gazprom clients.

Recent increase in prices of oil and gas is of windfall profit character, being the primary source of balancing the Russian budget. Thus, it is hardly possible to consider budget income sources steady. In the short run, price fall conditioned by the world economy may result in immediate profits decrease. In the long term, a deteriorating economic situation in Russia may lead to disputes over distribution of profits from gas production and sales, ending up in stealing assets and slowing down economic development. In this case a struggle for money involves enterprises and public authorities alike, as in the case of Russian and Nigerian oil production (Nore 2004, pp. 263–264). Another factor of slowdown in growth could be looking for benefits rather than output efficiency increase. Corruption accompanying the above phenomena intensifies ineffectiveness (the situation referred to as the resource course). The Dutch disease as variation of the resource course appears in those countries, which can no longer dictate prices on the world market. The appears a new export sector in a national economy e.g. benefiting from the increase of world price for the extracted raw material. A favorable alteration in world prices, is followed by a new sector “sucking out” production agents offering them better remuneration. The fall of traditional export sectors, unable to compete against a new one, is a usual side effect. Still, the new sector favours the national economy

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<sup>34</sup> In: Briefing Russia's economy, *The Economist* (1–7.03.2008, p. 26) names Gazprom “inefficient monopoly”.

as long as its export product prices are relatively high. Their decrease may result in the economic breakdown and prosperity decline.

The analysis of threats endangering Gazprom receivers proves their high level, difficult to be lowered in other than diversification way. The use of gas weapon by Russia-Gazprom is one of the threats, as there are no instruments influencing the state building process available, as the state reinforces it and makes independent from Gazprom that would result in embracing the enterprise by market economy rules in a democratic state.

Even the low probability of Russia/Gazprom use of gas as a weapon does not mean that the existing dependence is a desired one. Strategic analysis and planning must take into consideration a multiple check of correctness, pursuant to which a non-democratic state administering the weapon is tempted to use it for its sole interest. The weapon in itself, including the economic one, is not dangerous, contrary to its non-democratic administrators. Ignoring this rule means consenting to the risk of dying on the beaches of Normandy having rejected to die for Danzig. This logic forces, while applying all instruments available to the EU and its member states, to parallel diversification of suppliers, energy sources and steady broadening of strategic reserves. Simultaneously, the EU countries should stop making bilateral deals with Russia and co-ordinate their co-operation with this country as well as equivocally support rival projects of supplying Europe with natural gas.

## **6. Conclusions**

With an increase of market power of Gazprom the Russian government is winning an instrument to influence public authorities in almost entire Europe. A strong position of the Soviet Union in the bipolar political system destroyed by the end of the 1980s is, at least partly, regained by state-owned Gazprom – through economic power. Fast development of this company, its expansion not only in the market of natural gas and its dispatch, can be politically dangerous for the whole Europe. It is as well dangerous for the Russian society that dependence on public authority is not only of economic but also political nature. Windfall profits from rising oil and gas prices are an unstable source of Russian budgetary revenues. Falling oil and gas prices can adversely affect the Russian economy and – indirectly – its political system. Destabilization of Russia can be even more dangerous for Europe than the use of gas as a weapon directed against European countries.

## References

- Applebaum A. (2008), *Rosją rządzi kaprys jednostek*, Gazeta Wyborcza, 10 July 2008.
- Besaçon A. (1984), *Anatomia widm*, Krąg, Warszawa.
- Blum W. (2000), *Cover of Roque State: A Guide to the World's Only Superpower*, Common Courage Book.
- Brzeziński Z. (2008), *Komunizm, kapitalizm, Putinizm*, Gazeta Wyborcza, 30 April–1 May 2008 i 10–11 May 2008.
- Country Report Russia*, The Economist Intelligence Unit Limited, different volumes.
- Haliżak E., Kuźniar R. (2006), *Niekonwencjonalne sposoby regulacji w stosunkach międzynarodowych*, in: *Stosunki międzynarodowe. Geneza, struktura, dynamika*, Wydawnictwo UW, Warszawa.
- Kissinger H. (1996), *Dyplomacja*, Philips Wilson, Warszawa.
- Kublik A. (2008), *Wielki brat Gazprom*, Gazeta Wyborcza, 13 May 2008, <http://gospodarka.gazeta.pl/gospodarka/1,33207,5209269.html>.
- Kuchciak Z. (2007), *Gazpromowy Nord Stream realnym zagrożeniem dla PGNiG?*, Rzeczpospolita, 17 December 2007, <http://www.rp.pl/arttykul/78002.html>.
- Madej M. (2004), *Globalizacja zagrożeń asymetrycznych*, in: *Globalizacja a stosunki międzynarodowe*, E. Haliżak, R. Kuźniar, J. Symonides (eds.).
- Negri A., Hardt M. (2000), *Empire*, Harvard University Press, Cambridge, London.
- Nore P. (2004), *Oil and Development*, in: *Covering Globalization. A Handbook for Reporters*, A. Schiffrin, A. Bisat (eds.), Columbia University Press, New York.
- Paniuszkin W., Zygar M. (2008), *Gazprom. Rosyjska broń*, Wydawnictwo W.A.B., Warszawa.
- Parra F.R. (2004), *Oil Politics: A Modern History of Petroleum*, I. B. Tauris, London.
- Pearson F. S., Rochester J. M. (1988), *International Relations. The Global Condition in the Late Twentieth Century*, Mc Graw – Hill Publishing Company, New York.
- Perloff J. M. (1998), *Microeconomics*, Addison Wesley Publishing Company, Reading Mass., New York and others.
- Pietraś M. (2002), *Koncepcje i realia reżimów międzynarodowych*, in: *Stosunki Międzynarodowe*, vol. XXV, nr 1–2 .
- Potocki W. (2006), *Gazprom – strategia totalna*, CEO, September 2006, [http://ceo.cxo.pl/arttykuly/52810\\_1.html](http://ceo.cxo.pl/arttykuly/52810_1.html).
- Romm J.J. (1993), *Defining National Security: The Nonmilitary Aspects*, Council on Foreign Relations Press, New York.
- Stern R., *Oil market Power and United States National Security*, <http://www.pnas.org/content/103/5/1650.full>.
- Stiglitz J. E. (2004), *Globalizacja*, PWN, Warszawa.
- Tonnies F. (2008), *Wspólnota i stowarzyszenie. Rozprawa o komunizmie i socjalizmie jako empirycznych formach kultury*, PWN, Warszawa.
- The Economist* (1–7.03.2008).
- US Trade Act* (1974).

### ***Internet sources***

<http://eng.gazpromquestions.ru/index.php?id=4>  
<http://europe.theoil Drum.com>  
<http://epp.eurostat.ec.europa.eu>  
[http://ec.europa.eu/economy\\_finance/publications/publication10969\\_en.pdf](http://ec.europa.eu/economy_finance/publications/publication10969_en.pdf)  
[http://media.ft.com/cms/ac6bbb8c-2baf-11dc-b498-000b5df10621,dwp\\_uuid=95d63dfa-257b-11dc-b338-000b5df10621.pdf](http://media.ft.com/cms/ac6bbb8c-2baf-11dc-b498-000b5df10621,dwp_uuid=95d63dfa-257b-11dc-b338-000b5df10621.pdf)  
<http://naftagaz.pl>  
<http://theoil Drum.com>  
<https://www.cia.gov/library/publications/the-world-factbook/geos/rs.html>  
<http://www.eia.doe.gov/emeu/cabs/tbl4c.html>  
[http://www.gazprom.com/documents/Investor\\_Day\\_31.10.2006.pdf](http://www.gazprom.com/documents/Investor_Day_31.10.2006.pdf)  
<http://www.pb.pl/Default2.aspx?ArticleID=f994ebf0-44d6-4b7d-91d6-d87b0fcad9a9&readcomment=1>  
<http://www.pnas.org>  
[http://www.who.int/whosis/database/core/core\\_select\\_process.cfm#](http://www.who.int/whosis/database/core/core_select_process.cfm#)  
<http://www.worldbank.org.ru>  
<http://wyborcza.pl>