GAZPROM INTO EUROPEAN FINAL MARKETS
Rafael Fernandez

Lead author: Rafael Fernandez (Ph.D)

Affiliation:
Applied Economics Department, Complutense Institute of International Studies,
Complutense University of Madrid

Address:
Facultad de Ciencias Económicas y Empresariales
Departamento de Economía Aplicada I, pabellón 2, 304
Campus de Somosaguas, Pozuelo de Alarcón, 28223
Tel: 0034-91-3942473
Fax: 0034-91-3942499
e-mail: rafeman@ccce.ucm.es
e-mail: clara.garcia@ccce.ucm.es
1. Introduction

Since the beginning of the last decade the Russian government set in motion an ambitious strategy to expand and diversify the productive and export capacity of the gas sector, the state-owned Gazprom has proved extremely active on many fronts, especially from 2005, coinciding with rising prices and the consequent improvement of company accounts (Stern, 2005 and 2009, Locatelli, 2007).

Gazprom has developed large projects upstream (exploration and exploitation of gas in Russia) and midstream (construction of new long-distance pipelines). And at the same time, it is planning to install several LNG plants, export gas to Asia-Pacific, invest in other producing countries, and last but not least to become a main player into the EU final market (Poussenkova, 2010).

Thus, Gazprom has quickly become a special model of NOGC (National Oil & Gas Company), since without losing its political ties to the Russian State\(^1\) is now a large transnational gas company which covers all phases of the gas cycle and participates in various areas of energy business\(^2\). This process of vertical integration on a global scale has been carried out by creating joint ventures and strategic alliances with some major European companies, according to criteria and methods similar to those of TOC (Transnational Oil Company).

The paper aims to analyze this process, paying special attention to Gazprom move into EU downstream markets. The conclusion is that this expansion, including business alliances with

---

\(^*\)This paper is part of a research project financed by the Complutense University (Madrid, Spain), CAM/UCM (CCG08-UCM/HUM-4142).

\(^1\) Under Putin Presidency, the State strengthened its control over the company, increasing its stake to 51% and then forcing a profound renewal of top managers.

\(^2\) Gazprom Group also has a significant presence in the power and oil sectors. The company also has interests in other key sectors of the Russian economy as metallurgy, chemistry, finance, and media (www.gazprom.com).
European companies, relies on Putin’s political support but is fully consistent with current operating conditions of the international market for natural gas. The analysis is divided into five parts. First, it raises the basic lines of the growth strategy of the company and then discusses the key of this strategy in each of the three phases of the gas cycle. Finally, it details the role played by the agreements, investments and acquisitions of other companies in transforming Gazprom into a global vertically integrated company.

2. Strategic approach

Russia provides 27% of gas world reserves, and a fifth of production and exports. 60% of these reserves, 80% of this production and 100% of these exports belong to Gazprom. Foreign markets receive 45% of Gazprom’s production, of which 30% goes to the CIS and 70% to Europe, mostly to the European Union (EU). Although sales outside the CIS account just for 30% of the company's supply, they provide more than 60% of revenues, because international prices are four-five times higher than the prevailing in the home market. This fact reinforces the strategic value of the European market, EU especially. The market share of Gazprom inside the EU is more than one third of imports coming outside EU countries, and almost a quarter of total EU gas demand. Within the EU, Gazprom main customers are Germany (25%), Italy (14%), France (7%) and UK (7%); and outside the EU, Turkey is another important market, the third for sales volume. Within the CIS, Ukraine and Belarus continue to receive a substantial part of Gazprom's supply. Central European countries, which are traditional customers and very much dependent on imports from the Russian company, do not have large nor growing markets, so currently do not reach as prominent position as Western countries.

The company's goal is not to lose market share in these “consolidate” markets, appearing as a reliable partner able to maintain a continuous and growing flow of exports. At the same time,

---

3 It is common to discuss the internationalization of Gazprom only in political terms. On the role of energy in Russia's foreign policy, see Liuhto (2010), Shadrin (2010) and Perovic (2009).
Gazprom wants to open up to other Western European economies and diversify their sales to markets in East Asia.\textsuperscript{4}

To fulfill these goals, Gazprom needs to develop a comprehensive strategy, with three levels of action, which together account for the transformation of the Russian state-owned enterprise into a vertically integrated global company. The three levels of action are:

1) \textit{Upstream}: Gazprom needs to undertake a highly complex upstream expansion strategy in order to increase and diversify its sales abroad. This strategy includes exploring new territories and putting into operation new fields in remote areas. To increase exports, Gazprom can also choose less costly alternatives which can supplement, but not replace, the necessary expansion and geographical diversification of its productive capacity.

2) \textit{Midstream}: Directly related to the former goal, Gazprom also needs to develop a specific strategy for the expansion and diversification of transport infrastructure. This expansion requires large investments. Previously, ways of transport (tubes or vessels), routes, destinations and partners must be chosen.

3) \textit{Downstream}: Gazprom needs to be sure that the investment dedicated to expanding its export capacity is finding a stable and rising demand, whether in Europe or Asia. Demand security relies mainly on the continuity of long-term contracts, but investments to get direct access to European final consumers, either industries or households, are also an option. Buying assets into EU downstream markets, Gazprom not only gets the chance to increase profit margins but strength the “loyalty” of its main costumers.

\textsuperscript{4} Diversification of exports is a Russia's goal since the seventies. However, the first sales in Asian markets, from the island of Sakhalin, were not performed until 2008. The government is forecasting Asian sales will be a fifth by 2030 (Gromov, 2009, 2010). For Gazprom's strategy toward Japan, China and Korea, see Stern and Bradshaw (2008).
Table 1. Gazprom: production and exports, 2005-2009 (bcm)

<table>
<thead>
<tr>
<th></th>
<th>2005</th>
<th>2006</th>
<th>2007</th>
<th>2008</th>
<th>2009</th>
<th>Sales country (%)</th>
<th>Sales country within region (%)</th>
<th>Purchases to Gazprom of total imports (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Imports</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Turkmenistan</td>
<td>555</td>
<td>556</td>
<td>549</td>
<td>550</td>
<td>461</td>
<td>66.2</td>
<td>37.3</td>
<td></td>
</tr>
<tr>
<td>Uzbekistan</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>42.3</td>
<td>11.8</td>
<td></td>
</tr>
<tr>
<td>Kazakhstan</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>14.2</td>
<td>15.4</td>
<td></td>
</tr>
<tr>
<td><strong>Supply: P+M</strong></td>
<td>555</td>
<td>556</td>
<td>549</td>
<td>616</td>
<td>499</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Exports</strong></td>
<td>233</td>
<td>262</td>
<td>265</td>
<td>270</td>
<td>222</td>
<td>100.0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Austria</td>
<td>6.8</td>
<td>6.6</td>
<td>5.4</td>
<td>5.8</td>
<td>5.4</td>
<td>2.4</td>
<td>4.1</td>
<td>68.1</td>
</tr>
<tr>
<td>Germany</td>
<td>36</td>
<td>34.4</td>
<td>34.5</td>
<td>37.9</td>
<td>33.5</td>
<td>15.1</td>
<td>25.5</td>
<td>35.5</td>
</tr>
<tr>
<td>Belgium</td>
<td>2</td>
<td>3.2</td>
<td>4.3</td>
<td>3.4</td>
<td>3.3</td>
<td>1.5</td>
<td>2.5</td>
<td>15.3</td>
</tr>
<tr>
<td>Bulgaria</td>
<td>2.6</td>
<td>2.7</td>
<td>2.8</td>
<td>2.9</td>
<td>2.2</td>
<td>1.0</td>
<td>1.7</td>
<td>100</td>
</tr>
<tr>
<td>Slovakia</td>
<td>7.5</td>
<td>7</td>
<td>6.2</td>
<td>6.2</td>
<td>5.4</td>
<td>2.4</td>
<td>4.1</td>
<td>100</td>
</tr>
<tr>
<td>Slovenia</td>
<td>0.7</td>
<td>0.7</td>
<td>0.6</td>
<td>0.6</td>
<td>0.5</td>
<td>0.2</td>
<td>0.4</td>
<td>57.3</td>
</tr>
<tr>
<td>Estonia</td>
<td>1.3</td>
<td>0.7</td>
<td>0.9</td>
<td>0.6</td>
<td>0.8</td>
<td>0.4</td>
<td>0.6</td>
<td>68</td>
</tr>
<tr>
<td>Finland</td>
<td>4.5</td>
<td>4.9</td>
<td>4.7</td>
<td>4.8</td>
<td>4.4</td>
<td>2.0</td>
<td>3.4</td>
<td>100</td>
</tr>
<tr>
<td>France</td>
<td>13.2</td>
<td>10</td>
<td>10.1</td>
<td>10.4</td>
<td>10</td>
<td>4.5</td>
<td>7.6</td>
<td>16.7</td>
</tr>
<tr>
<td>Greece</td>
<td>2.4</td>
<td>2.7</td>
<td>3.1</td>
<td>2.8</td>
<td>2.1</td>
<td>0.9</td>
<td>1.6</td>
<td>62.3</td>
</tr>
<tr>
<td>Holland</td>
<td>4.1</td>
<td>4.7</td>
<td>5.5</td>
<td>5.3</td>
<td>5.1</td>
<td>2.3</td>
<td>3.9</td>
<td>24.8</td>
</tr>
<tr>
<td>Hungary</td>
<td>9</td>
<td>8.8</td>
<td>7.5</td>
<td>8.9</td>
<td>7.6</td>
<td>3.4</td>
<td>5.8</td>
<td>88.9</td>
</tr>
<tr>
<td>Italy</td>
<td>22</td>
<td>22.1</td>
<td>22</td>
<td>22.4</td>
<td>19.1</td>
<td>8.6</td>
<td>14.5</td>
<td>30</td>
</tr>
<tr>
<td>Latvia</td>
<td>1.4</td>
<td>1.4</td>
<td>1</td>
<td>0.7</td>
<td>1.1</td>
<td>0.5</td>
<td>0.8</td>
<td>100</td>
</tr>
<tr>
<td>Lithuania</td>
<td>2.8</td>
<td>2.8</td>
<td>3.4</td>
<td>2.8</td>
<td>2.5</td>
<td>1.1</td>
<td>1.9</td>
<td>100</td>
</tr>
<tr>
<td>Poland</td>
<td>7</td>
<td>7.7</td>
<td>7</td>
<td>7.9</td>
<td>9</td>
<td>4.0</td>
<td>6.9</td>
<td>71.1</td>
</tr>
<tr>
<td>Czech R.</td>
<td>7.4</td>
<td>7.4</td>
<td>7.2</td>
<td>7.9</td>
<td>7.1</td>
<td>3.2</td>
<td>5.4</td>
<td>100</td>
</tr>
<tr>
<td>United K.</td>
<td>3.8</td>
<td>8.7</td>
<td>15.2</td>
<td>7.7</td>
<td>9.7</td>
<td>4.4</td>
<td>7.4</td>
<td>18</td>
</tr>
<tr>
<td>Romania</td>
<td>5</td>
<td>5.5</td>
<td>4.5</td>
<td>4.2</td>
<td>2.5</td>
<td>1.1</td>
<td>1.9</td>
<td>100</td>
</tr>
<tr>
<td>UE-27</td>
<td>139</td>
<td>142</td>
<td>146</td>
<td>143</td>
<td>131</td>
<td>59.0</td>
<td>100.0</td>
<td>26.5</td>
</tr>
<tr>
<td>Bosnia</td>
<td>0.4</td>
<td>0.4</td>
<td>0.3</td>
<td>0.3</td>
<td>0.2</td>
<td>0.1</td>
<td>0.8</td>
<td>100</td>
</tr>
<tr>
<td>Croatia</td>
<td>1.2</td>
<td>1.1</td>
<td>1.1</td>
<td>1.2</td>
<td>1.1</td>
<td>0.5</td>
<td>4.2</td>
<td>89.1</td>
</tr>
<tr>
<td>Macedonia</td>
<td>0.1</td>
<td>0.1</td>
<td>0.1</td>
<td>0.1</td>
<td>0.1</td>
<td>0.0</td>
<td>0.4</td>
<td>100</td>
</tr>
<tr>
<td>Servia</td>
<td>2</td>
<td>2.1</td>
<td>2.1</td>
<td>2.2</td>
<td>1.7</td>
<td>0.8</td>
<td>6.6</td>
<td>100</td>
</tr>
<tr>
<td>Switzerland</td>
<td>0.4</td>
<td>0.4</td>
<td>0.4</td>
<td>0.3</td>
<td>0.3</td>
<td>0.1</td>
<td>1.2</td>
<td>9.7</td>
</tr>
<tr>
<td>Turkey</td>
<td>18</td>
<td>19.9</td>
<td>23.4</td>
<td>23.8</td>
<td>20</td>
<td>9.0</td>
<td>77.2</td>
<td>52.1</td>
</tr>
<tr>
<td>Others</td>
<td>0</td>
<td>0.4</td>
<td>0.5</td>
<td>0.6</td>
<td>2.5</td>
<td>1.1</td>
<td>9.7</td>
<td></td>
</tr>
<tr>
<td>Rest f Europe</td>
<td>22</td>
<td>24</td>
<td>28</td>
<td>29</td>
<td>26</td>
<td>11.6</td>
<td>100.0</td>
<td></td>
</tr>
<tr>
<td>Europe</td>
<td>162</td>
<td>166</td>
<td>174</td>
<td>172</td>
<td>157</td>
<td>70.7</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Armenia</td>
<td>1.7</td>
<td>1.7</td>
<td>1.9</td>
<td>2.1</td>
<td>1.7</td>
<td>0.8</td>
<td>2.7</td>
<td>100</td>
</tr>
<tr>
<td>Azerbaijan</td>
<td>3.8</td>
<td>4</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
</tr>
<tr>
<td>Belarus</td>
<td>19.8</td>
<td>20.5</td>
<td>20.6</td>
<td>21.1</td>
<td>17.6</td>
<td>7.9</td>
<td>27.8</td>
<td>100</td>
</tr>
<tr>
<td>Georgia</td>
<td>1.4</td>
<td>1.9</td>
<td>1.2</td>
<td>0.7</td>
<td>0.1</td>
<td>0.0</td>
<td>0.2</td>
<td>12.5</td>
</tr>
<tr>
<td>Kazakhstan</td>
<td>4</td>
<td>6.5</td>
<td>10</td>
<td>9.6</td>
<td>3.1</td>
<td>1.4</td>
<td>4.9</td>
<td>37.1</td>
</tr>
<tr>
<td>Moldavia</td>
<td>2.8</td>
<td>2.5</td>
<td>2.7</td>
<td>2.7</td>
<td>3</td>
<td>1.3</td>
<td>4.7</td>
<td>56.9</td>
</tr>
<tr>
<td>Ukraine</td>
<td>37.6</td>
<td>59</td>
<td>54.8</td>
<td>56.2</td>
<td>37.8</td>
<td>17.0</td>
<td>59.7</td>
<td>100</td>
</tr>
</tbody>
</table>
3. Upstream and Midstream: Expansion and geographical diversification

3.1. Upstream: New fields and territories

Gazprom accounts for 90% of its output in Nadym-Pur-Taz (NPT), Western Siberia, with production expected to begin to decline in the middle of this decade. In principle, this decline is not particularly problematic because Gazprom has more than enough proven reserves in other territories. The problem is that around 40% of these reserves are located in remote areas lacking infrastructure, so the launch of these new production regions requires large investments.

After many years of neglect, these investments began to grow in the middle of the last decade, mostly focused toward the opening of new wells in secondary fields from NPT and large-scale development of a new productive region on the Yamal Peninsula, north of NPT, which is expected to start production in 2012. Later, Yamal contribution could be supplemented by gas from the Ob and Taz Bay, which borders the Peninsula, and the offshore Shtokman field, located in the Barents Sea. This way Gazprom would have a more than sufficient margin to further increase its exports to European markets.

However, Gazprom also intends to expand its presence in Asian markets, which implies that major investments in the Eastern regions should be made. Instead a slower expansion of Yamal, Shotkman, and other territories that are closer to European markets must be accepted. In turn, under the program of eastward expansion, Gazprom finds different alternatives. Fields of Sakha-Yakutia (onshore), in the Far East, and Sakhalin Island (offshore), in the Pacific, are closer to Asian markets, but fields in Krasnoyarsk (Yurubcheno and Sobinskoye) and Irkutsk (Kovytka), located in eastern Siberia, give greater versatility as could supply both the Russian and the Chinese market (Fernández, 2010).
All these choices, of enormous significance for the future of the company, depend largely on the existence of commercial and financial partnerships with companies from importing countries to ensure the viability and profitability of the investments to be undertaken. In Asia, the precariousness of these commitments has been decades delaying plans for expansion to the East; recently, there have been major advances, but the lack of an agreement with the Chinese government on selling prices continues to complicate the development of investments in upstream at Eastern Siberia and Far East (Fernandez and Palazuelos, 2011). For the export of gas to Europe, Gazprom has a framework of relationships much more stable and well defined, but in recent years several factors have raised greater uncertainty about future gas demand and, consequently, so have the safeguards of gas companies regarding their investment plans. This situation is discussed later in more detail, as well as the ways Gazprom has tried to reduce this risk.

3.2. Other ways to increase the export potential

Properly managing the tempo of upstream investments is of great difficulty. Fortunately, Gazprom has other ways to increase its export potential. These other “routes” are not enough to solve the investment challenge, but especially in the short term they can play a particularly crucial role.

a) Domestic price increases: over the last decade, the international price has remained about five times domestic price. For the state-owned company, the price convergence, discounted taxes and transport costs, initially scheduled for 2014-2015, is needed for two reasons: it would help to rationalize the consumption of gas within Russia, which is needed in order to divert gas from home to export, and (especially) to collect additional revenues to finance large investments. However, despite Gazprom interests, the Government has always

5 More detailed information on the development of upstream projects can be found on the website of the company: www.gazprom.com. For a detailed analysis on the Russian gas reserves, see Soderbergh, et. al, 2010; and Fernandez, 2009.
managed wisely its pricing policy, because price increases have important impacts on household budgets and on costs of industrial enterprises (Tsygankov, 2008).

b) **Improving energy efficiency:** reducing domestic consumption also depends on measures such as modernization of industrial equipment, renovation of housing stock, the upgrading of gas distribution networks and the replacement of the heat generation plants and electricity. In all of them, but especially in the last two, Gazprom has the ability to influence directly, because it owns the entire distribution network and shareholdings in the electricity sector are recently increasing (Fernandez, 2009; IEA 2006)

c) **Leaving room to independent companies inside the Russian market:** Beyond the ability to moderate the growth of domestic demand, the most effective alternative to increase export potential is to open domestic markets to independent companies. In 2000, these companies contributed only 11% of Russian production, and in 2010 this contribution was 21%, with half the oil companies, most of Lukoil and Rosneft, and the other half to other gas companies, including Novatek which is number one among independents. Gazprom owns a fifth of Novatek’s capital (Henderson, 2010; Locatelli, 2008).

d) **Supply agreements with Central Asia:** Over the years of greatest growth in gas demand, Gazprom made a great effort to normalize its relations with exporting countries at Central Asia in order to ensure an increasing flow of natural gas, as it was the cheapest and fastest way to cover gas demand from CIS importing countries. This “domestic” trade between countries of the former USSR allowed Gazprom to release some of their own production for EU markets. Thus, in 2008, Gazprom came to buy in central Asia more than 65 bcm, which accounts for more than a fifth of their net exports. In 2009, these flows dropped suddenly, showing that Central Asian supplies are used by Gazprom as an adjustment variable, quite flexible and inexpensive. However, this option is currently in danger due to the entry of competition from China (Pirani, 2008 and Fernandez, 2011).

e) **Changing trade relations with CIS importing countries:** Before the sharp fall in demand in 2009, Gazprom sold 77 bcm to Ukraine and Belarus, which is 30% of foreign sales, except
that they are conducted at prices below international prices. The forthcoming opening of new transport routes, and the gradual reduction of the gap between the international price and the CIS price, will surely contribute to moderate gas demand by these countries. This reduction will give another surplus of exports to EU markets.

3.3. Midstream: investments in all directions

Accompanying the set of measures to ensure (if necessary) a moderate increase in export supply, the second key of the export strategy is to expand and diversify the infrastructure connecting the producing regions with the importing countries.

To this end will go most part of Gazprom capital expenditure over the next two decades. The challenge is extraordinarily ambitious, as it tries to connect Siberia with China and the Pacific, while is carried out a thorough renovation of the pipelines which pump gas toward Europe. Moreover, Gazprom plans to start LNG distribution. The putting into operation of Northern and Eastern productive regions depends largely on the pace at which they are moving these transport facilities.

In the case of Europe, Gazprom needs to connect the new regions of Yamal and Shtockman with the European market, but the expansion and renovation of the transport network also seeks: i) to avoid the risk of bottlenecks occurring in the old pipeline built in Soviet times, and ii) above all, to reduce transit dependence on Ukraine.

Currently, 80% of Gazprom gas exports to Europe pass through Ukraine via the old Soviet Brotherhood pipeline. Only Goluvoi Potok (Blue Stream), which crosses the Black Sea from north to south into Turkey, and the Yamal-Europe (Northern Light), which allows entry into the EU via Belarus, achieve to offset partially this transit dependence on Ukraine.

6 On January 2009, Gazprom and NAK Naftogaz Ukrainy reached an agreement on prices and quantities that it is supposed to last until 2019 (Pirani, et. al 2010). On trade disputes with Ukraine see Stern, 2006; and Pirani et. al, 2009.

7 More detailed information on Gazprom's pipelines that go to Europe is in Barysh (2009) and Nies (2008). Most current information is on the web: www.gazprom.es
Since the mid-decade, Gazprom’s strategy is focused on building two gas pipelines able to break this dependence. The first of these projects is the Nord Stream, coming from Russia to Germany across the Baltic Sea. The second is the Southstream which will enter Europe through the Black Sea across Bulgaria. It is scheduled to arrive to Hungary and Austria through Serbia, while it could also supply Greece and Italy. Thus, in the middle of next decade, the gas pumped to Europe via Ukraine could represent less than 30%.

By passing Ukraine, Gazprom will not only provide greater security to its EU customers, but also have a much greater leeway to change the pricing policy toward Ukraine that was implemented after the collapse of the USSR. In addition, Southstream offers an alternative to Nabucco, a project sponsored by various Central European companies and governments. Southstream not only sought to escape this transit dependence from Ukraine, but also reduce dependence on Russian supplies and jeopardize the Russian monopoly over Central Asia (Fernández, 2011)

Besides these two mega projects, Gazprom also has plans to build another pipeline that connects Shtokman to Nord Stream, as well as a LNG plant in this field that would allow to move offshore gas not only to Europe but also the United States. Finally, the investment program includes the extension of the Northern Light to export gas from Yamal, either via Belarus through the Yamal-Europe or via the Baltic Sea through Nord Stream.

Recently, Gazprom also considers building a LNG plant in the Yamal Peninsula, although the cost and technological complexity of this project are particularly high. However, the goal is this plant provides greater flexibility to allocate production to Europe, Asia or North America, depending on market conditions.

According to schedule, Gazprom plans to finish Nordstream in 2012 and Southstream 2015. The Shtokman pipeline and the LNG plant would be operational in 2016 and 2017, respectively, and the extension of Northern Light in 2015. In those years Gazprom could also begin to sell liquefied gas from Yamal. However, these dates are continually changing, as a result of the high cost and technical complexity of all these projects, and the many uncertainties surrounding the
evolution of the sector worldwide. The greater doubts are concerning the construction of LNG plants in Yamal and Shtokman, but also recently has even questioned the interest of Southstream which could be replaced by an LNG plant that stand at the Russian Black Sea coast.

Map 1: Pipeline network and new productive regions

![Map of Russia showing pipeline network and new productive regions.](source: www.gazprom.com (22/04/2011).

4. **Downstream: Gazprom becomes a global company**

4.1. **Why does Gazprom go downstream?**

The core business of Gazprom is in the upper parts of the gas cycle, but its transformation into a vertically integrated transnational company has accomplished with the internationalization of its downstream activities. This internationalization has served two strategies of a different nature but complementary.

The first has a more "defensive" character which is consistent to the interests of an upstream company engaged in the business of exporting natural gas, whose main objective is to ensure
that their customers are committed to purchase a continuous flow of gas along the time. The second strategy is more "offensive" and seeks to take advantage of economies of scale, scope and expertise in order to take positions in European final markets which offer large profit margins.

Both strategies are complementary because they go through the same path (vertical integration from upstream to international downstream) and are facilitated (and, in some way, enforced) by the same process: the EU gas market liberalization. On the one hand, liberalization ended with the former barrier between the upstream of the downstream, making easier the development of integration strategies in both directions (from top to bottom and bottom to top). On the other hand, liberalization has contributed to an environment of greater uncertainty, which in recent years has been intensified by other factors surrounding such as LNG gas boom, boosting renewable energies and the European renaissance of nuclear energy (before Fukushima), not to mention other events of even more uncertain future as the competition of unconventional gas.

This uncertainty has also stimulated vertical integration and “self-contracting”, as a method of risk reduction, cost control, and protection against hostile mergers.

This self-contracting has come no to replace but complement long-term contracts (which are nothing else than another form to internalize economic transactions). Gazprom sells gas to their own downstream trading subsidiaries which sell directly to small resellers and end users. This way the group achieve greater portfolio flexibility because this gas can be sold under different terms, either through long term or short term conditions (Figure 1). Thus, large sellers (not only Gazprom) are adapting to new market conditions in such a way that open market transactions are still a small part of the gas traded in Europe.

See Honoré (2010), and Stern and Rogers (2011) for a detailed analysis about recent changes that are affecting the functioning of the European natural gas market.

Take or pay oil-linked Long-term contracts (twenty to thirty years) are still dominant in Europe (even more than ten years after liberalization). They seem to be useful for both the seller, because they guarantee a return on investment (upstream and midstream) subject to very high fixed costs, and the buyer, because they ensure a continued supply of gas at a price competitive with a product (theoretically) replacement (Finon and Locatelli, 2007).

The development of open markets, organized around multiple hubs, is a major strategic commitment of the EU. One of its objectives is to break bilateral trade relations with Russia (Noel, 2008). Currently, spot
4.2. Gazprom into European downstream

The formulas through which Gazprom has developed this strategy to expand downstream are varied and its scope is far from negligible\textsuperscript{11}:

- Establishing subsidiaries directly linked to the Russian holding. These include: Gazprom Export, which manages wholesale contracts with large importers, and Gazprom Germania, which, based in Halle (Germany), comprises thirty companies operating in over twenty countries with the aim of selling gas from Russian and Central Asia and Russia into Germany and other EU countries.

- Shareholding, directly or through Gazprom Export, in the leading utility companies of the small countries of Central and Eastern Europe, whose economies are highly dependent on markets represent less than 15% of trade, of which the vast majority takes place in the hubs in the UK and Holland.

\textsuperscript{11} The information provided below is available on the websites of Gazprom and its subsidiaries. Complete with data provided by Energy Intelligence (2008) and Ehrstedt and Vahtra (2008).
Russian imports: Finland (Gasum, 25%), Estonia (Eesti Gas, 37%) Latvia (Latvijas Gaze, 34%), Lithuania (Lietuvos dujos, 37%) and Serbia (Yurgorosgas, 50%), among others.

- Shareholding, through Gazprom Germania, in different trading companies in countries like Austria (GWH, 50%), Hungary (Panrusgáz, 40%), Poland (EuropolGas, 48%), Czech Republic (Vermex, 50%), Romania (WIEE, 50%), Bulgaria (WIEE, 50%), Serbia (Progresstrading, 25%) and Turkey (Turusgas, 45% and Bosphorgaz, 50%), whose ownership is sometimes shared by other companies that also belong to Gazprom.

- Creation of joint ventures through partnerships with large European majors. The two most important are Wingas and Wiehe, of which Gazprom Germania and Wintershall Holding AG hold 50% each. Wintershall is a wholly owned subsidiary of the German chemical company BASF. Wingas is the seventh largest gas utility in Europe which sold 27 bcm in 2010. Thus, through this company Gazprom has not only became a main gas retailer inside the German market, but also got the chance to enter into the final markets of other European countries such as Belgium and the UK, and to a lesser extent, France, Austria, Holland and Denmark. In addition, Wingas Transport owns the large diameter pipeline that crosses Germany coming from Russia, as well as an extensive network of high pressure pipes inside the German market.

- Playing in open markets, through Gas Management and Trading (former Gazprom UK Trading), a subsidiary of Gazprom group, linked to Gazprom Germania. GM&T has subsidiaries in Germany, France, USA and Singapore, and acts as a trader in the major hubs of the EU (NBP, Zeebrugge, TTF and EGT). Since 2001, it has got license to pump gas through the British pipeline system in order to sell gas to different power stations and, since 2007, also participates in the electricity markets of France and Germany.

- Shareholding in Europe's largest gas storage centers (Haidadi, Austria, and Rehder, Germany) to supply hubs and final consumers through GM&T. The owner is the Gazprom’s subsidiary ZMB, based in Switzerland, 100% owned by Gazprom Germania. ZMB also has
license, through its subsidiary Wingas Storage UK Ltd, to manage the center of Saltfeetburg, in UK.

- Shareholding new hubs, particularly the Central European Gas Hub (CEGH) in Baumgarten, Austria. To do this, Gazprom closed in 2008 an agreement with the Austrian IOC OMV, which has since been stopped by the EU authorities. Gazprom appears as minor shareholder (30%), but should actually own another 20% through Centrex Europe Energy and Gas, a trading gas that is 100% owned by Gazprom. The agreement with OMV also included a partnership agreement between Russians and Austrians to build highly expensive storage facilities, which are necessary for developing CEGH.

- Participación en proyectos de licuefacción de gas fuera de Rusia, en Malasia, Trinidad y Argelia, para la venta de gas en Europa, USA, Japón y Corea, tanto a través de hubs como de contratos a largo plazo. Esta tarea es responsabilidad de Gazprom Global LNG Ltd, que es propiedad de GM&T.

- Participación en Production Sharing Agreements (PSA) para la extracción de gas en Asia central, a través de compañías con sede en Suiza como ZMB y Centra Gas Holding AG, que también llevan a cabo las gestiones comerciales para la venta del gas centroasiático en Ucrania y otros países centroeuropaes, por medio de otras empresas intermediarías, que también pertenecen al grupo Gazprom como RosUkrEnergo y Grupo DF.

These different forms of sailing downstream are complemented by other paths of internationalization:

- Shareholding in LNG projects outside Russia; in Malaysia, Trinidad and Algeria for shipping gas to Europe, USA, Japan and Korea. Gazprom Global LNG Ltd is responsible for this task; it is owned by GM&T that sells this gas both in spot markets and long-term contracts.

- Signing Production Sharing Agreements (PSA) to drill gas in Central Asia, through companies based in Switzerland as ZMB and Centra Gas Holding AG. CGH also act as a trader for the sale of Central Asian gas to Ukraine and other Central European countries,
where Gazprom is the owner of other trading companies such as RosUkrEnergo and Group DF.

- Different types of agreements between Gazprom and EP International PDVSA of Venezuela, and the NOCs of Algeria, India, Bolivia and Vietnam, to carry out prospecting works in fields offshore and onshore. In the next future these agreements can be an important complement to globalize the scope of the company.

And finally to all the above must be added different routes of inward internationalization (entry of foreign companies in projects that are developed by Gazprom inside Russia). These routes have been followed since 2005 to capture both financial and technological resources, but also to strengthen "supply alliances" with major European importers.

- Swapping assets for strategic purposes. The best example is the agreement reached in 2005 with Wintershall. Gazprom gave this German company 25% of SevernefteGazprom, which leads the project for the exploitation of the Yuzhno-Russkoye field (NPT), in exchange for raising Gazprom’s stake in Wingas to 50%. Gazprom also shares with Wintershall the Achimov field in NPT. In 2009, the German E.On joined the project in YuzhnoRusskoye.

- Opening offshore projects of high technical complexity to European companies, such as the Shtokman, with France's Total (25%) and Norway's Statoil (25%), and Sakhalin-2 with the Shell American (27.5 %) and Japan's Mitsui (12.5%) and Mitsubishi (10%)12.

- Joint projects for the construction of large pipelines, seeking to ensure supplies as much as financial and technological resources. Nordstream is carried out by Gazprom and E. On, and Southstream by the Italian IOC ENI, which also was a partner of Gazprom in the construction of Bluestream. The recent entry of BASF and EDF in Southstream and GDF Suez in Nord Stream, where now Gazprom holds 49% for 51% Wintershall, E. On and Nederlandse Gasunie, give to these projects greater strategic importance, as they draw a wide circle of partnerships with the major gas companies in Europe.

---

12 The entry of Gazprom in Sakhalin-2 also resulted in an exchange of assets with Shell, which was given the half share of the project for the development of Zapolyarnoye deposits in western Siberia, but in this case the objective was none other than forcing Shell to transfer to Gazprom the leading of the project.
Overall, this is a picture that, without wishing to be complete, is sufficiently clear to portray the dense network of investments and business relations that starting in the upstream flow into European downstream market to turn Gazprom into a fully internationalized company able to vertically integrate the entire gas cycle.

Figure 2. Gazprom from upstream to downstream

![Diagram of Gazprom's operations from upstream to downstream](source: Own made)

5. Conclusion

The consolidation of Gazprom as a world leader has demanded the implementation of an ambitious strategy to expand its productive base and its transport infrastructure. These investments have been accompanied by an increasing internationalization of the company, primarily focused on the business of gas distribution and marketing within the European market.
As a result Gazprom is not any more just a foreign gas supplier but an important player in a lot of European wholesale and final markets.

Gazprom strategic approach towards Europe is mainly explained by two reasons: first, Gazprom enters into the most profitable area of the gas business, taking advantage of economies of scale, scope and experience; second, Gazprom goes to the end of the value chain to reduce uncertainty and ensure stable demand from European countries, which is essential to offset the high risks that entail the upstream investment projects. In both cases, the globalization of the company is completely understandable by business criteria. In other words, the scope, methods and objectives of this internationalization does not support the idea that this expansion has been mainly to serve the geopolitical interests of the Russian government.

The latter does not deny that Russian energy diplomacy has played an important role in promoting and negotiating agreements with foreign companies. Nor does it deny that Gazprom’s partnerships also seek "political" goals, as it is to deepen business interdependence with the three major states of the EU, thereby weakening the position of those who advocate a greater distance strategy towards Russia. Gazprom remains a state enterprise whose major strategic decisions have to balance the political interests of the business, but its recent transformation into a vertically integrated global company with multiple interests and partnerships with various gas companies in different countries shows that it is a state company that moves away from the stereotype of a typical NOGC and approaches in their size, scope and mode of operation to the characteristics of a TOGC.

References


