

# Russian and European gas interdependence: Could contractual trade channel geopolitics?

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## Abstract

In a framework of international political economics, this article analyses the increasing distance between Russia and the European Union (EU) in their interdependent relationship with regard to gas. The representations of economic risks associated with the dominant position of the Russian seller in the European gas market are analysed in terms of industrial economics. Then the relevance of possible responses by the EU is analysed in relation to the reality of alleged risks of gas dependence: the tentative EU–Russia regulatory unification, the creation of a single gas negotiator, and the support to a denser pan-European network, with additional entry points and sources of supply and increased market integration in order to increase the contestability of the markets.

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## 1. Introduction

A great deal has been written recently on relations between European Union (EU) countries and Russia with respect to gas. Alarmed by the fears stirred up by the supply cuts following the gas dispute between Russia and Ukraine in January 2006, European states are increasingly concerned about their growing dependence on Russian gas (40% of imports) and the strategy of the quasi-public company Gazprom, which would like to take control of some major gas companies in certain countries without offering anything very substantial in return. Politicians and the media are advocating an excessively gloomy picture of relations between the EU and Russia, sullied by a geopolitical power struggle. Unfortunately, this view has spilled over into analysis of the economic risks associated with Gazprom's dominant position on the European gas market.

The economists and political commentators who latch onto this issue tend to extrapolate from the political risk

typically associated with a position of dependence to business relations, highlighting the risk of market power resulting from an alleged monopoly. The list of possible economic risks associated, wrongly or rightly, with growing Russian gas exports to Europe is long. But there is no certainty that a dramatic interpretation of the economic risk is particularly helpful in the search for a compromise, with stable rules governing trade in gas between Russia and the EU. However, this interpretation is currently guiding politicians, the media, and many of the analysts advising governments, such as Clark (2006), a former advisor to the British government. Other reputable analysts, in particular Stern (2005, 2006), propose a much less dramatic interpretation of the Russian government's political and economic strategy for exploiting its gas resources and sales to Europe. But insufficient attention is paid to such views.

Adopting a more alarmist line, some member states, as well as the European Commission in its March 2006 Green Paper (EC, 2006), advocate a widespread campaign to force Russia to sign the Energy Charter Treaty or at least to adopt its market principles. Some member states, the UK, France, some Central European countries, and the Baltic states are also advocating establishment of a “single

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negotiator” for contracts to be signed with external sellers, the Russian seller foremost.<sup>1</sup> The European Commission, which could not politically integrate this measure into its proposals but is keen to reinforce its power to manage European energy supplies in the long term, defends as a leitmotiv the necessity to “speak with a single voice”. This is intended to counter-balance Gazprom’s market power, and seems to go hand in hand with direct measures designed specifically to limit the political risks associated with short-term supply security. But the first economic risk does not require such direct responses, but rather measures to facilitate trade in gas and competition between major exporters of gas to EU markets. To see this, it is first necessary to stop confusing Europe’s current dependence on gas with the more restricted issue of energy security.

The aim of this article is to analyse the interdependent relationship between Russia and the EU with regard to gas. We will strive to gauge the economic risk associated with the dominant position of the Russian seller in the European market, with a view to assessing the relevance of possible responses by the EU. We refer to theories of international relations to set the stage on which the EU wants to extend a multilateral market regime for energy trade while Russia prefers to use its energy resources to restore its geopolitical power. It is on this stage that political risk to supply security interacts with competition in gas trade on the regional market and interdependence of interests between European buyers and foreign producers in the quest for gas rent.

The paper starts by emphasising the fundamentally different perspectives from which Russia and the EU act as states in energy policy, and their impact on the decline of mutual trust and the rise of a perception of entangled economic and political risks. Then it analyses the dominant representation of the economic risks associated with Russian market power on the European gas market in terms of industrial economics. It concludes by considering the relevance of the possible responses open to the EU and member states to limit real risks without excess.

## 2. Increasing distance between two opposite worlds

Given the difference in gas resources between Russia and the EU, the gas trade should normally develop in the mutual interest of these economies. Russia exports exclusively towards Europe (EU and CIS countries), and exports of 30% of its production cover 70% of gas revenues, which, via profit taxes on the gas producer, finance 20% of the federal budget. The EU’s own gas production, which still covered 43% of demand in 2005, will only cover 25% by 2030, with Russian production

playing a key role in imports of European countries. The market share of Russian gas, which is currently 33% of European imports, could reach 50% by approximately 2020.<sup>2</sup> However, at the same time, Russian gas exports will continue to be captive to European buyers for a long time, given the time and capital resources required to develop infrastructure linking other regional markets. Nonetheless, beyond a mutual interest in trading large volumes of gas, relations between Russia and European countries are increasingly structured by the politisation of energy relationships.

### 2.1. Two opposite stories in international energy relationships

The history of international and regional energy markets clearly shows that the state of the world as a whole is a key factor in what happens in the global oil and gas industry (Clarke, 1990). Two theories of international relations, the neo-liberal paradigm (see in particular Keohane and Nye, 1977) and the neo-realist paradigm (see in particular Walz, 2003),<sup>3</sup> offer opposite interpretations of the evolution of international relations. In the first perspective, after the collapse of communism in the Soviet Block, general market-based rules in the international and regional regimes were the order of the day in the midst of optimistic prophecies about the triumph of globalisation and the “end of the history”. The prospect of mutual gains from trade provides the rationale for market-based arrangements. At the EU level, this provided the backdrop for the single market and, at the national level, programmes of liberalisation and privatisation under the aegis of the EU. This was the height of what Correljé and van der Linde (2006), in their scenarios of international energy relations, call the “*Markets and Institutions*” approach to international economic and political cooperation: an integrated, multi-lateral world with effective institutions and competitive markets.

The neo-realist perspective points to an alternative to the multilateral and free-trade approach that Correljé and van der Linde (2006) label “*Regions and Empires*”. It is a world primarily based on a balance of diplomatic and military

<sup>2</sup>Concerning quantities and according to the long-term Russian Energy Plan of 2003 (Mintopenergo, 2003), total exports to Europe of 154 billion cubic metres per year (Bcm/y), of which 136 Bcm/y towards the EU in 2005, could rise to 210 Bcm/y by 2020.

<sup>3</sup>In the neo-realist theory summarised by Walz (2003), states seek to survive within an anarchical system. Although states may strive for survival through power balancing, balancing is not the ultimate goal of that behaviour, but rather a product of the aim to survive. And because the international system is regarded as anarchic and based on self-reliance, the most powerful units set the scene of action for others as well as themselves. Neo-realist theory is opposed to the neo-liberalist paradigm elaborated by Keohane (1984) and Keohane and Nye (1977), which argues that, even in an anarchic system of autonomous rational states, cooperation can emerge through the design of standards, regimes, and institutions, in a system of complex interdependences in which the role of military force in resolving disputes between countries is negated.

<sup>1</sup>These various member states supported this idea at the summit of European Heads of State and Government in March 2006. See, for example, the memorandum on energy policy presented by the French government in January 2006. [http://www.minefi.gouv.fr/notes\\_bleues/nbb/nbb304/Memorandumenergie.pdf](http://www.minefi.gouv.fr/notes_bleues/nbb/nbb304/Memorandumenergie.pdf).

power, in which American unilateralism holds sway, and political and regional blocks compete. It is a world that will make it difficult for integrated global markets to emerge or maintain themselves. It is a world that leaves little room for the European approach based on integration through the market with neighbours and a multilateral attitude to international relations. It is a world in which national and international security issues and military conflicts, bilateralism and excessive regionalism prevent international economic integration rooted in overall regulation of the flow of goods, capital, and labour. Trade is part of the broader geopolitical game and relative gains are more significant than absolute gains. Russia's present relationship with the EU is developing more as neo-realist theory predicts and these two perspectives are increasingly entangled.

The geopolitical context in which the EU operates has changed considerably since 1989. In the previous period, throughout the 1990s, the international and European scenes were better described by the “markets and institutions” pattern than the *realpolitik* of “empires and regions”. The fall of communism coincided with the EU's drive to extend the single market into the utilities sector, including the gas market. The formerly communist states looked towards the EU, and prepared to accept the new EU regimes as and when they joined. Russia accepted the market-based reforms and privatisation recommended by international organisations. The Energy Charter Treaty sought to establish a common liberal free trade for energy beyond the borders of the EU, including Russia and other producer republics. But, by the time liberal market principles had triumphed in the EU, “new” Russia had moved towards a model of traditional power, deployed diplomacy backed by force to reassert its influence in its “near abroad”, and was determined to use its energy resources to exert geopolitical influence.

As Russia moved towards an intrinsically political energy strategy, it created *de facto* interference between foreign trade and foreign policy in energy. While this limits the effectiveness of the multilateral approach of the EU, which continues to act according to the first paradigm, it reveals its lack of cohesion and the weakness of its diplomatic means in foreign policy when the game appears to be structured according to the second paradigm.

## 2.2. Russia, an “energy power”

After a decade during which Russia's state apparatus disintegrated, its international position deteriorated, and market rules were imposed on the economy with little benefit, V. Putin's design for Russia is to become an “energy super-power” and play a key geopolitical role by positioning itself as an essential supplier for major regional energy markets and by organising competition between consumer countries and regions to boost its importance.

### 2.2.1. The need for control of oil and gas resources

This power game implies government control of energy resources. It is based on an organisation of the oil and gas industry involving a few large companies in which the state holds a majority stake. The companies represent the government's main way of controlling oil and gas revenues to fund the public budget and finance economic development. They also underpin foreign policy goals and their action is not restricted exclusively to Russian resources and the domestic market. Their sphere of action includes Russia's “near abroad”, where they seek to control recently exploited reserves and exports. It also includes rich European countries where they are keen to play a part in downstream activities and tighten their hold on revenues along the entire value chain. The Russian state does not hesitate to pre-empt companies to secure the country's energy resources and ensure that they are properly exploited. The shake-up in the oil and gas industries since 2001 has enabled the development of production, transport, and exploitation resources to be reorganised under direct control of the state.<sup>4</sup>

Private companies still play a part, in some cases in partnership with foreign companies trying to maintain their position: BP through the BP-TNK joint venture, and Conoco through Lukoil (in which it holds a 20% share). But the public or parapublic sector now has the upper hand and can shape institutional rules at its convenience to keep control over resources, replace private or foreign investments with public–private partnerships, and pursue the goals decided by the political executive. As a result, the perimeter of the publicly or semi-publicly owned industry will only be stabilised when the Russian state has regained direct or indirect control over resources developed by international companies, as demonstrated by the assumption of control over Shell's assets in the Sakhalin II gas field in December 2006 and the BP-TNK project of the Kovitka field in Central Siberia in June 2007. Neither market rules nor international law will guarantee foreign investments, only the president's agreement.

The choice of this model reflects the weakness of Russian institutions, as theorised by [Tompson \(2006\)](#). A powerful state and a strong legal system would be needed to control, within the framework of private enterprise, a sector yielding substantial rent and involving a small number of extremely powerful players, the only ones capable of funding and developing production. But because the capacity of the state in Russia is limited, with little respect for the law and a poor sense of political accountability, the most effective way of exploiting resources with a view to developing the nation's political and economic power is (quasi-) nationalisation. The disadvantage of this

<sup>4</sup>State interventionism has taken the place of the free-market ideas that once prevailed. The free marketers tried several times to reform energy prices, deregulate access to the gas and electricity network, and organise competition in sales to industry, in keeping with the recommendations of international and EU bodies.

institutional context is the lack of transparency in the decision-making process and management of the system. This trend is consistent with increasing centralisation of power and the authoritarian nature of the Russian political system since 2001. At an international level, this goes hand in hand with a policy of reaffirming Russian power and, for countries within its immediate sphere of influence, a style of “power diplomacy” (Gomart, 2006). The Russian government instrumentalises domestic gas and oil companies to organise its relations with its main partners and its integration in the international arena (Boussena et al., 2006; Locatelli, 2006). More broadly, Russia wants to establish a position of leadership and ensure that it is a key player with control over the terms of sale in the various markets and influence on their long-term developments.

### 2.2.2. *The central role of Gazprom*

Gazprom is the best example of a major corporation serving the Russian state’s objectives of political and economic power. Putin has strengthened government control over the gas industry by reinforcing the vertically integrated gas monopoly with a 51% share held by the Russian state. It took control of privately owned production by purchasing the producer Northgas as well as a 20% share in Novatek, two companies exclusively involved in gas production (Stern, 2006). Inside Russia, it diversified in a number of sectors corresponding to the government’s objectives of industrial control. Besides political investment in media, it is diversifying into the oil business, with the purchase of Sibneft, and into upstream (equipment and construction industry) and downstream activities (electricity, petrochemicals). Gazprom is also using its wealth to modernise the electricity industry by acquiring a 10% share in the dominant electricity company and planning to fund new nuclear reactors.

Gazprom’s strategy abroad should be seen in the larger context of Russian foreign policy. Russia wants to keep tight control over how gas from the Caspian is sold to Europe and Asia and restrict political and economic competition from the former Soviet republics of Central Asia and the Caucasus. In the case of Gazprom, this means that the Putin government is encouraging it to invest in central Asia, to install its own routes from this region, and to redefine preferential terms for gas sales to countries in its sphere of influence. The aim is to reassert its political influence through close economic integration but also to regain control over countries attempting to distance themselves from Moscow (Ukraine and Georgia in particular).

### 2.3. *The European Union in search of energy multilateralism*

The EU institutionally contrasts with Russia at several levels in the energy and gas field, where resource poverty motivates effective integration in extended regional energy markets. First, it contrasts in the variety and complexity of relationships between the energy companies and the

governmental spheres at the dual levels of EU and member states. Since 1988, the Commission’s drive for a single market has fostered the development of competition and discourages any energy and industrial policy based on national champions. Although the common EU energy market was designed around a liberal model, there were a variety of versions in the member states, with substantial capital concentration in some of them owing to historical and cultural determinants. As in the past, each country developed its own gas market, relying on a national monopoly or a market leader to develop infrastructures and take charge of negotiating giant contracts for imports. Governments of major member states still prefer to rely on these incumbent operators to develop long-term supplies in arrangements with producer countries backed by their political support.

Second, the EU contrasts with Russia in the lack of classical attributes of a State and the means of geopolitical power, which explains its multilateral conception of international relations. Lacking efficient governance with no majority rule in decision making and substantial diplomatic and military resources, it cannot pursue a significant foreign policy. The interests and ideas of member states often diverge, and with the arrival of new members differences have increased, in particular in the domain of defence and relations with the USA and Russia.

#### 2.3.1. *Acting according to “Market and Institutions”*

In a world that is still organised in terms of a geopolitical balance of power, based on diplomatic and military power, the EU is trying to be a *de facto* super-state with the traditional attributes of power, despite the fact that it lacks the means to enforce its own sovereignty. To make up for this shortcoming in its dealings with other world powers, Europe resorts to “soft power”, conceptualising its dependence in terms of interdependence (Laïdi, 2006). It seeks to influence reality “by trying to deploy on as large a scale as possible standards capable of organising the world, bringing discipline to the market place, and making behaviour more predictable...” (Laïdi, 2006). It projects onto its relations with other states the type of inter-state relations that its own members have succeeded in setting up with one another in an attempt to achieve integration through the market, which, as Majone (1993) points out, is the only way of achieving greater political integration in Europe.

In the energy field, within the institutional framework created by European treaties, management of gas and oil resources has always remained within the competence of states. The European Treaty does not give the EU any direct powers over energy policy, only indirect means via market integration and environmental policies for which the Treaty gives competences to the EU. The International Energy Agency (IEA) is responsible for the security of short-term oil supplies, through coordination of strategic reserves. There is no effective collective approach to the problem of gas on the regional European gas market,



despite some recent efforts concluded by the passing of the ambiguous directive on gas security in 2004 (EC, 2004a, b).

Otherwise, the EU typically acts by exerting influence on the institutions of other countries to try to promote homogeneous regulatory areas.<sup>5</sup> At the beginning of the 1990s, it was the EU that took the initiative of setting up the Energy Charter Treaty to promote harmonisation of laws on investment in the energy sector and access to infrastructures in former-Soviet bloc countries, in particular Russia. The EU's implicit objective was Europe's long-term energy security. This was to be achieved by facilitating the installation of foreign companies, securing investments, and organising trade in energy products by liberalising access to transport networks. In general, the EU sets conditions for partnership and cooperation agreements with third countries, requiring gradual changes in their legislation to bring them into line with the rules in force within the European Community. In the energy sector this space already includes Norway. It may soon include countries along the southern Mediterranean coast. The EU has also launched a Neighbourhood Policy, which concerns transit countries such as Ukraine, with action plans concerning the energy sector. The Commission sees this foreign policy by influence on institutions as a possible way of regulating the conditions affecting the flows of gas into Europe.

### 2.3.2. *Complex interaction between the “national fact” and the “European Fact”*

Since the European Community came into being, the national fact has continued to predominate. Member states have been unwilling to give up their sovereignty in energy matters, considering the stakes to be too high with respect to their national interests in the area of energy dependence and control of their resources. The larger states have traditionally relied on national firms, most often public utilities, to take charge of the major part of their oil and gas supplies and reduce dependence by promoting technologies such as nuclear power. A certain number of states (France, Italy, Spain) required their energy companies to diversify their foreign gas purchases among several supply sources. The privatisation and liberalisation of electricity and gas markets has not fundamentally called into question this policy of governments to rely on their leading national firms to secure long-term energy supplies, which they have been able to do thanks to their bargaining power and their significant financial capacity to enter into large long-term contracts and partnerships to develop transport infrastructures. These operators are seen, and see themselves, as guardians of their domestic markets, or “gatekeepers” to use the words of Stern (1998), rather than as national

champions (that would be protected at home but encouraged to secure shares in markets abroad). Their role is based on their bargaining capacity in dealings with major foreign sellers and building partnership with oil and gas companies.

The EU wants to manage the growing gas dependence of its member states, but as previously indicated, it lacks the institutional and geopolitical means of a joint foreign policy. The need for a joint energy policy has become all the more pressing since ten new members joined the Union in May 2004 (and Bulgaria and Romania in January 2007), because most of them depend almost exclusively on Russia for their gas supplies. The European Commission wants the EU to have a joint foreign energy policy to “speak, and discuss or negotiate with a single voice” on behalf of European governments and companies, with energy-producing countries and the companies they control. This approach is outlined in the March 2006 Green Paper (EC, 2006). But it is at the Gordian node between the two views of international relations. One of the contradictions that reveals the entanglement of interest and objectives is the fact that major member states (Germany, France, Italy) do not perceive a real advantage to ceding more powers to the EU to manage energy foreign policy and energy foreign trade, in particular when it involves their foreign relations with Russia acting as a geopolitical power with energy.

### 2.4. *The decline of mutual trust*

As previously mentioned, the geopolitical context in which the EU operates has changed considerably since 1989. By the time liberal principles had triumphed in the EU, Russia was moving towards a more political strategy for energy. Although the EU and Russia launched their joint energy dialogue in 2000, designed as a forum for resolving problems related to market access, progress has been slow and the member states rather than the EU still play a dominant role vis-à-vis Russia. The Russo-Ukrainian crisis in January 2006 was revelatory of this definitive change of context.

Russia does not accept the idea of aligning its legislation with the market rules advocated by the EU, in particular ratification of the Energy Charter. On other issues the parties are completely at cross purposes, such as when the Commission applies pressure to break long-term contracts with all exporters to promote competition on the market, or to change certain contractual clauses of existing contracts (such as the final destination clause that helps to segment the European market). It is also the case in the opposite direction when Russia demands complete freedom to take control of gas suppliers in some European countries and the Commission replies that such takeovers would be entirely acceptable, provided Russia brought the rules governing its gas industry into line with the rules for open access to its infrastructures and resources according to a “principle of reciprocity”, and ratified the

<sup>5</sup>It has some power within the framework of the trans-European Networks policy, financially assisting the establishment of major transit and import facilities that contribute to greater diversification, justifying a coordinating role in this issue.

Energy Charter.<sup>6</sup> Things are no better when Russia emphasises the merits of mutualising the interests of the various parties by exchanging distribution assets in Europe for gas production assets on a bilateral basis, as it has done with various European companies.

Given Russia's refusal to accept this multilateral regime, a dominant position in the European market of a company controlled by the Russian government inevitably makes supplies from Russia a political issue, prompting fears as to the instability of long-term contracts. Political tension is exacerbated by the fact that the break-up of the Soviet Union increased the number of transit countries and raised the political and commercial risks involved in purchasing gas from this part of the world. To make matters worse, the transit countries that have not been integrated in the EU are not in a position to make any credible commitments and run the risk of conflict with Moscow.

For Russia it is easy to play on the weaknesses of the EU, a power without any real diplomatic resources. It can adopt a bilateral approach, dealing directly with dominant European countries and major national companies. Understandably, the question that the EU is unofficially asking is whether it should not be setting up a real supranational power to govern energy relations, and primarily to balance the market power of the Russian seller and jointly negotiate gas contracts. But to find an answer we need to establish how real the threat of market power, backed by an unbalanced political power, is for the European gas market.

### 3. Risks of Gazprom's market power on the European gas markets

Because representations of international relations of gas trade on the European regional market shift from "Market and Institutions" with mutual gains from trade, to "Regions and Empire" with games without absolute gains, there is amplification of the perception of the economic risks associated with Gazprom's increasing dominant position on this market. There are now concerns about the risk of Gazprom controlling prices, or of coercive price actions throughout the European market and the additional risk associated with the Russian conglomerate's downstream diversification through the purchase of distributors and direct sales<sup>7</sup>—one of its objectives being to capture a larger share of gas revenues. Competition in the European gas trade structured in the "Regions and

Empire" story is intrinsically imperfect and would only benefit the dominant producers and sellers backed by their governments in search of political power. Concern about economic risks from Gazprom's dominant position is fuelled by Russia's one-sided approach and its refusal to comply with free-market regulations at home, in terms of opening access to the Gazprom transit network and independent producers. The asymmetry has become all the more apparent since the start of the shake-up in the Russian oil and gas industry in 2005 and re-nationalisation of gas production assets belonging to international firms in Russia.

We shall start by listing the various critical arguments on the risks associated with Gazprom's market power, as highlighted by different analysts. Then we discuss them one by one, referring to different settings in economic theory in which market power can arise (Vives, 1999): a cartel analyzed in terms of a cooperative game when we consider the risk of collusion on the European market or on the worldwide market; an oligopoly in a Stackelberg game with a core (the Gazprom monopoly or the duopoly of Gazprom and the Algerian Sonatrach) and a competitive fringe; or else an oligopoly of major producers in a non-cooperative game on the European gas market with forward contracts and spot trades. In non-cooperative games, collusion between the main exporters would enable them to increase the price above marginal costs by withholding quantities in the short term, or by restricting investment in new production capacities in the long term.<sup>8</sup>

#### 3.1. The dominant view of market power risks associated with Russian gas

Gazprom already occupies a dominant position in EU markets with a 33% share of imports and a 25% share of total consumption in 2005 (EC, Green Paper, 2006). It enjoys a quasi-monopoly in Finland, ex-Comecon and Baltic countries. Its market share is likely to increase in the future. European forecasts indicate that its share of imports will have risen to 50% by 2020, with a 35% share of consumption. Growth in Russian supplies is necessary to satisfy rising demand in the EU, alongside scope for growth in sales of Norwegian and Algerian gas, each expected to expand by 40 Bcm/y (Boussena et al., 2006), and the arrival of new supplies of LNG to other parts of Europe (Table 1).

<sup>8</sup>We are not developing an argument on the imperfect competition of the European gas oligopoly market. A number of numerical simulation models have been developed to study it in the recent years, but relevance of results is limited by simplifying hypothesis, as underlined in the recent survey of Smeers (2007). They use a representation in which spot exchanges are central in the market price making of all the gas trade. Most of them do not consider investment in production in the seller countries, only one of them considers investment in infrastructure and storage inside Europe, and all of them simplify the Cournot game by ignoring the major way to trade gas in Europe by long-term contracts with contractual price independent of spot price. That limits a priori the relevance of every result on the effects of market power of the big sellers on the European market.

<sup>6</sup>See the letter from the European Commission, dated May 2, 2006, to the Russian Minister of economy quoted in the Financial Times, May 4, 2006.

<sup>7</sup>Gazprom is trying to develop its position downstream to gain access to end users, in particular in the UK, Belgium, and Sweden, where it has no contracts with the national gas company. It is proceeding along similar lines in France, Italy, and Austria, despite its links with the national company, with large contracts already in force or currently renegotiated. In the UK, Gazprom is targeting more than a 10% direct share of the market by 2010, rising to 20% by 2015.

Table 1  
Degree of dependence of European Union countries on Russian gas in 2005

	Slovakia	Finland	Baltic States	Greece	Czech Rep.	Austria	Hungary	Poland	Germany	France	Italy
Import (Bcm/y) <sup>a</sup>	7.5	4.5	5.5 <sup>b</sup>	2.4	7.4	6.8	9	7	36	13.2	22
Ratio, Russian gas import/ consumption (%)	100	100	100	86.8	80.8	73.4	63.4	50.2	36	26.8	26

<sup>a</sup>The following countries do not import Russian gas: Spain, Portugal, Netherlands, Belgium, Denmark, and Sweden. The UK makes occasional purchases, totalling 4 Bcm/y.

<sup>b</sup>Imports by Baltic countries are 2.8 Bcm/y for Lithuania, 1.4 Bcm/y for Latvia and 1.3 Bcm/y for Estonia.

There are two levels to the dominant analysis of the economic risk presented by Gazprom's market power: first, the risk of it reducing supply in the short and long term in order to increase price, with or without collusion with other major exporters; second, the risk of an industrial strategy to encircle and partition the European market by downstream integration and acquisition of major national suppliers.

- *Monopoly and oligopoly strategies*: Some prospects of how Gazprom will use its market power are based on an idealised picture of the future European market. Indeed, in order to have monopoly power, tacit collusion, or a cartelisation of the European market, it must be assumed in these analyses that the organisation will revolve around short-term markets in which Gazprom or a European oligopoly would be able to raise prices by restricting exports. The equilibrium structure of the market would be dominated by spot purchases on gas exchanges and medium-term contracts of 5–8 years.<sup>9</sup> On account of its particular liquidity, the price on the spot market would be the indexation price in forward contracts. It is reckoned that when spot trading accounts for 20% of physical transactions negotiated on this market, then spot prices can be used as a reference for setting contract prices, as happened in the USA in the 1980s and in the UK for some new contracts around 2000<sup>10</sup> (IEA, 2002). The spot market would be organised around a few well-developed hubs in northern and southern Europe (the NBP in the UK, Zeebrugge in Belgium, Emdem on the border between Holland and

Germany, etc.). Much as the Organisation of Petroleum Exporting Countries (OPEC) can control the price of oil by controlling output, in the short term, Gazprom will be able to do the same, in coordination with the other major sellers, by cutting the short-term supply.

- *Long-term market power*: According to the prevailing view, in the longer term the hesitation to develop super-giant gas fields and the threat of developing the means to export production to other potentially large Asian and North American markets brandished in 2006 by the Russian seller clearly reflect plans to control prices. The Russian government is refusing to adopt free-market regulations because it wants to be able to control independent production at home and prevent European and other foreign firms from being leaders in production projects. It can thus retain control over production and exports for making price to increase. Consumer countries, in particular the IEA (2006), have questioned Russia and Gazprom about future growth in gas production and its ability, beyond 2010, to fulfil its export commitments at the level announced in the long-term Energy Plan of 2003. Russian production alone might not be sufficient to cover the contracts signed for exports to Europe and the CIS after 2010, whenever its reserves are not in doubt.
- *Encircling and partitioning national markets*: According to the dominant view, the closer links between producer countries that Russia instigated in 2000, under the name of Gas Exporting Countries Forum, represent the threat of the various parties forming a cartel with market power comparable to that of OPEC. Gazprom could act as a swing producer keeping prices at a particular level by reducing supply, as Saudi Arabia does for oil. Discussions between Russia and other large producers and exporters, in particular Iran, Qatar, or Algeria in 2006 and 2007, are immediately perceived as threatening to encircle the European market. Entente of producer countries under the control of Russia would be focused on the European market. In this respect, the alliance that Gazprom sealed with Sonatrach in August 2006 and confirmed in January 2007 has been seen as the start of a collusion between the two main foreign sellers (33% and 15% of European imports, respectively), even

<sup>9</sup>This is the view defended by the EC and some professional and academic consultants. At first sight this view is consistent with the theory of commodity markets with spot exchanges and forwards. It is understandable, corresponding to what has occurred in North American markets. This experience of liberalisation shows that existing contracts were queried and that contractual prices were indexed on spot market prices, in keeping with a rationale of gas-to-gas competition, spot markets being sufficiently liquid to limit the volatility of prices and keep spot and future price trends interpretable.

<sup>10</sup>In the UK market, the main innovation in gas contracts has been the indexation on electricity price for those signed with electricity generators. The indexation on the NBP price was used up to 2007 for an import contract between Statoil and Centrica signed in 2001.

if the content of the memorandums of understanding is vague and the projected ventures in production and infrastructures cover limited stakes, much as those involving Gazprom or Sonatrach with large international oil companies.

According to this sort of analysis, the diversification of routes from Russia to European countries by Gazprom<sup>11</sup> is designed to drive a wedge between member states' interests and weaken those that are the most dependent from the Russian gas. In 2006, some new member states and the European Commission accused Germany to do with the Nordstream project, which will connect it directly to Russia. In the same vein, there will be greater scope for Gazprom to exercise market power if it can increase direct involvement by purchasing distribution and sales assets in national markets (as it wanted to do in the UK in 2006 with its project of acquisition of Centrica), and break the European market into separate markets. This strategy could enable it to guarantee output to isolated markets, but eventually to push industrial and prices up on markets in which it will enjoy a dominant position.

Also, according to this sort of analysis, the Russian government is in fact in a position to dictate its own rules to European countries. It might develop its downstream activities by purchasing distribution and sales assets, while refusing deregulated access to Russian gas resources and pipelines. Instead, Moscow is promoting an unbalanced situation, on the one hand protecting its sales and profit margins by taking control of distribution and sales assets in European countries, and on the other hand only ceding minor shares, on an ad-hoc basis, to gas companies—such as E.ON, BASF, ENI in some developing gas fields, while entirely controlling development and the rent from production. Similarly, European countries are accused of undermining their own bargaining power by leaving the large national gas firms to negotiate with Gazprom, one by one.

The most alarmist commentators suggest that Gazprom could take advantage of its monopoly to break contracts unilaterally and impose more favourable terms for prices and volumes. According to them, this is suggested by its treatment of CIS countries' companies where it has drastically increased prices since 2005, first in Ukraine

and Georgia, and then in other countries, threatening to stop deliveries during each negotiation.<sup>12</sup>

We shall discuss these different aspects by distinguishing between the risk associated with Gazprom's short-term market power and the long-term risks associated with a strategy of restricting investment in capacities directed to supply the European market in order to create scarcity.

### 3.2. Risk associated with monopoly power on short-term markets

Analyses that point to the risk that Gazprom might easily exercise its market power by increasing prices assume the possibility of a monopolistic strategy or collusion with other major sellers to restrict quantity and control prices. This is based on the implicit assumption that the European market is going to be dominated by spot sales or short-term transactions. Logically, one could complete the story as follows: given that spot markets are very illiquid in continental Europe, Gazprom would have an interest in developing its spot transactions in order to acquire more effective control over prices. But this scenario is unrealistic for two reasons: as a monopoly, Gazprom has no interest in developing short-term sales and, more generally, sellers and first-tier buyers will probably prefer to trade a mix of long- and medium-term contracts on the European market with no link to the spot price—which will remain a non-credible benchmark.

An analysis of Gazprom's contract strategy reveals that the Russian producer's priority is to renew its current long-term contracts and sign new ones, while making no attempt to capitalise on the new characteristics of the market by aggressively pursuing short-term sales (Komarov, 2004). Direct sales are only a secondary element in its overall strategy. Gazprom's managers have on numerous occasions reiterated their preference for long-term contracts and defended existing contracts challenged by the European Commission. In the future, most of Gazprom's exports will continue to be sold through long-term contracts, most probably of shorter duration than in the past (for example, 20 years instead of 30). In 2006, it succeeded in contracting, with some of the major gas companies (E.ON-Ruhrigas, BASF-Wintershall, the Austrian OMV, ENI, GDF, the Danish DONG), for new 20- to 30-year agreements that will maintain the same flow of gas it trades with these companies.<sup>13</sup>

More generally, the scenario of Gazprom's market power being based on the development of liquid spot markets on the continental gas market is unrealistic and largely ignores the forms of long-term competition that will prevail on the European gas market, despite the fact that

<sup>11</sup>Gazprom is still increasing transport capacity (currently about 145 Bcm/y) by diversifying export channels. This process has been consolidated with the commissioning of the Blue Stream pipeline under the Black Sea to Turkey. Plans for an extension of Blue Stream into southern Europe, Greece, and Italy are being substituted in 2007 by the South Stream project under the Black Sea, which is promoted with ENI and will be connected by two lines to central Europe (Austria, Hungary, etc.) and to Greece and Italy. A northern project, which initially was planned to be completed by 2010, is the Nordstream (around 30 Bcm/y) under the Baltic to Germany. It follows an agreement signed in 2005 between Gazprom, BASF, and E.ON and will be the first direct channel to Europe, doing without the need to pass through other countries. This will postpone the Yamal 2 project, which will double up Yamal 1 in Belarus and Poland.

<sup>12</sup>Commentators forgot to say that in each case the Russian party does not break current contracts because discussion stands when the supply contracts with the CIS countries (which have short time spans) were renegotiated.

<sup>13</sup>E.ON has contracted up to 2036, ENI up to 2035, Wintershall up to 2030, OMV up to 2026, and GDF up to 2030.



the 1998 and 2003 directives on gas market liberalisation are bringing changes to regulations that aim in the first place to encourage shorter, more flexible contracts and the development of spot market transactions. A common view is that, given a well-established demand and a close-knit gas system, the European market is mature and, in this context, the most efficient way to trade is short-term transactions, as the American experiment shows (Doane and Spulber, 1994; Creti and Villeneuve, 2004; Neumann and von Hirschhausen, 2004).

But there has been no expansion of spot markets in Europe, with the exception of the pre-existing UK market, which has benefited from the North Sea resources and the presence of several producers in competition. Spot trading accounts for less than 5% of physical transactions on the continental market. There are, first of all, legacy reasons for this, namely the existence of long-term contracts signed before the reforms and the extremely small proportion of non-contracted gas or free gas.<sup>14</sup> The second main reason is that the future of the European gas supply will be characterized by increasing imports from distant regions, given that the reserves of state members are declining and the continuously increasing need for new non-EU sources of supply (Finon, 2004). Behind the desire of producers to retain recourse to long-term contracts to sell their gas, there is the decisive factor of constraints on any large-scale operations to develop new fields and install pipelines or LNG chains to connect them to the European gas system. Lenders and investors are unwilling to invest in very capital-intensive projects without guarantees on quantity and price provided by such contracts. In contrast with the North-American gas market, which has substantial internal resources, the supply side of the European gas market will never be mature because of the recurrent need for costly new upstream developments in production and infrastructures. For this reason, the European market is and will continue to be dominated by long-term contracts alongside some medium-term contracts of 8–10 years, in the opinion of many gas experts (Mazighi, 2005; Chabrelie, 2006).

These observations suggest that the risk of market power in short-term sales is reduced because priority is given to long- and medium-term transactions, and spot markets would probably not be sufficiently developed to be reference markets for contractual pricing.

### 3.3. *Risk of collusion with the other exporting companies*

This contractual environment of the gas trade on the European market precludes the possibility of cartelisation of the European regional gas market under Russian leadership. So it is also for a cartelisation at the global level, which is being widely discussed in 2006 and 2007, when Iran and Russia have evoked the possibility of creation of a Gas-OPEC by the transformation of the Gas Exporting Countries Forum, which presently is a weakly structured organisation (Hallouche, 2006; Wagbara, 2007). But the conditions for a worldwide cartelisation are much more demanding, owing to the different conditions of physical trade inside each region (Europe, North America, Asia) and the marginal interactions between the three regional markets in the medium term.<sup>15</sup> If we imagine a European gas market structured in such a way that prices can be controlled by volume restrictions in the short term, a policy to cut back production would be more costly to implement than in the oil sector, since the gas industry has much higher fixed costs between wells and customers. The incentives are much less effective than with the oil trade.

Furthermore, the possibility of reaching agreement on volumes and prices is limited considerably by the widely varying interests of the major sellers (national companies in gas-producing countries, international oil companies). Norway fully subscribes to the competitive rules of the EU in its economic partnership agreement, its public export monopoly having been abolished. International gas and oil companies operating in the gas sector in countries that export to Europe (Egypt, Nigeria, Qatar, Trinidad, etc.) would have to be party to any agreement to form a cartel in order to guarantee its effectiveness. But they would never subject their long-term gas strategies to the decisions made in the context of agreements managed by producer states.

Moreover, if Russia wants to become the swing producer in the European gas market following the example of Saudi Arabia in OPEC, it will not have the same room to manoeuvre on gas costs as Saudi Arabia does on its oil production costs. Such an eventuality is therefore highly unlikely. Furthermore, if the Russian giant restricts its supplies to the European market to force up spot prices and contract prices that would be indexed on it, it would quickly be called to order by the threat of entries—because the cartel cannot include all the producers—in particular from LNG projects backed by gas and oil companies. Moreover as Stern (2007) outlines, the example of its relations with OPEC, which Russia has never sought to join, suggests a determination not to allow the commercial

<sup>14</sup>The European Commission, desiring effective competition based on a large spot market and short-term transactions at prices aligned with spot prices, would have wanted to limit the duration of new contracts and amend existing long-term contracts, which are regarded as barriers to entry, even in the case of contracts with sellers outside the European regulatory space. A lengthy debate ensued between the European Commission on one side and Russia and Algeria on the other, in which the former lost the game on the issue of the contractual time-span. A compromise was reached affecting solely the removal of the final destination clause, allowing gas price discrimination at the border of the exporter, depending on the buyer's country—this clause imposes gas transportation on this country.

<sup>15</sup>The relative cost competitiveness of pipeline gas versus LNG gas means that the gas market is regional in nature (Atlantic, Asia Pacific, and European). There is thus no global gas market where exporter actions can be harmonised. LNG trading remains relatively too small to make a difference.

rules of its energy trade to be set by others, *a fortiori* to carry the swing producer's responsibility.

Finally, unlike in the oil trade, the definitive obstacle to a cartelisation is the predominant base of long-term contracts, with prices indexed to oil products' prices. As just said, it is not until there is a movement in the gas market towards a spot market system—and the latter is liquid enough—that the scope for a European gas cartel becomes be realistic. Moreover, oil prices are destined to remain high for a long time, so the major sellers have nothing to gain from collusion. Strategies to restrict short-term supply would hardly provide them with any additional advantages.

### 3.4. Risks of long-term market power

Gazprom could use its dominant position to impose discretionary changes in long-term contracts and create pressure on long-term gas prices by restricting the development of capacities oriented towards European markets.

#### 3.4.1. Risk of contracts breaking up

Gazprom could seek to benefit from its dominant position to break up contracts and obtain better prices without respecting the renegotiation conditions normally provided for in contracts or to retaliate on behalf of the Russian government against the national company of a particular country. But even influenced by the Gazprom's dominant position, the market is contestable in the long term. Its credibility as a contracting party will be totally lost to the advantage of its competitors. However, there are no instances of the (formerly Soviet) Russian party forcing the renegotiation of European contracts or intentionally disrupting deliveries to western European markets since the Russian producer is fully aware that it is not in its interest to jeopardise its contractual credibility on these markets.<sup>16</sup> The main incentive to avoid breaching its contractual credibility remains its dependence on European markets for acquiring the largest possible rent from its gas production, with no possibility of short- or medium-term diversification on other markets.

#### 3.4.2. Restricting investment in new capacity of supply to the European market

The theoretical literature on market power exercised by restricting the development of capacity in non-cooperative games shows how, through a two-stage game involving decisions to invest followed by decisions to produce, companies can be better off developing less capacity, despite having lower sales due to reduced demand caused by higher prices (Murphy and Smeers, 2002). In the European gas market, questions might indeed be raised

about Gazprom's cautious approach to investing in the next development of its giant gas fields. Aside from straightforward explanations outlined in Box 1—uncertainty regarding long-term European sales in the face of competition, partial recourse to Central Asian gas—some commentators believe that Gazprom's strategy of caution is aimed at keeping market prices high on the European markets (Ahrend and Tompson, 2004; IEA, 2006).

Let us assume that it is intentional. In the theoretical non-cooperative oligopoly model, no possibility of entry is considered and oligopoly or monopoly benefits from this strategy. In the real world, as in the previous case, the market is contestable in the long run. High market prices will attract projects from competitors outside the oligopoly of dominant producers, even if it owns the major resources around the regional market, as shown by the reaction of firms, which, in parallel with their negotiations with Gazprom in 2006, were exploring new agreements with other producers. Furthermore, non-cooperation in the oligopoly could be far from purely theoretical, in the sense that if Gazprom does not defend its market share on the European market, other major sellers could seek to capture part of it without looking for a price increase by a common strategy of restricting capacity development with the other sellers.

In fact, cooperative games would be preferable in the form of long-term coordination with other producing countries. Russia aims to establish such coordination by promoting the idea of a gas-OPEC in the discussions of the Gas Exporting Countries Forum, in particular, in its sixth meeting on April 2007 in Doha (Socor, 2007). But such a strict long-term coordination at the worldwide and regional level is not feasible, given the divergences of interests. It is feasible at the sub-regional level under conditions of political domination, as shown by the coordination organised since 2004 by Russia with the Central Asian producers for developing their production and export routes. It has to be proved that a strict coordination could be established with other countries, for instance with Iran, Qatar, or Algeria in the absence of similar political conditions, when some of them are potentially competitors of Russia.

Nevertheless, as any reliable economics textbook will tell us, a long-term strategy of high prices requires two conditions in order to be viable: the existence of barriers to entry and a monopoly position. If barriers to entry are low, the dominant producers must not allow prices to exceed entry costs in the long term, according to the theory of barriers to entry (Dixit, 1979). If there are dominant sellers with a competitive fringe, there must at the very least be a tacit agreement with the minority sellers in the market. These sellers agree to keep their prices in line with those determined by the dominant sellers without attempting to boost their market share. They would agree to this provided they were able to benefit sufficiently from high prices. Let us imagine the situation on the European gas market if Gazprom, or Gazprom and Sonatrach, the two

<sup>16</sup>Let us notice by the way that the renegotiation of price terms with the different companies in the CEI states was legally possible because the contracts linking them to Gazprom are short-term contracts (1–2 years).

**Box 1**

The debate about Gazprom's long-term production and export capacities.

Reserves are not in doubt, but Gazprom seems to be dragging its feet before developing new gas fields, in particular the Yamal and Shtokman fields, whereas the three giant fields of Medevhze, Urengoy, and Yamburg, which entered production under the Soviet Union, are reaching their peak and are starting to decline. The problem for the development of production may consequently be summarised as follows. Three new fields—Zaporlarnoye, Pestovoye, and Tarkosalinskoye—have already been developed. As satellites of the three giants they can easily be connected to the existing infrastructure. Up to 2009–10 the new fields will compensate for the projected decline in output from the super-giants. But beyond that date the prospects are less clear. If Gazprom wants to maintain its current level of production (547 Bcm/y), it will need to add new production capacity equivalent to 70 Bcm by 2015, and 180 Bcm by 2020 (Stern, 2005). At present Gazprom is only allocating 30% of its investments to developing production.

The company has recently provided a timetable for the start of production on the Yamal fields, only for Bovanenko, in 2011 (Gas Matters, November 2006). Gazprom has cited market uncertainties to explain its delay investing in the development of gas fields earmarked to supply the European market. They relate to liberalisation of its main export market. Gazprom argued that Russia needs “demand security” when the European Union requires “supply security”. Liberalisation would imply shorter contracts and less predictable contractual sales and prices. So in line with Transaction Cost Economics (Williamson, 1985), it was rational behaviour to avoid risking buyers' opportunism before investing in non-redeployable equipment without long-term commitments to securise them. This objection is now overcome. Gazprom succeeded in successively signing new long-term contracts with E.ON, BASF, ENI, OMV, GDF, and DONG in 2006 (see below). Consequently in 2007, a long-term programme of steady investment in exploration and production and infrastructures including development of some fields of Yamal was announced. So the investment programme of April 2007 for the period to 2030 aims to replace declining production and increase overall production by 25–45%. It plans an amount of \$100 billion in production, \$31 billion in exploration, \$135 billion in transport by Gazprom for the period, and \$50 billion by Russian independents if they are incited by an internal price doubling.

But whatever the level of Russian production reached, a large buffer will be offered by massive purchases of gas from the countries of Central Asia (Turkmenistan first, Kazakhstan, Uzbekistan). Purchases of 150 Bcm/y by Russia in 2010, an estimate provided by Stern (2005), are close to the current level of exports to Europe. For this strategy to succeed, Gazprom should have to retain its control over access to its transport and transit network, and over the export routes from Central Asia, maintaining its monopoly over the purchase and resale of Caspian gas. It would be challenged by the Trans-Caspian Project promoted by the USA, which is still in limbo (because of the long-lasting issue of property rights on the Caspian sea) and the projected Nabucco scheme (30 Bcm/y) running from the border of Turkmenistan, through Turkey, and into the Balkans and Central Europe up to Hungary. But in May 2007, Gazprom succeeded in recreating a strong alliance with the gas producers of Central Asia, which are contractually bound to sell major shares of their gas to Gazprom and to install a large pipeline of 80 Bcm/y to Russia along the Caspian Sea. So it is probable that a part of the Gazprom contractual gas sales to Europe will be supplied by Central Asian gas sold to it. This arrangement does not impinge the contractual credibility of Gazprom, because nothing forbids fulfilling contracts in that fashion, provided that quantity and quality conditions are respected—as it is common practice on the global oil market and in the gas trade in North America.

largest suppliers, decided to restrict volumes and long-term capacity to raise prices above their competitive level.

Barriers to entry are not so high for Gazprom's major rivals. Producers in the Norwegian area of North Sea (Statoil, international oil and gas firms) are a competitive force that could counter-balance the Russian seller's monopoly strategy in the next 20 years. Norway still has significant production development potential and its current exports of 60 Bcm/y could reach 100 Bcm/y by

2020 (Boussena et al., 2006, p. 106). In other regions, there is effective competition from the oil and gas companies that play an essential role in the European market. These companies work on the principle of quickly “monetizing” newly discovered fields in order to obtain a rapid return on their investment. Their strategy is to seek partnerships and production-sharing agreements in the resource-rich countries with national oil companies and also major European buyers to install LNG chains or international gas pipelines.

The cost of a greenfield LNG chain (approximately €3bn) is within the means of such partnerships. Projects of this type are also very attractive to large operators such as Gaz de France, Centrica, E.ON-Ruhrgas, Distrigas, ENI Power (formerly SNAM), and the Spanish company Gas Natural. These operators are looking to get involved in production and LNG liquefaction in gas-producing countries in order to gain greater control over their supply costs. In this competitive framework, recent fears that the Russian producer will wield market power and be completely unpredictable are resulting in the announcement of numerous rival projects of Gazprom's one.

Thus, since 2005, numerous LNG and gas pipeline import projects planned as far back as 2000 have resurfaced and are, in some cases, already under way.<sup>17</sup> According to the exhaustive study carried out by the Observatoire Méditerranéen de l'Energie in 2002, these projects are profitable at prices below \$3.5/MBtu, compared with the average price of \$5/MBtu in 2005 and 2006. Many of them could be implemented in the event of sustained high prices or heightened geopolitical risks, examples being the new projects to import LNG from Nigeria, Angola, Trinidad, Qatar, Yemen, and even Australia. The capacity of some 15 LNG terminals that could be built and commissioned by 2012 in the North and South of Europe is estimated at 110 Bcm/y by Cedigaz (Chabrelie, 2006), of which at least half of them could be probably installed.

*3.4.2.1. Deploying gas production and infrastructures towards alternative markets.* Following this same line of interpretation of Gazprom's dominant position, the Russian player could play off projects to supply the large Asian and North American markets against European supply projects, as it threatened to do early in 2006 when certain European governments were reluctant to allow it to purchase local companies.<sup>18</sup> This possibility certainly cannot be ruled out, particularly since the giant offshore Shtokman field development was initially designated for contracts with US LNG importers and one of the options for developing exports to the Chinese market is to link up the Yamal fields both to future export pipelines to China and to the western pipeline system to Europe. But these threats are merely potential: for instance, the agreement with China is only at the preliminary stage of the MoU. Moreover, a costly infrastructure of transcontinental pipelines has to be installed and the prospects for Chinese gas demand development have to be clear before contracting. That is not the case.<sup>19</sup> In the next 15 years, projects to supply the European market will no doubt bring a more

rapid and more secure return on investment than any other project, since the European infrastructures are in place and the demand is already there.

But it remains that the moment when transport infrastructures are developed towards Chinese and North American markets will happen in the next 20 years, that will change the game. This strategy should not be misinterpreted as a form of market power exercise in the long term. From the perspective of the Russian seller, it is a way to be less dependent on European buyers and their potential monopsony power. In the recent Russia–EU confrontation in 2006, these buyers were denounced by the Russian party as a coalition able to impose new forms of trade (shorter-term contracts, no discrimination of border price with final destination clause) in their advantage, but against the interest of the Russian seller. Even if this representation was far from reality, Russian dependence on European buyers is symmetrical to European dependence on Russian gas.

### *3.5. Risk of market power in direct sales on national markets*

The aim of Gazprom's direct sales strategy (see Box 2) is to capture the profit margins that go to downstream suppliers. Gas sold to a large operator at a border price of €200–230/1000 m<sup>3</sup> in 2006 would be bought indeed by an industrial consumer from this operator for €400–450/1000 m<sup>3</sup>. There are two reasons for this price difference: first, transmission, distribution, and storage costs; and second, supply margins that depend on the intensity of competition on the industrial and retail market in question.

First, a foreign producer who does not have transmission, distribution, or storage assets should not underestimate the cost of transporting, storing, and distributing gas. For example, in Germany the estimated average price for transmission and distribution paid by a gas marketer to the transporter and distributor is between €100 and €130/1000 m<sup>3</sup> for a delivery of 0.1 million m<sup>3</sup> per year (Mm<sup>3</sup>) to a commercial customer and up to €38/1000 m<sup>3</sup> for an annual delivery of 25 Mm<sup>3</sup> to an industrial customer (EC, 2004b, p. 48). Storage costs increase these intermediary costs by 30% in the first case and by 90% in the second (EC, 2004b, p. 30). Foreign producers therefore have a lot more to gain by taking over or forming alliances with existing suppliers and distributors, in particular when they possess storage capacity. They can then extract value from gas transmission and distribution, which are regulated activities with guaranteed profits and an aspect of the value chain that should not be underestimated.

Second, through such strategies foreign producers can also benefit from limited competition in direct sales to industrial consumers and small distributors, given that demand is less sensitive to price fluctuations in this market. But certain competitive national markets likely to be covered by Gazprom, such as the UK market, are less profitable than others such as Germany and Italy in the supply to the industrial segment, as is shown by the supply

<sup>17</sup>Energy Business Review, January 16, 2006.

<sup>18</sup>D. Medvedev, Gazprom vice-president, quoted in Moscow Times, June 23, 2006.

<sup>19</sup>As Jonathan Stern (2005, p. 168) underlines, in any realistic scenario, the constraints associated with building the pipelines and developing the gas fields associated with the first major contract would push back the first deliveries to beyond 2020, always assuming a positive outcome to negotiations before 2010.



## Box 2

## Gazprom's strategy of downstream diversification.

To maintain its sales in national markets now open to competition and appropriate a larger share of gas revenue, Gazprom has consolidated the strategy of downstream diversification, which it began developing in the 1990s. This strategy is based on setting up marketing subsidiaries, purchasing shares in local companies, and forming joint ventures with national partners in transport, distribution and trading. In the middle of the 1990s, Gazprom started Wingas in Germany, a joint venture with BASF-Wintershall, to transport gas and sell it directly. This enabled it to take a 13% share of the wholesale market.

Since then, Gazprom has moved into the new EU member states—former Soviet republics (Baltic countries, where it holds 35–40% of the respective national gas companies) or ex-Comecon (Poland, Hungary, Czech, and Slovak Republics)—taking advantage of privatisation of the gas industries. Its objective is clearly to maintain its sales in countries that are heavily dependent on its gas. It is now using the same strategy to attack the large European markets, attempting to gain control of suppliers and distributors, as demonstrated by its interest in Centrica or Scottish Power in the UK in 2006, but without success. It might be interested in taking a share in Distrigaz of Belgium, or of strengthening its position in Germany by buying out local distributors. In Austria, the agreement with OMV and regional distributors in 2006 provides for Gazprom to market directly 1.8 Bcm/y of gas through GWH, a subsidiary jointly owned with another Russian investment company. In Italy the agreement with ENI provides for Gazprom's direct sales of 3 Bcm/y by 2010.

It is also building alliances by swapping assets in sales or distribution, on the one hand, and production, on the other. For instance, the agreement signed in 2006 between BASF and Gazprom will give the former a 25% share in the large Yuzhno-Russkoye gas field in exchange for consolidation of the latter's position in Wingas (share rising from 35% to 50%) and in the marketing company, WIEH. Gazprom is pursuing similar ends to reach the Hungarian market through its general agreement with E.ON-Ruhrigas of July 2006 with entry in a large gas field in exchange for shares in E.ON Foldgaz Storage and E.ON Foldgaz Trade and in common regional gas suppliers in holdings with MOL, the national oil and gas company. In Italy the long-term agreement of 2006 with ENI provides for Gazprom's direct sales provides to ENI shares in Ioukos assets and involvement in the new South Stream pipeline under the Black Sea announced in June 2007.

margin figures in the European Commission's Benchmarking report in 2004 (EC, 2004b, p. 30).<sup>20</sup> On the UK market, the supply margin in 2002 for customers of 25 Mm<sup>3</sup> was 9 €/1000 m<sup>3</sup>, compared with 27 €/1000 m<sup>3</sup> in Germany and 18 €/1000 m<sup>3</sup> in Italy. For customers of 0.1 Mm<sup>3</sup>, the supply margins are 22 €/1000 m<sup>3</sup> in the UK, 36 €/1000 m<sup>3</sup> in Germany, and 44 €/1000 m<sup>3</sup> in Italy. Does the direct entry of a foreign producer in the downstream business in less competitive markets present a risk of increasing the suppliers' exercise of market power on industrial and retail markets?

The answer could be given by observations of the Gazprom's experience in selling directly on the German market, since 1994, the date of the creation of the joint venture Wingas between BASF-Wintershall and Gazprom. It shows a classical sequence of entry on an oligopolistic market (Quast and Locatelli, 1997). Initially, the Gazprom's revenues dropped for equivalent volumes sold, due

to falling wholesale prices with the introduction of competition by Wingas' entry. But this loss was more than offset by profits made from sales to industry and municipal distributors and from transport activities.<sup>21</sup> Subsequently, profits increased when Wingas shared the market with other regional sellers (under the former demarcation agreements that legally governed the German gas industry until 1998). After the opening-up of the German market in 1998, foreclosure resulting from high access charges practised by the major regional transport and retail companies dissuaded foreign sellers from entering the market and made it easier to keep selling prices high. This experience suggests that Gazprom's direct involvement in a

<sup>20</sup> Estimation of supply margins is done by disaggregating the value chain in the EC, Benchmarking Report (2004b, p. 30), see Graph 10, Estimated breakdown of gas prices (production, network charges, balancing and storage, retail supply margin, 2 500 000 and 100 000 m<sup>3</sup>). The units that are expressed in €/GJ are transformed here in €/1000 m<sup>3</sup> with an equivalence of 36 GJ for 1000 m<sup>3</sup>.

<sup>21</sup> Wingas was created in 1994 to build long-distance gas pipelines (investment of €2.5 billion) and branches to transport Russian gas inside Germany and sell it directly to local distributors and certain large industrial customers. The entry of this joint venture onto the market did not have any profound effect on Ruhrigas, which purchased 40% of its gas from Russia. Its market share remained unchanged since Wingas initially supplied large buyers, mainly distributors on the new East German market. In order to capture market shares, Wingas had to reduce the wholesale prices charged to distributors and consequently prices charged by Gazprom to Wingas had to be lowered.

market can have the opposite effect to what might be feared. Of course, there could then be a return to the earlier situation of collusion—but this is where the energy regulator should step in. Gazprom's direct presence should in fact present less risk of market power in sales to end users than current situations when markets are dominated by incumbent suppliers.

Nevertheless, the beneficial effect of Gazprom's entry on competition will only be felt if Gazprom's partner or the company it is taking over is not the dominant operator. Gazprom certainly cannot shut its competitors out of the national market with a 15% share of the market, as the one held by Wingas in Germany. It would be quite a different story if Gazprom entered a market by taking over the dominant national supplier. The risk of monopoly power developing on the concerned markets would certainly not be negligible, given that Gazprom could benefit from its vertical integration to deter others from entering.

To conclude, despite Gazprom's dominant position on the number of European gas markets, the risks of it exerting market power of different forms is alleviated by the simple necessity for it to respect the contractual arrangements by which it wants to sell the quasi-totality of its gas to these markets. Russia and Gazprom have a strong incentive to respect market rules and maintain contract stability. Politisation of the gas trade does not mean that there will be additional risks of market power and discretionary behaviour of the Russian partner.

#### 4. Responses to the alleged Russian gas risk

The response of the member states and the EU to the economic risk associated with the Russian producer's market dominance must be based on a realistic analysis of what makes up this risk. What is the real risk of market power? How credible are Russian producers' contractual commitments? Any response must also take into account the fundamentally different nature of the Russian state and the EU. As said, the Treaty attributes no direct power to the EU to intervene in inter-state relations in issues concerning energy, if member states do not explicitly concede some on a specific issue.

We shall examine three responses to the alleged economic risks of Europe's growing reliance on Russian gas: integration of Russia in the European single regulatory area for trade in energy, the creation of a European authority to coordinate the negotiations of European buyers with foreign producers, and the expansion of interconnection and import infrastructures (LNG terminals, transcontinental gas pipelines) to improve the contestability of different national gas markets in the future. These responses should act at the main point of interference between the two "Markets and Institutions" and "Regions and Empires" paradigms when considering political and commercial gas relationships. They must be evaluated in relation to the reality of the economic risks of Russian gas dependence, and in light of their separation from the geopolitical risk to be protected from by

organisation of short-term solidarity for which it makes sense that the EU coordinates.

##### 4.1. Deadlock in attempts at EU–Russia regulatory unification

The first proposal from European governments and the European Commission for limiting the "Russian gas risk" is typically set in the "Market and Institutions" paradigm, but clashes head-on with the "energy super-power" geopolitical ambitions of Russia. Following the Russia–Ukraine crisis of early 2006, the first proposal was indeed to get Russia to ratify the Energy Charter Treaty. The Green Paper of March 2006 insists on the role of liberalised markets in helping to secure European gas and oil supplies. If Russia could be persuaded to adopt free-market legislation in the energy sector, this would help create greater interdependence and integration of interests between energy firms in Russia and the EU. Legal alignment would help limit the risks associated with investment partnerships, facilitate funding needed to develop new gas fields and associated major infrastructures, allow direct trade with independent producers to motivate them to invest in production, and enhance transparency in gas trading. At the end of 2006, in order to circumvent the Russian locking of the Energy Charter ratification, the European Commission wanted to add an energy chapter reiterating all the principles of the Energy Charter to the new Economic Partnership general agreement that was under negotiation in order to benefit from the search for a global compromise between different economic items.<sup>22</sup>

But as far as the Russian state is concerned, the Energy Charter is a "stillborn" treaty, as argued by the vice-president of Gazprom,<sup>23</sup> even though the door for negotiations seems to have been left slightly open by the Russian party. The renegotiation in 2006 of the EU–Russia partnership ended twice in Russian refusal to discuss Gazprom's export monopoly and third-party access to networks.<sup>24</sup> In order to reinforce the message, the Duma passed a law in July 2006 that clearly confirms the Gazprom monopoly on Russian gas exports and transit.

There is lesson to be learned from this refusal. As emphasised above, Russia sees itself as a sovereign power and has no plans to become part of a European common political and economic space; consequently, it has no immediate interest in bringing its regulations in line with European legislation. This refusal also means that Russia's reasoning on gas issues is as much political as it is economic. Russia is not inclined to abandon part of its

<sup>22</sup>See, for example, the very shady status of EuralTransgaz and RosUkrEnergo, intermediary for Turkmen gas sales via Russia to Ukraine.

<sup>23</sup>Statement made by A. Medvedev at the World Gas Congress in April 2006, quoted in *The Economist*, April 29, 2006.

<sup>24</sup>The first refusal was at the EU–Russia summit in Sochi in May 2006. It would most probably have been the same in Helsinki on November 24, 2006 if Poland had not blocked the negotiation on the principles of Energy Charter by taking an intransigent position.

sovereignty in an area that is at the core of its power politics, and any control over the rent yielded by its natural resources for the public budget and its industrial policy. It manipulates the legal rules in order to try to revoke in a discretionary manner the property rights given by Yeltsin's government to private and foreign companies in gas fields under leonine conditions of concessions. It must therefore be reckoned with as a state in search of power, which is seeking to shirk subscribing to international rules on energy for this very reason, and which is returning to the confrontational practices of power struggles inherited from the Soviet and Cold War era. This situation will probably remain unchanged until such time as the Russian state has regained complete control of national energy resources and concluded its project to create large international industrial groups in the oil and gas sector.

The EU must acknowledge that Russia is a state in a class of its own and in particular will not liberalise its oil and gas industry. The problem is that the Russian government is hardly reassuring. It employs forceful rhetoric in its relations with the former Soviet republics. It puts oil and gas resources development under its control in a quite discretionary way. It is expert at employing legal quibbles to deny the existence of any imbalance between its demands for direct access to European markets through the acquisition of stakes in national firms and its refusal to liberalise access to its own infrastructures and resources.

Focussing on the war of words and the legal power struggle creates a fear both of Russia using its gas as a weapon against European countries, as it did against the Ukraine and Georgia in 2006, and of Gazprom exerting market power. But this combined fear makes it easy to forget the corrective forces that the market develops against this risk. Gazprom knows that it has everything to lose if it is seen as using its gas exports as a weapon. What approach should therefore be adopted with this atypical state and its semi-public company that is both an actor and the instrument of its power strategy without exaggerating the challenge of balancing economic and commercial relations with the Russian gas sector? Are there economic risks to the EU market as a whole and to some individual state member markets to accepting Russia as an atypical state escaping multilateral regulation?

#### *4.2. To speak a common voice: the creation of a common negotiator*

The creation of a common authority for negotiating contracts with sellers is typically an answer forged in the perspective “Regions and Empire”—to balance power with power—but crafted to be applied to gas trade which is set in the international relationships arena structured by the paradigm “Markets and Institutions”. Indeed, from the first perspective, there would have been two reasons for which strict coordination would be needed. First, as the European Commission considers, member states are exposed to very differing degrees to the economic risk of

Russian gas imports. Ten of the 12 new members are strongly dependent on Russia for their gas, and they were subject to Soviet political and military domination for a long time, which creates a specific politicised climate in their trade relations with this country. From this perspective, bilateral relationships of the major member states with Russia weaken the bargaining power of the others, as the Nordstream project shows.

Second, as a critical Russian analyst warns from the same perspective (Milov, 2006), by competing with each other for access to Russian gas, the European companies would play into Russia's game and become weaker. Some European commentators close to the European Commission would even go so far as to anticipate a European market where the Russian seller would be able to impose its conditions as a monopoly. Consequently, any bilateral contract would be concluded between two uneven partners and would further weaken the bargaining power of each European buyer in its negotiations with Russia. From this perspective, liberalisation of the European market, which has led to an increase in the number of buyers seeking to trade with the narrow oligopoly of sellers under the leadership of Gazprom, has enhanced the market power of the Russian state-backed company, enabling it to impose its conditions regarding price and volume.

Faced with these alleged risks, the idea of a “common negotiator”, which was suggested by different governments after the Russo-Ukrainian crisis, would be for the EU to take direct coordinated action in the negotiation of contracts with the gas exporting countries. It would be consistent with the Commission's political stand of “speaking with a single voice” to gas producer countries. Even if it was not introduced in the list of propositions envisaged by the European Commission in the Green Paper of March 2006 (EC, 2006),<sup>25</sup> the idea merits attention because it was widely discussed and still is evoked from time to time.<sup>26</sup> The discussion has to consider three aspects: what could a coordination of contracting by a European agency really allow? Are the interests of EU members really converging on the need for coordination? Is the Gazprom's position sufficiently dominant in the long term to weaken the position of the European gas companies?

<sup>25</sup>The Green Paper (EC, Green Paper, 2006, p. 8) recommends the establishment of a European Energy Supply Observatory as soon as possible to monitor the demand and supply patterns on EU energy markets, identifying likely shortfalls in infrastructure and supply at an early stage and complementing on an EU level the work of the International Energy Agency. But this response appears to be oriented to short-term security issues for the different energies than on longer-term issues. However, it is not clear if it could not also cover issues such as diversification of gas supplies or gas routes.

<sup>26</sup>On July 2, 2007, in the Times of London, J. van der Veer, the CEO of Shell, called for better coordination between foreign policy and energy security by the nomination of a European energy minister. “I don't think that it makes sense that every country make its own policy towards the supply of Russian gas. Only Brussels can do it”.

#### 4.2.1. Which role?

First, the role and functions of a common negotiator, as imagined for organising a real coordination and reinforcing the bargaining power of the European buyers, are far from consistent with market principles, unless this role is symbolic. Technically, we could imagine a European agency acting as a public not-for-profit entity in a role of broker for contracting with large foreign producers. But this raises many questions:

- (a) What will be its goal vis-à-vis foreign producers and in particular Gazprom: Get the lowest price for gas? Over all the volumes to be imported in the future by European gas companies? Does Brussels dictate the terms of commercial deals to private sector players? Does it choose who gets to buy from such or such a producer on the basis of different geographical and political criteria?
- (b) With respect to the parties that would be eligible to be represented by this European Negotiator Agency: How will this sort of “broker” organise its intermediation? Will it auction on a pure market basis on the side of producers? Will it organise a coalition of buyers to negotiate contracts and then allocate contractual gas along a pre-agreed rule of allocation or auctions?
- (c) On some specific projects: How does one organise contractual agreements to establish a new LNG chain between a European gas company and a joint venture of an international oil company and a producer state (such as Egypt, Nigeria, or Qatar for instance)?

This set of questions suggests that a common negotiator has nothing to do with the short- and long-term effective competition that the European Commission wants to establish in Europe. In fact, when European officials evoke coordination, they conceal that the Commission could only manage the harmonisation of contractual arrangements with foreign producers (time span of contracts, pricing clause, etc.), which is far from the ambitious Single Negotiator.

#### 4.2.2. The existing bargaining power of gas companies

Second, as argued above, the EU cannot pursue a consistent common external policy on energy, particularly since the interests and ideas of member states often diverge and internal rules of decision-making in foreign policy do not allow the assertion of any efficient energy policy. As shown by Poland's diplomatic choices in 2006 and 2007, some of the new member states do not have the same culture of compromise and the same approach to their relations with the USA for their protection and with Russia, which is systematically seen as a geopolitical opponent. In this situation, extensive application of some solidarity principles in foreign policy and energy trade would create a risk of blackmail on the former member states by these new members completely engaged in the

“Regions and Empires” paradigm for acting in their foreign relations.

In this context, Russia's gradual politicisation of energy relations has prompted the principal member states to maintain the autonomy in their external energy policies that they had in past decades. They have done this by conducting negotiations with Russia at the level of heads of government to back the incumbent gas companies in their commercial negotiations with Gazprom. A typical example is the German government with the E.ON-Ruhrgas merger in 2003, which, in violation of the position of its national antitrust authority, created an energy giant able to balance Gazprom's bargaining power and develop an alliance with it, as in 2005 for the construction of the Nordstream—confirmed by the inter-governmental Irkutsk Agreement of April 2006. These Russo-German agreements reveal the importance of long-term energy security to the German government and its preference to retain its sovereignty in managing this issue, lacking confidence in the EU. Italy, France, and the Netherlands have a similar view of the situation. If the UK has, since 2005, spoken in favour of strengthening Community powers after long being scornful of Community involvement in the energy sector, it is because of security reasons, given that, becoming increasingly dependent on gas, the UK does not have sufficient storage capacity to guard against shortages.

So, working in coordination with government, incumbent gas companies are in a position to negotiate directly with Gazprom to set up balanced agreements that may also give the Russian party access to much coveted downstream assets, or to directly sell on the industrial market segment. The six major long-term contracts that were concluded in 2006 despite political tensions created by the Russo-Ukrainian crisis in January 2006 bear witness to the autonomy and bargaining power of these major buyers, who did not think twice about negotiating new contracts with Gazprom without fear of having to accept exorbitant conditions. Although talks with Gazprom can be long and tough when asset swaps are involved, the conditions of these agreements were, by no means, one-sided. In fact, no negotiating party suffers on account of alleged competition between buyers since all partners, whether buying or selling in Europe, want the same type of long-term contract with prices indexed to the price of crude oil and petroleum products.

#### 4.2.3. Weakening gas companies to create a common bargaining power

Third, this issue of European players' bargaining power is at a point of a fundamental tension between competition development desired by the EU and preservation of European players' bargaining power. Given the weakness of competition on wholesale markets, attributable to the structure of the gas industry and the bundling of the transport and supply business of gas companies, proponents of competition recommend separation of the transportation assets of the major gas operators and their



supply and wholesale purchase activities, which would be an important barrier to market entry, in order to weaken their market power at home (EC, 2005; EC-DG Comp, 2006).<sup>27</sup> Member states have been criticised for protecting their national companies both by advocates of European market competition and by those in favour of European coordination of negotiations with the Russian producer—sometimes the same parties. Both would prefer to see the creation of giant European multinationals rather than national champions in a European gas market, which would be more and more integrated.

But, if in the name of the principles of short-term competition the major gas buyers will be weakened by the patrimonial unbundling of their gas system claimed since the end of 2006 by the European Commission, although it is a secure source of cash helpful for long-term commitments in gas purchases, their bargaining power with large regional sellers and their financial capacity to handle large import projects would be reduced. This is the basic conflict between the Community's objectives of promoting short-term competition at all costs and guaranteeing long-term security of supply.<sup>28</sup> There is undoubtedly a logic in wanting to disperse gas company assets in the name of short-term competition principles on the one hand and to reinforce European coordination by “speaking with a single voice”, by eventually creating a single European negotiating authority, because weakening the major players would imply re-balancing the large sellers' bargaining power. But major member states are bound to wonder if they could gain in this game and how such institutional choices might improve the long-term security of their national gas supply when first-tier buyers of imported gas would be able to achieve this more easily by falling into line with their government's objectives.

#### 4.2.4. *Is there such a risk of Russian market power?*

Fourth, as argued in the previous analysis of the risk of Gazprom market power, the vision of a European market under the monopoly of the Russian seller does not take into account the effective reality of oligopolistic competition analysed above. The market for long-term contracts is contestable. Gas buyers, whether incumbent operators or market entrants, can choose between a certain number of producers in countries outside Russia: Norway, LNG

exporting countries in Africa (Maghreb, Egypt, Nigeria, Gulf of Guinea region), the Caribbean, and the Middle East, which will promote greenfield projects backed by international oil and gas companies. These countries will be joined in the medium and long term by Central Asian countries and Iran if the Nabucco line and its successors get off the ground.

#### 4.2.5. *Some more flexible forms of coordination*

So European coordination of the “Common Negotiator” type is not justified in the situation of the market for long-term gas contracts in Europe. Moreover, inside the EU nothing impedes neighbouring countries from joining forces to create the infrastructures needed to diversify their supplies or even to set up contracts to import gas from different sources. For example, eight Central European countries (Austria, Slovakia, Hungary, Czech Republic, Poland, Croatia, Slovenia, and Romania), that met in April 2006 following the Russo-Ukrainian gas crisis, were able together to provide the critical mass of political support needed for finalising the existing project of a Hungary–Croatia pipeline to link Central Europe to the Adria LNG terminal project in Croatia. This type of sub-regional coordination could be encouraged by the EU through financial support for the projects created.

More flexible forms of coordination would also prove useful. The first possible initiative, along the lines of that implemented by the IEA in the oil sector, would be to organise a permanent dialogue with the gas exporting countries to the region in order to look at the prospects and long-term plans of the parties and in particular to harmonise contractual conditions to help more transparent competition in trade. Another possibility will be offered by the eventual creation of the European Energy Supply Observatory as proposed by the Green Paper of 2006 for short-term security objectives. Its purpose would be “to monitor the demand and supply patterns on EU energy markets, identifying likely shortfalls in infrastructure and supply at an early stage and complementing on an EU level the work of the International Energy Agency” (EC, 2006). This would enable the European Commission to assess the extent to which each country is dependent on the exporting countries, and to motivate governments and companies to reveal some of their projects to help the resolution of eventual conflicts of interest between member states.

#### 4.3. *Improvement of infrastructures to promote diversification of supply sources*

If we consider the competitive environment to be an important aspect of Russia–EU gas relations, then we should look at the role of member states and the EU in enhancing physical market integration and improving gas pipeline and LNG connections with the major exporters. In the framework of the Trans-European Network policy, the EU is empowered to provide support for the development of interconnections and new import infrastructures, such as

<sup>27</sup>New criticisms have been addressed at upstream contracts by the Commission at the end of 2006 and reported in the Financial Times, 31 October, 2006.

<sup>28</sup>It is also worthwhile to note that gas companies have already been weakened by the new contractual rules imposed by the Commission for gas purchases by forbidding the final destination clause in the new contracts for reasons of discrimination of frontier prices of the exporters by national markets. Indeed it was the base of a very convenient system of price calculation in “net back” by subtracting the cost of transportation between the national market and the exporter frontier from the reference price of an oil products' basket. Henceforth, companies have no reference to negotiate the frontier price with Russian, Algerian, or Norwegian producers taking into account the specific cost of transport. This has tended to increase the bargaining power of sellers.

the Mediterranean and Trans-Caspian pipelines and LNG terminals. In this way, the EU is already playing a dual role of catalyst for competitive markets and promoter of long-term energy security. Providing financial assistance for LNG terminals in the north, transit routes such as the Nabucco project, and interconnectors is typically part of the role of long-term competition catalyst. Moreover, the improvement of European gas market regulation would play in the same direction. Indeed, greater transparency and harmonisation of the rules of access to networks, storage facilities, and interconnections should facilitate swaps between purchase contracts—something that has already been done—and also help countries that depend on a single import source to envisage importing from more diverse sources in the medium and long term.

In the future, it should be easy for first-tier buyers in Central Europe to obtain gas by pipeline from Norway or LNG from Algeria via Croatia, just as a large UK buyer might do from Statoil, Gazprom, QatarGas, and Exxon. New transit infrastructures, such as the proposed Nabucco pipeline, and joint ventures with the producers themselves, such as Medgaz with Sonatrach, CEPSA and GDF and Nordstream with Gazprom, E.ON and BASF, and more recently the South Stream with Gazprom and ENI, will provide greater opportunities for diversification. These partnerships, which allow the development of a diversified gas system, might conflict with the competition principles such as they are defended by the European and national antitrust authorities, in the light, for instance, of the demand addressed in June by the Commission to Gazprom to resell the totality of its interests (51%) in Nordstream, given its function of dominant seller (Gas Matters, July 2007).<sup>29</sup> But again short-term competition principles conflict with long-term security objectives, which necessitate the creation of large and diversified infrastructures.

#### 4.4. Organisation of short-term solidarity

The economic rationale and political justification for coordinating emergency solutions to preserve supply security, to be viewed as a collective good, is widely recognised by market proponents.<sup>30</sup> In the oil sector, the industrialised countries represented by the IEA (IEA) decided in the 1970s to establish emergency oil stocks and coordinate their use under the auspices of the IEA in the event of major shocks on the world market or technical problems in exporting or transit countries. The effort is shared among member countries, which are committed to holding a certain level of emergency stocks and to defining the institutional means for reaching this level. Where European gas supplies are concerned, the regional market

must be seen as a whole, with the European Commission acting as the vector for coordination, in the same way as the IEA might be for the international oil market (Helm, 2005).

It would be a more effective response to the fears expressed by Poland and the Baltic countries after the recent Russo-Ukrainian crisis in 2006 were they to ask for a strict coordination of projects of contracting and routes with Russia. If we look more closely at their arguments, we find that these countries are more concerned by the risk of temporary supply shortage for political reasons than by the risk of facing a monopoly power for contractual purchases of gas.<sup>31</sup> The EU should thus concern itself with organising solidarity in the event of an interruption of supply. But this would be far more complicated than the oil security regime because of the much higher cost of underground gas storage, the multifunctionality of the storage capacities in their owners' commercial strategies (regulation of their seasonal in-take and off-take, seasonal and geographical, arbitrage, balancing service), and the great difference in existing storage capacities related to each national market. So a priori it would make sense to incite all the European countries to establish emergency stocks to protect against technical and geopolitical uncertainties affecting supplies, to keep the European Commission informed of the situation of gas supplies in real time in case of crisis and to empower it to order the release of gas stocks from certain countries to supply the market of other countries in the event of a supply disruption.<sup>32</sup> But there are, in fact, economic and political obstacles to such a regime even for a part of the storage.

In this context, Directive 2004/67/EC “concerning measures to safeguard security of natural gas supply” voted in April 2004 (EC, 2004a) simply spells out wishful measures that can be taken at a national level to enhance the security of long-term supply, and to invite neighbouring countries to voluntary rules. The Directive does not oblige each member state to define a share of emergency stocks in existing storage to guard against short-term risks, nor does it create an official body to collect information in real time and make adjustments in the event of a crisis. The “Coordination Group”, which is installed by the directive to operate in this direction, has no clear powers of information and prescription. The Green Paper of March 2006, which draws attention to the importance of solidarity, could mark the start of a process to strengthen

<sup>31</sup>The fears expressed by the president of Poland at the German–Polish summit of November 2, 2006 are typical. Criticising Germany for its involvement in the Nordstream pipeline routed along the Baltic Sea floor and bypassing Poland and other transit countries, he only emphasised the risk of gas shortages for political reasons “The idea is that Poland would get deliveries from western European states in case of danger”, he said, adding that Norway was under discussion as a possible source (reported in the Financial Times, November 3, 2006).

<sup>32</sup>A major supply disruption is defined as “a situation where the Community would risk to lose more than 20% of its gas supply from third countries and the situation at Community level is not likely to be adequately managed with national measures”.

<sup>29</sup>The Spanish energy regulator addresses a similar demand to Sonatrach to limit its share in Medgas to 20%, unless to accept very stringent conditions to raise its stake at 36% (Gas Matters, July 2007).

<sup>30</sup>For a sound analysis of the public economics of energy security, see Bohi and Toman (1996).

EU powers on this question. The Commission recommends reinforcing the means of the Coordination Group. The proposed creation of the European Energy Supply Observatory to identify likely shortfalls in infrastructure and supply at an early stage would be progress. If all its recommendations are implemented, the EU will be able to better protect member states against the effects of any political crisis and thus deal with the economic risk as a separate issue.

To conclude, when the EU wants to act with norms and rules and to promote infrastructures to stimulate gas trade, there is a real economic efficiency in acting this way inside the area of the EU, including partners that have agreed to work in the same multilateral regime, such as Norway. But if the EU wants to act with other means at the points of tension between the two paradigms “*Markets and Institutions*” and “*Regions and Empire*”, these means risk being inefficient and generating new contradictions inside the EU area. The re-politisation of energy relations in the last 10 years obliges us to consider Russia as a state in a class of its own and consequently to manage the EU–Russia gas relations in a “realpolitik” way and to find balanced compromises. Geopolitics are a reality in the regional gas trade and cannot be ignored by the major member states, which can hardly be confident in the European Commission to represent their interests in the present stage of European construction. Nevertheless, it is legitimate to organise solidarity between former and new member states in gas relations on the short-term security issue.

## 5. Conclusion

The confusion surrounding energy dependence and the issue of energy security has undoubtedly clouded approaches to the question of the economic risk stemming from Gazprom’s position in the European market. Here, we have developed the point of view that the reality of gas trading between Russia and Europe is determined by market principles and the need of Russia for stable long-term contractual arrangements based on credible commitments. While it is inevitable that Gazprom’s share in certain national markets will remain important, thanks to the availability of Russian gas and the development of transmission infrastructures, we challenge the idea that Gazprom is not a reliable supplier, that it could abuse of an alleged monopoly position, and that it can easily play an oligopolistic game. Consequently, it appears unnecessary to guard at all costs against the risk associated with the Russian seller’s market power by creating a special power at the European level, because the long-term contracts market is fundamentally a contestable market. It also appears unrealistic to give priority to promoting short-term competition by dispersing the assets of the large gas companies rather than by using their long-term planning and bargaining powers to encourage development of future supply capacity if, in the end, it has to be recommended that the bargaining power of fragmented players be

consolidated by a European coordination of gas purchases, by altering the credibility of the Russian exporter.

The deliberate politicisation of the gas issue by the Putin government as a way of affirming Russia’s ambitions to recover its international influence undoubtedly contributed to creating interference between energy trade and foreign policy. It creates fears that Gazprom is trying to shut out competitors from national markets by securing footholds downstream and is using its position to control prices on the European market. There may also be fears that Gazprom’s position might help the Russian government to pursue its political objectives with respect to the EU. But this kind of strategy will certainly not help Russia to keep the gas revenues it will derive from its European sales.

The Commission’s effort to address the issue of politicisation of the gas trade, while also addressing the question of vertically and horizontally integrated gas companies in the member states, is at the node of the contradiction between the new rise of “hard power” in the international arena and the nature of the EU. It focuses on projecting multilateral institution-building strategies onto an increasingly politicised international scene. So inside this contradiction it appears to make sense to leave development of long-term gas supplies to the interplay of competition between the major buyers and sellers, because long-term competitive pressure will discipline the dominant sellers.

It makes sense to accept Russia in a class of its own, but without naivety. Accepting means that it would be unrealistic to expect Russia to ratify the Energy Charter Treaty in the next few years and that it is best to avoid confrontation. Accepting without naivety means exercising caution in agreeing to Gazprom’s acquisition of stakes in European gas companies, although this possibility should not be discarded out of hand since Russia’s presence in direct sales can also be a competitive factor. Accepting without naivety also means that Europe must maintain pressure through dialogue with Russia, in the hope that one day this country will ratify the Energy Charter, once its industrial ambitions have been achieved in the control of its oil and gas resources.

## References

- Ahrend, R., Tompson, W., 2004. Russia’s gas sector: the endless wait for reform? OECD Economics Department Working Papers, no. 402, 37pp.
- Bohi, D.R., Toman, M.A., 1996. *The Economics of Energy Security*. Kluwer Academic Publishers, Boston, MA.
- Boussena, S., Pauwels, J.-P., Locatelli, C., Swartenbroeckx, C., 2006. *Le défi pétrolier: questions actuelles du pétrole et du gaz*. Vuibert, Paris, 394pp.
- Chabrelie, M.C., 2006. Which Future for the Gas in Europe? Panorama 2006. Institut Français du Pétrole.
- Clark, D., 2006. Putin’s power struggle: we cannot let Russia use its domination of energy supplies. *The Guardian*, November 29, 2006.
- Clarke, J.G., 1990. *The Political Economy of World Energy: A Twentieth Century Perspective*. Wheatsaf, Harvester.

- Correljé, A., van der Linde, C., 2006. Energy supply security and geopolitics: a European perspective. *Energy Policy* 34, 532–543.
- Creti, A., Villeneuve, B., 2004. Long term contracts and take or pay clauses in natural gas markets. *Energy Studies Review* 13 (1), 75–94.
- Dixit, A., 1979. A model of duopoly suggesting a theory of entry barriers. *The Bell Journal of Economics* 10, 20–32.
- Doane, M.J., Spulber, D.F., 1994. Open access and the evolution of the US spot market for natural gas. *Journal of Law and Economics* 27, 477–517.
- EC, 2004a. The Council Directive 2004/67/EC of 26 April 2004 concerning “Measures to safeguard security of natural gas supply,” Brussels.
- EC, 2004b. DG TrEn, Third Benchmarking Report on the Implementation of the Internal Electricity and Gas Market. European Commission, Brussels.
- EC, 2006. Green Paper. A European Strategy for Sustainable, Competitive and Secure Energy, March 2006 (COM(2006) 105 final).
- EC, DG Competition, 2006. Inquiry on competition in energy sector. Preliminary Report, Brussels, February 2006.
- Finon, D., 2004. European gas markets: nascent competition and integration in a diversity of models. In: Finon, D., Mittdun, A. (Eds.), *Reshaping European Gas and Electricity Industries: Regulation, Markets and Business Strategies*. Elsevier, London (Chapter 7).
- Gomart, T., 2006. Politique étrangère russe: l'étrange inconstance, *Politique Etrangère*, 1/2006.
- Hallouche, H., 2006. The GECF: Is It Really a Gas OPEC in the Making? Oxford Institute for Energy Studies, Oxford.
- Helm, D., 2005. European energy policy, securing supplies and political challenge of climate change. <[http://www.dieterhelm.co.uk/publications/European\\_Energy\\_Policy251005.pdf](http://www.dieterhelm.co.uk/publications/European_Energy_Policy251005.pdf)> (accessed 25 october 2005).
- IEA, 2002. Flexibility in Natural Gas Supply and Demand. OECD/IEA, Paris.
- IEA, 2006. Optimising Russian Natural Gas. Reform and Climate Policy. OECD/International Energy Agency, Paris.
- Keohane, R.O., 1984. *After Hegemony: Cooperation and Discord in the World Political Economy*. Princeton.
- Keohane, R.O., Nye, J.S., 1977. *Power and Interdependence: World Politics in Transition*. Little, Brown and Company, Boston.
- Komarov, Y., 2004. It's a long time since we have been analyzing implications of gas market liberalization in Europe. Interviews, Gazprom, 20 Janvier, 5pp.
- Laïdi, Z., 2006. *La norme sans la force, l'énigme de la puissance européenne*. Editions des Presses de Sciences Politiques, Paris.
- Locatelli, C., 2006. The Russian oil industry between public and private governance: obstacles to international oil companies' investment strategies. *Energy Policy* 34 (9), 1075–1085.
- Majone, G.D., 1993. *Deregulation or Re-regulation?: Regulatory Reform in Europe and United States*. Pinter, London.
- Mazighi, A., 2005. An examination of the international trade of natural gas. *OPEC Review* 27 (4), 313–329.
- Milov, V., 2006. *The EU–Russia Energy Dialog: Competition against Monopolies*. The Energy Policy Institute, Moscow (published in *Russie.NEI.Visions*, no. 13, Institut Français des Relations Internationales, Paris).
- Mintopenergo, 2003. *Energy Strategy of Russia for the Period Ending 2020: Main Provisions*, Moscow, November.
- Murphy, F.H., Smeers, Y., 2002. Generation capacity expansion in imperfectly competitive restructured electricity markets. CORE Discussion Paper 2002/69, Université Catholique de Louvain.
- Neumann, A., von Hirschhausen, C., 2004. Less long-term gas to Europe? A quantitative analysis of European long-term gas supply contracts. *Zeitschrift für Energiewirtschaft* 28 (3), 175–182.
- Quast, O., Locatelli, C., 1997. Russian natural gas policy and its possible effects on European gas markets. *Energy Policy* 25 (2), 125–133.
- Smeers, Y., 2007. European Gas Market Models and three difficult objectives. Presentation to Berlin CeSSA Conference “Gas and Nuclear Economic Mechanisms,” DIW Berlin, May 31–June 1, 2007 <[http://www.cessa.eu.com/sd\\_papers/berlin/CeSSA\\_Berlin\\_108\\_Smeers.pdf](http://www.cessa.eu.com/sd_papers/berlin/CeSSA_Berlin_108_Smeers.pdf)>.
- Socor, V., 2007. Russian energy: toward a Russia-led “OPEC for gas”? Presentation to the Jamestown Foundation Conference, April 25, 2007 <[http://www.jamestown.org/events\\_details.php?event\\_id=31](http://www.jamestown.org/events_details.php?event_id=31)>.
- Stern, J., 1998. *Competition and Liberalization in European Gas Markets: A Diversity of Models*. The Royal Institute of International Affairs, London.
- Stern, J., 2005. *The Future of Russian Gas and Gazprom*. Oxford University Press, Oxford.
- Stern, J., 2006. Is Russia a threat to energy supplies? Discussion paper, Oxford Institute for Energy Studies, August 2006, pp. 3–4.
- Stern, J., 2007. Gas-OPEC: a distraction from important issues of Russian gas supply to Europe, OEIS comments.
- Tompson, W., 2006. Un Venezuela du froid?: la malédiction des ressources et la politique russe. *Politique Etrangère* (1), 37–50.
- Vives, X., 1999. *Oligopoly Pricing: Old Ideas and New Tools*. MIT Press, Cambridge, MA.
- Wagbara, O.N., 2007. What would the gas exporting countries forum influence gas trade? *Energy Policy*, 1224–1237.
- Walz, K., 2003. *The Anarchic Structure of the World Politics, International Politics: Enduring Concepts and Contemporary Issues*. Addison-Wesley Publishers, New York.
- Williamson, O.E., 1985. *The Economics of Institutions of Capitalism*. The Free Press, New York.