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# Gas Supply and EU–Russia Relations

EVERT FABER VAN DER MEULEN

## *Abstract*

Drawing on New Institutional Economics (NIE) theory, the article argues that EU energy policy towards Russia damages security of supply because it neglects the specific aims and propensities of Russia and Gazprom. EU Commission initiatives are based on the promotion of interdependence through market opening, favouring a policy of competition over security of supply. The reason for this focus is found in the EU's embedded inclination towards liberal markets. Russia, by contrast, has chosen suboptimal state control of natural resources over the frontier capitalism of the 1990s. Sustainability of the current rent based system and geopolitical considerations are essential to Russia and Gazprom. In this situation a pragmatic approach that aims at security of supply and security of demand seems to be more successful. In this approach, liberalisation of the market can only be a long-term goal.

HYDROCARBON ENERGY PLAYS A VITAL PART IN contemporary society and this is unlikely to change in the near future. However there are important developments that are altering the old consumer–producer relationship. In particular the market for hydrocarbon energy is evolving from a buyer's market to a seller's market. The tightness of supply globally and the decline of energy supply in the OECD countries are the main causes. Moreover, because of the issues surrounding climate change, hydrocarbon energy is now being seen in a fundamentally different light in developed countries (Correljé & Linde 2006; Helm 2007a). Gas is an important part of the energy mix of the European Union (EU). The EU is faced with declining domestic gas supplies and an increasingly complicated regional gas market. The dependence on Russian gas in particular causes controversies within the EU. Nevertheless, independent research agencies, business and the EU Commission agree that the EU needs Russian gas and will need Russian gas in the future (IEA 2007; BP 2008; EC 2007b).

The literature on the energy dialogue between the EU and Russia can be divided into two groups. The first focuses on the clearly established notion of interdependence (Skinner 2005). Specifically regarding the EU–Russian gas dialogue, various authors have stressed the interdependence between the two partners, often emphasising common interests, linkages and pointing to spillover factors beyond the energy dialogue (Monaghan & Montanaro-Jankovski 2006; Stern 2006; Milov

2006a; Aalto & Westphal 2007; Hanson 2008). This notion of interdependence has also been acknowledged by the EU (EC 2006). However, as Spanjer (2007b) and Simonia (2008) note, this notion of interdependence is often overlooked in EU policy-making circles. Subsequently, other authors have paid more attention to the differences in policy and policy interests between the EU and Russia, and the subsequent interplay between the two (Prozorov 2005; Dmitriev 2006; Morozov 2007; Helm 2007b). Recent work has also begun to evaluate critically the EU external energy agenda (McGowan 2008; Natorski & Herranz Surrallés 2008). Furthermore, a number of studies focus on specific characteristics within the EU–Russian gas market. Some authors focus heavily on the characteristics of the Russian domestic gas market (Ahrend & Tompson 2004; Tarr & Tompson 2003; Stern 2005; Dudek *et al.* 2006; Milov 2006b; Spanjer 2007b), while the specific characteristics of the gas market within the EU has been studied extensively in Spanjer (2008b).

The goal of this article is to explain the fundamentally different approaches the EU and Russia take towards the EU–Russian gas dialogue. While acknowledging the general notion of interdependence, the article will indicate significant differences between the two sides which surface not only in policy formation, but also—and more fundamentally—in the differences between the institutional and economic structure of the EU and Russia and thus the two gas markets. The article argues that within the EU prevalence is given to a specific vision of interdependence, based on a policy of competition in free markets, whereas Russia's view is based on state control over essential resources and thus the essential functions of the Russian economy and cash flow.

The theoretical framework used to analyse the EU, Russia and the gas market is based on New Institutional Economics (NIE). The reasons for using this framework are two-fold. First, the characteristics of the gas market are such that they cannot be completely explained and solved within a neoclassical framework. Neoclassical economic theory is unable to provide adequate answers to the problems of investment irreversibility, risks and uncertainties associated with the (new) gas market (Spanjer 2008b, pp. 50–56), because it presupposes the existence of perfect competition and thus zero transaction costs. On the other hand, a NIE framework encompasses the neoclassical, competition orientated framework but leaves room for solving the various market failures associated with the gas market outside the neoclassical framework. Within NIE, Transaction Cost Economics (TCE) offers an analysis that, by including transaction costs and making the framework under which competition takes place the focus of its research, moves away from the notion of perfect competition.

Second, NIE offers a framework that is able to link ideas, institutions and policies to economic developments and economic frameworks. By encompassing the notion of path dependence (North 1990), it acknowledges that the institutional framework determines the opportunity set of a country. North defines this institutional framework as a combination of formal rules, informal norms and their enforcement characteristics (1990, p. 4, 2005, p. 22). Within this framework organisations operate that are able (albeit slowly) to influence the institutional matrix. Thus by making the economic structure of a country a product of its institutions, we are able to link the institutional and governance structure of the EU and Russia to the policies they

pursue on the gas market. In doing this we are able to take an inclusive approach towards the political sociology of the EU–Russia energy dialogue (Aalto & Westphal 2007, p. 4).

Williamson (1998, 2000) produced a basic model of the economics of institutions that will be used in this article in order to structure the theoretical framework of NIE. In the Williamson model, the first level of the economics of institutions is composed of informal constraints, as studied by economic historians and sociologists. This embedded institutional level is resilient to change and nigh impossible to influence by means of the short term, blunt instruments, used by policy makers (North 2005, ch. 5) The second level is the formal institutional climate of property rights and the general institutional environment (Coase 1960). It comprises the formal rules of the game and is known as first order economising. On rare occasions—and under extreme circumstances, such as a revolution or the fall of communism—change can occur quite rapidly, although this is generally considered to be the exception rather than the rule (Williamson 1998, p. 28). The third level is the level of governance, of policy and contracting (Coase 1937). This is the level of second order economising, or TCE. It assumes that the institutional rules of the game are by nature imperfect and looks at governance structures or, in other words, the actual play of the game. Change at this level is subject to reviews of existing legislation and takes place in the order of a year to a decade. The fourth level is the focus of conventional neoclassical economics and agency theory and deals with the market which is subject to constant change. This article offers a slightly modified version of the Williamson model, as shown in Figure 1, in order to better fit the purpose of this particular exercise. As in the original Williamson model, the solid arrows between the various layers signify the (path dependent) constraints under which a lower level operates. The dashed arrows signify feedback from a lower level to a higher level.

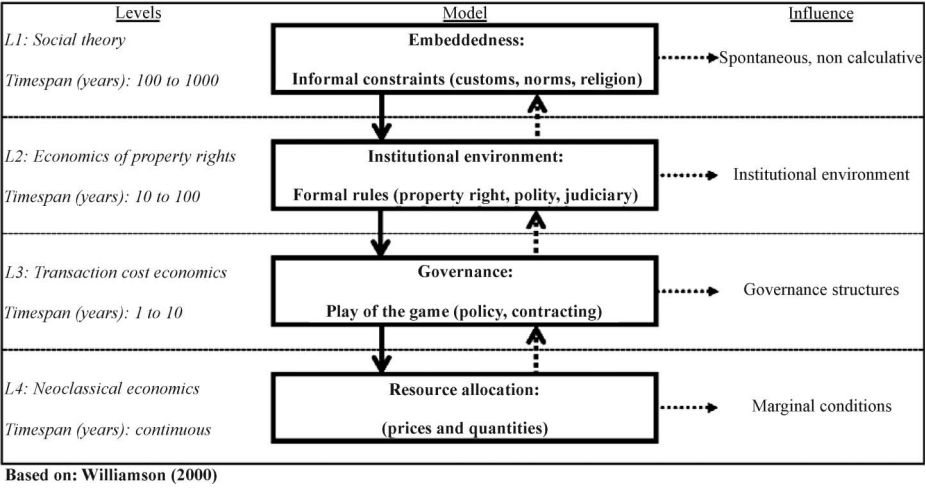


FIGURE 1. MODIFIED VERSION OF THE WILLIAMSON MODEL

It will be argued below, drawing on NIE and TCE, that to a large extent the problems of liberalisation and privatisation of the gas industry are situated in levels 1, 2 and 3 of Williamson's model, making it essential to look at the institutional and governance climate of the EU and Russia before making any kind of assumptions on how best to deal with the gas sector.

### *NIE and TCE theory*

The Williamson model has been used before to structure the gas market, most notably in CIEP (2006) and Spanjer (2008a). These publications argue that in view of the new reality of the energy market the neoclassical paradigm no longer suffices as an explanatory model for the gas market. These structural market shifts have been described as a paradigm shift (Helm 2007a). The new paradigm consists of the increase in importance of the issues of energy security and sustainability, combined with the ending of the period of asset sweating.<sup>1</sup> These three issues lead to a new climate that is in dire need of investment, because new assets have to be constructed and new technologies and innovations have to be adopted. These objectives then have to be undertaken in a market that is increasingly dominated by politics, and is undergoing a shift in the balance of power under which the influence of the producer increases.

It is beyond the scope and goals of this article to provide a complete overview of the argument on the introduction of a TCE perspective on the gas market. A brief summary is offered below of the general economic reasoning for the gas market that leads to the necessity of the introduction of TCE in order to complement standard neoclassical economic theory. The focus will be on the issue of uncertainty. This is followed by discussion of some specific examples that are relevant to the case of Russia and the EU. The reasoning in this section is mainly drawn from Spanjer (2008b).

In the gas market the paradigm shift described earlier directly leads to uncertainty.<sup>2</sup> This uncertainty can be found in different forms. Examples include uncertainty due to import dependence or dependence on transit countries. Additionally, uncertainty can be related to the opportunistic behaviour of stakeholders such as rent-maximising investors; or the market may suffer from political uncertainty due to the politicisation of the market itself, or from regulatory uncertainty, because investors are at the whim of a regulator that has the power to determine prices. These examples of uncertainty all have direct effects on energy security, whether security of demand or security of supply.

In combination with complex transactions and the presupposition of bounded rationality, uncertainty leads to contractual incompleteness. Incomplete contracts are an open invitation for opportunistic players to take advantage of the loopholes. Additionally the gas market suffers from asset specificity which can take several forms

<sup>1</sup>Asset sweating is the process that took place in the gas market during the 1980s and 1990s. This was a period when there were substantial assets (due to earlier investments) and the main concern was using these assets as efficiently as possible. Due to the fact that these assets now need to be replaced and there has been an increase in demand for gas, this situation has changed in the 2000s.

<sup>2</sup>Uncertainty should be distinguished from risk, the difference being that whereas risk can be predicted or measured and thus caged in a contract, uncertainty cannot. Therefore the presence of uncertainty leads to delay or inaction.

but, for the gas industry, two forms are important: locational (or site) specificity and dedicated assets. It is in the combination of incomplete contracting, opportunism and asset specificity that the issue of *ex-post* contractual hazards becomes vital. These hazards by nature cannot be embedded in a contract *ex-ante* and the consequence is investment hold-up (Spanjer 2008a, pp. 125–27). Under investment hold-up the market will respond by creating alternative means of contracting such as long-term contracts, vertical integration, regulation, or finally, turning to the public domain as a ‘last resort’ in order to guarantee certainty (security) on the market (Williamson 2000, p. 603).

A closer examination of the segments of the gas markets will shed some light on the interplay between uncertainty, asset specificity and opportunism and its consequences for structuring the gas market. Only if there is evidence that all three problems are simultaneously relevant in the gas market might we consider models of regulatory or political intervention that go beyond the neoclassical economic model that would intervene if market failure occurs (Spanjer 2008b, p. 129). When either the neoclassical model or the TCE model states that market intervention is necessary, these decisions have to be analysed beyond level four of the Williamson model.

### *The composition of the gas market*

For reasons of clarity the gas market is split up into two sections for discussion: first, upstream; and secondly, midstream and downstream. However, in reality the gas market is more complex, comprising of multiple segments.<sup>3</sup>

#### *Upstream*

In the case of upstream extraction, there are two problems, both of which have been studied within NIE and TCE. These are the problems of common property resources and locational specificity.

Common property deals with the problem of how to extract resources optimally so that the maximum benefits will be achieved. Ideally these benefits should flow back to the population. Common property is defined by two characteristics: excludability and subtractability. Excludability refers to the extent to which control of access to a resource can be managed. Subtractability refers to the effect where exploitation of an individual user adversely affects the interests of other users (Feeny *et al.* 1990, p. 3). Exploitation of common property depends on the allocation of property rights, making it a clear example of a case where the Williamson model comes into play. A variety of property rights’ schemes can be used including open access, private property, state property or a hybrid form.

The exact regime, according to Libecap (2005), depends on three factors. First, the physical nature of the resource has to allow a definition of property rights under reasonable costs. Secondly, there is the factor of resource value. Generally higher valued resources benefit more from clearly defined private ownership, because private ownership is more efficient. However, under some circumstances private usage might

<sup>3</sup>These could include upstream, supply pipelines, transmission, distribution, and consumption.

be considered socially optimal due to third-party effects. Some highly valued resources, due to their unique nature, are better managed under public ownership. The final factor is equity, in that some vested interests are bound to be excluded from the resource by more precise definitions of property rights, and these vested interests have a stake in the political process determining these definitions. In addition to these three factors, a fourth may be added: the issue of enforcement. Any scheme of property rights is only worth the transaction costs associated with this definition, if the proper enforcement characteristics are in place. However, this is also the area where most problems occur since, if key actors are able to behave opportunistically, this will lead to additional transaction costs that have to be taken into account when deciding upon the extraction regime.

A further issue related to gas extraction is locational specificity. This is one of the possible forms of asset specificity (Glachant 2002). Locational specificity occurs if the production process of a product cannot be moved. In the case of gas extraction this relates to the fact that gas can only be extracted on top of (or very near) a gas field. Gas fields are spread out unevenly throughout the globe and it is this physical specificity and unequal distribution combined with its massive usage, that makes the gas market in essence a geopolitical market. As a consequence gas is not only dominated by economics, but also by international politics. Again this provides an argument for looking beyond level four of the Williamson model.

#### *Midstream and downstream*

Gas is distributed through pipelines which automatically bind producer and consumer together in a relationship of dependence.<sup>4</sup> *Ex-ante* (before the pipeline is built) this relationship is dominated by the producer or investor; however *ex-post* the power shifts towards the consumer or regulator. Moreover, gas pipelines are dedicated assets and have no alternative use. In combination with the immense costs associated with the construction of pipelines, the problem emerges that a producer or investor needs guarantees *ex-ante* before undertaking an investment decision.<sup>5</sup> This might take various forms, including long-term contracts, vertical integration or even public ownership.

Linked to the problem of dedicated assets is the monopolistic character of gas distribution. Economic logic dictates that a (natural) monopoly will and should occur when production technology costs cause the long-term average total cost to decline when output expands. In this situation it should make economic sense that the most cost effective output should be one single producer because this leads to maximisation of economies of scale. Secondly, not only will the prices go up if there are more producers, it will also lead to the construction of duplicate facilities (for example, two gas lines in one street) and thus extra costs. These conditions apply to gas distribution

<sup>4</sup>Transmission can also take place as Liquefied Natural Gas (LNG) via ships. However, due to the investment characteristics, the LNG market (with long term, take or pay contracts) does not differ greatly from the transmission of pipeline gas.

<sup>5</sup>A more elaborate explanation of the problem of dedicated assets and its relation to investment decisions can be found in Spanjer (2008b, ch. 5).



networks. This also creates additional problems, because the gas distribution network might be considered a vital asset (and thus indirectly a public good) by a country, possibly justifying barriers to investment, golden shares or complete state ownership.

Gas consumption, in providing heat and electricity for population and economy, is a vital product that arguably needs additional security of delivery. Security of supply is a classic example of a public good. According to Ferroni (2002, pp. 1–2) public goods have three characteristics: they generate significant externalities; they are to a considerable degree not subtractable or excludable; and they enhance welfare. Gas consumption by itself is not a public good; however it is (indirectly) affected by its relation to the public good of security of supply and this creates a number of complications.

Goldberg (1976) argues that in specific circumstances, when a consumer wants a guaranteed right to be served, the best solution is for the service to remain in the public sphere. Secondly, he also warns that in the case of liberalising companies that provide a public good there are significant added transaction costs. In situations where there are complex mixes of services, or when contract duration makes future adjustment to the service predictable, or when a strong guarantee is sought, transaction costs will actually rise, especially in the case of small scale consumers (Glachant 2002, p. 5). Moreover, goods that are (to a considerable degree) non-excludable discourage private companies from investing, because of the risk of free riding by individual consumers.

When justifying possible market interventions in these cases of dedicated assets and public goods, TCE and NIE theory argue that a comparison of transaction costs is essential (Coase 1974; Spanjer 2008b, p. 116). Some solutions might be found in an efficient market-based system, but others require a different framework. Three frameworks may be distinguished that are relevant to the EU and Russian gas market.

The first framework would be not to intervene at all and leave all distortions in place. In leaving the market to structure the world, ideally supply and demand will be balanced optimally. However, because of the market distortions there are substantial risks involved. A private enterprise might use its market power to extract more rent from its customers, leading to a situation that is socially undesirable.

A second framework might be direct political intervention, taking the form of state ownership. This can be seen as socially optimal in the short term, because society has direct control over the assets. However, this situation creates longer term risks related to investments. The government might be tempted to use its control over assets and industry as a political tool. An example would be a government deciding to lower the prices for electoral reasons. In this situation a company would still operate, as long as its revenue covers its operating costs. However, it will not get any return on its initial investment and will not be inclined to invest more (Spiller & Tommasi 2005, p. 519–20). Other examples can of course also include using the market power of the enterprise on the international political spectrum for political gains. The problem here is that this misuse of political power will lead to political opportunism and thus the delay of additional investment.

A third possible framework is regulatory intervention. Contrary to neoclassical economic thought, regulatory control is fundamentally different from direct state control or ownership (Menard & Shirley 2005a). Actors at the political level, being aware of the temptation to use their power over an enterprise for short term gains, can



decide to outsource their power to a specialised agency—a regulator. The main advantages of a regulator are expert knowledge of the subject and a narrow, long-term policy outlook, decreasing the risks of short-term political interventions. However, as Spanjer (2008a, pp. 135–37) demonstrates, the (EU) gas market is still faced with the risk of regulatory opportunism. This opportunism heightens uncertainty and thus potentially leads to delays in investment.

In choosing the right framework, a balance will have to be found between what is deemed to be socially optimal in the short term and in the long term. Also, one has to take the current market situation into consideration. The gas market in the past might have required a different framework compared to the gas market at the current time, due to the fact that facilitating investment has become more important. Past solutions offer no definite answers for the structures needed. Moreover, as was the case with a framework for the management of common property, any regime will only be able to operate if the enforcement characteristics needed to uphold the regime are in place.

This section has identified four specific problems associated with the gas market. Two problems, locational specificity and dedicated assets, are directly related to asset specificity. The two other issues of common property resources and public good are related to the structure of the market and opportunism. In combination these issues lead to additional uncertainty in the market. Uncertainty in turn will be translated as investment hold-up. Moreover, dealing with challenges such as the definition of property rights and the public interest, opens the door to an analysis of the institutional structures and the structures of governance. These issues are a clear justification for applying the TCE perspective. This article will continue with an overview of the institutional climate in each of the EU and Russia, concluding with a hypothesis concerning the motivation of the gas supply policy of each. On this basis an analysis will then be possible of the ‘play of the game’ by both Russia and the EU.

### *Origins of EU energy policy*

Generally speaking, and unlike Russia, the EU has a well developed system of informal constraints and formal rules, ensuring a balance of power in the institutional matrix. However, within this institutional structure there are two inherent biases—an embedded liberal bias and a regulatory bias.

### *The institutional framework*

North (1990) defines informal constraints within an institutional structure broadly as norms of behaviour, conventions and codes of conduct, that come from socially transmitted information, or in other words, culture. These constraints are hard to measure, but judging by the differing (economic) performance of countries under identical formal rules, one can conclude that they are of the utmost importance.

One way of measuring these informal constraints is by investigating social capital. This would mean analysing the level of institutional and interpersonal trust, and the level of participation in civil society. Social capital has a direct and positive relation to

economic growth (Knack & Keefer 1997), and generally speaking, social capital in the countries of the EU is high, though Western and Northern Europe perform significantly better than Southern and Eastern Europe. There is a second, interesting correlation to social capital: originally posed by Durkheim, and somewhat counter-intuitively, social capital has a positive relation to individualism. More recent statistical evidence is also available (Allik & Realo 2004). This direct relationship to individualism is interesting to witness when Ruggie's (1982) conclusion is taken into account, that Western capitalist countries, each in their own unique way, learned to reconcile efficiency in the market with social values within their communities. Western countries thus have an embedded liberal focus.

The EU as an organisation was born from these embedded liberal values. One can distinguish two different value sets in Ruggie's definition above: liberal individualism as a system of values and liberal individualism as a means to (economically) order the world. Both are present within the EU, though in the same measure.<sup>6</sup> Here we are mainly interested in the second point. The EU originated from the liberal doctrine of free markets. The internal market and the policy of free competition are the beating heart of the EU and the reason why the European Economic Community originally took shape in the 1950s. This system is firmly embedded in neoclassical economic thought. As Arnspurger and Varoufakis (2006) argue, there are three axioms that underlie neoclassical economics: methodological individualism, methodological instrumentalism and methodological equilibration. These three axioms lead to the notion of perfect competition, because they assume that if utility-maximising individuals choose to operate on the market there are no information (transaction) costs (Spanjer 2008b, p. 61).

There is also a second aspect of the EU as an organisation that has to be highlighted. When looking at formal rules, the countries of the EU can be described as having a high level of institutional development. Most European countries for instance are high performers on the World Bank Governance Indicators and also perform well on global competitiveness (WEF 2008). EU countries have well developed property rights and balance of institutions; though again, Western and Northern Europe perform better than Eastern and Southern Europe. The EU has a specific role in this institutional framework. As argued by Majone (1996), the EU can be described as a regulatory state. The root causes of the rise of the regulatory state (and with it the EU as a level of governance) are to be found in the combination of the rise of the neo-liberal doctrine of liberalisation and privatisation and the increasing importance of certain risk-associated policy areas (Eberlein & Grande 2005, pp. 89–90), linking it to Ruggie's notion of embedded liberalism.

As opposed to redistributive policies, budgetary constraints have a limited impact on regulators because the nature of regulatory policy is such that the costs are borne by those who have to comply with the regulation (Majone 2005, p. 145). In the case of

<sup>6</sup>The liberal value system can be found in the humanistic ideas of freedom and human rights. These values can, for instance, be seen in the Charter of Fundamental Rights of the EU, but they have a broader bearing that goes beyond the EU as an organisation. They are, for instance, acknowledged as founding principles of the EU, conditions for suspension of membership, preconditions for membership and a key aspect in the external relations of the EU in the Treaty on European Union. On internal policy see articles 6 and 7, and on the EU's external policy, see article 11 of the Charter.

the EU this means that the costs of a common energy framework will be borne by the member states and the companies and investors in the energy sector. These costs can either be direct financial costs in order to impose legislation, or indirect economic or political costs, due to its implementation.

### *Governance*

In dealing with energy the EU distinguishes three policy objectives, namely sustainability, competitiveness and security of supply (EC 2006, 2008b). In order to meet the sustainability objective, legislation was proposed covering the second phase of the EU Emission Trading Scheme (EU-ETS) in January 2008 (EC 2008a). The latest phase in the competitiveness objective was the third liberalisation package of September 2007 (EC 2007c). Finally, security of supply was the main topic of the Second Strategic Energy Review of November 2008 (EC 2008b). However, apart from this review, EU initiatives regarding security of supply have been modest. Though the Commission effectively treats the three energy policy objectives as inherently equal and intertwined, it can be argued that this is not the case. By using Maslow's pyramid of human needs, Frei (2004) argues that lower order needs have to be satisfied before higher order needs can be met. In the case of energy policy objectives this would mean that guarantees over security of supply will predate an agenda on sustainability and competitiveness.

This problem with security of supply is aggravated by the fact that the Commission has limited competences in this area. During the 1980s and 1990s increasingly the energy sector became a 'normal' sector. Slowly markets became privatised and liberalised and the EU increasingly used competition policy in the field of energy. Gradually member states adapted their interests to the EU framework as it came to be formed along the lines of market liberalisation (Jabko & Eising 2001). At the same time the EU framework on sustainability was also set up along market based lines. This eventually culminated in the far-reaching EU-ETS, under which the polluter pays for its CO<sub>2</sub> emissions. However, it is questionable whether this market-based approach will be successful in the case of energy security, where security concerns increasingly seem to dominate the agenda (McGowan 2008; Natorski & Herranz Surrallés 2008). Security of supply currently remains largely outside of the Commission's scope. The Treaty of European Union explicitly mentions that member states can determine their own energy mix (Treaty of European Union, article 175). Thus the policy objective of security of supply essentially belongs to the individual member states and, since there exist substantial differences between individual member states, a common policy for security of supply is hard to define.

When examining the energy mixes of different member states, a number of different interests can be distinguished. Here only those directly relevant to the gas sector will be discussed. Firstly, gas occupies a distinctive position in the energy mix itself. Some countries (for example, France and Poland) greatly rely on other forms of energy, while gas penetration is high in other countries (for example, the Netherlands). Secondly, some countries (most significantly the UK and the Netherlands) have domestic gas supplies, whereas others have not. Thirdly, diversification of imports is a significant factor. Generally speaking, Western Europe has a more diverse supply mix

than Eastern Europe. Also, one has to consider the market power that larger member states carry as opposed to the smaller states. Finally, history can be an important element too. Eastern Europe has a less positive attitude towards Russia than Western Europe: Germany, Austria and Italy have had gas imports from, and good energy relations with, Russia and the Soviet Union for decades. The result of these divisions is that whether or not gas is deemed to be a secure resource differs greatly for member state. Again this complicates the situation regarding security of supply.

Additionally, different member states have different regimes to structure the gas market. Unsurprisingly, the Commission seems to prefer an independent regulatory authority, but it lacks the competences to introduce an EU-wide regulator. The Commission wants to take additional steps to facilitate cooperation and information exchange between national regulators (EC 2007c, pp. 7–9, 40–46), but the power and influence of these regulators differs per member state. Some countries (such as the UK, Italy or the Netherlands) have a powerful regulatory authority, while in France the direct influence of the state as a shareholder in the energy companies is significant, and in Germany the privatised companies are extremely influential, leading situations where business interests often prevail (Westphal 2007). The risks and problem areas differ under each framework, often leading to different policy priorities.

### *Hypothesis*

Thus, the EU suffers from an inherent embedded liberal bias that automatically puts policy formation in the gas sector within a neoclassical framework. Moreover, the policy initiator (the Commission) does not directly feel the negative aspects of its policy, due to the fact that the Commission is essentially a regulator. Therefore the costs associated with its policies are not borne by the EU itself, but instead by the member states or investors. Furthermore, within the EU policy objectives, the Commission has limited competences on the issue of security of supply. This leads to the following hypothesis with regard to actual policy initiatives of the EU: in enacting its three energy policy objectives, the Commission will not take proper and sufficient account of security of supply, due to the fact that the actual competences in this field lie within the scope of the individual member states, which are divided on the subject.

### *Russian energy policy*

According to some writers, Russia has now evolved into a normal ‘middle income country, struggling to overcome its communist past’ (Shleifer & Treisman 2004, p. 20), but others have contested this view. It has been argued that, after the break-up of the Soviet Union, Russia did not completely evolve into the institutionalised climate of the liberal market economy, comparable to the level of various Eastern European countries today. Russia can be seen as an abnormal country with a different societal structure to Western Europe and as a weak state in the sense that its institutional structure is underdeveloped (Rosefielde 2005; Trenin 2006).

Whereas most EU countries have high social capital, Russia has limited social capital. Some scholars even speak of negative social capital in Russia (Hayoz & Sergeyev 2003). This notion of negative social capital is closely related to trust.

Whereas under normal circumstances trust has a positive correlation to social capital in economic development (Fukuyama 1995, p. 26; Putnam 2000), in transition economies a distinction has to be made between the role of institutional (vertical) trust and personal (horizontal) trust. As Oleinik (2005) has argued, institutional trust in Russia is low. Trust in Russia is based on informal, personal networks. The role of these social networks is the creation of trust in absence of the institutional trust in the state. In non-communitarian systems of social capital, that are common to weak states, this is the only effective form of trust. In this pre-modern structure (Rose 2000) the state itself is merely a collection of social networks formed into one behemoth network. The defining characteristic of these social networks is the degree of access to power. Power is used to reduce uncertainty: every social network tries to maintain its own status, and is only concerned with its small part of the institutional matrix. In the absence of formal institutional trust (and enforcement) it is nigh on impossible to prevent a network—whether it is the president's network or that of a local mayor—from using its preferential position to its advantage at the cost of the nation in general. State power thus tries to enforce cooperation as a 'suboptimal solution' (Hayoz & Sergeyev 2003, p. 3).

Thus, the formal institutional climate in Russia is not comparable to the institutional climate of the EU. Whereas the EU represents a complex balance of power between various players in the institutional climate of European society, the Russian institutional climate is much more focused on a single element of the institutional structure, the presidential administration. Here the following characteristics of the Russian institutional climate will be highlighted: the role of the traditional actors in the balance of power; the allocation of property rights; and the role of NGOs and the media.

Institutions in Russia have an apparent orientation towards the presidential administration. Russia is ruled mainly by presidential decree, as it was during Tsarist and Soviet times (Wirtschafter 2006, p. 67). Today, decrees are implemented immediately and, although they can be revoked if found unconstitutional by the Supreme Court, it is a process that takes years. In the 1993 constitution, power was already highly centralised in the presidency, but recent events have aggravated this situation. An important decision in this respect was taken in 2005 when—for security reasons after the Beslan drama—local governors were no longer to be elected, but appointed by the president (Stoner-Weiss 2006, pp. 104–05). The *Duma* is best described as a parliament with 'parties of power', that are established and controlled by elements of the state. The state, by occupying this position, directly hinders the development of a civil society (Knox *et al.* 2006, p. 4). Property rights are not safeguarded to the same extent in Russia as they are in the EU. Russia is known for using its judicial system in order to control ownership of assets against Russians and foreign investors (Heinrich *et al.* 2002). This system of weak property rights was actually enforced and used by the Russian state in the 1990s.

Historically, the role of NGOs and independent media has been very restricted. While in the 1990s there were some signs of development in this area, in recent years NGO legislation has become more restricted, and Russian NGOs and several Western election monitoring NGOs have encountered problems with the government. Furthermore, various Russian NGOs have been criticised for accepting outside

funds, which in the view of the Russian state makes them policy tools of the US and EU (Carothers 2006). Independent media reporting is seriously lacking in Russia. The current role of the media has been described as a neo-Soviet model; its main characteristics are a lack of objectivity, government interference, imperfect media legislation and a hostile environment against journalism in general (Oates 2007).

The Russian institutional climate with its central focus on the presidential administration leads to a situation where the main organisation in the institutional matrix, the broader social network that the executive constitutes, tries to maximise control over society in order to substitute trust and prevent free-riding at the expense of the nation in general. However, in order to understand Russian energy policy and specifically the role of gas, it is not sufficient to only explain the functioning of the institutional climate. It is also necessary to look at the governance of gas supply more widely.

### *Liberalisation in the 1990s*

During the immediate post-Soviet transition to a market economy, the government was geopolitically unwilling and politically unable to fully relinquish control of the economy. Privatisation policy was designed to ensure that vital sectors (like the oil extraction sector) of the Russian economy were transferred to the newly formed Russian business elite, and not to foreign investors. The government used the climate of uncertainty in post-transition Russia in order to control the economy.

The process of privatisation can be linked to the nature of Russian society discussed above. In essence, privatisation was based on a deal between the government and the various insiders that would come to form the new elite: in order to guarantee the cooperation of the insiders, the government ensured that they would become the new owners of the assets and the power of these insiders guaranteed that the actual legislators had little influence on the privatisation process. However, as was understood by the newly formed elite, the deal only represented the balance of power at a moment in time, and the government might use legislation later to seize back these assets. In effect it created a 'privatisation rent' (Makushkin 2004, p. 11) for the new business elite. It was acknowledged that the system would change if government policy changed. This led to large-scale capital flight and underinvestment. Foreign investors were kept at bay using the climate of uncertainty and arbitrariness and if a foreign investor decided to accept the risks and invest, legislation could be used against the investor in the same way it was used against the Russian elite. This system was also considered by the government to be a source of revenue during the chronic budget deficits of the 1990s (Heinrich *et al.* 2002, p. 505).

With the change of presidents at the turn of the millennium the system changed. Various underlying problems became apparent, resulting in a shift of policy in favour of a balance between a strategy that would guarantee Russia's place in the multipolar world, and an economic policy of market opening in an increasingly globalised world. In essence, this is also the balance between creating institutionalised market control in an under-institutionalised environment.



*The new Russian strategy*

The significant changes that Russia has undergone since the 1990s have given room to fundamentally different policies in the 2000s. Having lost its great power status, Russia now desires a position of power in the multipolar world and in order to achieve this Russia has decided it 'owns its own future'. This has led to a philosophy of international relations that Russians themselves describe as a pragmatic view of upholding national interests in foreign affairs and of establishing equal relationships with the EU and the US (Lavrov 2007, p. 9, 2008, pp. 10, 14). In this perspective Russia sees natural resources in general and energy sources in particular as one of the key elements to secure its place in the multipolar world (Gref 2004). Faced with a world of one (US) world order and the degradation of old forms of international law after the wars in Yugoslavia and Iraq, and faced with the fact that high energy prices will not last in the long term, the rationale of Russian policy changed into one of making maximum use of its preferential position in energy. This was to be achieved by keeping foreign investors in check in Russia itself, and by Russian investors moving downstream, and into assets of non-nationalised energy supplies abroad (Delyagin 2006).

It soon became apparent that the old system of oligarchs was fundamentally flawed for this purpose. In response to the capital flight of its elite and faced with oligarchs who tried to influence the political game, the Russian government decided to renationalise its energy sources. This in turn resulted in attempts to discipline oligarchs either to conform with the government policy of buying up assets on the open market (in the case of Lukoil), or to terminate the original rental agreement they received in the 1990s (in the case of Yukos).

*Economic issues*

The nature of Russian privatisation caused another problem that came increasingly to the forefront after the crisis of 1998 and the economic boom afterwards. This was the crisis of liquidity in Russia. Two problems are related to this investment issue: first, the degradation assets and the dire need of economic diversification.

By selling assets at bottom prices in order to maintain Russian control over the assets and to ensure that liquidity could be maintained, Russia grossly undervalued its assets. This resulted in structural underinvestment in the Russian economy as a whole, with selective investments in certain areas, for example, oil. This could be maintained as long as the Russian economy was still growing on the basis of old Soviet assets (capital assets and labour assets still calculated at old Soviet liquidity prices). In effect the Russian economy was maintaining itself on investment done in the past. However, when these assets had worn out and needed to be replaced at market prices, in a situation of undervalued assets, it was found that liquidity was insufficient for large scale investment (Makushkin 2004). Due to the nature of the Russian economy, and especially the situation regarding property rights, corruption and tax regulation, both foreign investors and Russian investors still deemed the risks of investing in Russia as too high (Helm 2007b).



The second problem is the issue of diversification.<sup>7</sup> From a significant fallback in the 1990s, Russian economic growth increased to around 7% annually in the period 2001–2004. The main drive for this economic growth came from the energy sector: some 19% of GDP is earned in the oil and gas sector, and oil and gas amount to 70% of the industrial growth. The oil sector alone was responsible for 25% of GDP growth (Ahrend 2004, 2006a, p. 5). However, this situation cannot last. Hydrocarbon prices are notoriously unstable and this has had substantial undesired effects on Russian economic growth and its capital reserve. Also, there is a structural problem. The long-term expectation is that the direct link between global GDP growth and global energy consumption will decrease. This will significantly affect Russia's economic growth and international bargaining power.

The undiversified resource-based situation in Russia was due mainly to the more competitive position of energy on the international market than other Russian products. The process of liberalisation and the resulting lack of liquidity aggravated this situation. One of the consequences of the chaotic period of privatisation was that value chains were disrupted, with complex high-value chains becoming disrupted more easily and quickly. Short chains, such as the extraction and transportation of natural resources, were much less disrupted. The result was that the capital that was present in Russia was mainly invested in the natural resource sector because these chains still functioned. This led to a standstill in developments towards competitiveness in the other sectors of the economy (Boze 2004, p. 6).

The only way to solve these problems of liquidity and diversification was to become part of the world market and the world investment system. This meant that Russia had to open its market to FDI and seriously liberalise or privatise some sectors of the Russian economy. Generally speaking, recent developments have tried to alter the negative competitive conditions in the non-natural resource sectors of the economy. First, after 2000, it was made a priority for Russia to join the global economy, gain WTO accession, and enjoy the benefits of a substantial increase in FDI. The Russian government also tried to modify the preconditions of competitiveness by reforming various service monopolies. Some of these reforms were also preconditions to Russia's entry into the global economy. The WTO negotiations resulted in an EU demand for internal price reforms in the gas sector, and US demands for serious reforms in the banking sector. In practice, not all sectors were subject to the same liberalisation efforts. For the strategic reasons discussed above, and also because of the specific position of the state subsidiary Gazprom, the gas sector was a different case.

### *Gazprom and its societal role*

Gazprom, as the heir of the old Soviet ministry of gas, inherited a position as a public utility with a specific role in Russian society. This means Gazprom cannot be understood in strictly conventional economic terms. The Russian government uses Gazprom to supply the basic energy needs to the population at subsidised prices.

<sup>7</sup>There are actually two aspects of diversification: of the economy as a whole and of energy exports. The focus here is on the first element. For a view on the possibilities of the second element see Milov (2006a).

Throughout the post-Soviet period, Gazprom has maintained this rent-based system by its lucrative exports to the EU. Therefore the EU is, in effect, paying for the Russian subsidy system on the domestic market. Gazprom's priority is to ensure the survival of this rent based system. However, it is increasingly faced with rising costs, due to the decline of the old gas fields and the degradation of the distribution network. This leads to a position where Gazprom tries to maximise its direct (shorter term) profits as much as it can. First, it tries to guarantee security of demand from the EU and tries to enter the lucrative European end distribution market. Secondly, outside Russia it tries to increase gas prices, often leading to conflicts with post-Soviet states, for whom gas was previously subsidised.

As a result of its particular situation, Gazprom's investment priorities are to spend its money on distribution networks within the EU in preference to developing new sources of supply such as the development of the Shtokman or Yamal peninsula fields. The further consequence is that Gazprom prefers to buy increasing stocks of Central Asian gas, to fill the supply gap and let independent producers function on the Russian market. The break-up of the export monopoly directly contradicts this policy. Using Central Asian gas is also a tactic applauded by the Russian government, because it saves Russian energy supplies for later use, thus contributing to the Russian energy strategy. In this view, it is not realistic to expect any form of liberalisation of Gazprom, since it is not in the strategic interest of Russia both at a national and an international level.

### *Hypothesis*

Thus, in contrast to the EU's embedded liberalism and regulatory policy, Russia's energy policy is based on suboptimal state control of the gas market. Even though, under the influence of underinvestment and a crisis of liquidity, parts of the Russian economy are opening up, this is not the case for the gas sector. State intervention in the gas sector leads the way to potential political opportunism supplying the population with cheap gas and using gas as a geopolitical tool. However, this system also makes Gazprom highly dependent on its lucrative exports to the EU. From this situation we have the following hypothesis regarding the policy of the Russian government and Gazprom: under suboptimal state control the main concern of Gazprom will be to ensure and control external security of demand as much as possible in order to sustain a rent-based system in Russia.

### *The interplay of the EU and Russian energy strategies*

The previous sections have concluded that there are some inconsistencies regarding the energy policy of Russia and the common energy policy aspects of the EU. The main problems relate to the lack of a common approach regarding security of supply in the EU, combined with a Russian desire for guaranteeing security of demand on the EU market. This section will look at how a number of key EU and Russian policy decisions affect the opposite side. It will roughly follow the problem areas defined in the section 'NIE and TCE Theory': common property, locational specificity, dedicated assets and the public good.

*Upstream*

Since Russia has opted for an extraction regime of natural gas that is based on state control it only offers limited roles for foreign investors in gas extraction, based on a system of minority stakeholders. Furthermore, as the case of Sakhalin II clearly showed, Russia is prepared to reverse the terms of deals that have been made in the past.<sup>8</sup> However, if Russian policy is understood in terms of the four factors that determine an extraction regime discussed above, it becomes clear that, due to the specific circumstances Russia faces, the choice is not illogical.

In the case of gas extraction, property rights are relatively easy to define, so that the cost factor does play a significant role. Although, since resource value is high, it might seem that clearly defined private property would be optimal, in seeing energy as its ticket to the multipolar world the Russian government has defined gas in such a way that the resource value is not strictly an economic calculation but also a geopolitical one. This can then potentially justify public ownership. When examining the factor of equity, it is clear that the various stakeholders had or still have an interest in keeping as much state control as possible, whether in the form of direct state ownership, or ownership by rent seeking insiders within Gazprom. The final factor of enforcement is also relevant, because, due to the limited institutional strength and low institutional trust, it will prove difficult in Russia to legitimately enforce a system of private property rights.

Such state involvement in the gas sector is not uncommon. Even within the countries of the EU, there have been (and still are) cases of significant state intervention in the gas extraction regime. For instance, in the history of Dutch gas extraction the state has been a vital (if not determining) actor (Correljé *et al.* 2002). Also, in Norway the state is an important actor in the energy market.

Russia also uses locational specificity to its advantage. In Russia, Gazprom holds a monopoly on the entire pipeline grid. It also supplies the majority of gas in this network (Stern 2005). Thus the Russian state as majority shareholder directly controls supply and transmission of gas in Russia in accordance with its geopolitical objectives. On the Russian market, Gazprom allows Third Party Access (TPA) for some independent Russian producers. However, this is not allowed for its lucrative exports to the EU. Through these exports Gazprom sustains its rent based system. As already mentioned, this gas pricing system relates to the societal role of Gazprom and will, for political reasons, be difficult to change in the short term. As a second element of locational specificity, the near abroad has in the recent past faced the consequences of Russian political opportunism. As Belarus, Ukraine and Georgia have already experienced, the Russian government will not refrain from using gas exports as a

<sup>8</sup>In 1994 the exploitation rights of the Sakhalin II project in the Far East were given to a consortium led by Royal Dutch Shell. However, severe pressure by the Russian government led to the fact that from 2007 onwards Gazprom owned the majority share of the Sakhalin II project. The official reasons for this pressure were environmental conditions; however, one can question whether this was the complete motivation for the Russian government. Russia signed the deal under highly favourable conditions to the consortium during a time when the country was in severe disarray, lacking longer term economic and political strategy. And it is, of course, not unlikely that this was an important factor in the renegotiation of this deal, resulting in the majority share of Gazprom.

political tool. It is this final element that directly relates to security of supply and is frequently (but not often correctly) addressed in the popular media of the EU.

The central framework for the EU and its member states towards the transit and producer countries is the Energy Charter Treaty (ECT) and its Transit Protocol. The ECT offers a legal framework under which transactions can take place between consumers, producers and transit states. It ensures equal treatment for foreign and local investors and has provisions on the non-discriminatory transport flow. Further measures regarding transit were proposed in the Transit Protocol (effectively ensuring a limited form of TPA to pipelines). However, in December 2006 Russia stated that it would not ratify the ECT nor adhere to the Transit Protocol.<sup>9</sup> Two factors complicate agreement between the EU and Russia in this field: first, the Commission's insistence on an REIO clause;<sup>10</sup> second (and more fundamentally), Russia wants to maintain its monopoly on gas exports.

Often the Russian example is used as a reason to justify giving the Commission common external energy competences, as, for example, in the 2006 Green Paper on a European Strategy for Sustainable, Competitive and Secure Energy. The Commission defined an external energy policy as part of the process of creating a common regulatory space in the neighbourhood (EC 2006, p. 16). Since then the Commission has often repeated its principle of exporting (parts of) the internal energy market regulation.<sup>11</sup>

These EU initiatives on creating a common ground for external competences have not been without criticism. In a reply to the 2006 Commission Green Paper on energy, the Clingendael Institute (CIEP 2006) criticised the EU's rhetoric for being focused too much on the internal aspects of markets, where the external policy should be of greater importance. It also heavily criticised the focus on free markets and, since according to the International Energy Agency (IEA), substantial investment was needed in the short term, it argued that an external policy should overcome regulatory and political uncertainty. Russia, by contrast, feels that it is forced to take the route of geopolitical power play. By solely focusing on liberalisation, the EU is effectively asking Russia to give up its status as an independent sovereign power and conform to the rules of the EU's single market (Prozorov 2005; Morozov 2007).

The problem is that neither of these measures, the ECT or external competences, deal directly with the issue of security of supply and the issue of security of demand is not taken into consideration at all. This adheres to the conclusion that EU policy circles often overlook the areas of interdependence (Spanjer 2007a; Simonia 2008).

<sup>9</sup>To be more precise: Russia has signed the ECT and applies it provisionally. Russia linked ratification of the ECT to reaching an agreement on the Transit Protocol.

<sup>10</sup>The Commission has insisted on the introduction of a clause on the regional economic integration organisation (REIO) in article 20 of the Transit Protocol (the REIO clause), which ensured the particularity of the EU internal market regime. The Transit Protocol then effectively became outdated in the face of further transit regulation within the internal market. However, the EU has an exemption regime on TPA (article 22) that contradicts the rules of the Transit Protocol.

<sup>11</sup>See for instance Kroes' interview with Euractiv at: <http://www.euractiv.com/en/energy/interview-eu-competition-commissioner-neelie-kroes-energy/article-153617>. Both Piebalgs and Kroes have acknowledged these principles in various speeches available at: [http://ec.europa.eu/commission\\_barroso/piebalgs/media\\_en.htm](http://ec.europa.eu/commission_barroso/piebalgs/media_en.htm) and [http://ec.europa.eu/commission\\_barroso/kroes/speeches\\_en.html](http://ec.europa.eu/commission_barroso/kroes/speeches_en.html). All websites accessed 1 December 2008.

Whereas the EU supports the policy of pushing Russia to sign the ECT and its Transit Protocol, this does not stop individual member states from dealing with Russia under the current conditions, as can be seen by the various gas deals signed by various European companies in recent years; and the member states have not agreed on giving the Commission external competences in the field of energy or gas. It clearly shows that member states retain the competences of issues that directly breach on security of supply.

### *Midstream and downstream*

EU involvement on the midstream and downstream sections has been substantial in recent years. In 1998 and 2003 the Commission introduced two sets of regulations dealing with market unbundling<sup>12</sup> and the EU is currently finalising the third liberalisation package (EC 2007b). This package would complete the unbundling process by going beyond legal unbundling and pushing for full ownership unbundling. Additionally, the Commission is striving for the break-up of long-term contracts. To this end the Commission has brought various companies to the courts. These measures have not been without criticism. In July 2007, nine member states (amongst them most notably France and Germany) submitted a letter to the Commission stating there was no proof that ownership unbundling would lead to lower prices and more network investments, due to rising transaction costs. Neither would it necessarily lead to a consumer-friendly diversification of supply. Furthermore, unbundling of ownership could have serious consequences for the security of supply. Finally, it could potentially put companies from the EU at a disadvantage compared to companies from third countries. Neuhoff and Hirschhausen (2005) argue that even in a liberalised market some long-term contracts will remain in place, and Spanjer (2008b) has criticised the Commission's focus on the neoclassical economic paradigm of market intervention. One of his conclusions is that this might have serious impacts on the investment climate in the EU, especially transmission systems. This would then negatively affect security of supply.

Current regulation does offer scope for measures moving away from the neoclassical paradigm. Firstly, apart from complete ownership unbundling the Commission, anticipating a blocking minority in the Council on complete unbundling, suggested a second option of an Independent System Operator (ISO) (EC 2007b, article 9). Additionally, as a third option the Council suggested an Independent Transmission Operator (ITO) (Council of the EU 2008, 2009).<sup>13</sup> Secondly, since 2003 there has been

<sup>12</sup>Unbundling deals with the separation of gas production and distribution, effectively separating the gas flow from the transmission system. At the moment legal unbundling is already assured, but the third liberalisation package would also ensure ownership unbundling, preventing a production company from owning assets in a distribution company and vice versa.

<sup>13</sup>Both the ISO and the ITO would leave the vertically integrated undertaking (VIU) intact, but would use regulation to guarantee TPA. The difference between an ISO and an ITO is that, in the case of an ISO, operational, maintenance and investment decisions are conducted by the ISO. Moreover, the ISO management has no ties to the VIU, and the VIU is obliged to cooperate with the ISO. In the case of an ITO, operational, maintenance and investment decisions are still influenced by the VIU, because it receives 50% plus one vote in the supervisory board of the ITO. Management is not completely separated, though there are some safeguards in the form of waiting periods. Also as a safeguard, the (national) regulator has to approve long-term investment schemes.

legislation on gas that has tried to stimulate additional investment. The two examples are the regulation on TPA exemptions and the exemptions on long-term contracting. However, these measures are not without criticism. The TPA exemption regime has been criticised for allowing too many exemptions and having too short a time span (Spanjer 2008a). Exemptions on long-term contracting have been criticised for being limited to the EU internal market by not encompassing long-term gas supply contracts with third countries. This has been commented on by the EP Committee on Industry, Research and Energy (EP 2008).

Nonetheless, Gazprom, as a stakeholder on the EU market, is faced with investment uncertainty, and is, moreover, unsure whether long-term supply contracts will remain an option in the future. Moreover Gazprom has a potential disadvantage regarding the construction of certain supply pipelines, since exemptions under article 22 are territorial and as a consequence, for instance, large parts of the proposed Nord Stream pipeline would not qualify for these exemptions, whereas the Nabucco pipeline would qualify. Gazprom has responded by buying up significant assets on the EU market, which has led to additional complications.

Regarding its own grid, the EU has proposed measures that safeguard the essential transmission grids in the member states. At least partly in response to Gazprom's penetration of the EU market, the Commission proposed a third country reciprocity clause in the third liberalisation package. This measure would ensure that no third country companies or states could control assets in a transmission system, unless the country signed an agreement with the Commission (EC 2007c, p. 30). Rather surprisingly the EU introduced this measure in the explanatory memorandum (EC 2007c, p. 7) as a liberal measure promoting competitiveness, whereas it was interpreted in Russia as a protective measure aimed at stopping the market penetration of Gazprom, and aimed at applying additional pressure to Russia to ratify the ECT. The third country clause thus became known as the Gazprom clause. Compared to the Commission, the Council (2008) had a different view but it eventually adopted a revision in October that would allow third party states to sign an agreement with the individual member states on whether or not they could control assets in a transmission system instead of having to sign an agreement with the Commission. The reciprocity clause is remarkable in two aspects. First, it highlights the Commission's embedded liberal nature, in defining a protective measure as liberal. Secondly, it shows that member states retain the competences of issues that can directly breach security of supply.

### *Conclusions*

The gas market cannot be fully understood by the neoclassical economic model. NIE, and within it TCE, offer a frame of analysis that complements the neoclassical view and helps distinguish several problem areas, including common property, locational specificity, dedicated assets and the public good. These issues are directly related to the problems of asset specificity and opportunism, leading to additional uncertainty on a market that is already dominated by uncertainty. This uncertainty will be translated to investment delays on the market, potentially damaging both security of supply and



demand. Additionally, NIE analysis shows us that a complete analysis of the gas market has to include institutions and governance structures.

The article has argued that the EU suffers from an inherent embedded liberal bias that automatically puts policy formation in the gas sector within a neoclassical framework. This liberal, regulatory bias can be seen in the energy market where the EU sees market liberalisation as automatically contributing to its energy policy objectives of sustainability, competitiveness and security of supply. However, the Commission has limited competences on the issue of security of supply, arguably the most important energy objective. These competences currently reside with the individual member states and they often deal with security of supply in a different way.

By contrast, in examining the institutional structure of Russia, the article has argued that in the context of a society based on social networks and suffering from a lack of institutional trust, trust is enforced by a single player in the institutional matrix, the presidential administration. With this structure in place, the policy options for the Russian state are limited. It is in the Russian economic interest to incorporate the Russian economy into the world system in order to solve the problems related to a chronic lack of capital and to ensure general economic diversification. However, in the case of natural resources, Russia faced the choice between the frontier capitalism of the 1990s or state control over the sector, and it opted for the latter. Finally, the specific role of Gazprom in Russia has to be emphasised. As a consequence of the Russian decision for state control, Gazprom is used by the state to ensure its own interests. Gazprom's investment strategy is completely dominated by the fact that it has to sustain a rent-based system in Russia.

The examples of EU–Russia interaction in the final section show that Russia is mainly interested in guaranteeing security of demand, by controlling its natural resources and its export market and entering the lucrative EU market. The Commission has defined this as a threat to its energy policy objectives and has tried to liberalise the Russian market by exporting aspects of the EU internal energy market, and blocking Russian entry into the EU market. Member states that are affected directly by these uncertainties, and thus decreasing security of supply, diverge from the Commission policy. They seem to take a more pragmatic approach towards the gas discourse, paying attention to the synergies between EU security of supply and Russian security of demand. In this approach liberalisation of the market can only be a long-term goal.

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