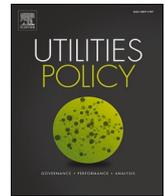


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Out by the door, in through the window: Politics and natural gas regulation in Russia

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ABSTRACT

This article deals with the regulation of the natural gas sector in Russia through the lens of institutional economics. It proposes a framework in which 'meso-institutions' bridge the gap between the macro-institutions shaping the 'rules of the game,' with the Kremlin at the core, and the micro-layer within which firms operate. We argue that the slow reform process comes from conflicts of interest embedded in these meso-institutions, specifically: *the Federal Antimonopoly Service, the Ministry of Energy, and the Ministry of Economic Development*. Based on official documents, data from various public sources, and semi-directive interviews and discussions, our analysis shows that parties are locked in a sub-optimal equilibrium.

1. Introduction

Natural gas, a major source of energy for many countries, faces political interferences everywhere. This is particularly true in Russia, where natural gas represents a key economic resource. It accounts for almost 50% of primary energy supply and power generation, 12% of exports, and about 7.5% of Federal budget revenues.¹ As of 2018, Russian natural gas was also estimated to provide 66.4% of the net gas imports from third countries by the European OECD members and 36.8% of gas consumption by the European Union, with a peak of 75% for Germany (IEA, 2019a; also Henderson and Moe, 2019: chap. 2).

Not surprisingly, natural gas thus represents a strategic resource for all parties involved. As such, this sector remains highly regulated, with varying but constant interference by the "visible hand" of policy-makers. As pointed out by Ronald Coase long ago (Coase, 1959, 1977), regulation, by almost definition, provides policy-makers with the institutional avenue to interfere with the organization of markets considered imperfect or misaligned with social needs ... or as the means to satisfy specific interest groups. A challenging question then is whether any institutional design can avoid transforming economically, socially, or politically-motivated regulation into political arbitrariness leading,

among others, to a poor business climate and inadequate investment (Levy and Spiller, 1994; Laffont, 2005: chap. 2; Henderson and Moe, 2019: chaps. 2 and 3).

Our study explores this question through the analysis of institutional arrangements intended to provide intermediation between political powers and operators working within the Russian natural gas industry. Since the collapse of the Soviet Union, internal forces promoting some liberalization emerged, partially under pressures from the World Trade Organization and the European Union, in an effort to deregulate this market and shake the dominant position of Gazprom (European Parliament, 2009; EC, 2018; Henderson and Moe, 2019: chap. 4). Although the liberalization of the domestic gas market was an important part of the EU-Russia Energy Cooperation Roadmap (2013: 10), the escalation of political tensions since 2014 made these commitments largely obsolete. Useful insights on this context and its institutional dimensions are provided in Henderson and Pirani (2014) and Henderson and Moe (2019). Each treatment provides a broad overview of the Russian gas sector, including its historical background and political monitoring. Another stimulating contribution comes from Gaddy and Ickes (2015) who analyzed the specific role of Gazprom as a key component within the vast rent management system the Kremlin has

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¹ IEA, 2019b; Federal Customs Service of the Russian Federation. *Exports and Imports of main goods from January to December 2018*. http://customs.ru/storage/document/document_statistics_file/2019-09/16/BsWD/WEB_UTSA_01.xls (Last retrieved, 16.03.2020); The Federal Treasury of the Russian Federation. *Annual report on execution of federal budget in 2018*; <http://roskazna.ru/ispolnenie-byudzheta/federalnyj-byudzheta/> (Last retrieved 23.06.2019).

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implemented since the 1990s. In what follows, we also refer to chapters in Treisman (ed. 2018) that provide insights into the political monitoring of Russian businesses.

The goal of our study, however, differs from these approaches, as we focus on the complex institutional nexus with its embedded vested interests that create formidable obstacles to reform. In doing so, we pay particular attention to channels of influence (Milgrom and Roberts, 2014), namely the institutional entities (e.g., the Federal Antimonopoly Service (FAS), the Ministry of Energy (ME), and the Ministry of Economic Development (MED)) endowed with regulatory, yet overlapping powers with regard to developing and monitoring competition, regulating tariffs, and defining and controlling technical standards.

The focus of our analysis is thus on the institutional entities that operate as transmission mechanisms, as the go-betweens. This ‘meso-institutional layer’ bridges the gap between the macro-layer within which policy-makers define relatively general and abstract rules and goals and the micro-layer within which firms operate and users interact. This approach enables an in-depth analysis of the institutional design, and it goes beyond the simplistic view that authoritarian regimes are monolithic (for similar views, see Noble and Schulmann, 2018; Lamberova and Sonin, 2018). Our core hypothesis is that the different elites associated with the natural gas industry, which compete and cooperate (North et al., 2009), find in these meso-institutions the privileged terrain through which they can express their diverging interests and, in some cases, the opportunity to challenge political monitoring.

Although our analysis focuses on institutional issues, the socio-technological background of the Russian gas industry must be kept in mind. First, Russia is partially locked-in with natural gas due to resource availability, the heavy sunk investments in infrastructure required for its exploitation and distribution, and the large sunk investments made by major industrial users (such as the metallurgy and the chemical industries). Second, continuity in the provision of gas is vital for Russia; households are spread over vast territories, and harsh climates mean long heating periods (seven months or even more). Extreme climate and geological conditions impose severe technical constraints on the entire gas network. Third, the vast seasonal variations in both domestic and foreign markets (exports represent almost 30% of Russian annual gas production) puts added pressure on different segments of the network. For example, domestic consumption in the summer may be less than 40% of its winter peaks. These variations mean that the investments in sophisticated storage capacities and equipment operate at less than full capacity for several months. Fourth, aging infrastructure causes challenges to the technical stability of the network. As of 2018, 61% of the total Russian network operated with pipelines older than 30 years, up from 46% in 2014 (Gazprom, 2019).

In this context, the question is whether the meso-institutions, with their overlapping responsibilities and the diverse interest they channel, are able to make the natural gas market more effective and transparent while respecting the socio-technological requirements imposed on the industry, and simultaneously remaining sheltered from political arbitrariness. Can these institutional entities open the door for substantial and sustainable reform without political interferences coming back in through the window, thus neutralizing change?

The article is organized as follows. Section 2 introduces the conceptual framework through which this issue is examined and outlines the methodology adopted. Section 3 briefly reviews the structural components that shape the Russian natural gas industry and may potentially hamper its reform. Section 4 shows how the overlapping responsibilities among the different meso-institutions have led to poorly designed and often contradictory regulation within the industry. Section 5 illustrates the pricing policies and the distortions they introduce in the organization of the industry. Section 6 discusses how the divergent interests embedded in this institutional setting generate a lock-in that facilitates political interferences. Section 7 draws lessons from this case about the key role of meso-institutions within the institutional layers with regard to understanding the successes and failures of reforms.

2. Analytical framework: disentangling institutional layers

Our underlying hypothesis is that in order to understand the complex path followed by the reform of the Russian gas industry, one needs to look at the institutions composed of different layers that fulfill distinct functions. In that perspective, we pay special attention to the institutions that provide transmission mechanisms to bridge the gap between policy-makers and operators and users. Notwithstanding certain differences, these institutions which we identify as ‘meso-institutions,’ share common ground according to the functions they supplement. In doing so, they play a crucial role in supporting or inhibiting the reforms needed for the natural gas industry to perform better. This approach diverges from the widespread view that the Kremlin’s leadership is the only explanation for the existing situation (Geddes et al., 2014; Myers, 2015). We concur with Ananyev (2018) that this interpretation of an autocratic regime as monolithic is misleading and dissimulates the forces at work in making or delaying needed reforms (see also Henderson and Moe, 2019: chap. 2).

2.1. Why meso-institutions matter

The conception of different institutional layers dates back to Davis and North (1971: 6), who introduced a distinction between a macro-layer (the ‘institutional environment’), in which ‘rules of the game’ are defined; and a micro-layer (the ‘institutional arrangements’), populated by players operating within these rules. However, this left a gap as to how general and abstract rules are transmitted to the players and how the latter provide feedback, which might influence the former. Although empirical studies have substantiated the need to consider these gap-filling institutions (illustrations can be found in OECD, 2017, World Bank, 2017), a theoretical framework within which to embed these different components is lacking.

Ostrom (2005, 2014) made an important step in this direction. Building on Davis and North, she pointed out that ‘rules’ is a generic term that needs to be disentangled according to the domain they cover. She suggested differentiating ‘constitutional’ rules, which delineate the domain and mechanisms of choice established by a society; political rules, through which specific institutions define specific rules framing specific socio-economic activities; and ‘operational’ rules that actually define how agents process transactions. Taking inspiration from this conceptualization, several contributions suggest embedding these different rules within distinct institutional layers that provide the support they need (Ménard, 2014, 2017; Alston et al., 2018: chap. 1). At the most general level, constitutive rules are established and their broad modalities of enforcement are defined through macro-institutions, namely, the executive branch, parliaments, and the judiciary. These constitutive rules delineate ‘rights-to-use,’ establish entities and procedures to support and transfer these rights, and determine the conditions and limits to their usage. At the other end of the spectrum is the micro institutional layer, within which ‘operational’ rules frame transactions through firms and strategic alliances that deliver products and services, thus creating value. This is the domain of organizations, well explored in works from Barnard (1938:73) and Selznick (1948) to Williamson (1985) and modern theories of organization (for a review, see Gibbons and Roberts eds., 2013).

However, a gap between these two layers remains. What are the mechanisms of transmissions and the supportive arrangements through which the micro- and macro-layers interact? Williamson (2000: 597) showed an awareness of the problem when he differentiated between institutional layers based on the scope and time of the rules they established. But the proposed scheme relied on a relatively blurred definition of the time scale. For the purpose of our analysis, Ostrom (2005, 2014) provides a more relevant approach with her introduction of intermediate, specific rules framing socio-economic activities and relying on specific institutional devices for their implementation and monitoring. This intermediate institutional layer, also labeled as

'meso-institutional layer' (Ménard, 2017; Ménard et al., 2018; for a similar approach see also Alston et al., 2018, chap. 1; Kourula et al., 2019; and Shastitko, 2019), captures the arrangements in which the general rules of the game are translated, interpreted, implemented, monitored and adjusted based on feedback from actors operating at the micro-level. Public bureaus, regulatory agencies, and local or regional administrations monitoring utilities are examples. What they share, notwithstanding their differences, is the fulfillment of the functions defined above. This is done through specific protocols and guidelines bridging constitutive rules and operational ones. The abundant literature on regulatory agencies illustrates the key role of these institutions (Laffont and Tirole, 1993; Joskow, 2000; Laffont, 2005; Brès et al., 2019).

Fig. 1 synthesizes the resulting framework. It not only points out the key functions of these three institutional layers, but also their interdependence with technologies, an issue not developed further here.

In what follows, the analysis focuses on the intermediate, meso-institutions of particular importance for the natural gas industry, namely: the Federal Antimonopoly Service (FAS), the Ministry of Energy (ME), and the Ministry of Economic Development (MED). This is to say that beyond our reference to the rules determined at the macro-layer, such as the general laws regulating the gas industry or the legal status of these entities, and our brief review of the organization of the industry at the micro-level, our attention is mainly devoted to the specific role of these meso-institutions as vectors of reforms ... or as obstacles to reforms. The underlying hypothesis, at the core of this analysis, is that these meso-institutions play a crucial role in shaping and regulating an industry plagued with diverging goals and conflicting interests.

2.2. Methodology

This hypothesis is explored through a classical triangulation approach, using official documents, data from various public sources, and semi-directive interviews and discussions. The limitations of the third source are discussed below.

First, through documents publicly available we collected information on the different meso-institutions under review as well as on the firms with which they interact, basically Gazprom, Rosneft, and Novatek. Laws and decrees regulating the natural gas sector, formal documents regarding the status of these different parties, and annual reports provided relevant information. Documents made public by FAS and the courts in connection with cases initiated by or submitted to their jurisdiction also provided important information on the issues at stake and on the interest groups involved (references are indicated in due course).

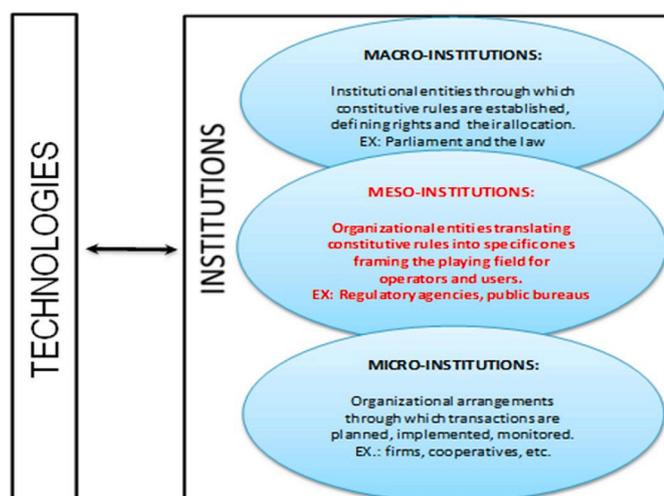


Fig. 1. Institutional layers with a focus on meso-institutions. Source: Adapted from Ménard (2014).

Second, our analysis of the Russian gas sector, its significance and the organization of the industry benefited from data issued by international organizations (IEA, World Bank, OECD), Russian institutions (particularly Rosstat and the Central Bank of Russia), and the annual reports of the firms. We also benefited from the extensive information detailed in Henderson and Pirani (2014), particularly with regard to the industry's historical background.

Third, the qualitative analyses of the role of the meso-institutions under review, the divergence of policies to be implemented, and conflicts of interest they created depend on semi-directive interviews and personal interactions with some of the main actors in the industry. This is a sensitive issue, as one of the authors has been directly involved for years in the monitoring and analysis of the Russian gas industry, and was thus a "participant observer."

This allowed for direct access of information through semi-directive interviews and discussions, especially with the top managers of the leading firms and the highest-ranked civil servants involved in the sector, with regard to their relationship with political authorities on the one hand, and between the leading firms and the bureaucracy on the other hand. Because of the sensitivity of the issues at stake and of their position in the decision-making process, interviewees provided information under the condition of anonymity.

Last, fully aware of the limits imposed by this qualitative approach,² we submitted initial versions of our paper to the scrutiny of experts, two specializing in Russian institutions and three foreign specialists in the gas industry. At the end of the day, crosschecking through these diverse sources makes us confident in the relevance of the information supporting the analysis that follows.

3. Micro-layer: organization of the Russian natural gas industry

As was already mentioned, natural gas plays a special role in Russia. In addition to providing nearly 50% of its power generation and domestic primary energy, it also represents a noteworthy 6.4% of the total value of the sales by Russian companies; and about 12% of the country's total value of aggregate exports; it is an important source of revenue for the government, accounting for 7.5% of the federal budget. It constitutes a source of foreign currency and is a key factor in the ongoing current account surplus, contributing over \$54 billion of the \$113.5 billion total (all data for 2018).³

Because of its importance to the Russian economy and its direct impact on consumers, any major reform of the gas industry is socially sensitive and politically risky. The introduction of greater competition in the sector also faces specific challenges generated by the pervasive heritage of the Soviet era and the co-existence and complex interplay of domestic and foreign interests. The resulting relationship between the main market players and the meso-institutions regulating and/or monitoring these players is discussed in sections 4 to 6. But before doing so, we briefly review some of the structural elements and organizational arrangements of the Russian natural gas industry.

3.1. Soviet heritage: the dominance of Gazprom

Restructure of the monopolies inherited from the Soviet period was an important part of the market reforms initiated in the chaotic 1990s (Hedlund, 2014). However, in the gas industry, this process was very slow in comparison to developments in the oil and electricity sectors. In addition to challenges generated by the fact that production was located

² Merits and limits of qualitative evidence are well assessed in Siggelkow (2007) and Skarbek (2020).

³ Besides references from footnote 1, see Rosstat. *Sales of organizations since 2017*. <https://fedstat.ru/indicator/57710>. (Last retrieved 23.06.2019); Central Bank of Russia. https://www.cbr.ru/statistics/?Prtd=svs&ch=IncFile_58606#CheckedItem (last retrieved, 21.06.2019).

far from consumption centers, which necessitated extensive pipeline systems for distribution and imposed high sunk costs, some major obstacles came from socio-political factors. The importance of natural gas in the economy as a whole and for households more specifically overlapped with institutional aspects that made reform of the sector particularly challenging.⁴

Under the Soviet regime, the energy sector was tightly controlled by the central government. The wave of reforms in the 1990s to shift to a market economy created a warped transformation of the energy sector, supported by the persistent view that natural resources should remain under public control. In the oil industry, transportation was decoupled from production, with privatization of the latter quite early in the reform process (in 1993). The electricity sector moved in the same direction but at a slower pace. Indeed, coordination problems and limited storage possibilities for electricity pushed towards keeping the national long-distance grid under public control.⁵

Reform of the natural gas industry lagged behind. The initial reforms of 1989–1992 merely transferred all the production and distribution assets, which previously had been in the hands of the Ministry of Gas Industry, to a state-controlled corporation, Gazprom. Gazprom was also granted a monopoly over exports. During the subsequent privatization movement of 1992–1996, Gazprom strongly opposed the option of unbundling its different activities, arguing that gas should remain a ‘national property’ preserved from ‘dissipation’. Following intense lobbying, Prime Minister Chernomyrdin (1992–1998) endorsed this position, confirming state control over the corporation. Consequently, Gazprom was neither unbundled nor fully privatized. After the adoption of the Resolution of the Government of Russia No. 138 of February 17, 1993 and subsequent adjustments (see [Henderson and Moe, 2019](#): chap. 2), partial privatization was implemented, although the corporation remained under state control. By the end of 2018, the Russian Federation controlled 50.2% of Gazprom through a specific public agency and two state-owned entities. 24.1% of its shares were floated freely on international stock markets, while different legal entities and individuals held the remaining shares ([Nikolaev, 1994](#); [Malkova; Igumenov, 2012](#); [Gazprom, 2018](#)).

Even more important for the initial period, and for understanding the debates and conflicts of interests that plagued the reform of the sector, gas tariffs and particularly gas transportation were (and are) tightly regulated (see sections 5 and 6). The law ‘‘On natural monopolies’’ adopted in 1995 applies to and obligates Gazprom to provide access to its pipelines without discrimination to all users of gas transportation services and to assure the transparency of information on capacity, pricing, and technical requirements. ‘Users’ in this context refer mainly to the regional companies, most of them controlled by Gazprom, that distribute gas to final consumers; and, in a limited number of cases, to independent producers or other private entities often with a local or regional monopoly. Within this peculiar market structure, the obligation of ‘fair access’ remained vague, giving Gazprom considerable freedom in fixing prices. In 1997, Government Resolution No. 858 attempted to clarify the situation by specifying the conditions and procedures of access for third-parties; however, the lack of specific detail helped the Gazprom position. Ambiguities and overlapping responsibilities on the

regulatory side combined with technological constraints gave Gazprom substantial leverage (see section 4).

Briefly, the transfer of assets from the Soviet period to this state corporation at no cost, the strict regulation of domestic market tariffs, and Gazprom’s monopoly on exports secured the availability of gas in Russia at very low costs. This benefitted households as well as businesses facing major difficulties during the transition period. This so-called ‘social contract’ produced through gas revenue became an important factor of social stability, generating what has been identified as a vast ‘rent management system’ ([Gaddy and Ickes, 2015](#)). The configuration also made the gas sector unattractive to potential competitors, but the situation changed after President Putin came to power. Successive regulations targeted domestic tariffs with progressive increases in order to bring them closer to export prices. The underlying logic was to introduce competition (and to counterbalance the power of oligarchs) by making the domestic market more attractive for private investors. This led to the emergence of the so-called ‘independents,’ created and developed through strong political support from the Kremlin,⁶ as some of these had already gained considerable expertise in the oil industry. Among these ‘independents’, two became significant competitors to Gazprom: Rosneft and Novatek. As of 2018, these three giants dominate the Russian natural gas market: Gazprom, which still has its monopoly over natural gas transportation and exports, and the ‘independents’, who rely on Gazprom’s trunk pipelines for transportation but compete over the final distribution within a regulatory setting to be analyzed below.

3.2. Intricate interests with foreign partners

The dominant position of Gazprom and its capacity to influence Russian policy-makers is re-enforced by the overlap of its interests with foreign entities. First, several European importers (e.g., Uniper, previously E. ON, from Germany; OMV from Austria; Wintershall from Germany, etc.) are closely interlinked with Gazprom’s activities upstream through joint-venture partnerships in production. Second, Gazprom maintains long-term contractual relationships through its subsidiary (Gazprom Export) with leading actors of the European gas industry (e.g., Uniper, OMV, Wintershall, but also Gasunie and GasTerra (Netherlands), DEPA (Greece), ENI (Italy), etc.). Joint-partnerships and long-term contracts backed by its huge reserves make Gazprom a major player on the international markets, a role reinforced by the law ‘On gas exports’ (July 18, 2006 No. 117-FZ) that sanctioned this corporation with exclusive control over foreign trade of Russia’s natural gas. However, as of 2013 this monopoly no longer applies to Liquefied Natural Gas (LNG) a response to the lobbying of ‘independents’ close to the Kremlin and the strategy of the government to diversify export channels ([Henderson and Mitrova, 2015](#): 74). At the same time, foreign investors and countries heavily reliant on Russian natural gas, notably Germany, have vested interests in a stable system that can secure supply and reduce price volatility. [Table 1](#) clearly indicates the weight of these complex interests in the importance of Russian gas for several major European economies.

One consequence of this situation is that any change in the law and/or transformation in the status of Gazprom is considered by the status quo proponents as threatening the reliability of existing long-term contracts and the negotiating power of this conglomerate with its Western partners while symmetrically challenging the stability of the market for the main foreign buyers and consumers of Russian gas. The existence of these interests with foreign partners obviously increases Gazprom’s leverage with policy-makers considering reform.

⁴ See Treisman ed. (2018) and [Gehlbach \(2018\)](#) for an assessment of the institutional setting inherited from the Soviet period. Problems specific to the energy sector, already discussed in [Joskow and Schmalensee \(1997\)](#), are quite extensively reviewed with indications on this institutional heritage in [Henderson and Pirani \(eds., 2014\)](#) and [Henderson and Moe \(2019\)](#).

⁵ The national electricity grid was initially in the hands of the Federal Grid Company (FSK) while regional grids were transferred to 15 regional companies (MRSKs, e.g., ‘‘MOESK’’ for the Moscow region, ‘‘MRSK Center’’ for the center region, etc.). Plagued with problems of coordination, the system was partially recentralized in 2012, with the creation of a holding (‘‘Rosseti’’) that oversees FSK as well as all the MRSKs.

⁶ This support exceeded a political one, the ‘independents’ benefiting from facilitated access to the natural resource, piped infrastructure, financial support, and industrial clients.

Table 1
Russian natural gas supply to leading European economies in 2018.

	Supplies from Russia, bcm	Net import, bcm	Consumption, bcm	Share of Russia in net import, %	Share of Russia in consumption, %
	(1)	(2)	(3)	(4)	(5)
France	9.8	43.4	41.5	22.6	23.6
Germany	69.6	88.7	92.5	78.4	75.3
Italy	32.4	67.5	72.7	48.0	44.5
United Kingdom	1.4	39.4	79.7	3.6	1.8
OECD Europe in total	195.4	294.5	520.1	66.4	37.6

Note: 'bcm' is for billion cubic meters; column (2) summarizes the net imports of natural gas for each country, with the exclusion of gas imported and transferred to other countries, such as from Germany to other EU members; column (3) shows total consumption (in volume); column (4) indicates the percentage of net imports from Russia (column (1) over column (2)); column (5) shows the percentage of Russian supply in local consumption (column (1) over column (3)).

Source: data from IEA (2019a), Tables no. 5, pp.II.8–9; no. 9, pp.II.16–17; no. 11, p. II.20; and no. 17, pp. II.30–31. Calculation by the authors.

3.3. Organization of the industry

Table 2 summarizes the organization of the Russian gas industry as shaped by this combination of factors. Currently, three firms dominate the natural gas sector, with Gazprom in a strategic position. In addition to Gazprom, the Russian government also monitors other participants in the industry, acting as a “visible hand” with regard to the organizational arrangement it has shaped. Indeed, Rosneft, which initially developed within the oil industry, remains state-controlled; and thanks to the active support of the Kremlin, a private Novatek has emerged. As of January 2019, other producers, representing less than 20% of the total Russian gas output, are dominated by three large oil companies (LUKOIL; GazpromNeft, controlled by Gazprom; Surgutneftgaz), three operators with production-sharing agreements and state participation through state-owned companies, and 144 small “independents,” mostly controlled by Gazprom or closely linked to regional authorities.

In this context, efforts to reform the Russian natural gas industry remain severely constrained. In addition to the key role of Kremlin controlling the macro-institutional layer, albeit with certain limitations that are often underestimated as pointed out by Noble and Schulmann (2018), and its interferences with the top management of these firms, transmission mechanisms and forces embodied in the meso-institutional layer also play a non-negligible role. These different forces can push in different and sometimes contradictory directions. We now turn to these intermediate channels of transmission and influence.

4. Meso-institutional setting: the go-between functions

Indeed, a well-documented peculiarity of Russia’s modern institutional design is the continuing interference from centralized leadership through its influence on macro-institutions, but also on the industrial organization, particularly with respect to natural resources (see, among others, Brown et al., 2009; Treisman, 2018; Gehlbach, 2018). Intervention can proceed through formal channels, typically through the adoption of laws, decrees, and resolutions; or through informal channels, typically through personal relationships linking the president and/or the presidential staff to the leaders of dominant firms. Less documented is the role of transmission mechanisms that populate the meso-institutional layer and which may interfere according to their own agenda and can generate distortions in the monitoring of the industry. These transmission mechanisms operate through entities within which interpretation and implementation of the rules adopted by the executive and/or the legislative body intend to make them operational. Meso-institutions also enable feedback and lobbying from firms that can create conflicts of interests.

4.1. Key meso-institutions for the gas industry: overlapping responsibilities

In this respect, three public entities occupy a central position in the meso-institutional layer: the Ministry of Energy (ME), the Ministry of Economic Development (MED), and the Federal Antimonopoly Service

(FAS). All play an active role in the monitoring of the natural gas industry, although in different ways and with different means. As intermediaries bridging the gap between the macro-layer of policy-making and the micro-layer of firms, these entities operate under pressure from political leadership and from firms, particularly the three giants, and often provide some space for the expression of conflicts of interest among parties.

By its legal status,⁷ the ME is in charge of “the elaboration and realization of the national policy in the area of gas supply”, particularly with respect to the provision of gas to regions, and must “elaborate and realize the measures for competition development on product markets.” The mandate to secure gas provision to all regions, including remote ones, and to all connected households and businesses throughout the cold season makes this Ministry pivotal. It must interpret and adapt laws governing the energy sector and implement national gas policies and market regulation which, in principle, cannot be bypassed. In doing so, it must also guarantee access to the ‘gas market’ under socio-politically acceptable conditions, particularly for ‘problematic’ regions disadvantaged by their remoteness from production sites and/or their specific economic difficulties. This makes the Ministry particularly sensitive to regional influence and pressure.

Embodied with partially competing responsibilities, the MED must statutorily elaborate national economic forecasts and set target indicators.⁸ In practice, these forecasts include anticipating average increases for regulated wholesale prices of natural gas. Resolutions no. 1021 (December 29, 2000) and 1205 (December 31, 2010) stipulate that prices must reflect these target indicators, which are particularly sensitive to political interference. Moreover, Resolution no. 1021 specifies that the method for regulating prices, which in principle should be formulated autonomously by the Federal Antimonopoly Service, must be coordinated with the MED.

Indeed, according to its mandate, this third meso-institutional entity, FAS (which took over the responsibilities of the former Federal Tariff Service), is in charge of establishing “methods of gas price regulation and gas transportation tariffs regulation.”⁹ As such, by defining the rules of access to services provided under the monopolistic Gazprom, FAS plays an active role in the regulation of prices and tariffs and in their actual implementation. FAS is also empowered to react to any economically feasible transformation that could convert competitive markets to monopolies. In other words, it is presumed that FAS contributes to the restructuring of monopolistic sectors into competitive ones. FAS is also under pressure from foreign regulators and partners,

⁷ Statute of the Ministry of Energy of the Russian Federation, Resolution No. 400 of the Government of the Russian Federation, May 28, 2008.

⁸ Statute of the Ministry of Economic Development of the Russian Federation, Resolution No. 437 from the Government of the Russian Federation, June 5, 2008.

⁹ Statute of the Federal Antimonopoly Service of the Russian Federation, Resolution No. 331 from the Government of the Russian Federation, June 30, 2004.

Table 2
Overview of the Russian Gas Industry (main firms and characteristics, as of 2018)^a.

Firm	Characteristics			
	Status	Domain of activity/jurisdiction	Allocation of Shares	Main Gas Export Activities and Foreign Partners
<i>Gazprom</i>	State-controlled	<ul style="list-style-type: none"> – Largest Russian gas producer; – Owner of the gas transport system; – Monopoly over export through pipelines; – Unofficial “supplier of last resort” for domestic gas. 	<ul style="list-style-type: none"> – State: 50.2%; – International free float: 24.1%; – others: 25.6%. 	<ul style="list-style-type: none"> – Pipeline exports to Europe (main partners: Eni (Italy), Wintershall (Germany), Uniper (Germany)); – Future pipeline exports to: China (partner: CNPC); – LNG terminal on Sakhalin (partners: Shell (UK-Netherlands), Mitsui (Japan), Mitsubishi (Japan)); – LNG exports (mainly to Japan, Korea)
<i>Rosneft</i>	State-controlled	<ul style="list-style-type: none"> – Largest Russian oil producer and refiner; – ‘Independent’ gas producer; – Supplier of gas to multiple regions (mostly to industrial users in Urals, Siberia, and Center of the European part of Russia); – No gas exports. 	<ul style="list-style-type: none"> – State: 50.0%; – BP (UK): 19.8%; – QH (Qatar): 18.9%; – International free float: 5.6%; – others: 5.7%. 	<ul style="list-style-type: none"> – Gas production and LNG project on the island of Sakhalin (partners: Exxon (USA), SODECO (Japan), ONGC Videsh (India))
<i>Novatek</i>	Controlled by private shareholders	<ul style="list-style-type: none"> – Supplier to multiple regions of Russia (mostly to industrial consumers in Urals, Siberia, and Center of the European part of Russia); – LNG exporter since 2017; – Producer of liquid hydrocarbons. 	<ul style="list-style-type: none"> – Private Russian owners: 45.9%; – Total (France): 16.5%; – Gazprom: 10.0%; – International free float: 19.7%; – others: 7.9%. 	<ul style="list-style-type: none"> – LNG terminals in the Arctic region (partners: Total (France), CNPC (China)); – LNG exports to Europe and Asia

General Sources: Analytical Center for the Government of the Russian Federation (2019). *Fuel and energy complex of Russia 2018*. <https://ac.gov.ru/archive/files/publication/a/22922.pdf> [in Russian] Last retrieved: March 17, 2020; CDU TEK (2019). Results of operating activities of Russian fuel and energy industries in Jan.–Dec. 2018.

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^a Small independents are not listed because of their limited weight in the industry.

particularly the European Union (for the gas industry, see the so-called Third Energy Package, [European Parliament, 2009](#); and [EC, 2018](#)). In that respect, foreign sources of influence on FAS exceeds national ones.

In combining the characteristics of the key meso-institutions involved in the regulation of Russian natural gas with the configuration of the industry and its macro-institutional background as described in section 3, we can enrich the abstract analytical framework ([Fig. 1](#)) with a more specific empirical content. [Table 3](#) summarizes these different components.

Within this institutional environment and its different layers, the role of meso-institutions as intermediaries and their partially overlapping responsibilities create a particularly fertile ground for conflicting interests and political interference. As go-betweens, they operate both ways, providing channels for micro-institutions to lobby policy-makers, and providing the means for the presidential authority to shape the structure of the industry and intervene in operations at the micro-level ([Shastitko, 2019](#)).

4.2. Rules opening room for interference

By the late 2000s, this institutional setting and the specific role allocated to Gazprom were already consolidated ([Hedlund, 2014](#)). In addition to the general laws mentioned in section 3, the more specific laws “On gas supply” (31.031999, No. 69-FZ) and “On gas exports” (July 18, 2006, No. 117-FZ), complemented by Resolutions no. 1021 and 1205, established the regulatory regime for the natural gas industry and confirmed the rights and conditions of access for third-parties. Despite challenges from the European regulators and pressure on political authorities from its main competitors, Gazprom has been able to combine its exclusive control over transportation and exports via pipelines with its obligation to supply and sell gas at regulated tariffs to all buyers on the domestic wholesale market, regardless whether these buyers are

direct consumers (e.g., power plants) or suppliers to final users (e.g., traders).

This does not mean that the landscape remained unchanged. Successive reforms initiated by Putin’s government have allowed the ‘independents’ to freely determine natural gas prices on domestic wholesale markets in compliance with competition laws (specified in Resolutions No. 328 of May 22, 2002 and No. 750 of December 7, 2006). Although continuing to pay the regulated transportation tariffs to Gazprom, ‘independents’ took advantage of the resulting co-existence of both regulated and nonregulated gas prices in certain markets to expand. This triggered conflicts of interest, as shown in the different and sometimes diverging positions of the meso-institutions in question.

5. Institutionally grounded distortions: pricing

Indeed, the issue of pricing is informative in identifying the economic problems raised by the complex institutional responsibilities. On the one hand, intervention by the different meso-institutions in the pricing process induced severe distortions. On the other hand, it alleviated political interference. The result is what we identify as lock-in equilibrium (see Section 6).

5.1. Pricing gas as a mean to secure social stability

In a nutshell, Gazprom must sell gas on domestic wholesale markets,¹⁰ its competitors included, at a regulated price that also covers transportation fees for the usage of its pipelines. At the same time, Gazprom legally holds a monopoly on natural gas exports (with the exception of LNG, recently and partially excluded from this monopoly

¹⁰ Regulation of retail markets is beyond the scope of this analysis.

Table 3
Institutional layers in the Russian Natural Gas Industry.

INSTITUTIONAL LAYERS	ENTITIES & RESPONSIBILITIES	
	KEY ENTITIES	RULES AND RESPONSIBILITIES
MACRO-INSTITUTIONS (Institutional entities through which constitutive rules are established, rights defined and allocated)	Russian Government (Executive and legislative) – Main Initiator of Laws and rules through ‘Government Resolutions’; – Role of State Duma and Federal Council in adoption	– Establishes general rules through Laws and Government Resolutions – Allocates rights and controls modalities of access to the industry – Important role of informal channels connected to the Presidency
MESO-INSTITUTIONS (Organizational entities translating constitutive rules in specific ones and implementing them)	Ministries & Agencies – Ministry of Energy – Ministry of Economic Development – -Federal Antimonopoly Service	– Elaborate and monitor national policy to secure the stability of gas supply (ME) – Method and Forecasts on which regulated prices should be based (MED) – Gas transportation and Wholesale market regulation (FAS) – Rights of access to the transportation network (ME; FAS) – Enforcement of regulation (FAS) – Production (all of them)
MICRO-INSTITUTIONS (organizational arrangements through which transactions are planned, implemented, monitored)	Main Firms – Gazprom – Rosneft – Novatek – Other ‘Independents’	– Transportation through pipelines (Gazprom) – Transactions on wholesale markets (all of them) – International trade (Gazprom for pipeline, Gazprom and Novatek for LNG)

Source: authors

through amendment No. 318-FZ from November 30, 2013, which allowed direct LNG exports by Novatek and Rosnet). This combination of circumstances has introduced distortions with unexpected effects. Initially, low domestic prices were imposed Soviet-style on Gazprom by politicians to secure social stability by making gas resources available to all. These artificially low prices created barriers to entry, making the sector non-profitable for potential competitors while Gazprom was compensated through cross-subsidies from its exports monopoly. The reform later introduced by Putin (Resolution No. 1205, from December 31, 2010) was intended to progressively bring domestic wholesale prices closer to export prices and to simultaneously open the domestic market to increased competition through partial price deregulation (Hedlund, 2014; Henderson and Moe, 2019: chap. 2). This development led to a regime with three different sets of prices: export, domestic regulated, and domestic unregulated.

We focus on the domestic pricing regime. Assuming that Gazprom has limited control over prices determined on international markets, the dual domestic system is plagued with distortions because of overlapping institutions and the set of rules identified above. In principle, the transportation network monopoly subjects Gazprom to the control of FAS. As such, it must provide the FAS with data on its anticipated gross revenue and, in accordance with the forecast provided by MED, propose transportation fees to cover its maintenance and expansion costs of the pipeline network. Once approved, these tariffs apply to all Gazprom deliverables, and is thus passed to its own customers as well as to the

‘Independents’ and their buyers. Indeed, as a result of the liberalization policies progressively implemented in the 2000s, Gazprom and the ‘Independents’ partially compete on the wholesale market (President of the Russian Federation, 2017).

The purpose of this approach is to assure that all users contribute to the maintenance and improvement of the pipelines in strict proportion to their usage of this network. However, the arrangement suffers from two complementary sources of distortions.

First, it is plagued by a well-known distortion within a procedure that determines price through different costs used as building blocks. The regulated price of gas ultimately determined by FAS relies on the information and projections provided by Gazprom with regard to maintenance and development costs. For example, there is no explicit, transparent procedure to allow the regulator and third-parties to identify the costs for the domestic-oriented network from those of the export-oriented pipeline for which Gazprom holds exclusive rights. Consequently, it is not possible to isolate the part of total costs that corresponds to Gazprom’s own usage of the network. Indeed, the pricing rule only stipulates that Gazprom must cover remaining costs once the ‘Independents’ have paid their due.

Second, as already indicated in 4.1, two other meso-institutions are involved in the determination of these tariffs. On the one hand, MED is responsible for providing the other parties with forecasts about the development of the sector (e.g., demand for natural gas) but also and more importantly for establishing ‘target indicators,’ which are easily subjected to political interference. On the other hand, ME plays a different role through its responsibilities to secure the delivery of natural gas to all regions in Russia at an acceptable price. This policy, supported by successive federal governments, explicitly responds to socio-political goals: keeping domestic prices low so as to secure the political support of low-income households and of ‘problematic’ or remote regions,¹¹ the lack of viable energy alternatives, and the aggravating effect of their accumulated debts. The resulting so-called ‘social burden’ that Gazprom supports through low domestic tariffs (which may also differ across regions¹²) is the key argument for maintaining its monopoly over exports. This pricing policy has been identified by some authors as a ‘massive rent transfer management system’ (Gaddy and Ickes, 2015; Henderson and Moe, 2019: 8). Of course, it also opens the door to political interference, especially through establishing target indicators and regional development policies. Fig. 2 summarizes this dual price system, outlining the key steps, from production to final distribution, through which these meso-institutions can be influential.

5.2. Distortions illustrated: the 2010 reform

The adoption and implementation of an important reform in 2010 provide a vivid illustration of the combined strategy used by the firms operating at the micro-level, the politicization emanating from macro-economic concerns, and the temptation for meso-institutions to accommodate the different interests they represented by tailoring specific rules.

According to Tarr (2010), in the first decade of this century, domestic gas prices covered only about half of the long-run marginal costs of production and transportation. This situation remained sustainable as long as Gazprom had the advantage of the low costs of infrastructure inherited from the Soviet period and a favorable export market that allowed subsidization of the domestic market. The situation, however,

¹¹ These regions are concentrated in the south, including North Caucasus, and north-west of the European part of Russia.

¹² In principle, differences in prices are based on transmission distance (Gazprom. Russia. Russian Gas Market. <https://www.gazprom.com/about/marketin/g/russia/>). However, discrepancies in data suggest inter-regional cross-subsidization to keep prices socially and economically acceptable for ‘problematic’ regions (Idrisov and Gordeev, 2017).

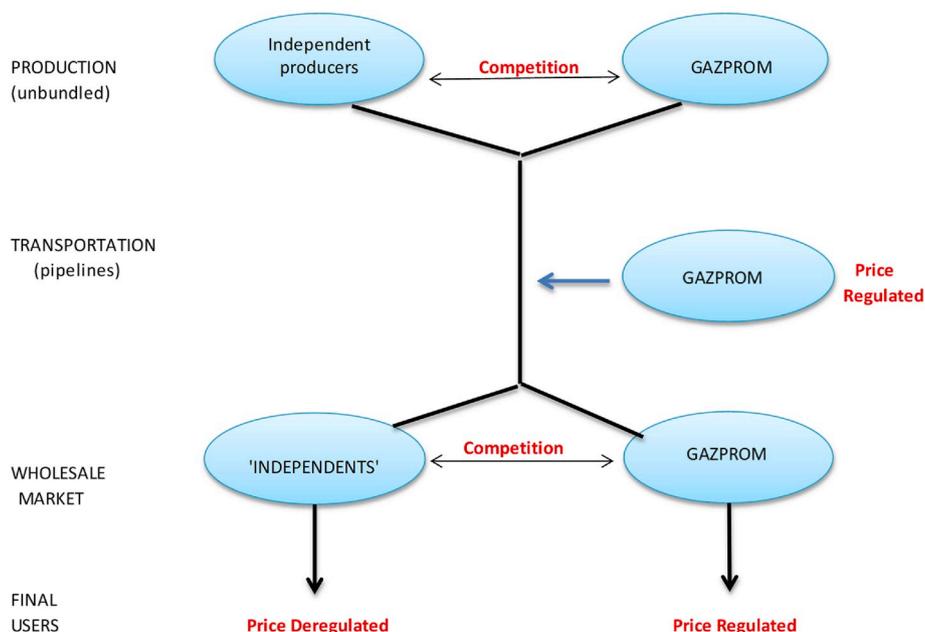


Fig. 2. A dual domestic price system. Source: authors

changed significantly at the end of the decade. First, the 2008 financial crisis and the progressive changes in consumption behavior and public policies regarding energy, notably in the European Union, negatively affected both demand and prices, making exports less profitable (Henderson and Moe, 2019: chap. 4). Second, the aging infrastructure was in need of urgent renovation (Gazprom, 2019) and the importance of expanding the pipeline network to new customers (including Asia) put financial pressures on Gazprom, making an increase in domestic prices imperative.

In response to this new situation, the federal government adopted in 2010 ‘Resolution’ No. 1205 to achieve profitability by 2015 for both domestic and export markets through the adjustment of regulated prices. This development was expected to allow prices to exceed marginal costs (IEA, 2011) and to provide resources for necessary investments. Despite its negative impact on economic growth (Shastitko et al., 2012), the reform was viewed as favorable to Gazprom. However, another article of the Resolution stipulated that once parity between the two markets was reached, prices would be deregulated. Increased transparency of the transportation tariffs would also make them similar to all participants, thus creating an open market that would challenge the dominant position of Gazprom. Fig. 3 illustrates the trend in prices as compared to other sources of energy following this reform.

Overall, there has been a significant increase in regulated wholesale gas prices, despite the restrictions imposed by the President in 2014 and 2016 in the face of growing social tensions and efforts to promote domestic industries amid the economic turmoil.¹³ While gas transportation remained tightly regulated, constraining Gazprom, price increases on the domestic wholesale market made the sector much more attractive for the ‘Independents’, and within a few years these had captured a considerable share of the market; Gazprom’s share of domestic market

¹³ A limitation was first imposed on price adjustment in 2014. In 2016, to battle the socio-economic consequences of a drop of gas prices on international markets and the foreign sanctions following the events in Crimea, the President decided more dramatically to freeze regulated prices on the wholesale market and transportation fees, and to keep the retail price increase in the regulated segment at 2%, well under that of the previous years. Notwithstanding their short term effects these measures did not significantly affect the long-term trend (see Fig. 3).

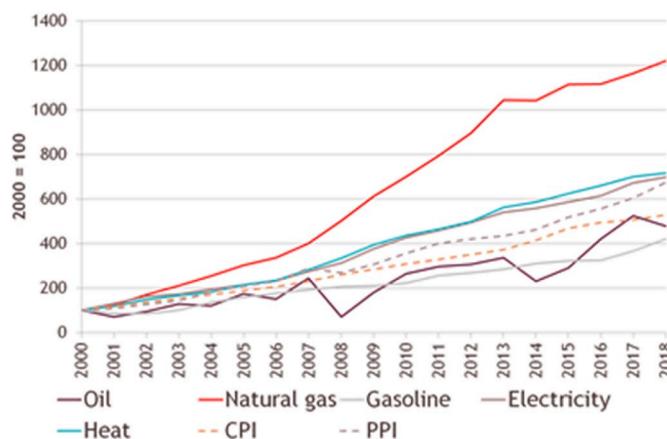


Fig. 3. Russian Price Indices for specific energy sources (in relation to inflation) (Wholesale price for industrial users; basis 100 for year 2000). Source: Rosstat, http://www.gks.ru/free_doc/new_site/prices/prom/tab-ind_tov.htm. Last retrieved: July 20, 2019

decreased from over 70% in 2009 to about 50% in 2015.

Fig. 4 summarizes this impact on Gazprom. From 2010 to 2016, supply to domestic consumers remained relatively stable due to stagnating demand in a weak economic environment. Simultaneously, total production also stagnated, as Gazprom had no prospects of finding compensating demand from abroad. Indeed (1) the reform of energy policies in the EU promoting efficiency in the use of existing resources and the development of renewable resources deterred growth; (2) the increasing role of the more flexible LNG delivery on the world market by ‘independents’ as well as by foreign suppliers (Qatar, Algeria, Nigeria, and Norway) increased competitive pressure; (3) political tensions between Russia and its main European customers created uncertainties among potential buyers; and (4) pricing formula in existing contracts (indexation on oil prices) made buyers bearish. This combination of factors was particularly challenging for Gazprom which at the same was confronted by a more competitive domestic market and diminishing resources from its exports monopoly. Meanwhile, the ‘Independents’, unhindered by the ‘social burden’ imposed on Gazprom were able to

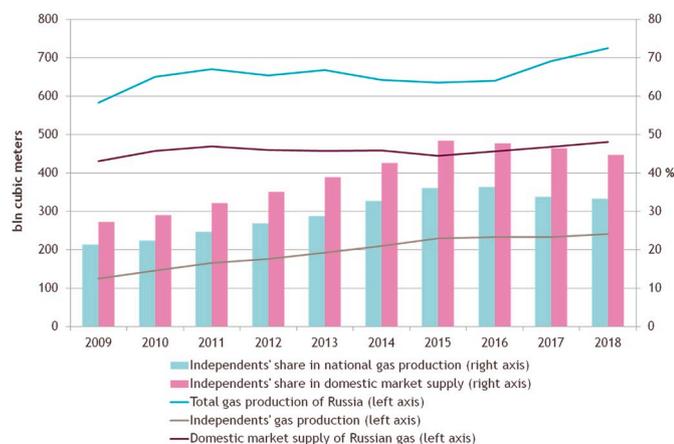


Fig. 4. Russian gas market dynamics, 2009–2018. Source: Authors' calculation, based on:

- (1) Ministry of Energy of the Russian Federation. *The outcomes of the Minenergo of Russia work and the main results of the fuel and energy complex functioning in 2015*. <https://minenergo.gov.ru/node/4436> Ministry of Energy of the Russian Federation. *The outcomes of the Minenergo of Russia work and the main results of the fuel and energy complex functioning in 2018*. <https://minenergo.gov.ru/node/14461>. Retrieved, July 20, 2019.
- (2) CDU TEK (2016). *Operating outcomes of the Russian fuel and energy complex functioning in December 2015 and for the period since the beginning of 2015. Dynamics of the Russian fuel and energy complex operating results in 2009–2014*. [in Russian]
- (3) CDU TEK (2018). Results of operating activities of Russian fuel and energy industries in Jan.–Dec. 2017. *TEC of Russia*, 1: 87–90; http://www.cdu.ru/tek_russia/issue/2018/1/. [in Russian]. CDU TEK (2019). Results of operating activities of Russian fuel and energy industries in Jan.–Dec. 2018. *TEC of Russia*, 1: 87–90. http://www.cdu.ru/tek_russia/issue/2019/1/. [in Russian]
- (4) Gazprom (2019).

benefit from the increase in retail prices. As a result, their share of the total national production grew steadily from 21% to 36% over the decade 2009–2018 while that of Gazprom declined. Indeed, with the exception of 10–15 bcm produced on Sakhalin-2 for LNG exports, the total output of the 'Independents' was sold on the domestic market, amplifying the scissor effect on Gazprom.

Gazprom still had the advantage of its gas exports monopoly, which remained relatively stable at 175–200 bcm for the period 2009–2015. The average price on the European market (at \$370–\$380 per 1000 cm) considerably exceeded the domestic prices which fluctuated in the \$80–\$150 range per 1000 cm, a persistent gap notwithstanding a 30% reduction in export duties and an increase in transportation costs (reaching \$50 to \$60 per 1000 cm).¹⁴

Nevertheless, the success of the 'Independents', primarily *Rosneft* and *Novatek*, resulted not only from the strong support from the leading macro-institution (namely, the Kremlin) but also from a simple strategy; taking advantage of their position on the deregulated price regime when domestic gas prices were going up, the 'Independents' set their price slightly below that of Gazprom which had to remain committed to the regulated prices. The dual price structure created a type of Bertrand

¹⁴ The situation was even more favorable to Gazprom after 2015, with a light revival of domestic demand, from which the 'Independents' already operating at full capacity could not benefit; a rebound of European consumption (Eurostat: https://ec.europa.eu/eurostat/statistics-explained/index.php?title=Natural_gas_consumption_statistics&oldid=88,292; data from May 2019); and the decision of the Netherlands to discontinue gas production by 2030. Although Gazprom had to renegotiate lower prices with its foreign partners than in the previous period, this new circumstance allowed compensation through increased exports (up to 220 bcm of pipeline exports in 2018).

competition, where prices were rigidly maintained for one player. *Rosneft* and *Novatek* also benefited from another institutional distortion. The policy of 'interregional flattening' had been adopted to ensure similar economic conditions all over Russia. This principle had originally motivated the regulated prices imposed on Gazprom but also opened the door to 'cherry-picking' by the 'Independents' who were free of the obligation to deliver gas to non-profitable regions.

The consequence was immediate. Expansion by the 'Independents' by far exceeded the expectations of policy-makers, creating tension between the measures to support the 'national champion' and those promoting competition (President of the Russian Federation, 2017). The situation, however, was plagued with ambiguities. The respective position of Gazprom and the 'Independents' was distorted by institutional efforts that imposed a competition-biased regulation and misaligned policies that created room for discretionary political interferences. As a result, the key players (Gazprom, independent producers, large influential consumers, and regulators) are locked in a set-up that prevents efficient reform.

6. The political economy of meso-institutions

As suggested above, these distortions in pricing are partially the outcome of the role of natural gas as a strategic political instrument in the hands of high-level government policy-makers (Henderson and Moe, chap. 5). However, they also mirror the modalities of how policies decided within each macro-institutional layer are translated and implemented by the different meso-institutions. These meso-institutions symmetrically channeled tension and even conflict among the interests entrenched within them and/or coming from the micro-entities (in the Russian context, mainly the leading firms but also regional groups) that use them as leverage to reach and influence policymakers. In that respect, partly in response to pressure from its foreign partners to develop a more efficient gas market (European Parliament, 2009; EC, 2018), the Russian government needs to acknowledge that in-depth changes are necessary not only in regulation, but also in the institutions in charge of their implementation. This makes the meso-institutions a key element of the existing institutional setting and of the political economy of transformation.

6.1. Tensions among meso-institutions

In that respect, an analysis of the adoption and evolution of the 2010 reform provides rich insights. The increasing awareness by the Russian authorities of the fact that regulated prices had become too low and were thus challenging the maintenance and development of gas infrastructures, pushed the government to ask ME, MED, and the Federal Tariff Service (later absorbed by FAS) to jointly elaborate a reform proposal for the gas sector. It was expected that a joint effort could produce a design and implementation for a painless regulation. The initiative failed, because of tensions among the three meso-institutions and the diverging interests to which they provided a voice. The key point of contention was over the rules that were to prevail on a deregulated market in order to prevent or absorb major external shocks and avoid price volatility. This point of tension was particularly noticeable between FAS and ME. The ME seemed relatively satisfied with the existing 'hybrid' model of regulation that secured moderately priced gas supplies and maintained some balance between regions and among key players. However, FAS, being in charge of promoting competition, could hardly accept a model that: (1) maintained regional monopolies on the wholesale gas market; (2) upheld a dual price system that allowed the 'Independents' to profit under the umbrella of regulated prices instead of competitive ones.

FAS thus became the driving force behind the reform embodied in Resolution No. 1205 that aimed for a more competitive market. For instance, natural gas trading was introduced in the Saint-Petersburg International Mercantile Exchange (SPIMEX) in 2014 (Henderson and

Moe, 2019: chap. 3); and in 2016 registration became mandatory for over-the-counter gas contracts. Although most natural gas was traded under regulated prices, these measures gave the FAS benchmarking tools to observe price deviations on the deregulated segments of the industry and identify anti-competitive behavior. These steps were also expected to give users the opportunity to purchase natural gas at competitive prices. However, implementation lagged far behind. By the end of 2018, only about 5% of the domestic market had been traded (SPIMEX, 2019).

6.2. Lock-in equilibrium

The slow progress of the 2010 reform reflects the weak power of the meso-institution charged with implementing competition when confronted with other meso-institutions, particularly the ME in this case, but also powerful micro-institutions, Gazprom and the 'Independents', with their easy access to the highest macro-institutional level: the presidency. Indeed, a large scale pro-competitive reform would hurt these powerful groups on four key issues, with dispersed consumers having almost no voice.¹⁵ (1) **Deregulation of gas price.** Paradoxically, *Gazprom* could benefit from price deregulation by becoming competitive in the most profitable regions while the 'Independents' would lose their comparative advantage of not being subjected to regulated price and the service obligations imposed on *Gazprom*. In sum concerned about not being able to compete efficiently with the market leader in a deregulated market, 'Independents' favor the existing arrangement with its dual pricing system. (2) **Homogenization of gas transportation tariffs.** The 'Independents' welcome this change because it would prevent *Gazprom* from using cross-subsidization between transportation and its other activities. From *Gazprom*'s point of view, homogenization would align its transportation costs with those paid by the 'Independents' in the profitable regions. But it would also remain legally obligated to deliver gas at regulated prices to all buyers, including those in the non-profitable areas, as well as maintain capacity also during peak consumption periods. This translates into heavy sunk costs. (3) **Extending the burden of the 'social stability' policy to the entire industry.** *Gazprom* welcomes this change, which the 'Independents' oppose: without access to international markets, the 'Independents' would become more exposed to domestic market fluctuations, increased costs, and political pressures to keep prices low. (4) **Access to exports for all suppliers, via pipelines and not only LNG.** 'Independents' push hard in this direction, hoping to enter the highly profitable export market. *Gazprom*, on the other hand, resists this change since it would weaken its capacity to deal with the burden of servicing poor regions. It would also diminish its capacity to confront tough competition from foreign suppliers due to increased activity among the Russian firms on the international markets, an argument to which the government pays a lot of attention. Note that these tensions find some echo among *Gazprom*'s foreign partners and the countries that rely on Russian gas. The fear is that they lose the benefits of long-term contracts or even joint-ventures with a well-identified Russian partner, which has provided some guarantee against the price volatility of a fully open market. The moderate position adopted by the European Union towards *Gazprom* illustrates this point (EC, 2018).

Table 4 summarizes these diverging interests of the micro-institutions, as mirrored through policies supported by the different meso-institutions.

In sum, reform along these four axes imposes a complex strategy that would require changes in the existing political coalition at the macro-institutional level, likely with high political transaction costs. On the other hand, partial reforms would confer considerable advantages to one or other parties in the natural gas industry. This would challenge the

¹⁵ Representation of consumers within decision-making entities (whether public, semi-public, or private) and even consumers' organizations are not part of the Russian economic landscape so far.

Table 4

Conflicts and contradictions among the main agencies affected by a reform of the natural gas markets.

Areas of conflicts	PRO	AGAINST
Deregulation of price in the domestic market	<i>Gazprom</i> : capacity to compete on prices FAS: Moving towards market mechanisms instead of public regulation	'Independents': to prevent predatory pricing strategy by <i>Gazprom</i> ME: to prevent possible price volatility
Harmonization of transportation tariffs	'Independents': to get equal & fair conditions with <i>Gazprom</i> FAS: to avoid distortions of competition	<i>Gazprom</i> : to preserve cross-subsidization between activities so as to maintain and develop infrastructure ME: to maintain services at a low cost for 'problematic' regions
Sharing socio-economic & stability burden	<i>Gazprom</i> : to reduce its share of the 'social burden' (social costs)	'Independents': to avoid 'social burden' and reduce risks of political obligations
Access to the export market (including through pipelines)	'Independents': to get access to profitable foreign markets FAS: to introduce competition on exports	<i>Gazprom</i> : to prevent additional competition on foreign markets ME: to prevent dissipation of rent

Source: authors

existing Nash equilibrium, threaten the rent management system that makes *Gazprom* the largest rent producer and distributor in Russia (Hill and Gaddy, 2015), and potentially weaken the Russian 'champion' in the context of international commercial and political tensions.

7. Conclusion

The key message of this study is that the meso-institutions do matter. These institutional arrangements bridge the gap between the macro-level agencies where rules of the game are adopted and/or decided and drawn (Davis and North, 1971) and the micro-level where transactions are drafted, negotiated and safeguarded (Williamson, 1996: 379). Efforts to reform the Russian natural gas industry show that even an autocratic regime needs such intermediate institutions (Svolik, 2012; Treisman, 2018). Indeed, they play a key role in translating and interpreting the general rules in relation to specific contexts, and in transmitting influence, through feedback, lobbying, or corruption from the entities operating at the micro-level.

Poorly designed meso-institutions with overlapping responsibilities might well explain why efforts of the Federal Antimonopoly Service, the Ministry of Energy, the Ministry of Economic Development and even the Presidency to introduce pro-competitive reforms are stalled. The Russian reluctance to reform the natural gas industry highlights the difficulties of overcoming path dependence, in this case, the heritage of the Soviet period, and the ever-present incentives for policy-makers to intervene in the transformation of strategic activity. This study contends that understanding these difficulties, shared by all autocratic regimes when it comes to key natural resources, requires analysis that digs deeper than the simple statement of 'institutions matter.'

The case under review shows that disentangling institutional layers and identifying the specific changes needed within each layer can throw light on the factors of success or failure for trial reforms. At the macro-institutional layer, new laws and directives rely on building political coalitions that are supportive of in-depth changes within the existing rules. At the micro-level, there is a need to go beyond the introduction of competitive markets. Typically, in order to disentangle political interests from economic ones, this would entail eliminating rent-seeking behaviors and incentivizing changes within organizations, such as by allocating real autonomy to leadership that favors management transparency.

However, the core of this analysis focuses on the largely neglected

meso-institutional layer. The main argument, substantiated in sections 5 and 6, considers this layer as the one within which much lobbying and politicizing occur (Finkel and Gehlbach, 2019: chap. 3; Henderson and Moe, 2019: chaps. 2 and 5). More specifically, we argue that the overlapping and blurred responsibilities of the different meso-institutions involved in monitoring the natural gas industry (ME, MED, FAS) support political unpredictability. Laws and directives to develop markets and transparency could well kick these interferences out the door; but the flaws in meso-institutions in charge of implementing these rules would let them back in through the window.

Making the Russian natural gas industry, and more generally Russian network industries, more efficient in delivering appropriate services at adequate costs to users still has a long way to go. Steps have already been made. The specific case developed here carries more general lessons, indicating the obstacles faced by such a transformation and highlighting the urgent need to reform the meso-institutions in order to reach such a goal. It also substantiates the role attributed to intermediate institutions in differentiating open-access and limited access societies (North et al., 2009).

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