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## The importance of Gazprom for the Russian gas sector against the backdrop of changes in the Russian and global economy

The years 2014–2021 were a time of rapid changes in the Russian economy, resulting not only from its foreign and internal policy – introduced, i.a., in the pursuit of development – but also from the pandemic. This article presents the importance of the gas industry for the economy of the Russian Federation against the backdrop of those changes as well as the shifts that have been taking place in the world economy. An analysis of available literature and of the macro-environment of Gazprom shows a clear decline in the relevance of the gas industry in recent years brought about by sanctions, the pandemic, and increased competition.

Keywords: gas sector, Russia, Gazprom, PEST, Russian economy

JEL classification: F23, K23, O12

### Introduction

Rapidly changing conditions, increasing globalization, technological progress, geopolitical transformations, economic crises, and now the pandemic are among the driving factors behind the development of new enterprise management strategies in all most important sectors of the economy. For the Russian Federation – the largest country in terms of territory – that means the energy sector (incl. the gas industry) [Ru-Stat, 2021]. The share of the actively developing gas industry in Russia's GDP is around 17%. Moreover, Russia is in the top 10 countries with the largest natural gas reserves – and the demand for hydrocarbons from European and Asian consumers is rapidly growing. All these considerations demand a closer examination of the issues of gas industry management.

Based on a literature review and a PEST analysis for Gazprom, this study aims to assess the importance of the gas industry for the economy of the Russian Federation against the backdrop of changes that have been taking place not only in the Russian economy, but also in the world economy.

## 1. The gas industry in Russia

About one-third of the world's natural gas reserves is concentrated in the Russian Federation. Most of the fields are located in the eastern part of the country, accounting for 84% of total gas production. To facilitate transport, Russia has created a gas supply system that connects compressor stations, pipelines, raw material storage facilities, and fields [Neftegaz]. Russia is also the world's leading gas exporter, exporting 217.2 bcm of compressed natural gas and 39.4 bcm of liquefied natural gas in 2019 [Statista, 2020].

There are several legal frameworks regulating the Russian gas sector, including:

- Federal law of the Russian Federation on natural monopolies of 17 August 1995 (no. 147-FZ),
- Federal law of the Russian Federation on gas supplies in the Russian Federation of 31 March 1999 (no. 69-FZ),
- Decree of the Government of the Russian Federation on state regulation of gas prices and tariffs for gas transport services in the territory of the Russian Federation of 29 December 2000 (no. 1021),
- Resolution of the Government of the Russian Federation on the sale of natural gas through organized tenders and amendments to the laws of the Government of the Russian Federation on state regulation of gas prices and on the access to the common gas transmission system for the open joint-stock company Gazprom of 16 April 2012 (no. 323).

In addition, in March 2021, the Ordinance on the long-term program for the development of liquefied natural gas production in the Russian Federation was issued. The program analyzes, i.a., main trends in global energy consumption and current schemes supporting LNG production, defines the raw material base for prospective LNG production projects, and includes:

- basic data on future gas market development in Russia and the world,
- LNG production projects,
- action plan for the implementation of the multi-annual LNG production development program.

The Russian gas market can be characterized as developing, as evidenced by the number of already existing LNG production projects: Sakhalin 2 (2009), the large Yamal LNG project in the Arctic (2005), and the Vysock LNG project in the Baltic Sea Region (2019). Moreover, Arctic LNG 2 and LNG Port projects are still under construction. According to Russia's Energy Strategy, the key to the development of LNG extraction is to further liberalize LNG exports while introducing a control mechanism and excluding competition that violates its economic interests in the global CNG and LNG markets. Successful implementation of Nord Stream 1, Nord Stream 2, Power of Siberia, Power of Siberia 2, and Altai projects, taking into

account the increase in domestic demand for gas, will thus make it possible to fully use the potential of gas fields in the Unified Gas Supply System.

## 2. Monopoly in the Russian gas market – Gazprom

Russia's largest gas extraction and processing companies include Vietsovpetro, Itera, Novatek, Nortgaz, Samaraneftegaz, Surgutneftegaz, and – first and foremost – Gazprom. Ranked 1st in the energy sector, 1st among Russian companies, and 55th among all companies included in the *Fortune* Global 500 ranking, in 2019 it accounted for 64.9% of total gas production in Russia.

The history of one of the largest energy suppliers dates back to 1989, when the Soviet Ministry of the Gas Industry was reorganized into the Gazprom State Gas Concern. Subsequently, in November 1992, the Decree on the transformation of PKG Gazprom into the Russian Joint-Stock Company Gazprom was signed by the President of the Russian Federation, followed by the relevant Resolution of the Government of the Russian Federation on 17 February 1993. Five years later, the Russian Joint-Stock Company Gazprom was transformed into the Gazprom Open Joint-Stock Company, whose organizational and legal form has not changed to this day. Noteworthy, Gazprom has the exclusive right to exploit the entire Russian gas network and export gas from Russia [Paszyc, 2011]. Figure 1 (volume of gas exported) and Figure 2 (value of gas exported) show the exports of natural gas from Russia to other countries.

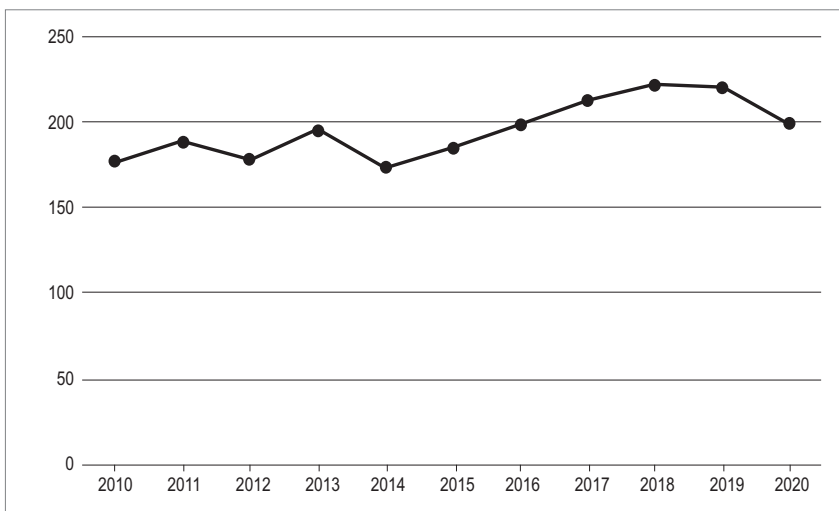


Figure 1. Volume of gas exported from Russia in 2010–2020 (bcm)

Source: Own elaboration based on: [Rosstat].

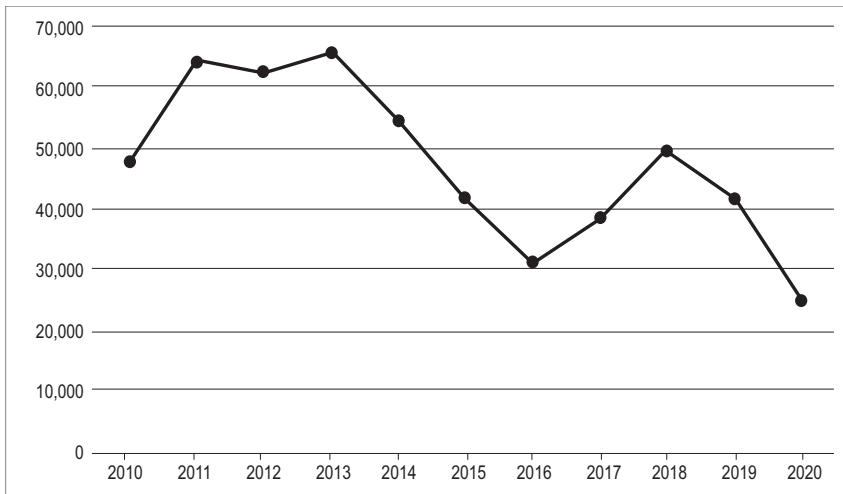


Figure 2. Value of gas exported from Russia in 2010–2020 (USD million)

Source: Own elaboration based on: [Rosstat].

According to Figures 1 and 2, there were noticeable declines in the quantity and value of exported raw gas in 2020 compared to 2019. As a result of the crisis caused by the pandemic and the decline in demand, pipeline gas exports to non-CIS countries decreased by 10% [RBC, 2021], which had an impact on Gazprom's share in Russia's GDP, as shown in Figure 3.

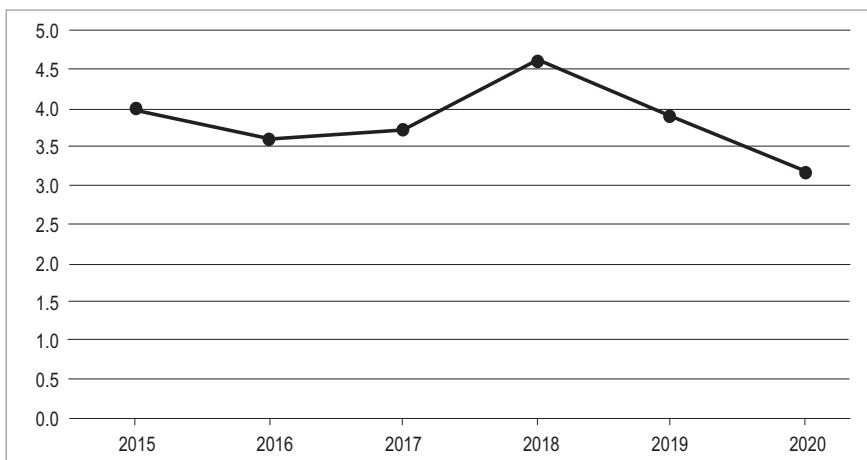


Figure 3. Gazprom's share in Russia's GDP in 2015–2020 (%)

Source: Own elaboration based on: [Gazprom, 2019; 2021].

The consequences of the pandemic are not the only challenges facing the Russian gas company. Increased competition may limit the markets to which Gazprom is able to export. According to a PwC report, in coming years competition will increase in one of Russia's important export markets – Europe. In October 2020, the Trans-Adriatic Pipeline was launched, and already there are plans to double its initial capacity of 10 bcm to 20 bcm per year [Energetyka24, 2020]. The gas will be extracted from the Shah Deniz field in Azerbaijan and delivered to Southern Europe through the Southern Gas Corridor, 878 km long, crossing the territories of Greece, Albania, and Italy, and running along the bottom of the Adriatic Sea.

The undertakings of American LNG producers, which include increasing the capacity of the Corpus Christi gas terminal in Texas (5 million tonnes per year), the Rio Grande gas terminal (27 million tonnes), and the Annova terminal (6.5 million tonnes), may also bring consequences unfavorable for Gazprom [PwC, 2021].

The challenges presented above and those that may face Gazprom in coming years call for the development of an appropriate strategy. Gazprom's strategy has been published on its website. The main strategic goal of the largest Russian gas company is to maintain a leading position among global oil and gas concerns by diversifying sales markets and supplies of natural gas and its processed products, ensuring reliable gas flows to customers, and increasing the efficiency and scale of operations. An important goal set in the strategy is to focus on human resources and innovation, including the development of scientific, technical, and technological potential. In addition, the company specifies its strategic priorities and projects in the areas of mining and production, transport, underground storage, and processing.

A strategy is essential for enterprises because it allows for the effective use of resources in the changing environment and thus helps them achieve their goals. One of the methods used to study the macro-environment is the PEST analysis. The remainder of the article is devoted to an analysis of the macro-environment of the Russian company Gazprom.

### 3. PEST analysis as a method of analyzing the macro-environment of a gas company – the case of Gazprom

The PEST analysis consists in examining the main directions of changes in the macro-environment as well as developments and trends affecting long-term decision-making processes. It is a strategic tool for explaining the causes of growth or collapse of markets and determining the company's potential. Its name is an ab-

breveviation that uses the first letter of each factor group analyzed in terms of their impact on the chosen enterprise:

- political (geopolitical circumstances),
- economic (national or regional macroeconomic indicators),
- technological (technological development level, use of technology in production),
- social (national or regional population characteristics).

The PEST analysis for Gazprom is presented in Table 1.

Table 1. PEST analysis for the Russian company Gazprom

Political factors	Possible impact
1. Introduction of economic sanctions against Russia and weakening international relations with, i.a., the EU and the US.	1. The sanctions have a negative impact on the economic performance of the whole country and individual big Russian companies. The US bans the export of technological equipment to the Gazprom-operated Yuzhno-Kirinskoye gas and condensate field in the Sea of Okhotsk.
2. Implementation of the import substitution program.	2. Under the import substitution program, Gazprom and all its gas production, storage, and distribution subsidiaries switched to using exclusively domestic large and smaller diameter pipelines.
3. Cooperation with the BRICS and the EEC.	3. The establishment of the Customs Union of Russia, Belarus, and Kazakhstan contributes to integration processes and strengthening international relations in the Eurasian space. Cooperation with the BRICS also positively affects the gas industry, strengthening trade ties between Russia and Brazil, India, China, and South Africa.
4. Exclusion of foreign enterprises from the gas industry.	4. Gazprom has monopoly on gas production and export.
Economic factors	Possible impact
1. Increased taxes for natural monopolies.	1. Higher tax rates for monopolists lead to an increase in business costs and to unfavorable developments in the domestic market as a result of reduced rates on raw materials.
2. Poor investment attractiveness.	2. Attracting foreign investments gives a new impulse to the development of the gas transmission system. Poor investment attractiveness leads to the collapse of the industry.
3. Lower contract prices for Russian gas.	3. The average price of gas exported by Gazprom to the post-Soviet states falls by ca. 27% and to Europe by ca. 42% in 2017 compared to 2015, mainly due to the instability of the ruble against the dollar and the euro.
4. Pace of economic growth.	4. Unstable, expanding and shrinking market outlets.
5. Degree of globalization and economic openness.	5. Competition is affected by whether and to what extent the markets are open or closed.
Social factors	Possible impact
1. Education level of the population.	1. Highly qualified personnel increases production efficiency.

2. End service user preferences.	2. Gazprom changes its approach to the end consumer, which requires adjustments in its offer in terms of quality, service, and price.
Technological factors	Possible impact
<ol style="list-style-type: none"> <li>1. Use of new equipment and technologies in oil and gas extraction.</li> <li>2. Financing R&amp;D.</li> <li>3. Technology use, implementation, and transfer.</li> </ol>	<ol style="list-style-type: none"> <li>1. In order to cut costs, Gazprom raises money for science and technology development to further modernize equipment.</li> <li>2. Optimized costs of identifying gas drilling sites.</li> <li>3. Higher profits with reduced losses.</li> </ol>

Source: Own elaboration based on: [Kislitsyn, 2016; Loktionova, Kurenkov, 2018; Spiridonova, Šarapova, 2017].

The results obtained during the study and the PEST analysis findings make it possible to conduct a timely assessment of the current commercial and production situation of the Russian gas company and identify potential threats. They may also serve as an introduction to further research on the future direction of its strategy.

## Conclusions

The gas industry based on raw gas is a critical element of the Russian economy. Gazprom has by far the largest, monopolistic share in total gas extraction, production, and export. As such, it is in need of reform and requires effective management, all the more so as the industry’s growth rate is quite high, and there are several hindrances to its further development. In addition to economic, technological, and social factors, the company’s Achilles’ heel may turn out to be the country’s political situation, resulting from both its foreign policy and the imposed sanctions, which weakened its image in the international arena and crippled Russian enterprises. This brought a slowdown in foreign trade (incl. gas exports) and in technological development (due to, i.a., reduced supply of modernized equipment). In light of dynamic geopolitical changes, it is essential to implement appropriate strategic management methods to make effective decisions and quickly solve problems caused by negative factors slowing down the pace of development of the industry and Gazprom itself. The results obtained from the PEST analysis may serve as a starting point for further research and for the formulation of an effective strategic plan of development for the gas industry.

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