



Role of Oil and Gas Industry in Economic Development

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Abstract:

Uzbekistan's oil and gas industry faces declining production due to the depletion of existing fields and aging infrastructure. A multi-level organizational structure at Uzbekneftegaz exacerbates inefficiencies, leading to increased bureaucracy and an inefficient allocation of resources.

Despite the industry's critical role in Uzbekistan's economy, there is limited research on the potential benefits of international listing as a solution to its challenges.

This study reviews the current state of Uzbekistan's oil and gas industry, evaluates the organizational structure of Uzbekneftegaz, and analyzes the potential impacts of an international Initial Public Offering (IPO) on the industry's performance.

Partial privatization through an international IPO can attract alternative financing without burdening the state budget. Compliance with international corporate governance standards is expected to enhance efficiency and productivity. Additionally, the transparency required by international markets can improve the company's valuation and facilitate better resource allocation.

The proposed IPO can mitigate existing inefficiencies by reducing bureaucracy and ensuring a more efficient management structure. The influx of foreign capital through an IPO is likely to address the investment needs for upgrading technology and infrastructure.

An international listing can serve as a catalyst for the revitalization of Uzbekistan's oil and gas sector, fostering sustainable growth and aligning the industry with global standards. This strategic move could significantly bolster economic development and energy security in Uzbekistan.

Keywords: Oil and gas, Uzbekistan, Uzbekneftegaz, initial public offering, corporate governance, efficiency, investment.

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Introduction

Since the 1990s, Uzbekistan has incorporated its energy strategy into its socio-economic changes, prioritizing attaining self-sufficiency in energy. The government has provided significant support to its key businesses, notably the oil and gas sector. The country augmented its output of liquid hydrocarbons, enabling it to meet both domestic demands and initiate exports.

These accomplishments have been realized by successfully executing several initiatives, including the activation of the Kokdumalak petroleum condensate field, the construction of the Bukhara refinery, and the implementation of sulfur scrubbers at the Mubarek Natural Gas Refinery. In order to enhance the administration and productivity of the oil and gas sector, the establishment of Uzbekneftegaz, a state-owned oil and gas business, was initiated, which was later transformed into a national holding company. Since the year 2000, Uzbekneftegaz has been drawing in foreign investments and advancing the oil and gas sector within the nation.

The oil and gas industry is a key sector of Uzbekistan's economy. The nation boasts vast quantities of hydrocarbon resources. According to Abdullayev (2013), the Institute of Geology and Exploration of Oil and Gas Fields (IGEOLF) has determined that 63.1% of Uzbekistan's area has the potential for oil and gas development. The proven oil and gas reserves of Uzbekistan cover an area of 203.7 thousand square kilometres. The primary oil and gas regions in the country include Ustyurt, Bukhara-Khiva, Southern-Western-Gissar, Surkhandarya, Shurtan oil gaz, and Ferghana (Figure 1). The Khorezm and Syrdarya regions, with a combined area of 78.7 thousand square kilometers, offer promising opportunities for oil and gas development.

Methodology. The oil and gas industry is a key sector of Uzbekistan's economy. The nation boasts vast quantities of hydrocarbon resources. Based on According to Abdullayev (2013), the Institute of Geology and Exploration of Oil and Gas Fields (IGEOLF) has determined that 63.1% of Uzbekistan's area has the potential for oil and gas development. The proven oil and gas reserves of Uzbekistan cover an area of 203.7 thousand square kilometers. The primary oil and gas regions in the country include Ustyurt, Bukhara-Khiva, Southern-Western-Gissar, Surkhandarya, Shurtan oil gaz, and Ferghana (Figure 1). The Khorezm and Syrdarya regions, with a combined area of 78.7 thousand square kilometres, offer promising opportunities for oil and gas development.

Uzbekistan experienced a significant rise in its oil production, increasing from 2.8 million tons in 1991 to 7.6 million tons in 1995 (Figure 2). Therefore, The nation ceased its oil imports and successfully attained energy self-reliance. In 1998, the production of liquid hydrocarbons reached its highest point, reaching a total of 8.2 million tons. However, this situation was short-lived, as starting from 2011, the consumption of oil and gas condensate has surpassed the production level. As a result, the country has become a net importer of oil. In 2013, there was a 7.1% decrease in production, while consumption increased by 2.1% compared to the previous year.

Uzbekistan has similar resource levels to Turkmenistan, however it produces considerably less oil and gas condensate (according to the EIA US, 2012). In 2013, Turkmenistan's production reached 11.4 million tons, which was 3.9 times greater than Uzbekistan's output. The decline in oil output in Uzbekistan can be attributed to insufficient investment and obsolete technologies.

Fig. 2. Production and consumption of oil and gas condensate in Uzbekistan (million tons) Source: British Petroleum, 2014.



Refinement. The state joint stock enterprise Uzneftmahsulot refines oil and gas condensate at its refineries in Ferghana. The Ferghana refinery is a prominent company in the Central Asian region that specializes in the manufacturing of fuels and lubricants. The launch of the project took place in 1958, and it currently has a production capacity of 8.7

million tons of fuel and lubricants per year ("Neftyanaya promishlennost", 2014). Due to the utilization of sulfur-rich crude oil by the Fergana Refinery since 1995, a diesel hydrosulfurization unit was constructed in 1999.

The intricate facility, valued at USD 200 million, was constructed by two Japanese firms, Mitsui and Tayo Engineering, with financial backing from the European Bank for Reconstruction and Development and Eximbank of Japan (Ferghana refinery, 2014). The Bukhara refinery, constructed in 1997, has an annual refining capacity of 2.5 million tons of oil and gas condensate (Bukhara oil refinery, 2014). By 2016, Uzbekistan aims to finish building the second phase of the Bukhara refinery, which will manufacture petroleum, diesel fuel, and Euro-3 grade jet kerosene ("Uzbekistan do 2016 goda", 2013). The initial construction cost amounts to USD 475 million and will be funded through loans from Uzbekneftegaz, the Fund for Reconstruction and Development of Uzbekistan, international loans, and investments ("Uzbekistan do 2016 goda", 2013).

Infrastructure for trade and transportation. Starting in 2003, Uzbekistan has been importing unprocessed petroleum from the Kumkol field in South Kazakhstan in order to refine it at their facilities.

The Fergana refinery factory in Uzbekistan processed the raw materials and then sold the refined goods to other countries. Uzbekistan has augmented its oil imports from Turkmenistan as a result of the decreasing production (Uzbekskie NPZ, 2013). Uzbekistan lacks a sophisticated oil pipeline infrastructure. A significant global pipeline connects Russia's Tumen to Kazakhstan's Shymkent, Uzbekistan's Bukhara, and Turkmenistan's Chardjou. The pipeline spans a distance of approximately 450 kilometers (Ibpus, 2013, p. 130).

The Fergana Valley oil pipeline links the Fergana and Altyaryk refineries. A pipeline connecting Angren to the Ferghana refinery is currently being built. The purpose of this pipeline is to provide a connection between the refinery and the Bukhara-Khiva oilfields (Ibpus, 2013, p. 130).

Due to being a double landlocked country, Uzbekistan lacks any marine ports. The primary modes of transportation for oil products are railways and automobiles. According to Ibpus (2013, p. 131), all oil and gas installations are linked to the railway system. Presently, the government is allocating substantial financial resources towards the upgrading of the Uzbek section of the Transcontinental Highway, as well as the establishment of new railway networks that will link with China and northern Afghanistan (Ibpus, 2013, p. 132).

1.2. Gas industry trends. Stockpiles. According to British Petroleum (BP), Uzbekistan has around 1.1 trillion cubic meters of proven gas reserves as of 2013. This makes it the fourth largest gas reserve in the Eurasia region, behind Russia (31.3 trillion cubic meters), Turkmenistan (17.5 trillion cubic meters), and Kazakhstan (1.5 trillion cubic meters). Uzbekistan extracts natural gas from 52 fields, including 12 significant deposits. These deposits are situated in the Amu Darya Basin in the southern part of the country and on the Central Ustyurt plateau near the Aral Sea in the western region of Uzbekistan. The Mubarek and Shurtan gas fields are the most extensive in size. The fields also include ethane, propane, butane, and other substances. These substances can be utilized to manufacture polyethylene and polyvinyl chloride (Ibpus, 2013, p. 129).

Manufacturing and use. BP's data shows that in 2013, Uzbekistan was positioned among the top three natural gas producers in Eurasia and placed sixteenth globally. From 1991 to 2008, natural gas production has had a significant increase of 64.12%, rising from 37.9 billion cubic meters (bcm) to its highest point of 62.2 bcm (Figure 3). Since then, production has been steadily decreasing and reached a level of 55.2 billion cubic meters (bcm) in 2013, when production from the Kokdumalak and Shurtan gas fields reached a

plateau, as reported by the EIA in 2012.

Uzbekistan utilizes 84% of its gas production, making it the primary consumer of hydrocarbons in the Central Asian region. Uzbekenergo State Joint Stock Company is a major consumer of natural gas and serves as the dominant producer and provider of electric power in Uzbekistan. It accounts for 35% of the gas consumed in the domestic market (Ibpus, 2013, p. 133). Gas is the primary fuel used in the power plants operated by Uzbekenergo. The corporation possesses 39 power units with a combined installed capacity of 12.0 million kilowatts. Uzkommunhizmat, a State Agency in Uzbekistan, is another entity that consumes gas and provides it to the final consumers. Additional industries that consume gas include the chemical, metallurgical, and mining sectors.

The present challenges facing the sector. The oil and gas industry is vital for sustaining the economic prosperity of Uzbekistan. In 2012, the proportion The contribution of oil and gas to the GDP was 5.1%, accounting for 18.3% of industrial production and 23% of exports, according to the Center for Economic Research (CER) in 2013. The industry has a significant influence on various sectors including transportation, energy generation, machinery manufacturing, metallurgy, chemistry, scientific research, non-ferrous metallurgy, oil refining, utilities, and construction (CER, 2013). Given the significance of oil and gas in the economic advancement of the nation, it is crucial to uphold the optimal functioning of the industry.

Presently, the oil and gas sector in Uzbekistan is confronted with two significant obstacles: a decrease in output and ineffective management. These issues must be resolved in order to guarantee long-term and steady development. The decline in production can be attributed to the depletion of oil and gas reserves in the brownfields, as well as the depreciation of infrastructure and equipment (Table 1). In order to address the current issue, the government of Uzbekistan is providing support for the growth of the industry through the implementation of several large-scale initiatives. Nevertheless, substantial investments are still required in order to pursue the following objectives: - Uncovering new oil and gas reserves through the initiation of greenfield projects inside the domestic market, as well as involvement in energy ventures in foreign markets. - Enhancing the infrastructure and technology.

Poor management is a hindrance to the progress of the industry. The multilevel organizational structure at Uzbekneftegaz gives rise to several issues, including heightened bureaucracy, an increased tax burden, and an inefficient distribution of resources.

Problems Concise clarification

The decrease in production can be attributed to two main factors: the exhaustion of oil and gas reserves in the brownfields, and the deterioration of infrastructure and equipment.

Lack of effectiveness in overseeing operations Cause: The multi-tiered organizational structure gives rise to several issues, including heightened bureaucracy, an increased tax burden, and an inefficient distribution of resources.

The presence of a complex hierarchical structure in the industry's governance is responsible for the bureaucratic administration and conflicts of interest that arise between the holding company and its subsidiaries. The managerial professionals at both the first and second levels perform identical responsibilities to those carried out by government officials responsible for the oil and gas sector. Within the three-tier management system, the second-level managers of Uzbekneftegaz carry out the same responsibilities as the first-level managers at the subsidiaries. The excessive number of management staff is the cause of the delay in the decision-making process. The third-tier entities responsible for carrying out core operations are inadequately managed due to the holding company's

inability to actively coordinate these companies (CER, 2013). In addition, the ineffective finance system and lack of financial autonomy prevent Uzbekneftegaz from being able to provide timely funding for operational and capital requirements (CER, 2013). The inefficiency of operations management is caused by the delays in accepting proposals on the import of essential products and technologies.

In conclusion, The oil and gas industry plays a vital role in driving Uzbekistan's economic expansion. The industry is the primary sector.

Contributes to the Gross Domestic Product (GDP) and generates revenue from exports. Oil and gas play a crucial role in economic development, making them the primary focus of the government's investment program. The vertically integrated state-owned National Holding Company Uzbekneftegaz operates the oil and gas industry. The corporation exercises complete control over both the downstream and upstream operations in the country through its subsidiary enterprises.

Although there has been significant advancement, the oil and gas sector in Uzbekistan encounters certain obstacles. Uzbekistan's oil and gas output has experienced a decrease, whilst consumption has witnessed an increase. In order to address the growing internal demand, it is imperative to investigate and cultivate novel oil and gas reserves as a substitute for the current ones. The process of aging necessitates the necessity for upgrading technologies and infrastructure.

In order to overcome these obstacles, the sector requires substantial investments. Given the long-term increase in the demand for capital, the privatization of Uzbekneftegaz through an initial public offering (IPO) can provide opportunities to secure the required financing through various means. Additionally, this would reduce the strain on the state's financial resources and encourage investment from private entities.

An Initial Public Offering (IPO) enables a firm to appeal to a diverse group of stock market investors in order to secure funding for its future expansion. After a firm becomes publicly traded, it gains the privilege to issue additional shares, therefore obtaining more funds to support its growth and expansion. In addition, when a firm is listed, it becomes more transparent, which can enhance its credit rating when it issues debt securities in capital markets. The ability to acquire substantial funds from the stock exchange, instead of having to seek and negotiate with individual investors, serves as a significant motivation for numerous corporations when they undertake initial public offerings (IPOs).

Another issue arises from the ineffective administration of the industry, resulting in heightened bureaucracy, an increased tax burden, and an inefficient distribution of resources. Due to its obligations to the government, clients, and investors, Uzbekneftegaz requires a streamlined management structure and direct oversight of its primary firms. Listing the company can serve as a vehicle for Uzbekneftegaz to enhance efficiency and productivity in the industry. The IPO process necessitates meticulous and thorough examination of the entire firm. This will facilitate the modification and enhancement of the organizational structure, communication, management, and control system.

References:

1. Abdullayev, G.S. (2013, May 15-16). Nadejnaya siryevaya baza uglevodorodov – osnova dlya privilecheniya inostrannih investitsiy v neftegazovuyu otrasl Respubliki Uzbekistan [Reliable hydrocarbon resource base – foundation for attracting international investments into oil and gas sector in Uzbekistan]. Presentation of the IGEOGF presented at the 17th Uzbekistan International Oil and Gas Conference. Problems and Perspectives in Management, Volume 14, Issue 2, 2016 271
2. Baker & McKenzie. (2014, February 12). Baker & McKenzie Index Finds Cross-Border IPOs Growing Three Times Faster Than Domestic IPOs.

3. Bridgman, B., Gomes, V. and Teixeira, A. (2011). Threatening to increase productivity: evidence from Brazil's Oil Industry, *World Development*, 39 (8), pp. 1372-1385.
4. British Petroleum. (2014, June). BP Statistical Review of World Energy 2014. Available at: <http://www.bp.com/en/global/corporate/about-bp/energy-economics/statistical-review-of-world-energy.html>
5. Bukhara oil refinery. (2014). History. Available at: <http://www.bnpz.uz/en/history>. Accessed on September 7, 2014.
6. Center for Economic Research. (2013, October 9). Neftgazoviy sektor Uzbekistana: sovershenstvovanie sistemi upravleniya [Oil and gas sector of Uzbekistan: improvement of the management system]. Available at: <http://www.12news.uz/news/2013/10/09/нефтегазовый-сектор-узбекистана-сов/>.
7. EIA US Energy Information Administration. (2012, January 19). Uzbekistan. Available at: <http://www.eia.gov/countries/cab.cfm?fips=UZ>.
8. Ernst & Young. (2009). Global IPO trends report 2009.
8. Eshmuratov, B. (2013, May 15-16). Investment decisions in Uzbekistan's natural gas transportation system. Presentation presented at the 17th Uzbekistan International Oil and Gas Conference. Ferghana Refinery. (2014). History of the plant. Available at: <http://fnpz.uz/rus/index.php?act=5>. Accessed on September 7, 2014.
9. Ibpus. (2013). Uzbekistan: mineral, mining sector investment and business guide. Available at: http://books.google.co.kr/books?id=Ye54sxx_yyQC&printsec=frontcover#v=onepage&q&f=false.
10. Neftyayaya promishlennost Uzbekistana [Oil industry of Uzbekistan]. CDU Tek. Available at: <http://www.cdu.ru/articles/detail.php?ID=309596&print=Y>. Accessed on September 30, 2014
11. Rossi, M. (2001). Technical change and efficiency measures: the post-privatization in the gas distribution sector, *Energy Economics*, 23 (3), pp. 295-304.
12. Shurtan GCC. (2014). General information. Available at: http://sgcc.uz/en_page.php?page=1. Accessed on September 30, 2014
13. Waddams Price, C. and Weyman-Jones, T.J. (1996). Malmquist indices of productivity change in the UK gas industry before and after privatization, *Applied Economics*, 28 (1), pp. 29-39.
14. Wolf, C. and Pollitt, M.G. (2008). Privatizing national oil companies: Assessing the impact on firm performance,
15. *Cambridge Working Papers in Economics*, Faculty of Economics, University of Cambridge.
16. Wolf, C. and Pollitt, M.G. (2009), The Welfare Implications of Oil Privatization: A Cost-Benefit Analysis of Norway's Statoil, *Cambridge Working Papers in Economics*, Faculty of Economics, University of Cambridge.