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Development of Israel's natural gas resources: Political, security, and economic dimensions

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ABSTRACT

The natural gas reserves discovered in Israel in recent years have instigated a debate on sociopolitical, international political, security, and economic issues. Examination and analysis of various policy documents that affected the final consolidation of Israel's gas policy show that the issue of natural gas discoveries in Israel is complex and characterized by many intricacies and uncertainties that create a unique collection of problems and solution. First, there are difficulties involved in setting a time frame for the public policy designed on the topic of natural gas. Second, the work division and interaction between the government, the public, and private companies is particularly complex. Third, the taxation policy must take into account benefits for the state and its residents but at the same time maintain and preserve the incentives offered to investors and developers. Fourth, it is hard to disregard the fact that the Israeli government has chosen not to bring the decision regarding the gas outline for public debate or for review by the Knesset, and fifth, the decision about how much of the gas reserves should be preserved for domestic needs and how much exported is particularly complex.

1. Introduction

Similar to many other countries, Israel too is in favor of a transition to natural gas as a main source of energy with many advantages for consumers, the economy, and the environment.³ Israel's first natural gas reserve was discovered at the end of the 20th century,⁴ however significant changes in the Israeli economy with regard to energy were felt only a decade later, with the discovery of the two large gas reserves, Tamar and Leviathan,⁵ and natural gas rapidly became the main preferred source of energy for producing electricity and for use in the major industries (Shaffer, 2013).

These gas discoveries have many different effects on the national level. First of all, burning natural gas produces significantly less pollutants and greenhouse gases than other fuels, and therefore the transition to natural gas for generating energy, for industry, and for public transportation, is expected to significantly reduce air pollution. Second, the extraction of natural gas and its preservation for use by the domestic economy will enhance Israel's security, after being compelled for many years to rely on natural gas supplied by its neighbor, Egypt, and experiencing frequent hostile acts involving damage to the pipeline and

disruptions of the gas supply. Third, exporting natural gas to its neighbors in the Middle East will help Israel generate and maintain political, economic, security, and strategic relationships with countries in the region and thus contribute significantly to the country's security (Fischhendler and Nathan, 2014). Fourth, the discovery of gas reserves in Israel harbors a not inconsiderable economic potential capable of changing the face of the Israeli economy and society for many years to come.

The dilemma of deciding whether to preserve the natural gas for internal use in Israel or to export it to countries in the region has instigated (and is still the cause of) a debate on sociopolitical, international political, security, and economic grounds. From the sociopolitical aspect, the question is who are the stakeholders and who holds the rights to the gas production process: the developers and owners of the gas companies to whom the state awarded the production license and who will be able to export a large proportion of the gas in return for financial gain, or the state itself, i.e., the citizens, who are entitled to enjoy the economic benefits expected to derive from these discoveries? The international political aspect concerns the political viability of exporting gas to neighboring countries (Egypt, Jordan, Turkey, and

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³ Such as: reducing the costs of producing electricity and industrial products, reducing pollution and greenhouse emissions, improving competition in the economy and promoting export, fortifying the Israeli economy, and more.

⁴ The Noa reserve in 1999.

⁵ In 2009 and 2010, respectively.

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others) and the question of whether it is indeed possible to form and maintain stable trade agreements with these volatile countries. From the security aspect, the question raised was what would be more beneficial for Israeli security: leaving the gas or some of it below the sea floor, which would ensure energy security for many years, or perhaps exporting the gas to neighboring countries and forming economic and security relationships with them, thus contributing to the country's existential defenses. From the economic aspect, the debate that arose concerned the economic benefits that Israel would receive from exporting the natural gas to other countries. Advocates of exporting the gas claim that the taxes and commissions the gas companies will pay the country as a result of gas sales will significantly enrich its coffers and therefore they should be allowed to export it (some of it). Then again, others claim that the export of natural gas will not have a significant effect on Israel's profits (if at all), as this would require it to import fuel or other gas in its stead and the high import costs would cancel out the profits derived from the exports.

One way or another, this issue was decided in a government resolution in 2013 that chose to adopt the recommendations of the Tzemach Committee⁶ that was convened for this matter and advised that all existing and potential claim holders to the gas fields be required to allocate at least part of the gas they hold for the use of the domestic economy, and at the same time to let these claim holders export up to 40% of the gas. Since the discovery of Israel's natural gas fields, many reports and articles have been written on the myriad complex issues involved, and therefore the purpose of the current article shall be to examine and present all the aspects, conflicts, benefits, and challenges that may accrue to the Israeli economy as a result of the extraction, use, and export of natural gas in the coming years.

Many countries in the world have natural gas reserves within their borders and ever since the middle of the 20th century have applied various regulation processes and gas export policies, as presented in detail by Johnston and MacAvoy (2002). The most prominent of these is Russia, who is considered to have the largest gas reserve in the world, is the world's largest exporter of gas, and is responsible for supplying gas, used for industry and heating, to most European countries.⁷ Similarly, Iran⁸ and Qatar⁹ as well have large natural gas reserves and apply a policy that supports the export of gas (Esen and Oral, 2016). In contrast, the US¹⁰ is one of the largest producers of gas for domestic use, due to the high demand for gas in the country,¹¹ while Norway¹² advocates the export of its natural gas rather than domestic use.

This study depicts the gradual increase in the production and consumption of natural gas in Israel, forming a basis for further studies that will explore the effect of these trends on Israel's economy in general and its energy industry in particular. Notably, many previous studies have demonstrated the impact that developing a domestic natural gas industry has had on the energy industry of other countries around the world and on their economy. Here are several conspicuous examples:

Firstly, Russia: Ellman examined in detail the effect of the Russian energy industry (petroleum and gas) on its economic indices. He expressed doubts as to the long-term contribution of natural resources to the domestic economy and claimed that countries who are rich in

resources suffer from what he calls the "resource curse". Despite the positive economic indices presented by Russia's economy in the mid-20th century,¹³ Ellman voiced concerns that in the middle and long term Russia's economic performance would be negative, affected by what he calls the "wealth of resources". In his opinion, this contention is particularly relevant for Russia, as the proportion of gas and crude oil exports relative to all domestic exports, as well as the proportion of revenues from this industry relative to all the country's revenues, has gradually increased until the domestic economy became dependent on its energy industry (Ellman, 2006).

Similarly, in his book published during the global economic recession, Stern too emphasizes the changes that occurred in the world gas industry since late 2008, and draws attention to the instability and uncertainty that have characterized the Russian gas industry since then. The author expresses worry and concern regarding the vulnerability of the Russian gas company Gazprom and its inability to fulfill its obligations. This concern stems, in his opinion, from insufficient investment in the gas industry in the years preceding the global recession as a result of the preference given by the Russian government to investing in the petroleum industry. Hence, the author claims that since the outbreak of the economic crisis in 2008 there are sincere doubts as to the ability of the gas company to fulfill its obligations concerning the production and supply of gas to its clients in Europe and elsewhere (Stern, 2009).

Secondly, Iran: A study that examines the relationship between natural gas consumption in Iran and the growth of its economy and attests to a positive relationship between these variables, while advocating the country's gas preservation policy (Heidari et al., 2013). Nonetheless, Ellman's "resource curse" contention (Ellman, 2006), presented with regard to natural gas in Russia, was explored in an article by Ahmed and colleagues and found true. The study, which compared Iran's natural resource production indices to domestic economic indices from 1965 to 2011, found that long-term utilization of natural resources as a major cause of growth might have a negative effect on the competitiveness of other sectors of the economy and might limit their ability to contribute to overall growth, while slowing down the economy's growth in the long term (Ahmed et al., 2016). One way or another, it appears that the demand for Iranian natural gas will keep growing in the next few decades as well, particularly thanks to the consistent demand for this resource by Asian countries to which Iran exports considerable quantities of natural gas (Carter, 2014), and therefore this industrial sector will continue to exert a dominant influence on the growth of the Iranian economy.

Thirdly, Qatar: Qatar's first gas reserve was discovered as early as 1971 in the north of the country, however it took twenty years for the economic potential of this discovery to bear fruit. To fully utilize such a discovery there are many other requirements, and many countries in the world are blessed with natural resources but have not managed to use them in order to flourish and develop. Qatar's development and the utilization of its natural resources is a consequence of its dedicated leadership, which managed to form a long-term vision and master plan for the country's development and for the rapid evolution of international economic, political, and security relationships (Ibrahim and Harrigan, 2012). These relationships enabled Qatar to obtain an outstanding global impact and to improve its national defense, since the countries in the region, who utilize Qatari gas, became significant stakeholders in its defense, and also to increase its revenues and profits to such a degree that its dependency on regional markets was neutralized (Krane and Wright, 2014).

At present, Qatar is considered to have the third largest natural gas reserves in the world (after Russia and Iran). As a result of this essential resource the residents of Qatar now have the highest per capita income

⁶ Established in 2011.

⁷ See: Bahgat (2010a, 2010b), Quast and Locatelli (1997), Spanjer (2007), Shadrina (2014), Åslund (2006), Ellman (2006), Stern (2009).

⁸ See: Ahanjan et al. (2017), Agheli and Fatemeh (2016), Taheri et al. (2014), Kakaee and Paykani (2013), Maroufmashat and Sattari (2016), Heidari et al. (2013), Ahmed et al. (2016), Carter (2014).

⁹ See: Ibrahim and Harrigan (2012), Krane and Wright (2014), Dargin (2007), Doukas et al. (2013), Hoyos and Chazan (2012).

¹⁰ See: Pierce (1995), Wakamatsu and Aruga (2013), Geng et al. (2016), Huntington (2007), Jenner and Lamadrid (2013), Talus (2014).

¹¹ Most of the natural gas produced in the US is intended for domestic use, and part of it is exported to countries such as Canada, Japan, and Mexico.

¹² See: Klick (2008), Rømo et al. (2009), Söderbergh et al. (2009), Söderbergh (2010), Sæther et al. (2011).

¹³ Increasing growth, a rise in the country's revenues, a drop in the unemployment rate, and more.

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