

Vienna Nuclear Deal: A New Opportunity for Both Iran and Japan

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Introduction

After prolonged negotiations stretching over 12 years, Iran and the P5+1 (United States, United Kingdom, France, China, Russia, and Germany) agreed on a Joint Comprehensive Plan of Action (JCPOA) on July 14, 2015. The implementation and consequences of JCPOA as one of the most important events in the second decade of the 21st century will have very important effects on Iran's relations with the international community, and its extent will not be limited to Iran's regional relations; the Vienna deal could possibly even have effects in geographically distant regions such as East Asia. One of the best examples for understanding the impact of the nuclear deal in this region is relations between Iran and Japan.

Japan and Iran have maintained harmonious relations since the establishment of diplomatic relations in 1929. This paper aims to analyze how the Vienna deal would influence the bilateral relationship in three aspects: (1) the international security regime, (2) nuclear activity and (3) economic relations. The new opportunities and challenges Japan is expected to face are discussed throughout the analysis. To achieve this aim, the first task at hand is to define the nature of relations between these two countries.

1. Japan's Foreign Policy Toward the Middle East, the Nuclear Issue and Relations with Iran

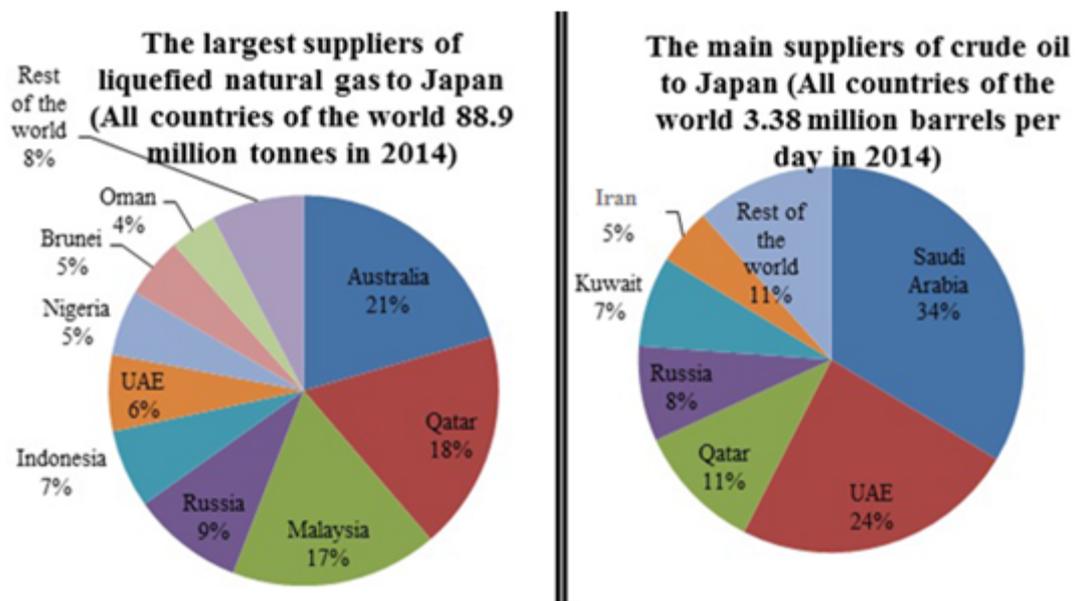
Despite their geographical separation and cultural, historical and religious disparities, Japan and the Middle East have become geostrategic partners. This geostrategic relationship is based on the absolute advantage of Persian Gulf countries in exporting oil and Japan's lack of resources that has turned it into an importer of natural gas and oil. Japan is one of the world's largest importers of liquefied natural gas (LNG), the second-largest importer of coal, and the third-largest net importer of crude oil and oil products.¹ The Fukushima nuclear disaster prompted the shutdown of all of Japan's nuclear reactors and after nearly 5 years, despite 27 reactors filing applications, just five of Japan's 43 operable reactors – Sendai 1 & 2, Takahama 3 & 4 and Ikata 3- have been

¹ US Energy Information Administration, *International Energy Data and Analysis: Japan* January 30, 2015, [https://www.eia.gov/beta/international/analysis_includes/countries_long/Japan/japan.pdf] accessed on March 8, 2016.

restarted after showing they have complied with post-Fukushima regulatory standards imposed by the Nuclear Regulation Authority.²

The Fukushima disaster resulted in the disruption of nuclear power operations. In an effort to compensate for the shortfall in nuclear power, Japan has thus far primarily swapped out nuclear fuel in favor of liquefied natural gas (LNG), crude oil, and residual fuel oil.³ Of Japan's 58 principal thermal power plants (1,000 MW or greater), 20 are fueled by LNG, 22 by a combination of fuel oil and crude oil, and the rest by coal.⁴ As a result, Japan has increased imports of crude oil and LNG for direct burning in power plants, and roughly 84% of Japanese crude oil imports originate from Persian Gulf countries. Saudi Arabia is the largest source of imports, making up 34% of the import portfolio, or more than 1.1 million barrels of crude oil per day. The UAE, Qatar, Kuwait, Russia, and Iran are other sources of oil for Japan.⁵ Qatar was the world's second-largest supplier of LNG to Japan after Australia, providing it with about eighteen per cent of its total needs in 2014.⁶

Figure 1: Japans Main Crud Oil and LNG Supplier



Source: U.S. Energy Information Administration

² Nuclear Energy Institute, *Japan Nuclear Update*, NEI website, August 11, 2016, [<http://www.nei.org/News-Media/News/Japan-Nuclear-Update>] accessed on August 13, 2016.

³ Calabrese, John, *Japan's New Energy Future and the Middle East*, Middle East Institute, June 11, 2012, [http://www.mei.edu/content/japan%E2%80%99s-new-energy-future-and-middle-east#_ftn4] accessed on March 8, 2016.

⁴ The Federation of Electric Power Companies of Japan, *Principal Thermal Power Plants*, March 1, 2015, [http://www.fepec.or.jp/english/energy_electricity/location/thermal/index.html] accessed on March 9, 2016.

⁵ US Energy Information Administration, *International Energy Data and Analysis: Japan*, Ibid.

⁶ Abdullah, Jamal, and Naser al-Tamimi, *Japanese–Gulf Relations: What's Next after Energy?*, Al Jazeera Centre for Studies Report, November 3, 2015 [<http://studies.aljazeera.net/ResourceGallery/media/Documents/2015/11/5/20151155594126734Japan%20&%20Gulf.pdf>] accessed on March 9, 2016.

However, Japan's dependence on Middle East oil tells just one side of story. On the other side, the relations between the United States and Japan have shaped and influenced Japan-Middle East relations. Japan's security dependence on the United States has often pulled Japan into involvement with the United States' Middle East policy, which (in various dimensions) put Japan-Middle East relations at risk because of the United States' support for Israel and the United States' military interventions in Middle East conflicts. Japan's relations with the Middle East on the whole have historically been caught between its dependency on the United States for its security in East Asia, and on the Middle East for oil and other sources of energy.⁷ The history of Japan-Middle East relations illustrates the complex dilemma of Japan's military security being dependent on its alliance with the United States while its economic prosperity is tied to reliable access to energy supplies concentrated in the Middle East. The Iranian nuclear issue highlights this dilemma.

Yukiko Miyagi has described Japan's policy on the Iranian nuclear issue as "balancing between oil interests, the United States alliance and anti-nuclear norms"⁸, and she believes that Japan's approaches to the Iranian nuclear issue exemplify its policy in the post-Cold War tilt towards the US and the West in regard to Middle Eastern conflicts. This has been shaped by Japan's security dependency on the US and concern for its international status as a developed economy and a "member of the West," which was manifested by its membership in the G8 (formerly G7).⁹

Anti-nuclear norms are also part of Japan's international position. Since the end of World War II, Japan has been one of the key members of the international community that working persistently against the proliferation of nuclear weapons and it has maintained stringent adherence to its Three Non-Nuclear Principles of not possessing, producing or permitting the introduction of nuclear weapons. For all of those reasons, Japan's approach to the Iranian nuclear development program since the issue was sent to the UN Security Council was paralleled the Western demand for Iran's compliance in order to dispel international suspicions of its intentions to seek nuclear weapons. Nonetheless, Japan has accepted Iran's right to peaceful possession of nuclear energy capability.

When first confronting the Iranian nuclear issue, the Japanese government took an unusually tough stance towards Iran at the IAEA Board of Governors meetings in September and November 2003. During these meetings, the IAEA Board of Governors adopted a resolution proposed by Japan with Australia and Canada to require Iran to take measures, including the suspension of uranium enrichment related activities.¹⁰ The

⁷ Miyagi, Yukiko, "Japan and the Middle East after the Arab Spring", *IDE ME Review*, Vol.1, February 2014, pp.28-45.

⁸ Miyagi, Yukiko, *Japan's Middle East Security Policy: Theory and Cases*, Routledge, 2008, p.130.

⁹ Miyagi, *Japan and the Middle East after the Arab Spring*, pp.29-30.

¹⁰ Disarmament, Non-proliferation and Science Department, *Disarmament and Non-Proliferation Policy of Japan 2011*, Ministry of Foreign Affairs of Japan, March 2011.

resolution implicitly claimed that Iran had failed to fulfill, or had breached, its obligations to comply with its NPT Safeguards Agreement.¹¹ At the same time, Japan put a lot of effort into continuing its Azadegan oil project, which was under pressure from the United States. However, Japan scaled down its engagement on the nuclear issue in 2004, after a serious warning from Iran that it would lose its oil stake in the country coincided with pressure from the United States.¹²

Japan's engagement with the Iran nuclear issue became more visible again when it assumed a role on the United Nations Security Council. Japan was a UN Security Council member when UN Resolutions 1737 and 1929 were adopted in December 2006 and June 2010, and Tokyo voted in favor of all UNSC sanctions against Iran's nuclear program. The role of Japan became more prominent after Japan assumed chairmanship of the UN Security Council's committee for sanctions on Iran in 2009 and 2010. According to a description of Japan's activities by its Ministry of Foreign Affairs, Japan has been actively engaging in the Security Council's efforts to uphold the nuclear non-proliferation regime in the Middle East. Japan served as Chair of the 1737 Committee (the Council's body for monitoring sanctions imposed on Iran) in 2009-10 and took the initiative in ensuring the full implementation of the relevant resolutions, including the establishment of the Panel of Experts.¹³

Apart from Japan's political position on the Iranian nuclear issue, this issue was proving a major obstacle to its oil relationship with Iran, so Japan aimed to remove the Iranian nuclear issue from the global agenda by persuading Iran to comply with UN Security Council demands. Japan always stressed that the questions surrounding Iran's program should be resolved diplomatically, and Iran considered a related UN Security Council resolution seriously. In parallel, Japan also continued its economic and diplomatic relations with Iran to keep lines of communication open. This was seen in high-level talks between Japanese and Iranian officials on various subjects, including bilateral relations, international affairs, security, business and cultural issues.

Despite all the effort from Iran and Japan to continue relations at this level, the expansion of US sanctions and increasing pressure from the European Union had serious effects on their bilateral relations. The changing situation caused Japan not only to approve US sanctions against Iran in 2010, but also to impose its own sanctions banning transactions with some Iranian banks and investments in the Iranian energy sector as well as freezing the assets of individuals and entities involved with Iran's

¹¹ See: IAEA Board of Governors, *Resolution GOV/2003/40: Implementation of the NPT safeguards agreement in the Islamic Republic of Iran*, [<https://www.iaea.org/sites/default/files/gov2003-40.pdf>] accessed on December 14, 2016.

¹² Miyagi, *Japan and the Middle East after the Arab Spring*, p.30.

¹³ Ministry of Foreign Affairs of Japan, *Achievements as a Member of the Security Council during 2009-2010*, October 2011, [<http://www.mofa.go.jp/policy/un/sc/achievements.html>] accessed on March 10, 2016.

nuclear program.¹⁴ In January 2012, Iran's second biggest customer for oil announced it would take "concrete steps" to reduce its oil dependency on Iran.¹⁵ Japan's political and diplomatic relations with Iran waned during this period, remaining subdued until the start of the Rouhani presidency.

The Japanese government welcomed the new leadership under President Rouhani, who was elected in June 2013. In its first step, Masahiko Komura, vice president of Japan's Liberal Democratic Party (LDP) and a former foreign minister, visited Iran in September 2013. He was the first senior official of the Abe administration to meet with the new Iranian leadership after it assumed office. The establishment of new diplomatic ties was followed by meetings between Prime Minister Abe and President Rouhani and between Foreign Minister Kishida and Foreign Minister Javad Zarif during the UN General Assembly, and Foreign Minister Kishida visited Tehran in November 2013.

Negotiations on the Iranian nuclear issue between Iran and the E3+3 have seen progress since September 2013. Through negotiations held in Geneva, the "Joint Plan of Action" was agreed to on November 24, 2013 as a first step. For the next twenty months, Iran and the E3+3 countries engaged in negotiations, and in April 2015 they agreed on a nuclear deal framework for the final agreement; Iran and the E3+3 agreed on a Joint Comprehensive Plan of Action (JCPOA) in July 2015.

The Joint Comprehensive Plan of Action prepared the ground for ramping up relations between Japan and Iran, and it opened a wide range of possibilities for the two countries to engage on bilateral and multilateral issues. This offered new opportunities not only to Iran but to all other countries like Japan having historical ties with Iran.

2. Opportunities for Japan after JCPOA implementation

(1) The international security system

When considering Japan's approach towards the Middle East in the future, it is important to assess Japan's long-term interests. In this context the most important outcome of the nuclear negotiations for Japan and other countries in East Asia is its long-term effect on the international security system. This claim is based on various assumptions: first, at the international level, relations between East Asia and the Middle East have become an issue between great powers, including the United States and China (as a rising power). In the United States' post-Cold War security and foreign policy, the Middle East and East Asia have been key sites for both reproducing and resisting the US' international power and roles. On the other hand, China is increasingly concerned

¹⁴ BBC, *Japan imposes new Iran sanctions over nuclear programme*, September 3, 2010.

[<http://www.bbc.com/news/world-asia-pacific-11173774>] accessed on March 10, 2016.

¹⁵ BBC, *Japan 'to reduce Iran oil imports'*, January 12, 2012, [<http://www.bbc.com/news/world-asia-16523422>] accessed on March 10, 2016.

about energy security. According to China's "Go-Out" strategy, the Middle East offers opportunities to exchange access for investors to China's vast market for deals with producer states guaranteeing China's oil supplies.

Second, the Middle East's geopolitical importance has been reduced by developments since the shale oil revolution. For 70 years, the Middle East had been at the center of American preoccupations. America's strategic relationship with this region was built on a foundation of American protection in exchange for Saudi Arabia maintaining stability in oil markets. More than a decade of increasing created a new situation for the oil market. High oil prices justified increased investment in new oil fields. New oil suppliers have emerged as a result and, thanks to the shale oil revolution in the United States, American oil production has almost doubled in the past six years. There is no sign that US shale oil producers have started to cut production in the face of plunging prices.¹⁶ This situation has cut US dependency on Persian Gulf oil, and suddenly the region has lost importance.

Third, the Israel situation in the Middle East has changed. Israel was an important asset for the United States, but Israel is more secure today than it has ever been in its history. Its peace treaty with Egypt is as strong as ever. Syria is tearing itself apart, with all combatants more focused on killing each other than plotting against Israel. Hezbollah has caught itself up in Syria. Israel and Turkey have reached an agreement to normalize ties;¹⁷ they have already signed a deal to restore ties after a six-year rift. Israel finds itself with converging interests in the Arab world, in particular with the Saudis.

Based on these assumptions and the US' "Asia-Pacific Pivot" policy, it is understood that there is a real possibility that Washington will go through the same Middle East debate that London did in the 1960s. The Obama administration's new Asia-Pacific military posture¹⁸ was the first sign, and the nuclear deal with Iran the second, that America is losing its will to secure the Middle East. The Iran nuclear deal lies at the heart of Barack Obama's vision for a new relationship between the United States and the Middle East, one that could transform the strategic order that has guided the region since the end of the Cold War.

This situation will have long-term positive and negative consequence for Japan, China and the rest of East Asia. On the positive side of this situation for Japan (and the negative side for China), America's security forces and commitments to East Asia will increase. Obama and his team believe that a nuclear settlement with Iran will allow the

¹⁶ Xinhua, *Oil prices drop amid ample supplies*, February 12, 2016, [http://news.xinhuanet.com/english/2016-02/12/c_135090952.htm] accessed on March 18, 2016.

¹⁷ Geopolitical Futures, *Israel's Reaction to Iran Without Sanctions*, January 18, 2016, [<https://geopoliticalfutures.com/israels-reaction-to-iran-without-sanctions/>] accessed on March 18, 2016.

¹⁸ Clinton, Hillary, "America's Pacific Century", *Foreign Policy*, October 11, 2011, [<http://foreignpolicy.com/2011/10/11/americas-pacific-century/>] accessed on March 18, 2016.

United States to focus its diplomatic and strategic energies on Asia, a region that will do more to determine the history of this century than the morass in the Middle East.¹⁹ In the context of the Japan-US relationship, the conclusion of the Iran nuclear deal will offer great opportunities for Japan's security policy.

However, this change could lead to a security vacuum in the Middle East and create an opportunity for another power such as Russia and China to take on a bigger role in this region. In this case, China would play a more important role than Russia. Russia is a great power with regional interests; Eastern Europe, Central Asia and the Caucasus are Russia's primary regional interests. For this country, the Middle East is a place to compete with the United States and oil suppliers simultaneously, so Russia does not have any vital interests in this region.

For China, the situation is totally different. China is thirsty for crude oil. The world's most populous country consumed over 11 million barrels per day (mbd) and accounted for over one-third of global oil demand growth last year. It is reliant on imports for 60 percent of its crude oil needs, and that reliance is growing as China's demand growth has outpaced the country's lagging domestic production growth. While China is expected to cut into crude oil demand growth, Chinese consumption is still projected to exceed 13 mbd by 2020. Despite the best efforts of producers like Russia, China will continue to be disproportionately reliant on imports from the Middle East. Middle Eastern crude accounted for over half of total Chinese imports, a share that is unlikely to decrease in a meaningful way given current market trends.²⁰ In this situation China considers stability in the Middle East important to its own stability.

Regarding these circumstances in the context of the US' Asian Pivot, Vali Nasr said, "the US wants to pivot to Asia and focus attention on China and away from the Middle East, but the problem is just as we are pivoting East, the Chinese are pivoting West." The Chinese are looking to the region—Pakistan to Iran to Saudi Arabia and Turkey—to help supply their vast need for energy and products.²¹ Cynics may say that these are all tactical moves designed to secure prime business opportunities for China on both sides. There may be some truth to this, but it would be a mistake to reduce China's latest actions to pure economic opportunism.

To manage its intensifying strategic competition with China in Asia, the United States has a two-layer strategy emerging. The first layer is to keep its distance from major flare-ups in the Middle East, providing support but making clear it will not be the one to take primary responsibility. As the situation on the ground deteriorates, the

¹⁹ Twining, Daniel, "Why Asia Should Fear the Persian Pivot", Foreign Policy, [http://foreignpolicy.com/2015/07/17/iran-china-japan-nuclear/] accessed on July 17, 2015.

²⁰ Daniels, Owen, and Chris Brown, "China's Energy Security Achilles Heel: Middle Eastern Oil", *The Diplomat*, September 8, 2015, [http://thediplomat.com/2015/09/chinas-energy-security-achilles-heel-middle-eastern-oil/] accessed on March 19, 2016.

²¹ Ambrose, Jeffrey R., "China Moves In: Beijing Filling U.S. Power Vacuum in Mideast", *The Real Truth*, [https://realtruth.org/articles/131213-002.html] accessed on March 17, 2016.

United States expects these conflicts to eventually compel regional powers to take responsibility.²²

The second layer of this strategy is creating a balance of power. The United States wants regional powers to deal with issues that threaten their interests more than American interests. At the same time, the United States does not want any one country to dominate the region. Therefore, it is in the American interest to have multiple powers balancing each other.²³

In this context, Japan can find ways of improving its long-term interests in the international security system and the Middle East simultaneously. Reducing the level of tension as the first step and ensuring stability in the Middle East (especially in the Persian Gulf region) as a second step are the most important approaches to secure Japan's interests. The United States' strategic assets and capabilities now stuck in the Middle East will be released in order to focus more on the Asia-Pacific pivot, and Japan as one of the US' primary allies in East Asia can enjoy the benefits of strong security cooperation.

At the same time Japan also has a long-term interest in expanding and consolidating relationships with the energy (crude oil and natural gas) supplier countries in the Middle East and in developing markets for Japanese products. For keeping and enjoying that kind of relationship, reducing tensions and enhancing stability are important steps.

Accordingly, Japan's foreign policy orientation in the Middle East can be based on three principles: alleviating destabilization, promoting/maintaining peace and supporting a system in the Middle East to keep countries (especially in the Persian Gulf region) from seeking security in an arms race. In line with these principles, Japan could play a role by taking a more principle-based position in support of political negotiations to reduce tensions and end the conflict.

The role of Japan in the Middle East has traditionally been joined with its image as a neutral country having strong ties with all the major actors in this region, especially the oil exporting countries. Given its unique position, it would be a mistake to dismiss Japan as solely an economic actor in the region. Japan can be a force for peace and stability in the Middle East, even if doing so is in its own interest.

(2) Nuclear activities

Japan can use its experience to help Iran develop nuclear power and safeguards. As a nonnuclear weapon state, Japan's experience with technology and safeguards is different from that of Russia, China, or India, which are enhancing their

²² Friedman, George, "Netanyahu, Obama and the Geopolitics of Speeches", *Stratfor*, March 3, 2015, [<https://www.stratfor.com/weekly/netanyahu-obama-and-geopolitics-speeches>] accessed on March 19, 2016.

²³ Ibid.

competitiveness in the global market for nuclear energy technology. Japan has nuclear facilities other than reactors that fall under the IAEA's safeguards, and it might advise Iran on designs that facilitate the introduction of safeguards and safeguards equipment in addition to establishing a domestic material accounting system.²⁴

A key area for mutual cooperation is nuclear security technology. Both countries face the threat of earthquakes. Fault lines run across Iran, and Bushehr is located near a point where three fault lines converge. Because of the frequency and magnitude of earthquakes in Japan, particular attention is paid to seismic issues in the siting, design and construction of nuclear power plants. The seismic design of such plants is based on criteria far more stringent than those applying to non-nuclear facilities. Japanese technology might be appropriate for Iran's purposes.

In this context, Japan's experiences in countering radioactive pollution (especially after the Fukushima Dai-ichi disaster) could lead Iran and Japan to pursue joint cooperation. Utilizing the lessons learned from this event, Japan could help Iran improve its ability to deal with a similar situation.

Both countries have their reasons for working with each other, and JCPOA has proposed fundamental rules for Iran to adopt a transparent nuclear program. In this context, mutual cooperation between Iran and Japan could offer a way to improve regional and international trust in Iran's nuclear program. Japan could provide Iran with (light water) power reactors that comply with the IAEA's safeguards system and the Additional Protocol.

At the same time, Japan's nuclear industry has faced various problems since the Fukushima Dai-ichi disaster. Despite the technical issues, the majority of Japanese oppose nuclear power plant restarts. Many of them believed that Japan would use the incident to rethink its energy plans, and particularly its nuclear energy policies. In this situation Iran's nuclear energy policies and plans can help Japan's nuclear industry to overcome and survive its current situation.

With the implementation of the JCPOA, Iran has entered into a verifiable agreement. Regarding this important step in cooperating with the IAEA, Iran can use Japan's technical advice and equipment support in addition to its vast experience of safeguards on similar facilities.

(3) Economic matters

Understanding the opportunities available for further cooperation between Iran and Japan in the near and distant future as a result of the negotiation process requires an investigation of the potential economic gains that led the parties ultimately to reach an

²⁴ Goto, Kazuko, "Japan's Role as Leader for Nuclear Nonproliferation", *Federation of American Scientists Issue Brief*, December 2012, pp.18-19.

agreement. Hence, before discussing Japan's opportunities, an overview of Iran's economy is required as introduction.

Iran's economy is currently reliant on the oil and gas sector, though the country is looking to diversify its economy. Iran also possesses significant agricultural, industrial and service sectors. According to an IMF 2015 report, Iran is the second largest economy in the Middle East after Saudi Arabia with an estimated nominal GDP of \$404.132 billion.²⁵ According to the latest report from the Statistical Center of Iran, this country has the second largest population in the Middle East after Egypt with around 80 million people²⁶ and has a large number of young people. More than 50% of the Iranian population is estimated to be younger than 35 years old, and the workforce population is highly educated.

As for natural resources, Iran holds some of the world's largest deposits of proven oil and natural gas reserves; Iran has the second largest gas reserves in the world and, possessing about 125.8 billion barrels of oil, the fourth largest oil reserves after Saudi Arabia. Iran also ranks among the world's top 10 oil producers and the top five natural gas producers.²⁷ Besides oil and gas, Iran ranks 1st in the world in terms of zinc resources, 2nd in copper resources, 9th in iron mines, 10th in uranium mines and 11th in lead mines. Iran is also one of the most important mineral producers in the world; there are 68 different types of minerals in Iran. The most important mines in Iran include zinc, copper, iron, uranium and lead. Other mines include coal, salt, sand and gravel.²⁸

In light of this short overview and with the nuclear agreement serving as an economic game-changer, there are many ways for Iran's international partners to benefit from this new situation. The deal provides global investors access to one of the most promising markets in the developing world, and there has been no shortage of major companies expressing interest in entering the Iranian market. There are many signs that Iran's government is unified in supporting the deal. Iran will be the biggest economy to re-join the global trading and financial system since Russia emerged from the ruins of the Soviet Union over two decades ago.

(a) Oil and gas: upstream and downstream

According to the 2015 BP Statistical Review of World Energy, Iran has proven oil reserves of 158 billion barrels, equivalent to more than 150 years of production at the rate of extraction recorded in 2014. The investment priorities in the oil and gas industry include enhanced oil recovery projects and the construction of liquefied natural gas

²⁵ International Monetary Fund, "Islamic Republic of Iran", *IMF Country Report*, No. 15/349, December, 2015.

²⁶ Statistical Center of Iran, *Iran Population*, March 25, 2016, [<http://www.amar.org.ir/>خانه/برآوردهای-جمعیتی] accessed on March 20, 2016.

²⁷ US Energy Information Administration, *International Energy Data and Analysis: Iran*, June 19, 2015, [https://www.eia.gov/beta/international/analysis_includes/countries_long/Iran/iran.pdf] accessed on March 20, 2016.

²⁸ فرید دهقانی، اسد ا... تابع، محمدحسین معادی، بررسی میزان ذخایر معدنی ایران و مقایسه آن با جهان، مرکز پژوهش های مجلس شورای اسلامی، مرداد 1393. [<http://rc.majlis.ir/fa/report/show/731132>]. accessed on March 21, 2016.

(LNG) export facilities. Iran shares the world's largest gas assets with Qatar and has the potential to become a leading LNG exporter if it can access the right technology. The lifting of sanctions offers opportunities for a revival of global trade and investment in Iran, particularly in energy. The lifting of sanctions will provide opportunities to international oil companies (IOCs) at a time when oil prices are down to levels not seen for a decade.

The drop in oil prices has had consequences for those companies (around the world) reflected largely in lower dividends, falling profits and job cuts. Under these circumstances, IOCs need to look for exploration and production opportunities that require comparatively little capital and operational expenditure. As such, Iran presents itself as a great opportunity – with costs to produce a barrel of crude in Iran estimated at around US\$12 compared to an average of around US\$9 in Saudi Arabia, around US\$36 in the USA and around US\$52 in the UK – provided the IOCs are willing to accept the risks and challenges that arise with investing in Iran.²⁹

Despite some differences, Japanese companies are in same position; they should compete with European and Asian companies and find new ways to benefit. In addition, energy security and diversification of resources are very important for Japanese companies and the Japanese government. Growing imports from Iran would help diversify petroleum sources, making it an essential step in securing a stable energy supply in the medium to long term. Hence, Iran's upstream oil industry is one of Japan's options. At this level, according to some estimates, one possible target for Japan's oil companies (especially INPEX as biggest oil developer and Marubeni) is Iran's Azadegan oil field, one of the world's largest untapped fields (INPEX held a 75% stake in the field before withdrawing in 2010 due to the US sanctions. China National Petroleum Corporation stepped in after INPEX left, but Tehran reportedly scrapped the tie-up with China).³⁰ However, as some experts have noted, INPEX and other Japanese companies remain cautious, citing uncertainties about Iran's political and investment environment³¹, as well as the prolonged slump in oil prices.

Because of this caution, "Japan is already late in returning to Iran, but there are still countless opportunities," says Fereidun Fesharaki, chairman of the energy consultancy FGE. Competition is the nature of free trade and market economics, and managing time and risks is an important element in competition. For example, Total, a French oil and gas firm that is one competitor in this market, has signed a confidential agreement with Tehran to develop Iran's South Azadegan oil field. Minister Zanganeh told reporters on

²⁹ Sobotzki, Johannes, and Pavel Sharma, "Iran after Sanctions: Oil and Gas Opportunities for Foreign Companies", *Forbes*, February 29, 2016. [<http://www.forbes.com/sites/drillinginfo/2016/02/29/iran-post-sanctions-oil-gas-opportunities-and-challenges/#483b712a456a>] accessed on March 21, 2016.

³⁰ Obe, Mitsuru, and Mayumi Negishi, "Japan Set to Resume Business with Iran", *The Wall Street Journal*, February 5, 2016, [<http://www.wsj.com/articles/japan-set-to-resume-business-with-iran-1454654121>] accessed on March 22, 2016.

³¹ Another key issue that still needs to be clarified is the new international petroleum contract (IPC), whose terms are yet to be fully disclosed. This contract will replace the (old) buy-back contract.

Thursday, 24 March that the accord would accelerate the pace of preliminary exploratory studies in the oil field. Apart from the Azadegan oil field, there is more room available for Japanese companies to invest and participate in Iran's oil and gas upstream industry. As Minister Zanganeh told the media, Iran needs \$200 billion investment to develop its oil and gas industry and, since internal resources are not enough to meet such need, the country should attract foreign investment.³² Still, Japan might have an edge on its European and American counterparts in that it has never had any political conflicts with Iran, and has always been considered by the Iranians as a reliable partner.³³

Another sector available to Japanese companies for working and investing in Iran is the downstream oil and gas industry. This includes:

- Transportation of crude oil and gas, including pipelines and pumping systems
- Liquefied natural gas systems, including liquefaction and re-gasification plant and machinery
- Oil refineries, petrochemical plants and gas processing

In this arena Japan enjoys great opportunities. Together with high-grade technology in this sector, Japanese companies and Japan's financial system have greater financial resources than their competitors in the European Union. In the wake of the Greek crises, the European financial system faces long-term problems. The Greece crises have cost €312 billion and there is no hope that this money will be released in the short term. This situation puts Japan at an advantage in entering new investment markets such as Iran.

Over the medium term, Iran and Japan can enjoy benefits from investing in petrochemical plants. There are several reasons for this claim. First, petrochemical production is the second-largest industrial sector after oil and gas. Second, natural gas is an important material for the petrochemical industry and Iran has an absolute advantage in this sector. Iran holds the world's second-largest natural gas reserves after Russia, and its price is defined in such a way that Iran's petrochemical products are competitive in the global market.

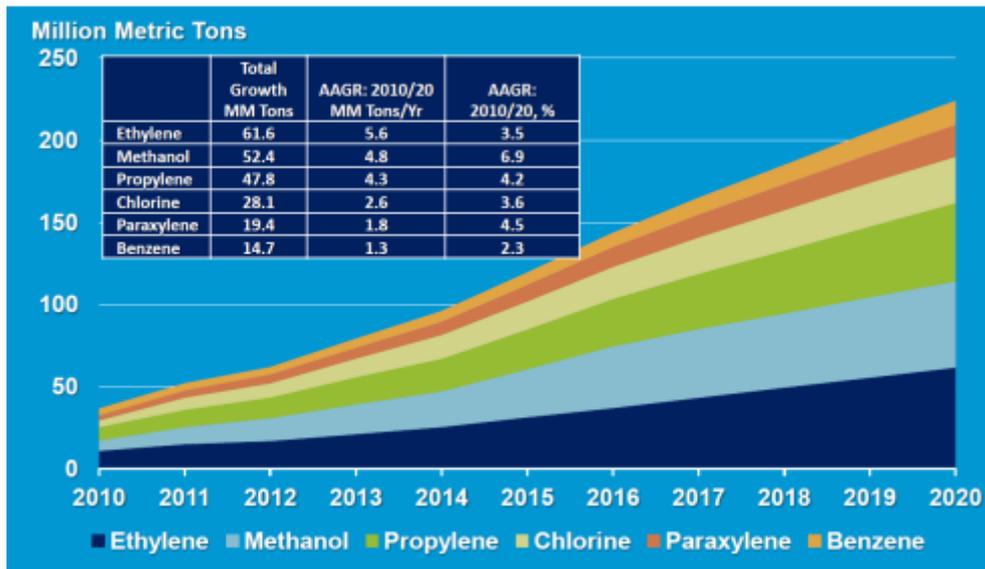
Third, assessments show that the market for petrochemical products is expanding and that the rate of demand is growing faster than that of supply.³⁴

³² صنعت نفت در طول برنامه ششم سالیانه 40میلیارد دلار سرمایه گذاری نیاز دارد، پایگاه اطلاع رسانی دولت، 1394/12/24، accessed on March 22, 2016 [http://www.dolat.ir/NSite/FullStory/News/?Serv=0&Id=275881]

³³ Salameh, Mamdouh G., "Japan Moves in on Post-sanctions Iran", Asia and the Pacific Policy Society, November 25, 2015, [http://www.policyforum.net/japan-moves-in-on-post-sanctions-iran/#sthash.gJ6wofQd.dpuf] accessed on March 30, 2016.

³⁴ Eramo, Mark, "Global Petrochemical Market Outlook", *Value Manufactures Association of America Workshop*, August, 2015.

Figure 2: Global Petrochemical Market



Source: Mark Eramo, Value Manufactures Association of America Workshop

Fourth, the petrochemical industry is one of the largest economic areas under private-sector control. This will help Japanese companies to invest in this industry directly and allow them majority ownership of petrochemical plants, which can serve as significant insurance for companies anxious about the changing political situation.

Finally, as yet another means of new cooperation between Iran and Japan, companies can use an exchange model for further deals. In this model a Japanese company would import Iranian oil products (such as fuel oil) and crude oil in exchange for Japanese oil products such as petrol. Currently this model is available between the National Iranian Oil Company (NIOC) and a number of European oil companies such as Glencore, Vitol and Trafigura.³⁵

(b) Investment, funding and money transfer

Financial markets are the second economic sector in Iran that provides worldwide opportunities to international banks and foundations. The financial industry will largely benefit from the lifting of sanctions that have, over the last three years, prohibited international banks from using SWIFT – the global payments system – to conduct business with Iran’s banks. Iran’s re-admittance to SWIFT will lead to many new opportunities for international finance and banking. As financial transactions affect all types of industry, there will be other significant opportunities that come from Iran’s access to the global payment system.

³⁵ Mehr News, *Iran, Switzerland Reach New Oil Deal*, February 28, 2016, [<http://en.mehrnews.com/news/114829/Iran-Switzerland-reach-new-oil-deal>] accessed on March 23, 2016.

In this case, though, there is ambiguity about the remaining US primary sanctions. These create opportunity and risk simultaneously. The opportunity is clear; all US banks and financial institutions are out of the competition in Iran's market, and less competition means more opportunity. At the same time, ambiguity about the remaining US primary sanctions and their effects on European and Asian banks, financial institutions and their branches in the United States constitute a risk for them, so there are many signs from the US administration show a willingness to accept legitimate business with Iran. As one example, Chris Backemeyer, the Principal Deputy Coordinator for Sanctions Policy at the US Department of State, said the US remained committed to the deal, and that his mission is aimed at reassuring not only businesses but also the Iranians.

In order to ease the concerns of business, Backemeyer and other State Department officials have met with companies in Dubai and elsewhere. Speaking on Wednesday, 23 March 2016 to journalists in the United Arab Emirates, Backemeyer acknowledged that "sanctions are very confusing," while saying that US-based companies with overseas subsidiaries potentially could do deals in Iran, so long as the money moved through foreign banks.³⁶ According to this statement and "guidance relating to the lifting of certain US sanctions pursuant to the JCPOA" presented by the US Department of the Treasury, it could be seen that perceptions of higher-than-actual risk stem from certain experiences during the sanction period.

However, in this situation, European (especially German) banks and financial institutions have legal guarantees against US secondary sanctions. German financial institutions may find themselves in a conflict between requests from a US counterparty to comply with US primary sanctions targeting Iran that remain in place after Implementation Day, and German "anti-boycott" laws, in particular, Section 7 of the Foreign Trade and Payments Ordinance, which prohibits German residents from declaring their participation in a boycott against another state in the context of foreign trade. The EU also has anti-blocking regulations in place (Regulation 2271/96), which prevent EU persons from complying with any requirement or prohibition in the US' Iran-related sanctions.

For Japanese banks and financial institutions, the "Agreement between Japan and the Islamic Republic of Iran on Reciprocal Promotion and Protection of Investment"³⁷ offers suitably substantial guarantees for investment in Iran. The deal governs the life-cycle of the investment process from the promotion of investments in both countries to the admission and protection of investment projects. In addition to winning a favored hand on future investments, Japan also managed to protect its reputational interests through inserting a clause in the agreement that indicates the agreement does not

³⁶ Gambrell, Jon, "US diplomat tries to persuade wary firms to deal with Iran", *Times of Israel*, March 23, 2016.

³⁷ Ministry of Foreign Affairs of Japan, *Agreement between Japan and the Islamic Republic of Iran on Reciprocal Promotion and Protection of Investment*, [<http://www.mofa.go.jp/files/000130577.pdf>] accessed on March 23, 2016.

overlook the potential for other security problems.³⁸ Japan's motivation behind this deal is competing for a share of the investment opportunities in Iran, As Yoshihide Suga, Japan's Chief Cabinet Secretary, told reporters at a regular briefing: "The aim of these negotiations is to protect the investment activities of Japanese companies. Japan will take the necessary steps and not be later than other nations."³⁹

(c) Industry

Once the sanctions are lifted, Iran is looking for foreign sources to help modernize the country's industries, which has suffered from a lack of investment and technology as the economy was largely cut off from the outside world for the past decade. This sector offers various opportunities in different areas to international companies, including Japanese companies. Electricity generation and automobile manufacturing are two key areas in Iran's economy that are attractive for foreign firms.

In the electricity sector, both Iran and Japan have advantages. Iran has oil and gas as fuel for thermal power plants, a growing domestic market and extensive electricity swap deals with Turkey, Armenia, Turkmenistan, Azerbaijan (including the Nakhchivan Autonomous Republic), Pakistan, Afghanistan, Syria, and Iraq. Iran seeks to become a major regional exporter of electricity and has attracted more than \$1.1 billion in investments for the construction of three new power plants. In addition 50% of Iranian thermal power plants are under private ownership.

At the same time, Japanese companies have updated their technology and capital for investing in this sector. Iran presents a dual opportunity for Japanese companies that, by investing and constructing power plant in Iran, can enjoy cheap secure fuel and sell its electricity to the Iranian market, or use Iran's electricity swap network to export it.

The automobile sector is also attractive, as the rate of car ownership in Iran is just 100 per 1,000 people —one-sixth that in Europe— and consumers have had limited access to new vehicles. As one of the biggest car markets in the Middle East, Iran is a very promising market. Today it has more than 1 million cars; it has the potential to go to 1.5 or 2 million. It is a competitive market, and European and Chinese companies are trying to stake out their own share. Peugeot has a contract with Iran Khodro to assemble its products in Iran, and Renault has already negotiated a minority stake in Iranian auto manufacturer Pars Khodro, according to Iranian officials.

³⁸ Nothing in this Agreement shall be construed to prevent a Contracting Party from adopting or enforcing measures: a) which it considers necessary for the protection of its essential security interests: I. taken in time of war, armed conflict, or other emergency in that Contracting Party or in international relations; or II. relating to the implementation of national policies or international agreements respecting the nonproliferation weapons; or b) in pursuance of its obligations under the United Nations Charter for the maintenance of international peace and security.

³⁹ The Tribune, *Japan, Iran to Start Investment Talks Next Week*, September 5, 2015, [<http://tribune.com.pk/story/951209/japan-iran-to-start-investment-talks-next-week/>] accessed on March 24, 2016.

Japanese auto manufacturers also can re-enter this market. For them, Iran appears comparatively more stable than the tumultuous Arab world since the 2011 uprisings began. Japan has a big advantage in hybrid vehicle technology. The tariff rate for this kind of vehicle in Iran is zero. Over the short term Japanese auto manufacturers can focus on selling this kind of product, and over the medium and long term they can invest in Iran's automotive parts industry. This would have various benefits for Iranian and Japanese companies; cheap raw materials and energy and an inexpensive but highly educated workforce would help Japanese companies reduce the prices of their products and make them extremely competitive in the international market. Iran, too, would enjoy positive outcomes from such investment.

In addition to the sectors previously discussed, the mining sector is available for investing. According to news reports, among foreign firms, Japan's leading steelmakers have announced interest in Iran's mining projects, including production of precious metals such as titanium. Meetings among executives of Kobe Steel Ltd, Japan's fourth-biggest steelmaker, and the state-run Japan Oil, Gas and Metals National Corp (JOGMEC) and officials in Tehran to discuss cooperation in Iran's mines and mining sector is a sign of Japanese interest in investing in this sector.

(d) Transport corridor

Japan has suffered from a prolonged period of deflation (or very low inflation). By pursuing an expansionary monetary policy and bringing down exchange rates as part of Abenomics, Japan hopes to encourage more private sector investment and spending and give exports a major boost. In this situation, finding new markets for export products is very important for Japan's economy. One major developing market is Russia/Central Asia.

For the past two decades Central Asian nations and Japan have steadily pursued partnerships. Japan is one of the largest supporters of structural reforms in Central Asia, and Japanese investments in different aspects of the region's economy and its transport/communication infrastructure add up to several billion dollars. There are numerous areas of special interest to Japan in its relations with Central Asia, including cooperation in education, economic development of the region, political reforms, and energy resources.⁴⁰ For both sides, however, their geographical separation remains a problem for ramping up their relations. To overcome this problem, Iran remains the best choice.

Ports in the south and north of Iran and the railway and road routes that connect them serve as one of the main international corridors for access to Central Asia. It is part of the International North–South Transport Corridor, which is the ship, rail, and

⁴⁰ Rakhimov, Mirzokhid, "Central Asia and Japan: Bilateral and Multilateral Relations", *Journal of Eurasian Studies*, Volume 5, Issue 1, January 2014, pp.77–87.

road route for moving freight between India, Iran, Russia, Central Asia and Europe. The route primarily involves moving freight from India, Iran, Azerbaijan and Russia via ship, rail and road. The objective of the corridor is to increase trade connectivity between major cities such as Mumbai, Moscow, Tehran, Baku, Bandar Abbas, Astrakhan, Bandar Anzali, etc. Dry runs of two routes were conducted in 2014; the first was Mumbai to Baku via Bandar Abbas and the second was Mumbai to Astrakhan via Bandar Abbas, Tehran and Bandar Anzali.⁴¹ The objective of the study was to identify and address key bottlenecks. The results showed transport costs were reduced by \$2,500 per 15 tons of cargo. Other routes under consideration run via Armenia, Kazakhstan and Turkmenistan.⁴² This corridor is already available to all countries, but converting this potential capacity into an operative opportunity for the Japanese economy will require economic and political will.

3. Advantages and risks

All of the opportunities explained in this article are available to all companies in the international market. This situation can lead to intense competition among international companies. However, Japan has the edge over its European and American counterparts in various elements. First, the country has long enjoyed stable relations with Iran free of any political conflicts. This continued relationship offers a solid basis for future cooperation because Japan has always been considered by Iranians as a reliable partner.

Second, there are expectations about changes in Iran's economic relations once sanctions are lifted. According to a survey published on January 25, 2016, 90% of Iranians expect many more foreign companies to invest in Iran and 85% of Iranians welcome greater trade and business ties between Iran and other countries. This survey also noted that, among nine prominent economic powers, Iranians believe that Iran can develop its trade relations best with Germany (31%) and next with Japan (14%).⁴³

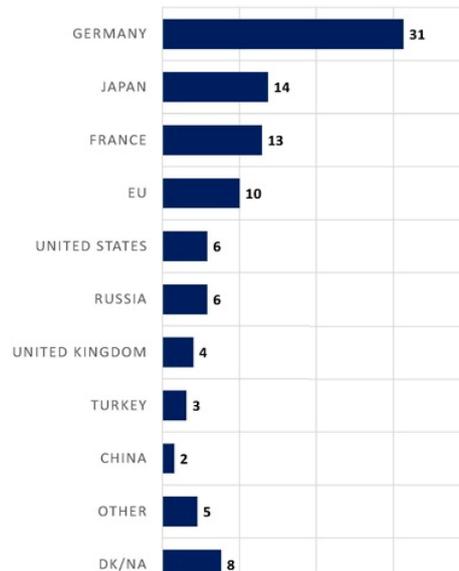
⁴¹ International North-South Transport Corridor (INSTC), [http://www.instc-org.ir/Pages/Home_Page.aspx] accessed on March 23, 2016.

⁴² The Hindu, *Iran deal spells good tidings for India*, April 10, 2015, [http://www.thehindu.com/opinion/lead/lead-article-iran-deal-spells-good-tidings-for-india/article7085906.ece] accessed on March 23, 2016.

⁴³ Iran Poll, *Iranians Overwhelmingly Welcome Open Trade and Growing Business Ties with Other Countries*, January 25, 2016, [http://www.iranpoll.com/blog/2016/1/25/iranians-overwhelmingly-welcome-open-trade-and-growing-business-ties-with-other-countries] accessed March 28, 2016.

Figure 3:

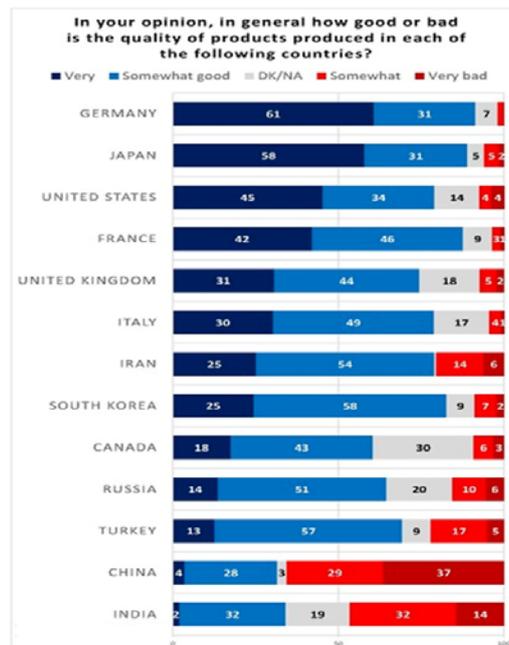
After the lifting of sanctions, with what specific country do you like to see Iran developing greater trade relations?



Source: www.iranpoll.com

The third advantage Japan has in working, investing and trading with Iran is the positive perception of Japanese goods and products in Iran. Iranians give high marks to German and Japanese goods. An overwhelming majority of Iranians believe that Germany produces high quality goods (91%), followed closely by Japan (89%).⁴⁴

Figure 4



Source: www.iranpoll.com

⁴⁴ Iran Poll, ibid.

All those elements pave the way for Japan to work with Iran, but they only present one side of the story. There are risks that should be duly considered by those interested in doing business in Iran. First, the JCPOA requires all JCPOA participants to make the necessary arrangements to implement their JCPOA commitments. Under the JCPOA, the US will lift secondary sanctions (i.e., sanctions imposed by the US on "non-US persons" for doing business with Iran) on Implementation Day. However, primary sanctions prohibiting "US persons" from conducting business with Iran will remain in place (although it is envisaged that OFAC will license certain activities).

The second important risk in working with Iran is the “snapback” mechanism for re-imposing economic sanctions if Iran does not comply with its obligations under the JCPOA.

To counter those risks, any companies seeking to enter into contractual relations with Iranian parties or conduct business in Iran should carefully study the current status of sanctions before doing so. They should also consider inserting appropriate wording into their contracts to guarantee their assets if the JCPOA's snap-back provisions are invoked.⁴⁵

Besides the risks described above, there are some fundamental economic problems in Iran that should be considered by business actors, especially foreign investor. Both macroeconomic instability and a lack of economic transparency⁴⁶ affect Iran's economic environment. Those two elements have created complexity in various forms, leading to an unpredictable market for foreign firms. However, Iran is certainly not alone in this regard.

Conclusion

Taking into consideration all assumptions, claims and arguments mentioned in this research, it is clear that the post-nuclear agreement period offers the basic conditions needed for improving future relations between Iran and Japan in various sectors. In the long term, JCPOA will serve as an important component for regional stability in the Middle East. As a result, US strategic capabilities currently deployed in the Middle East will be free to focus more on the Asia-Pacific pivot, and Japan can enjoy stronger security cooperation with the US.

In other respects, especially nuclear activities, cooperation between Iran and Japan can build a foundation for regional trust of Iran's intentions and help Iran to improve its

⁴⁵ Furlong, Kenan, and James Grennan, "Iranian Sanctions: Opportunities and Risks", *A&L Goodbody*, November 27, 2015. [http://www.algoodbody.com/insightspublications/iranian_sanctions_opportunities_and_risks_] accessed on April 3, 2016.

⁴⁶ Transparency International, *Corruption Perceptions Index 2015*, [<https://www.transparency.org/cpi2015/>] accessed on April 4, 2016.

nuclear security and develop light water nuclear power plants. However, the economic arena is where the effects of the JCPOA on Iran-Japan relations will be seen in the short term. Opportunities will be available in, for example, oil and gas upstream and downstream industries, investment, financing and money transfer, manufacturing (including electricity production and automobile manufacturing) and transportation.

Finally, this research has found that maximizing these opportunities will require thorough planning and robust risk management. The JCPOA has prepared suitable grounds for improving economic relations between Iran and the international community. Foreign investment will therefore be crucial for Iran, the last major economy not to have integrated into the global economy.⁴⁷ Indeed, Iran is ripe for economic transformation. Unlike most countries rich in natural resources, Iran has several additional advantages, including a diversified economy, a trade surplus, and a well-educated urban population. Foreign investment will allow Iran to capitalize on these strengths.

In the short term, Japan's economy could enjoy benefits from investing and working with Iran. There is cause for optimism. In deciding where to put their capital, investors take the country's status quo as a given and seek out the potential for dramatic gains. In this respect, Iran looks promising. If even a few of its economy's massive sources of inefficiency were removed, Iran could see immediate and substantial growth and become a premium investment destination. At the same time, Japan is looking to significantly reinforce its relations with Iran and overtake international competitors who are similarly looking to seize opportunities in Iran's opening market. The recently concluded bilateral investment treaty is a good start and will allow Japanese companies to regain a foothold in the Iranian market.

Bibliography

Books and Articles:

Ambrose, Jeffrey R., "China Moves In: Beijing Filling U.S. Power Vacuum in Mideast", *The Real Truth*, [<https://realtruth.org/articles/131213-002.html>] accessed on March 17, 2016.

Amir-Mokri, Cyrus, and Hamid Biglari, "A Windfall for Iran?", *Foreign Affairs*, September 11, 2015, [<https://www.foreignaffairs.com/articles/iran/2015-10-20/windfall-iran>] accessed on April 4, 2016.

Calabrese, John, "Japan's New Energy Future and the Middle East", *Middle East Institute*, June 11, 2012, [http://www.mei.edu/content/japan%E2%80%99s-new-energy-future-and-middle-east#_ftn4] accessed on March 8, 2016.

⁴⁷ Amir-Mokri, Cyrus, and Hamid Biglari, "A Windfall for Iran?", *Foreign Affairs*, September 11, 2015, [<https://www.foreignaffairs.com/articles/iran/2015-10-20/windfall-iran>] accessed on April 4, 2016.

Clinton, Hillary, “America’s Pacific Century”, *Foreign Policy*, October 11, 2011, [http://foreignpolicy.com/2011/10/11/americas-pacific-century/] accessed on March 18, 2016.

Daniels, Owen, and Chris Brown, “China’s Energy Security Achilles Heel: Middle Eastern Oil”, *The Diplomat*, September 8, 2015, [http://thediplomat.com/2015/09/chinas-energy-security-achilles-heel-middle-eastern-oil/] accessed on March 19, 2016.

Disarmament, Non-proliferation and Science Department, *Disarmament and Non-Proliferation Policy of Japan 2011*, Ministry of Foreign Affairs of Japan, March 2011.

Eramo, Mark, "Global Petrochemical Market Outlook", *Value Manufactures Association of America Workshop*, August, 2015.

Friedman, George, "Netanyahu, Obama and the Geopolitics of Speeches", *Stratfor*, March 3, 2015, [https://www.stratfor.com/weekly/netanyahu-obama-and-geopolitics-speeches] accessed on March 19, 2016.

Furlong, Kenan, and James Grennan, "Iranian Sanctions: Opportunities and Risks", *A&L Goodbody*, November 27, 2015. [http://www.algoodbody.com/insightpublications/iranian_sanctions_opportunities_and_risks_] accessed on April 3, 2016.

Gambrell, Jon, "US diplomat tries to persuade wary firms to deal with Iran", *Times of Israel*, March 23, 2016.

Goto, Kazuko, "Japan’s Role as Leader for Nuclear Nonproliferation", *Federation of American Scientists Issue Brief*, December 2012, pp.18-19.

The Hindu, *Iran deal spells good tidings for India*, April 10, 2015, [http://www.thehindu.com/opinion/lead/lead-article-iran-deal-spells-good-tidings-for-india/article7085906.ece] accessed on March 23, 2016.

International Monetary Fund, "Islamic Republic of Iran", *IMF Country Report*, No. 15/349, December, 2015.

International North-South Transport Corridor (INSTC), [http://www.instc-org.ir/Pages/Home_Page.aspx] accessed on March 23, 2016.

Jamal, Abdullah, and Naser al-Tamimi, "Japanese–Gulf Relations: What’s Next after Energy?", *Al Jazeera Centre for Studies Report*, November 3, 2015. [http://studies.aljazeera.net/ResourceGallery/media/Documents/2015/11/5/20151155594126734Japan%20&%20Gulf.pdf] accessed on March 9, 2016.

Ministry of Foreign Affairs of Japan, *Achievements as a Member of the Security Council during 2009-2010*, October 2011, [http://www.mofa.go.jp/policy/un/sc/achievements.html] accessed on March 10, 2016.

- Miyagi, Yukiko, “Japan and the Middle East after the Arab Spring”, *IDE ME Review*, Vol.1, February 2014, pp.28-45.
- Miyagi, Yukiko, *Japan's Middle East Security Policy: Theory and Cases*, Routledge, 2008.
- Nuclear Energy Institute, Japan Nuclear Update, *NEI website*, August 11, 2016, [http://www.nei.org/News-Media/News/Japan-Nuclear-Update] accessed on August 13, 2016.
- Obe, Mitsuru, and Mayumi Negishi, "Japan Set to Resume Business with Iran", *The Wall Street Journal*, February 5, 2016, [http://www.wsj.com/articles/japan-set-to-resume-business-with-iran-1454654121] accessed on March 22, 2016.
- Rakhimov, Mirzokhid, "Central Asia and Japan: Bilateral and Multilateral Relations", *Journal of Eurasian Studies*, Volume 5, Issue 1, January 2014, pp.77–87.
- Salameh, Mamdouh G., "Japan Moves in on Post-sanctions Iran", *Asia and the Pacific Policy Society*, November 25, 2015, [http://www.policyforum.net/japan-moves-in-on-post-sanctions-iran/#sthash.gJ6wofQd.dpuf] accessed on March 30, 2016.
- Sobotzki, Johannes, and Pavel Sharma, "Iran after Sanctions: Oil and Gas Opportunities for Foreign Companies", *Forbes*, February 29, 2016. [http://www.forbes.com/sites/drillinginfo/2016/02/29/iran-post-sanctions-oil-gas-opportunities-and-challenges/#483b712a456a] accessed on March 21, 2016.
- The Federation of Electric Power Companies of Japan (FEPC), *Principal Thermal Power Plants*, March 1, 2015, [http://www.fepc.or.jp/english/energy_electricity/location/thermal/index.html] accessed on March 9, 2016.
- Twining, Daniel, “ Why Asia Should Fear the Persian Pivot ” , *Foreign Policy*, [http://foreignpolicy.com/2015/07/17/iran-china-japan-nuclear/] accessed on July 17, 2015.
- US Energy Information Administration, *International energy data and analysis: Japan*, January 30, 2015, [https://www.eia.gov/beta/international/analysis_includes/countries_long/Japan/japan.pdf] accessed on March 8, 2016.
- US Energy Information Administration, *International Energy Data and Analysis: Iran*, June 19, 2015, [https://www.eia.gov/beta/international/analysis_includes/countries_long/Iran/iran.pdf] accessed on March 20, 2016.
- دهقانی، فرید. تابع، اسد... معادی، محمدحسین. بررسی میزان ذخایر معدنی ایران و مقایسه آن با جهان، مرکز پژوهش های مجلس شورای اسلامی، مرداد 1393 [http://rc.majlis.ir/fa/report/show/731132] accessed on March 21, 2016.

Documents:

IAEA Board of Governors, *Resolution GOV/2003/40: Implementation of the NPT Safeguards Agreement in the Islamic Republic of Iran*, [<https://www.iaea.org/sites/default/files/gov2003-40.pdf>] accessed on December 14, 2016.

Ministry of Foreign Affairs of Japan, *Agreement between Japan and the Islamic Republic of Iran on Reciprocal Promotion and Protection of Investment*, [<http://www.mofa.go.jp/files/000130577.pdf>] accessed on March 23, 2016.

News:

BBC News, *Japan Imposes New Iran Sanctions over Nuclear Programme*, September 3, 2010, [<http://www.bbc.com/news/world-asia-pacific-11173774>] accessed on March 10, 2016.

BBC News, *Japan 'to reduce Iran oil imports'*, January 12, 2012, [<http://www.bbc.com/news/world-asia-16523422>] accessed on March 10, 2016.

Geopolitical Futures, *Israel's Reaction to Iran without Sanctions*, January 18, 2016, [<https://geopoliticalfutures.com/israels-reaction-to-iran-without-sanctions/>] accessed on March 18, 2016.

Mehr News, *Iran, Switzerland Reach New Oil Deal*, February 28, 2016, [<http://en.mehrnews.com/news/114829/Iran-Switzerland-reach-new-oil-deal>] accessed on March 23, 2016.

Statistical Center of Iran, *Iran Population, March 25, 2016*, (in Persian) [<http://www.amar.org.ir/خانه/برآوردهای-جمعیتی>] accessed on March 20, 2016.

The Tribune, *Japan, Iran to start investment talks next week*, September 5, 2015, [<http://tribune.com.pk/story/951209/japan-iran-to-start-investment-talks-next-week/>] accessed on March 24, 2016.

Transparency International, *Corruption Perceptions Index 2015*, [<https://www.transparency.org/cpi2015/>] accessed on April 4, 2016.

Xinhua, *Oil Prices Drop amid Ample Supplies*, February 12, 2016, [http://news.xinhuanet.com/english/2016-02/12/c_135090952.htm] accessed on March 18, 2016.

صنعت نفت در طول برنامه ششم سالانه 40میلیارد دلار سرمایه گذاری نیاز دارد، پایگاه اطلاع رسانی دولت، [<http://www.dolat.ir/NSite/FullStory/News/?Serv=0&Id=275881>] accessed 1394/12/24 on March 22, 2016.