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Iran, International Trade

Iran: Innovating Oil Production

As the fifth-largest oil producer, Iran is among the world's largest contributors to the petroleum industry ("U.S. Energy"). However, the success of their reserves has been constrained as a result of international sanctions ("U.S. Energy"). Potentially, these sanctions are aggravating tension between the citizens and the government. Protests have erupted nationwide in an attempt to push back on the power of the regime on issues ranging from food prices to women's rights (De Groot). Citizens all across the country seem to have a lot of frustration with the Iranian regime, which likely fueled this upward trend of social/political movements. There are many ways in which Iran could improve their international trade standing and give their people a sense of economic relief. For example, building more domestic refineries, incorporating nuclear fusion energy, and including Iran in trading blocks with U.S. allies would allow the nation to rebuild its economy, which directly impacts the citizens' quality of life.

As of 2023, the urban population makes up about 77.3% of the total population, which is about 67,064,168.99 citizens ("Iran - the World Factbook"). Located in the middle east, Iran borders the Gulf of Oman, the Persian Gulf, and the Caspian Sea. ("Iran - the World Factbook"). Access to those bordering bodies of water makes fishing essential to the nation's harvest both domestically and for export ("Iran - Agriculture, Forestry, and Fishing").

Considering the large Muslim population in Iran, only halal food is offered in compliance with Iranian law (Tours). Poultry is slaughtered in a religious manner following practices of the Muslim faith, cutting through specific veins and arteries followed by a religious consecration ("Halal Food"). One might imagine that the longevity of this process in comparison to the typical process of poultry production is a big factor in the price of the food. If more labor goes into the production of a product, the marketer would likely want to charge consumers more for it both domestically and abroad.

Inflation, however, is only one minor aspect of a more important, wide-scale issue currently plaguing Iran's economy. The nation has been at an economic standstill for over a decade, due mostly to the several rounds of sanctions that have been placed on the Iranian government by the U.S. ("Iran's Economic Update"). Sanctions on oil transport and profit were a part of a comprehensive plan to suspend Iran's nuclear program, which proved to be greatly effective. This drove Iran into a deep recession nearing 2012 as oil exports "declined from 2.5 million barrels per day (bpd) to about 1 million bpd between 2011 and 2014" (Ghasseminejad).

In addition to the effects of the sanctions, the Covid-19 pandemic likely further challenged the current standing of the economy. In the midst of rising inflation, nearly one million people were laid off in the early stages of the pandemic, which only worsened conditions for those already living in poverty ("Two Years"). Many of their citizens that are employed are on poorly constructed contracts, resulting in a significant lack of job security, insurance, pensions, and other benefits ("Analysis"). Presumably, the high

unemployment rates coupled with the sharp increase in food prices, due in part to the already increased price of halal-prepared food, likely left many struggling to gain access to proper nutrition. Since the introduction of the first U.S. sanctions against Iran in 2012, the poultry market as well as the petroleum industry have been severely impacted. The sanctions have led to a significant increase in the cost of imported goods like feed ingredients for the livestock, which resulted in price fluctuations on the consumer market” (Vorotnikov).

Limitations as a result of sanctions have caused Iran to shift focus to aggressive developmental policy at the expense of the environment (Nazanin). The desperate need to generate revenue and account for the significant lack of resources makes it necessary for Iran to abuse the resources they currently have available. This is why in recent years the nation has become the “third biggest dam builder in the world, with consequent overuse of fossil groundwater sources, drying of its major rivers, and destruction of wetlands” (Nazanin). The United States has also made successful efforts to block Iran from receiving environmental financial aid from large international institutions like the United National Development Programme and the Global Environment Facility (Nazanin).

As of 2020, Iran has only 16 of its own oil refineries scattered in major cities throughout the country (“U.S. Energy”). Under President Obama, the U.S. introduced international penalties for selling oil to Iran, which resulted in a decrease in imports by 75% (Nazanin). Iran responded by attempting to develop its own refining system (Nazanin).

In order to work around the strict limitations of the sanctions on trade, Iran needs an alternative that not only saves them money, but generates more income that would, in turn, eliminate the need to exhaust all their resources. One way to achieve this would be to invest in the building of more domestic oil refineries within the country. Not only would this proposal limit foreign interaction, but ultimately provide jobs for many citizens that are still suffering to find sustainable employment as a result of the recent economic drops due to pandemic, sanctions, and oil prices (“Iran’s Economic Update”). Providing the nation with the resources to refine their own oil allows them to save money by refining domestically, while simultaneously creating more internal revenue by selling the refined oil for more than they could market the crude oil exports.

While it is evident that Iran has already begun exploring domestic refining in recent years, some have raised concerns about the effectiveness as well as the environmental impact of production (Nazanin). Reports suggest that oil refined in Iran contains “ten times the level of contaminants of imported petrol and its diesel 800 times the international standard for sulfur” (Nazanin). The irregular production of petrol in Iran, as opposed to the regulated contents of their previous suppliers, has caused severe pollution to the environment, affecting the air quality in areas nearing these refineries (Nazanin).

In light of the need for oil not only for energy but also income, the environmental effects of its production are also in need of attention. Based on the recent interest in nuclear fusion to create clean energy, a proposal to reform existing facilities (or build new facilities from the ground up) that are dependent on energy created through nuclear fusion would help address the issue of air pollution. Scientists at Lawrence Livermore National Laboratory in California have been looking into the effectiveness of nuclear fusion reactions, as they are meant to generate massive amounts of heat (Chang). This would be a

fitting alternative to the traditional refineries as it serves the same purpose without emitting as much harmful gas through the process of burning of fossil fuels. This could replace some of the already existing modes of refining and possibly provide a resource of clean energy for other things like heating and electricity.

In looking to fund the implementation of these nuclear fusion reactors in Iran, the Chevron Technology Corporation could be a wealthy investor worth involving. Chevron has recently invested in a Seattle-based startup company that is developing a similar approach to a cost effective energy sector using nuclear fusion technology (“Chevron Invests”). In light of existing projects in the Middle East (*i.e.*, Saudi Arabia), the company may see this particular project as a wise investment because of the level of revenue it will generate for the future of oil sales in Iran. If they see an opportunity to reap profit in the success of this project, it is likely to motivate a financial sponsorship to upstart this project as well.

In addition to the clean energy sectors being built within the country, it is also imperative that Iran build solid international relationships in terms of trade. Iran is one of the few countries not currently a part of the World Trade Organization (WTO) (“Iran Abandons Hope”). Many countries have expressed a generally unfavorable opinion of Iran (“Global Views”). This is due in large part to their reputation for violating the rights of their citizens (as seen through social protest) as well as Iran’s clear nuclear ambition (“Global Views”). It is evident that the nation as a whole carries a negative image in the international community, which has likely only made their chances to create strong foreign relationships much more difficult.

Following many attempts to accede to the WTO, Iran’s bids have been blocked several times due mostly to international influence from the United States (“Iran Abandons Hope”). The opposing and hostile reputation of many parts of the Middle East, Iran in particular, has been the driving force behind the continuous rejection of their admission into the WTO (“Iran Abandons Hope”). The perceived hostility from those countries may only be perpetuated by the way organizations like the WTO and United Nations (UN) isolate them on an international scale. Therefore, it is arguable that Iran would benefit from being a member of an independent trading block, one that particularly includes bordering countries that are currently in good standing with the United States such as Turkey, Saudi Arabia, and Jordan. Initially cooperation of the United States seems unlikely because weakening the consequence would defeat the sole purpose of the sanctions. This is why it is imperative that the other partners in the trading block are countries allies to the U.S. In order to motivate the U.S. to cooperate, they need that sense of security knowing that they once again hold a level of regulation over activity taking place in Iran in terms of nuclear material.

Once Iran is able to establish a specific group of trading partners that is favorable to the U.S. it may help improve their reputation within the international community. Iran agreed to sign the Joint Comprehensive Plan of Action (JCPOA) in 2015, exchanging restrictions on their nuclear program for sanction relief from the U.S. (Robinson). However, when Trump pulled the United States from the deal in 2018, Iran began to ignore the limitations on the nuclear program set by the terms of the agreement as the U.S. responded by reimposing sanctions (Robinson). By encouraging the U.S. to rejoin the deal, this would give them reason to believe that they can weaken restrictions on Iran and regain the power of regulation

over Iran in exchange. This sense of trust would motivate the United States to roll back some of the sanctions on international trade with Iran, which would dramatically improve the state of their economy.

In summary, Iran has the potential to restore its economy and even its reputation in the international community. Building more domestic refineries, incorporating nuclear fusion energy, and including Iran in trading blocks with U.S. allies has its advantages not only for Iran but for their trading partners. By becoming a part of a respected group of nations that professionally and freely trades, it is possible that they can repair that broken relationship with countries like the United States that have a say in the way they are perceived by the other countries in these larger trade organizations. Allowing the United States more control over what is being done with the resources in Iran may give them reason to trust that they should once again attempt to lift the restrictions on Iranian trade and give their economy, particularly oil sales, a chance to flourish again. Furthermore, the addition of these clean energy modes of refining crude oil not only creates a more profitable industry but combats the negative effects of the process on the environment. The implementation of any of these solutions would improve the economy of Iran, which, in turn, would promote financially stable citizens that can productively contribute to the economy as consumers of all industries.

Works Cited

- “Analysis: Iran’s Workers Struggle with Low or Unpaid Wages, Fixed-Term Contracts.” *Kayhan Life*, 28 Apr. 2022, [kayhanlife.com/society/human-rights/analysis-irans-workers-struggle-with-low-or-unpaid-wages-fixed-term-contracts/](https://www.kayhanlife.com/society/human-rights/analysis-irans-workers-struggle-with-low-or-unpaid-wages-fixed-term-contracts/). Accessed 12 Jan. 2023.
- Chang, Kenneth. “Major Nuclear Fusion Energy Announcement: How to Watch.” *The New York Times*, 13 Dec. 2022, www.nytimes.com/2022/12/13/science/nuclear-fusion-energy-breakthrough.html.
- “Chevron Invests in Nuclear Fusion Start-Up.” *Chevron.com*, www.chevron.com/newsroom/2020/q3/chevron-invests-in-nuclear-fusion-start-up. Accessed 12 Jan. 2023.
- De Groot, Kristen. “Iran Protests, Explained.” *Penn Today*, 29 Sept. 2022, penntoday.upenn.edu/news/iran-protests-explained.
- Ghasseminejad, Saeed, and Mohammad R. Jahan-Parvar. “The Impact of Financial Sanctions: The Case of Iran 2011-2016.” *International Finance Discussion Paper*, vol. 2020, no. 1281, May 2020, www.federalreserve.gov/econres/ifdp/files/ifdp1281.pdf, 10.17016/ifdp.2020.1281.
- “Global Views of Iran Overwhelmingly Negative.” *Pew Research Center’s Global Attitudes Project*, 11 June 2013, www.pewresearch.org/global/2013/06/11/global-views-of-iran-overwhelmingly-negative/. Accessed 30 Jan. 2023.
- “Halal Food: What Does It Mean?” *www.finedininglovers.com*, www.finedininglovers.com/article/what-does-halal-mean. Accessed 12 Jan. 2023.
- “Iran - Agriculture, Forestry, and Fishing.” *Encyclopedia Britannica*, www.britannica.com/place/Iran/Agriculture-forestry-and-fishing. Accessed 12 Jan. 2023.
- “Iran - the World Factbook.” *www.cia.gov*, www.cia.gov/the-world-factbook/countries/iran/#geography.

- “Iran Abandons Hope for WTO Accession - Al-Monitor: Independent, Trusted Coverage of the Middle East.” *www.al-Monitor.com*,
www.al-monitor.com/originals/2017/09/iran-wto-world-trade-organization-accession-nuclear-deal.html. Accessed 12 Jan. 2023.
- “Iran’s Economic Update — April 2022.” *World Bank*,
www.worldbank.org/en/country/iran/publication/economic-update-april-2022.
- Nazanin Soroush and Kaveh Madani for Tehran Bureau. “Every Breath You Take: The Environmental Consequences of Iran Sanctions.” *The Guardian*, The Guardian, 14 Feb. 2018,
www.theguardian.com/world/iran-blog/2014/nov/21/iran-environmental-consequences-of-sanctions.
- Robinson, Kali. “What Is the Iran Nuclear Deal?” *Council on Foreign Relations*, Council on Foreign Relations, 20 July 2022, www.cfr.org/backgrounders/what-iran-nuclear-deal.
- Tours, Iransafar. “Persian Cuisine.” *Iran Safar Travel*, 30 Oct. 2021, www.iransafar.co/persian-cuisine/. Accessed 12 Jan. 2023.
- “Two Years of COVID: Economic Cost.” *Iranprimer.usip.org*,
iranprimer.usip.org/blog/2022/feb/16/two-years-covid-economic-cost.
- “U.S. Energy Information Administration - EIA - Independent Statistics and Analysis.” *www.eia.gov*,
www.eia.gov/international/content/analysis/countries_long/Iran/pdf/iran_bkgd.pdf.. Accessed 12 Jan. 2023.
- Vorotnikov, Vladislav. “Politics Hinder Growth in Iran’s Poultry Sector.” *Poultry World*, 3 June 2020,
www.poultryworld.net/poultry/politics-hinder-growth-in-irans-poultry-sector. Accessed 12 Jan. 2023.
- “What Does an Acre Look Like? > Washington Grown.” *www.wagrown.com*,
www.wagrown.com/what-does-an-acre-look-like/.