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Iran, International Trade

Iran: Building a Self-Reliant Economy

The country of Iran is currently facing a nationwide crisis that threatens the lives of millions of people. This is the gradual disintegration of the economy under the strain of sanctions imposed by the United States, which heavily restrict international trade. The goal of these sanctions is to condemn the actions of Iran's government, but in reality they primarily harm the working class and refugee populations by causing a significant increase in the prices of food products (*Iran in 2022: U.S. Sanctions*). The abundant sociopolitical issues within the nation show no signs of improvement, diminishing the possibility of sanctions being lifted or reduced anytime in the near future. This is why the country of Iran should focus on strengthening its current self-sufficiency programs to combat the impact of the sanctions imposed by the U.S. government, prohibiting international trade.

The majority of the country is arid or semiarid, and only receives one-third of the world's average rainfall annually. 179 millimeters, or 71 percent of the annual rainfall is directly evaporated as well; many different regions of the country have suffered from severe droughts. The terrain is mostly rugged and mountainous, with small, sporadic plains and a subtropical climate along the Caspian coast (*The World Factbook*). Its primary exports are petroleum, natural gasses, and minerals like chromium or copper. It is also a major producer of fish products harvested from the Caspian Sea for both national and international consumption, including whitefish, salmon, bream, catfish, and caviar (Mostofi).

Of the 165 million hectares that make up the nation's territory, only 37 million hectares meet the conditions for irrigated and dryland agriculture. 30.1 percent of the country's area is agricultural land, which consists of permanent crops occupying 1.2 percent, permanent pastures occupying 18.1 percent, and arable land making up the remaining 10.8 percent (*The World Factbook*). Iran's farms are considered smaller in size, with 78 percent of farmers owning farms made up of less than ten hectares, 11 percent of all farms being less than one hectare, and farms occupying less than ten hectares making up 37 percent of cultivated land (*Water Conservation, Reuse, and Recycling*). The majority of Iranians follow a wheat-based diet, with tea being the staple beverage and rice being the staple food. Red meats and vegetables of all kinds are also crucial to their diet, especially lamb and onions, which are featured in almost every meal. Although there has been a decrease in dairy consumption from 2006-2017, herding has long contributed to the economy, and dairy products like yogurt and milk are frequently consumed (Aghayan).

Iran has a population of roughly 86.7 million people, and 77.3 percent of the population resides in urban areas. A traditional family structure is upheld in rural areas to ensure survival. Families tend to be patriarchal, with married couples only having one or two children. However, the extended family is a large part of the tightly knit family structure. The elder generations, such as grandparents or great-grandparents, tend to have a close relationship with the immediate family as well. It is not uncommon for grandparents to live under the same roof as their grandchildren or for all of them to travel

together, especially during holidays. The family is distinctly secluded from other social groups, and prioritizes loyalty to itself over any other relationship. Oftentimes children only leave their parent's households for marriage, work, or university (*The Value of family in Iran*). In the countryside, food is rarely cooked using central heating. Instead, villagers have been known to use portable kerosene heaters, charcoal braziers, and iron stoves that burn wood or coal. These customs hold less importance in modern areas, where the majority of the population lives. Many urban cities in Iran are designed with narrow, winding streets organized into separate quarters based on societal function. In the business quarter, or bazaar, the slim roads are lined with a multitude of compact shops clustered together depending on the type of products sold. Adjustments have been made to accommodate modern transportation, including the construction of broader streets and beltlines (Mostofi). There has also been a decline in the number of small businesses with the rise of major franchises and online shopping chains. Store owners continuously struggle to generate profits and attract new customers while rent prices steadily climb (Nasiri).

The government of Iran is a theocratic republic, with a religiously influenced legal system constructed on both secular and Islamic code. Although there are numerous political parties, they are all institutionally weak as they are forbidden from opposing the existing system of government or underlying state ideology. About one-fourth of the workforce is in manufacturing or construction, one-fifth works in agriculture, and there is a six day workweek, with Saturday as a rest day. Although it is not illegal, there is currently no established worker's union, and despite being able to pursue a career outside of the home, women are still held back by the many restrictions placed on them within the workforce. Student enrollment in Iranian universities has declined in response to the shortage of experienced teachers. The pursuit of higher education is highly esteemed in Iran, and many young adults are encouraged to study abroad in an effort to increase the number of specialized workers (Mostofi).

There is a long history of sanctions imposed by the United Nations, with the earliest dating back to November 1979. These were enacted in response to the Iran Hostage Crisis, during which 52 diplomats from the United States were kept as captives in the American Embassy in Tehran by a group of militarized college students. The sanctions were lifted following the release of the prisoners in 1981, but reimposed shortly thereafter due to the government's support of terrorism, and several more were imposed in December of 2006 after Iran refused to halt its nuclear enrichment program. These continue to be expanded on in reaction to incidents ranging from police brutality against protesters within Iran to missile exports (Katzman).

The impact on the economy has been disastrous, with inflation rising to 45 percent, the highest it has ever been since 1994, and food prices in particular increasing by 60 percent. The Iranian rial is now worth 270,000 to the dollar, a difference of several magnitudes compared to 2015, when the rial was worth about 32,000 to the dollar (Nasiri). This change has eroded peoples savings and decreased the value of their salaries. Afghan refugees are especially affected by this, as the devaluation of the currency diminishes the remittances sent back to their families in Afghanistan (Mohammadi). An estimated 45.5-55 percent of the urban population lives below the poverty line, and prevalence of food insecurity within the entire population has reached a staggering 49.2 percent. 19.2 percent of the population has reported food insecurity with hunger from 2009-2015, which reveals a significant increase compared to results from 2004, in which only 13 percent of the population claimed they experienced food insecurity with hunger (*Questionnaire-based Prevalence of Food Insecurity*). This trend disproportionately affects rural and

female populations as well, as recorded prevalence of food insecurity in rural areas was 66.1 percent, whereas food insecurity in urban areas was only 47.1 percent (Arzhang). The same study found that 51.3 percent of women struggled with food insecurity, meanwhile only 47.8 percent of men reported food insecurity.

The National Cancer Control Program has reported significant deficiencies, the most pressing being a nationwide drug shortage as a result of the sanctions. Although they do not intend to control access to healthcare supplies directly, they still greatly hinder patients' access to modern medicine. The program has also stated that they are lacking in palliative care, preventative measures, technology, and treatment as a whole (Shahabi). Many children in Iran suffer from a life-threatening skin condition that causes painful blisters all over the body called epidermolysis bullosa (EB), and most are unable to acquire sufficient treatment or import emergency medicines (Nori). Iran being unable to trade with large foreign companies has greatly impacted their ability to obtain the resources needed by healthcare workers to treat the population. Since the Iranian government is unable to trade and purchase from the largest foreign car companies, the majority of the vehicles in Iran are severely outdated, raising issues with air pollution. They both burn fuel less efficiently and tend to produce higher emissions, causing an estimated 4,000 premature deaths in Tehran yearly and 40,000 across the country. Solar power plant projects established by companies abroad have been abandoned due to local organizations being unable to replicate the capabilities of their foreign counterparts, causing Iran to further regress in sustainable power as well (Rajabi).

When solving a common crisis like international trade, it is important to consider steps other countries have taken to resolve the same issue. One potential solution to Iran’s crisis would be promoting urban farming in a similar fashion to Cuba. Cuba was barred from international trade in 1989 by the United Nations, which caused an economic crisis and led to a period of widespread food insecurity. To combat this, both the government and local grassroots organizations turned to urban farming programmes, independent gardening practices, and implementing infrastructural features in major cities (Clouse). Issues of hunger and food insecurity have largely been eliminated in present-day Cuba as a result (*Cuba | World Food Programme*). Although not all aspects of Cuba’s situation are applicable to Iran, the majority of their success came from the collective efforts of average citizens, making their strategies easy to replicate in different countries. The unique architectural features of Iranian city blocks may pose a challenge for the construction of traditional community garden plots, however, rooftop gardens above apartment buildings would be an equally effective alternative. Narrow, fenced roadside plots could also be built to replace clusters of vacant stores that have gone out of business. The government could release advertisements targeting store owners that would encourage them to sell seeds for gardening alongside their usual products, and could even discount rent for store owners selling them. Taxes could also be lowered on the seeds if they’re sold by small businesses, motivating people to support local businesses and to start their own garden. Another long-term strategy would be for the government to offer scholarship awards to students who plan to major in agricultural engineering while studying abroad, and to hold agricultural infrastructure design competitions among high school students as well. Incentivizing an interest in urban agriculture within the younger generation can have long lasting effects on the kinds of government-sponsored programs and organizations that will exist in the future.

Another possible solution to increase self-sufficiency would be introducing a primarily plant-based diet, which has been found to reduce the demand of plant products and farmland. Research shows that diets of equal calories with lesser animal products require less farmland to produce and sustain (*Future food self-sufficiency in Iran*). This concept should be initially expressed to the public through government funded advertising campaigns and informational pamphlets outlining the benefits of heightened plant consumption on the economy. Taxes on locally sourced produce could also be lowered to encourage people's purchasing habits. Scientific articles about the health risks of consuming too much red meats or dairy products and about the positive effects vegetables have on health could be presented more often on state media outlets. The most challenging part of executing an entirely government-based project like this would be receiving support from Iran's citizens, as the country's population has steadily lost confidence in their government's ability to serve them due to the worsening public health and economic decline (Crabtree). In order for this plan to be met with sufficient encouragement and participation from Iranians, the government will have to demonstrate transparency and capability while carrying out the solution. The government must consistently provide their citizens with certified data and the most up-to-date information in their advertising to motivate people to make informed decisions. They will also need to publicly state the intent and significance behind the project, and should be open to feedback, criticism, and suggestions from people as well. It may also be effective for government officials to work closely with community leaders and local politicians, as this could help them alter parts of their campaign so that it would be more quickly adopted depending on the region.

Unsustainable irrigation practices have been an enduring issue in Iran, with 90 percent of their crops being harvested from irrigated farming. One study notes that, "Current water withdrawal for agriculture is 86 billion m^3, which is 90 percent of the country's water use. According to estimates of the Ministry of Energy (MoE), the allowable, i.e. sustainable, level of agricultural water withdrawal, is 61.7 billion m^3 per annum" (*Future food self-sufficiency in Iran*). The over-withdrawal of water has caused damage to the environment, yet the weather and climate of most of the land available is unsuitable for farming without such extensive irrigation. More sustainable watering options like collecting rainwater are not realistic possibilities in this situation. Increased government investment in agriculture to minimize yield gaps on existing farms could potentially reduce the amount of water irrigation needed to produce the same amount of food. Given the multitude of smaller farms, state-run educational programs teaching farmers how to implement strategies that increase irrigation efficiency could have beneficial effects in the long run. The most effective yet most complex solution would be to completely uproot all existing infrastructure relating to surface irrigation, and to replace it with drip irrigation systems. Drip irrigation is widely recognized as the most sustainable form of irrigation, since it requires around 20-40% less water on average, while increasing crop yield by 20-50% in comparison to surface irrigation. Despite its advantages over flood irrigation, drip irrigation is not commonly used in countries that struggle with water scarcity due to its steep price (*Sustainable Irrigation*). The cost of the new irrigation systems could potentially be covered through a combination of international fundraising campaigns and an increase in taxation.

The economic collapse in Iran has caused a significant increase in food insecurity, especially among marginalized populations. This issue has also wreaked havoc on the country's healthcare system, agricultural practices, and their environment. The dangers of water scarcity and air pollution loom just over the horizon, and almost one-fifth of the population experiences hunger on a daily basis. Despite this,

there is still hope with the right support from the government and enough participation from citizens. Since Iran's economy has been isolated from international trade, the government should prioritize self-sufficiency in agriculture to reduce food insecurity and inflation.

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