



Neither East, Nor West: How Iran's Economy Copes With Sanctions

Adlan Margoev,
Petr Artemiev

The views and opinions expressed in this report are those of the authors and do not represent the views of the Valdai Discussion Club, unless explicitly stated otherwise.

ISBN 978-5-907845-10-7



© The Foundation for Development and Support of the Valdai Discussion Club, 2024

16/1 Tsvetnoy Boulevard St., Moscow, Russia, 127051

About the Authors

Adlan Margojev

Research Fellow at the Institute for International Studies,
Lecturer at the Department of Asia and Africa Studies,
MGIMO University

Petr Artemiev

Expert of the Russian Council on International Affairs

Contents

3	Executive summary
5	The sanctions chronicles
6	Economic model
10	The fallout from sanctions
14	The first shock. Attempts to negotiate a solution
17	Second shock. An attempt to adapt
27	An (un)competitive economy
40	Annex 1. Economic sanctions against Iran – Timeline
46	Annex 2. Shady schemes. How Iranians evade US sanctions
48	Annex 3. Red flags. Methods for identifying US sanctions violators

Executive summary

The United States imposed its first sanctions against Iran back in 1979 when the Iranian revolutionaries seized the American embassy and took its diplomats hostage. However, only after 2010 the restrictions that Washington and its allies imposed on Tehran for advancing its nuclear programme had a devastating effect on the Iranian economy.

Cut off from the oil market and the international financial system, Iran saw its oil exports shrink by a factor of two and had to rely much more on its remaining trade partners. In fact, by 2023, its top five trading partners accounted for three quarters of Iran's non-oil trade. Oil used to be Iran's main revenue driver so much so that a decline in its exports tripled the country's budget deficit, which reached 5 percent in 2022. Foreign currency also became scarce, while the value of the Iranian rial fell more than ten-fold. Inflation accelerated to 47 percent in 2023, according to a preliminary estimate by the IMF. All these factors resulted in slower GDP growth. Before 2012, Iran reported real GDP growth at about 5 percent, while the global economy expanded by about 3 percent. After that, the Iranian economy has been falling behind as its GDP increased by an average of 1.4 percent against a 2.5 percent of the global economy.

Iran experienced two sanctions shocks. Its leadership viewed external pressure as the main cause of the country's economic woes. This is why the government responded to the first sanctions wave in 2010–2013 by trying to ease restrictions through negotiations. However, striking a balance among all the parties involved in the nuclear talks proved to be an uphill battle. The resulting Iranian nuclear deal created a framework which was second to none in the world in terms of verification of the peaceful nature of Iran's nuclear programme, while the negotiators failed to devise a mechanism for assessing whether the United States performed its commitments in good faith in terms of lifting sanctions and enabling transnational corporations to tap the Iranian market without fearing any restrictions.

Moreover, the United States opted for torpedoing the Iran nuclear deal as a result of political infighting. In 2018, President Trump decided to withdraw from the agreement, while other parties condemned this move. Under the Biden administration, talks to revive the nuclear deal were suspended after Western countries accused the Iranian leadership of suppressing the autumn protests of 2022, as well as of supporting Russia in the Ukraine conflict.

Sanctions proved to be a one-way ticket, with 20 years of negotiations bringing nothing but disappointing results. While Iran and the six international negotiators did succeed in hammering out the nuclear deal, and it remains valid on paper despite the withdrawal of the United States, the sanctions pressure against Iran is several times higher now compared to where it was before the nuclear talks started.

The second wave of sanctions came in 2018–2024, and Iran had to adapt to it. Having failed to reach a deal which would be immune to the ups and downs in US domestic policy, the Iranian leadership tried to make the country's national economy resilient in the face of

American sanctions. However, preserving the value of its currency and staving off inflation, while also providing for the needs of the most vulnerable social groups proved to be an impossible task. In fact, the government policy produced an opposite effect: it had to introduce several different exchange rates for its rial and substantially increase its borrowing, including from the National Development Fund, in order to finance major social programmes while its oil revenue shrank, and the Central Bank had to turn on the printing press. Taken together, all these developments prevented Iran from overcoming inflationary pressures.

The government's interventionist approach prevented the Iranian economy from relying on market-based mechanisms and striking a new balance in order to adapt to the sanctions shocks. In fact, this policy not only failed to ease macroeconomic challenges resulting from the sanctions, but actually made them worse. The rate of inflation has stayed above 40 percent since 2018; there are three different exchange rates for the national currency, while it loses about a third of its value on the international market against the US dollar every year.

That said, sanctions prompted the Iranians to come up with sophisticated mechanisms for selling their oil, buying and transporting sanctioned goods and carrying out financial transactions. They rely on tankers which can change their flag or sail under a foreign flag, repaint their names, forge documents on the origin of goods, turn off navigation transponders and transfer oil from one tanker to another at sea. Iran relies on shell companies when carrying out international transactions, uses hawala, an informal money transfer system that does not involve moving money outside of the country, as well as cryptocurrency.

Iran has also been able to sidestep export controls when purchasing foreign technology and equipment, while also developing home-grown solutions to replace imports. It has had some success in certain sectors. Among other things, Iran learned to make gas turbines, process oil and introduce nanotechnology solutions in healthcare. However, quasi-legal schemes and advances in specific sectors cannot generate lasting economic growth.

And sanctions are not the main culprit. The main challenges for the Iranian economy deal with the way its economic model operates. Since the Revolution, it has been guided by a series of ideological tenets. State and public property have priority over the private one. Islamic values are viewed as being more important than economic freedom, which means, for example, that banks cannot earn interest. In terms of social justice, the economy prioritised redistribution, exchanges and consumption over manufacturing. There is also the commitment to achieving self-sufficiency in order not to rely on other countries in economic or political terms.

As a result, the state, its affiliated structures and religious institutions own three quarters of the Iranian economy, which remains focused on relying on its domestic resources. Foreign capital faces restrictions and cannot easily move in and out of the country, while the state uses non-tariff barriers in foreign trade to shield its domestic producers, and also controls the foreign exchange market. The government also supports the most vulnerable through cash subsidies and by imposing fixed prices on essential goods. All these measures

were designed to make the economy more resilient in the face of external pressure, but this model proved to be quite rigid, prone to vulnerabilities and uncompetitive.

The Iranian economy lags far behind the countries that sanctioned it, meaning that a tit-for-tat approach is not an option for the Iranian authorities. Countermeasures would do nothing but backfire, or prove totally ineffective. Against this backdrop, an asymmetrical path seems more advisable. For example, it could consist of creating a favourable business environment so that the potential investment returns would outweigh the sanctions risks.

Some of Iran's preceding presidents directed their administrations to move in this direction. There were, for example, attempts to tax companies owned by Islamic funds, privatise major corporations or cancel the fixed foreign exchange rate. However, instead of searching for ways to address real economic challenges, the government focused on the unfriendly actions by other countries, while the lack of consensus within the Iranian elite prevented the country from launching structural reforms for generating economic growth despite sanctions. This is why the Iranian leadership has been unable to build on the positive track record in certain sectors driven by competent and dedicated researchers, lobbying by the business community, with the state acting as a customer, investor and manager.

The sanctions chronicles

What can Russia learn from Iran in terms of countering Western sanctions?¹ This is the question Russian specialists in Iranian studies have been getting all the time since February 2022. The prevailing point of view in Russia has been that Iran managed to develop and grow despite sanctions for over 40 years now. True, the country faced its first sanctions back in 1979 after American diplomats were taken hostage² in Tehran (see **Annex 1** for a detailed sequence of sanctions against Iran). However, under the Algiers Accords, most of these restrictions were lifted one and a half years later. The United States did not move to restrict economic ties with Iran until 1984 when it accused Tehran of supporting terrorism. In 1987, the United States imposed a total ban on Iranian imports, while continuing to sell it its own products. For example, in 1992, the US was the sixth biggest importer for Iran, having delivered \$748 worth of goods.³ To put this into perspective,

¹In this report, references to sanctions cover both multilateral sanctions imposed by the United Nations Security Council, as well as unilateral restrictions bypassing the UNSC.

²European nations, primarily the UK, expressed their solidarity with the United States and tried to free hostages through diplomatic channels, while refraining from imposing restrictions on Iran, apart from an arms export ban. In 1980, the Soviet Union vetoed in the UN Security Council a US draft resolution on imposing international sanctions against Iran.

³Clawson P. U.S. Sanctions // The Iran Primer. 11.10.2010. URL: <https://iranprimer.usip.org/resource/us-sanctions>

trade between Russia and Iran that year totalled \$306 million, despite the fact that Moscow did not impose any sanctions on Iran.⁴

The Western sanctions did not have a major bearing on the Iranian economy until after 2010, when the country lost access to the oil market and the international financial system. This is when the sanctions started to bite. Apart from a short break between 2014 and 2017 resulting from the November 2013 Joint Plan of Action (JPOA) and the Joint Comprehensive Plan of Action (JCPOA) of July 2015, sanctions have been having a grave effect on the Iranian economy for little more than a decade now.

The success in the JCPOA talks brought about a diplomatic pause that lasted just over two years. Donald Trump referred to it as the worst deal and dismantled it. He then launched a maximum pressure policy against Iran. While the Biden administration did revive negotiations in order to reinstate the nuclear deal, it fell short of cancelling a single Trump-era order, even in the face of all the challenges Iran has had to face during the Covid-19 pandemic. There may have been a de facto easing of the way sanctions were administered under Biden compared to the Trump administration, but Iran did not feel any meaningful difference, and the maximum pressure policy remained in place.

Economic model

Although the sanctions have had an impact on the economic developments in Iran, internal factors have played a crucial role, including the government's policy and the economic model in place.⁵ The current political system took shape in 1979 on the back of the Islamic revolution under the slogan *Neither East, nor West – but the Islamic Republic*, which culminated in the overthrow of the monarchy. The new government sought for its own way that would simultaneously meet the needs of the country's development and align with the ideological concepts of the clergy. They sought to build an operational economy based on Islamic norms and values and eventually succeeded in creating an economic model that was unique

⁴ Илларионов А. Внешняя торговля России в 1992–1993 годах // Вопросы экономики, №6, 102. 1994. С. 85. URL: http://www.iea.ru/article/publ/vopr/1994_6.pdf

⁵ Кожанов Н.А. Между развитием, ростом и выживанием: о некоторых особенностях модели социально-экономического развития Ирана на современном этапе // Международная аналитика. 2023; 14(1):72-91. URL: <https://doi.org/10.46272/2587-8476-2023-14-1-72-91>

in some aspects and that, in many respects, continues to determine Iran's development today.

Ideologically, the new economic system rested on the class struggle ideas developed by the leader of the Islamic Revolution, Ruhollah Khomeini, who preached that society was divided into “the deprived” masses against “the arrogant” elites. Khomeini extended the “deprived” concept to all Muslims suffering under the oppression of godless rulers, and after the revolution, to anyone suffering oppression, regardless of their religious affiliation.⁶ The second important component of the new ideology was *Tawhid*, or “unity,” a theory set out by Khomeini's adviser Abolhassan Banisadr in his book *The Economy of Tawhid*.⁷ The eventual economic model guided by these ideological tenets included the following approaches:

1. **Priority of state and public property** (under article 44 of the 1979 Constitution, this sector included, among other things, the main industries, foreign trade, large mining companies, banking, and insurance.⁸ This approach also justified the earlier nationalisation of the property of the Shah's supporters and foreign citizens).
2. **Priority of Islamic values over economic freedom** (e.g. banks were not allowed to charge interest).⁹
3. **Social justice** (the emphasis was not on production but on distribution, exchange and consumption. One of the slogans of the economy of *Tawhid* was “produce according to ability, consume according to piety”).
4. **Autarky** as a means of liberation from economic and political dependence on other countries.¹⁰

The attempt to put these principles into practice led to the following results. The massive nationalisation increased the role of the state sector in the economy: in industry, its share rose to 70 percent, while most facilities remained unprofitable throughout the 1980s.¹¹ The nationalised property

⁶ Мамедова Н.М. Иран в XX веке. Роль государства в экономическом развитии. М., 1997. С. 65–67.

⁷ В 1980-е годы термин «тоухидная экономика» сменился на «исламская экономика».

⁸ Конституция Исламской Республики Иран. URL: https://www.constituteproject.org/constitution/Iran_1989

⁹ Мамедова Н.М. Исламская экономика Ирана: теория и практика. М., 2022. С. 56–57.

¹⁰ Беккин Р.И. Тоухидная экономика как разновидность исламской экономической модели // Проблемы современной экономики. 2012. № 2 (42). С. 448–450.

¹¹ Мамедова Н.М. Исламская экономика Ирана: теория и практика. М., 2022. С. 69.

was transferred to Islamic *bonyads*, or trust funds established by the clergy, and *waqf* property was restored.¹² That made the clergy one of the country's largest corporate entrepreneurs.

In the private sector, the emphasis shifted from large companies supported during the Shah period to small and medium-sized enterprises. Virtually all foreign companies were banned, and foreign trade came under full state control. Finally, state regulation intensified to an extent where it evolved into direct interference in the market. Fixed prices were set for various goods, and foreign currency for import operations was centrally distributed.¹³ The country's leadership insisted that isolation was one of the great benefits for Iran. The economy, however, suggested the opposite: by 1988, per capita GDP had fallen to \$3,300, more than halving in 12 years from its Shah-era peak.¹⁴

Hoping to overcome the economic crisis, Presidents Ali Akbar Hashimi Rafsanjani (1989–1997) and Mohammad Khatami (1997–2005) introduced a series of reforms. Domestic prices were liberalised, but the prices of bread, flour, fuel, medicines, baby food, seeds and fertilisers for farmers remained fixed. Food subsidies were gradually phased out, and restrictions on currency exchange and foreign trade were reduced.¹⁵ Public sector companies were partially privatised: in the 1992/93 Iranian year,¹⁶ the state's share in companies traded on the Tehran Stock Exchange fell from 70 percent to 37 percent. Iran began to attract foreign capital again, and the 1955 Law for the Attraction and Protection of Foreign Investment was renewed. The country also established free economic zones for the interaction of public, private and foreign capital.¹⁷

Mahmoud Ahmadinejad (2005–2013) continued attempts to introduce market reforms, but with the emerging sanctions regime, his economic policy became increasingly reactive to external challenges. Iran's Supreme Leader

¹² In Islamic law, *waqf* is charitable endowment where property is donated for religious or charitable purposes. The donated assets are held by a charitable trust, which channels the income to the needs of the Muslim community (*ummah*). Once donated, the status of this property cannot be changed.

¹³ Мамедова Н.М. Иран в XX веке. Роль государства в экономическом развитии. М., 1997. С. 74–90.

¹⁴ Мовчан А., Зотин А., Григорьев В. Сравнительная история нефтезависимых экономик конца XX – начала XXI века. М., 2017. С. 134.

¹⁵ Цуканов В.П. Государственное экономическое регулирование в Иране: отход от исламских принципов? // Ислам и общественное развитие в начале XXI века. М., 2005. С. 427.

¹⁶ The calendar in Iran is based on the solar Hijri: the calendar year begins on March 21 and ends on March 20 (for instance, the Iranian year 1403 started on March 21, 2024 and is referred to as the year 2024/25).

¹⁷ Мамедова Н.М. Иран в XX веке. Роль государства в экономическом развитии. М., 1997. С. 96–114.

Ali Khamenei described the tighter sanctions regime as the West's economic war against Iran.¹⁸

Ahmadinejad's reforms remained incomplete. The reduction of subsidies on essential goods (IMF estimates that before the 2010 reform, subsidies on fuel, gas and electricity alone reached 13 percent of the country's GDP¹⁹) was accompanied by broad social support measures in the form of cash transfers. More than 70 million people received those payments, out of the total population of 76 million. During the first year of the reform, the payments totalled \$30 billion for individuals and \$10–15 billion for legal entities, or about 9 percent of the GDP.²⁰ However, instead of lowering prices, the government indexed them. High inflation again widened the gap between fixed and market prices and, after a few years, levelled any effect from the reform.

Ahmadinejad also expanded the privatisation programme. The government issued so-called "participation shares", which were given to the poor to improve their welfare. Over the next decade, the shares were given at a 50 percent discount to people with disabilities, to the unemployed and war veterans, as well as to families where the sole breadwinner was a woman.²¹

Paradoxically, privatisation failed to increase the role of the private sector in the economy: between 2006 and 2010, only 13.5 percent of shares in state companies being privatised actually joined the private sector. The remainder was transferred to what is often called the pseudo-state or parastatal sector: pension funds, religious funds and *waqfs*, as well as companies of the Islamic Revolutionary Guard Corps (IRGC).²² Amid tightening sanctions, the parastatal sector actually replaced foreign capital.

In 2014, Khamenei responded to the mounting sanctions pressure by launching what he described as a "resistance economy." He proclaimed reliance on domestic opportunities, reducing dependence on oil revenues,

¹⁸ Iran Leaders Openly Bemoan Economic Pain // The Iran Primer. 25.07.2012. URL: <https://iranprimer.usip.org/blog/2012/jul/25/iran-leaders-openly-bemoan-economic-pain>

¹⁹ Subsidy Reform in the Middle East and North Africa // IMF. 2014. P. 51. URL: <https://www.imf.org/external/pubs/ft/dp/2014/1403mcd.pdf>

²⁰ Iran – The Chronicles of the Subsidy Reform // IMF Working Paper. 2011. P. 3. URL: <https://www.imf.org/external/pubs/ft/wp/2011/wp11167.pdf>

²¹ Мамедова Н.М. Исламская экономика Ирана: теория и практика. М., 2022. С. 98.

²² Harris K. The Rise of the Subcontractor State: Politics of Pseudo-Privatization in the Islamic Republic of Iran // International Journal of Middle East Studies. Vol. 45, No. 1 (February 2013). P. 46.

increasing resilience to various shocks ranging from global crises to sanctions, broad participation in economic development, including through privatisation programmes, rational consumption and a crackdown on corruption.²³

During his first term between 2013 and 2017, President Hassan Rouhani tried to continue market reforms – to reduce state intervention in the economy, carry out real privatisation and reduce the influence of military groups. However, he faced resistance from the conservative part of the Iranian establishment, so his reforms lost momentum.²⁴ IRGC-affiliated individuals who earned rents through access to government contracts particularly opposed a stronger private sector.²⁵

Therefore, when the US withdrew from the nuclear agreement in May 2018, Iran was a mixed economy based on Islamic laws. In 2017, experts estimated that the public sector accounted for 35 percent of Iranian GDP; private businesses contributed 25 percent, and the parastatal sector, 40 percent, of which 15 percent belonged to the IRGC.²⁶ To this day, *waqfs* and Islamic foundations play a significant role in the economy. The reliance on domestic resources, the restriction of foreign capital in the economy and vigorous state intervention in the form of non-tariff barriers in foreign trade, foreign exchange and capital controls remain in place. The government's economic rhetoric continues to promote fairness and support for the "deprived," which is done through cash subsidies and fixed prices for essential goods.

The fallout from sanctions

The all-out effort to sanction Iran started in 2010 and reached an even higher level in 2018, immediately becoming a defining factor for the Iranian economy. The following algorithm offers a good illustration of the way they work: lower oil revenue leads to higher budget deficit and generates

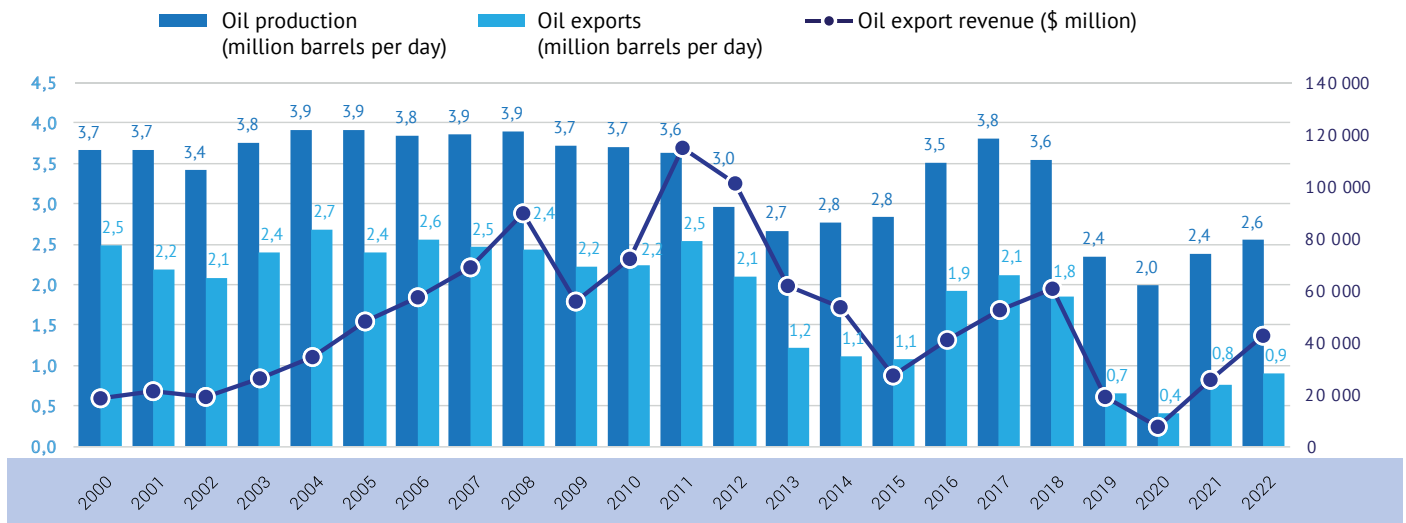
²³ Ayatollah Khamenei Announces General Policies on the Economy of Resistance // Khamenei.ir. 18.02.2014. URL: <https://english.khamenei.ir/news/5396/Ayatollah-Khamenei-Announces-General-Policies-on-the-Economy>

²⁴ Мамедова Н.М. Исламская экономика Ирана: теория и практика. М., 2022. С. 108-109.

²⁵ Azadi P. Governance and Development in Iran, Working Paper 8 // Stanford Iran 2040 Project, Stanford University. June 2019. P. 19.

²⁶ Khajepour B. The real footprint of the IRGC in Iran's economy // Al-Monitor. 09.08.2017. URL: <https://www.al-monitor.com/originals/2017/08/iran-irgc-economy-footprint-khatam-olanbia.html>

Figure 1. IRANIAN OIL PRODUCTION AND EXPORTS



Source: OPEC

inflationary expectations, which, in turn, results in higher foreign trade transaction costs, and then hits manufacturing considering the challenges with importing intermediate products, then resulting in lower household spending and corporate investment. Taken together, all these factors put a drag on long-term economic growth.

Sanctions resulted in a significant decrease in Iranian oil production and undermined exports (see Figure 1).²⁷ The maximum pressure policy by the Trump administration has made things even worse, while efforts to evade these restrictions failed to fully resolve all the challenges. According to available estimates, in 2023, Iran exported about 1.3 million barrels per day, down from a pre-sanctions peak of 2.7 million barrels.²⁸ Meanwhile, the geography of its exports became extremely narrow with China accounting for up to 90 percent of all the deliveries, according to *Kpler*.²⁹ OPEC data show that Iran's oil revenue more than halved from a peak of \$114.75 billion in 2011, before the sanctions came into force, down to \$42.6 billion in 2022.³⁰

This coincided with a structural shift in non-oil trade which became increasingly concentrated. According to the Iranian Customs Administration,

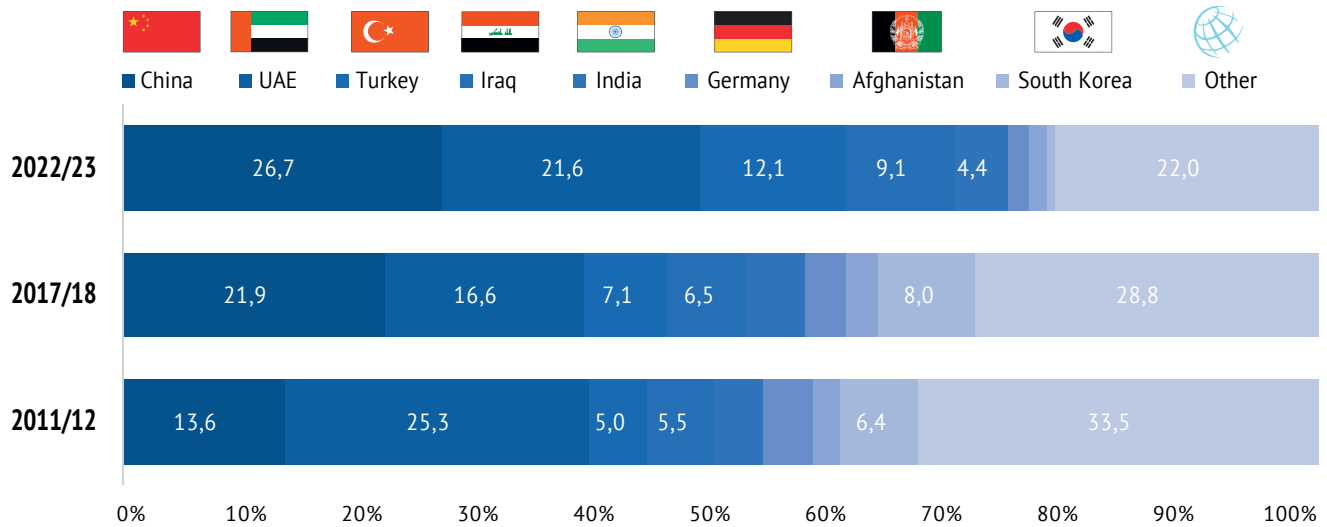
²⁷ Here and elsewhere in this report the prices are provided as of May 15, 2024.

²⁸ Organization of the Petroleum Exporting Countries. URL: https://asb.opec.org/data/ASB_Data.php

²⁹ Iran's Soaring Oil Exports // The Washington Institute. URL: <https://www.washingtoninstitute.org/media/6750>

³⁰ Statistical Bulletin for 2023 // Organization of the Petroleum Exporting Countries. URL: https://asb.opec.org/ASB_Charts.html?chapter=1516

Figure 2. IRAN'S NON-OIL FOREIGN TRADE (PERCENT)



Source: compiled by the authors based on data from the Customs Administration of Iran

the Islamic Republic's five biggest foreign trade partners increased their share from 56 percent to 74 percent over the past ten years (see Figure 2). China saw the biggest increase, and currently accounts for over a quarter of all non-oil trade with Iran.³¹ With less diversification, the Iranian economy has become increasingly vulnerable in the face of the policy choices by its key trading partners.

Oil used to be the main budget revenue driver for Iran, so much so that the decline in oil exports caused the country's budget deficit to increase from 1.65 percent of GDP in 2018 to 4.48 percent in 2019. This indicator reached 5 percent in 2020–2022, and is expected to total 3.3 percent in 2024.³² Foreign currency has become a scarce commodity for the Iranian market. Coupled with the budget deficit, this undermined the Iranian rial and caused inflation to surge (see Figure 3). When the JCPOA was in force, the rate of inflation decreased to single digits for the first time, only to exceed 18 percent in 2018, when the United States withdrew from the deal. In 2018–2022, consumer prices increased 3.7-fold, while the average annual rate of inflation was equal to 33.25 percent.³³ The IMF expects the inflation rate to total 41.5 percent in 2023.³⁴

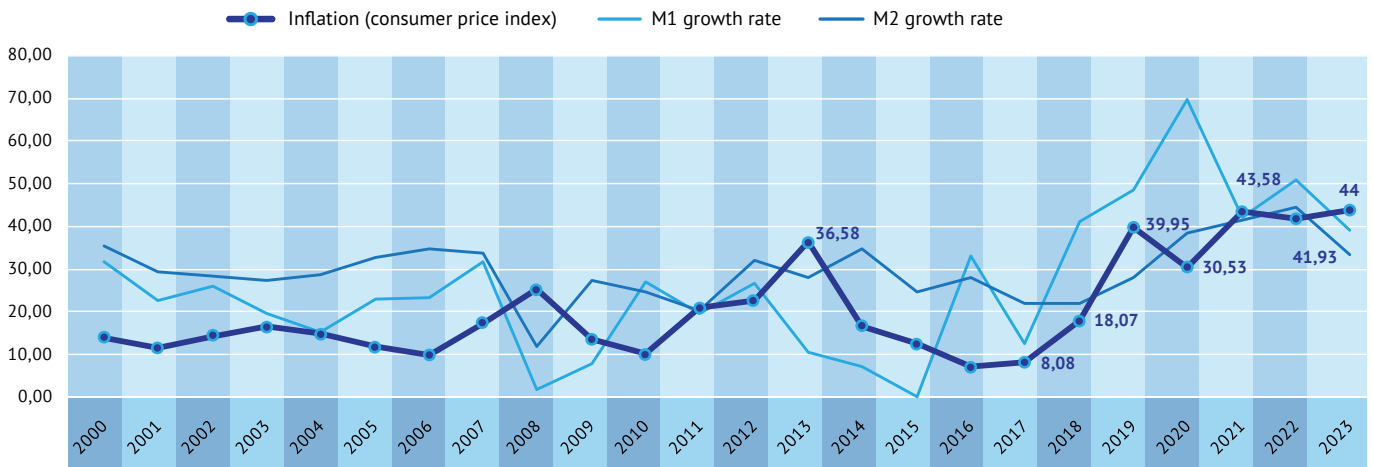
³¹ Customs Administration of Iran. URL: https://irica.ir/web_directory/55334-%D8%A2%D9%85%D8%A7%D8%B1.html

³² Economist Intelligence Unit. URL: <https://country.eiu.com/iran>

³³ Ibid.

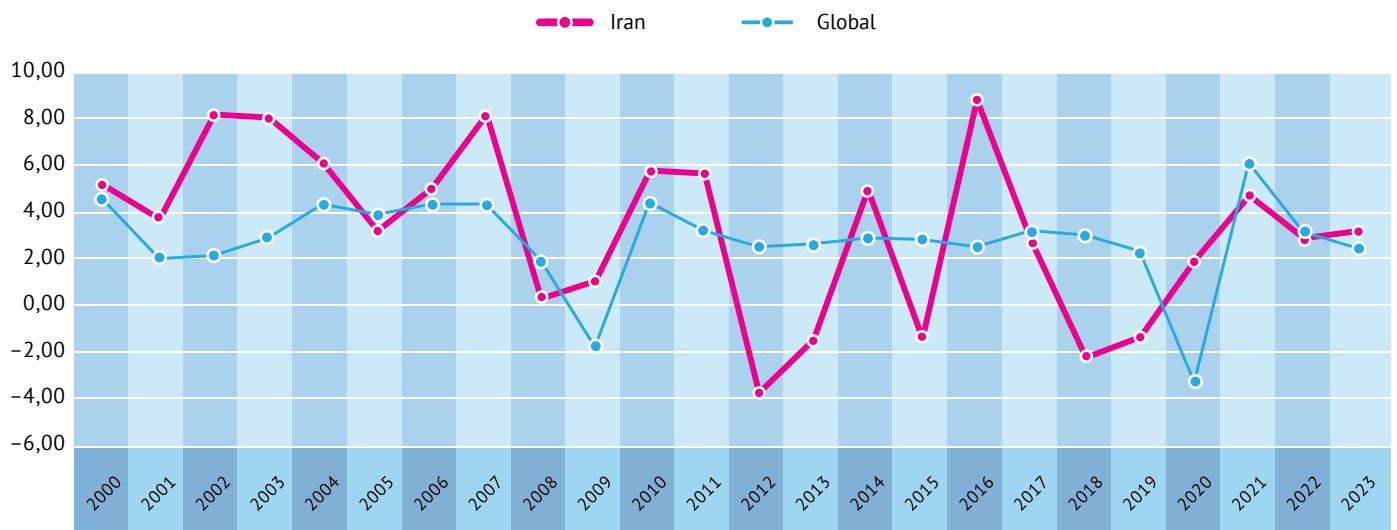
³⁴ International Monetary Fund. URL: <https://www.imf.org/en/Countries/IRN>

Figure 3. INFLATION AND M1 AND M2 AGGREGATES' GROWTH RATE



Source: Economist Intelligence Unit. 2023 – forecast

Figure 4. REAL GDP GROWTH, ANNUAL RATE (PERCENT)



Source: Economist Intelligence Unit. 2023 – forecast

The sanctions slowed down GDP growth (see Figure 4). Iran’s real GDP increased at an annual rate of about 5 percent between 2000 and 2011, against a global average of 3 percent, but in 2012–2022, Iran’s economy decelerated to a 1.4-percent growth rate, all while the global economy continued to expand at an annual rate of 2.5 percent.³⁵ The country did get a respite in 2016 and 2017 when its real GDP increased 8.9 percent and

³⁵ Calculated by the authors using the CAGR method based on the *Economist Intelligence Unit* data. URL: <https://country.eiu.com/iran>

2.8 percent, respectively, but the overall cost of sanctions imposed against Iran in 2012–2014 is estimated at 17 percent of its potential GDP.³⁶ Real per capita GDP growth has essentially zeroed-out in 2012–2022, as opposed to the preceding period when this indicator averaged 3.5 percent.

Therefore, the Iranian economy stayed ahead of the global economy in term of its growth rate until it got hit head on with a coordinated sanctions push. Not only did sanctions upend this trend, but they also forced Iran to rely more on its core foreign trade partners.

The first shock. Attempts to negotiate a solution

Iran responded to the sanctions shock by first trying to reach an agreement with those who imposed these restrictions. However, in the process it learned that this meant spending a lot of time negotiating, while ensuring that it achieved the desired result was not guaranteed. Talks on the Iranian nuclear programme started back in 2003 and continued for 12 years, and only the last two of them were actually effective. Why did it take so long? This drawn-out process was largely attributable to the discordant presidential election cycles in Iran and the United States. Until 2005, Mohammad Khatami's cabinet was willing to compromise, and it was the George W. Bush administration which ended up derailing the agreement. In 2009, Barack Obama was willing to reach an agreement, but his then-counterpart Mahmoud Ahmadinejad stuck to an openly anti-American rhetoric, which did nothing to bring the agreement any closer. It was only in 2013, with Hassan Rouhani's election, that both sides were ready to engage in meaningful talks. Still, Donald Trump's victory in 2016 doomed the nuclear deal, and even Joe Biden's election in 2020 was not enough for it to be revived.

Had the United States remained a party to the JCPOA in 2018, there would have been another long-term obstacle for maintaining the deal, considering the asymmetrical nature of the verification mechanisms it offered.³⁷ IAEA inspectors went to great lengths when carrying out their

³⁶ Gharehgozli O. An estimation of the economic cost of recent sanctions on Iran using the synthetic control method // *Economics Letters*, 2017. Vol. 157. Issue C. P. 141-144. URL: <http://www.sciencedirect.com/science/article/pii/S0165176517302331>

³⁷ Parsi T., Khajepour B. How to Make Iran Trust a New Nuclear Deal // *Foreign Policy*. 17.08.2021. URL: <https://foreignpolicy.com/2021/08/17/iran-nuclear-deal-talks-biden-raisi/>

inspections, collecting data from multiple cameras and sensors, which made the Iranian nuclear deal second to none around the world in terms of verifications for compliance in 2015–2018. However, no one thought about ways to measure the way the United States performed its obligation to lift the Iranian sanctions. Washington was deemed to have fulfilled its obligations when the president signed the corresponding executive orders and announced that the US sanctions against specific sectors of the Iranian economy, as well as individuals and legal entities, were lifted.

The Iranian economy still faced structural challenges and its business environment remained quite complex. Against this backdrop, international companies were still wary of working with Tehran considering efforts by the US government to maintain an atmosphere of tension on Tehran-related matters.³⁸ In the United States, the right to impose sanctions largely belongs to the president, meaning that companies whose investment is expected to produce returns within a timeframe exceeding the presidential term in office had to include this in their projections as a factor of uncertainty. After all, the fact that the two sides agreed on something did not guarantee that the United States would not shift to a radically different Iran policy under a new president. Therefore, nothing guaranteed that a foreign business operating in Iran would not face steep fines for failing to comply with the sanctions regime or that, once lifted, sanctions would not be reinstated. When talks on resuming the nuclear deal started under the Biden administration, Iran asked for economic guarantees that the resulting agreement would remain in force longer than the previous one.³⁹

This gave rise to a new debate within the professional community⁴⁰ with experts suggesting technical guarantees for carrying out the nuclear deal,⁴¹ drafting a list of the so-called automatic benefits which were expected to produce an immediate positive effect on the Iranian economy,⁴² offering guaranteed long-term exemptions from the sanctions regime regarding Iran's priority economic projects and their funding,⁴³ as well as outlining

³⁸ Batmanghelidj E. How to Think About Getting Foreign Firms Back into Iran // Bourse & Bazaar. 11.01.2022. URL: <https://www.bourseandbazaar.com/articles/2022/1/10/cascade-theory-and-getting-iran-sanctions-relief-to-work>

³⁹ Inside story: JCPOA talks zoom in on verification, guarantees as end nears // Amwaj Media. 16.02.2022. URL: <https://amwaj.media/article/iran-vienna-jcpoa-baqeri-kani-shamkhani>

⁴⁰ Tazmin-e eqtesadi-ye tavafoqh [Economic guarantee of the agreement] // Donya-e Eqtesad. 04.12.2021. URL: <https://donya-e-eqtesad.com/fa/tiny/news-3821830>

⁴¹ Batmanghelidj E., Lawrence C. and Shah S. Using 'technical guarantees' to restore and sustain the Iran nuclear deal // European Leadership Network. 24.11.2021. URL: <https://www.europeanleadershipnetwork.org/policy-brief/using-technical-guarantees-to-restore-and-sustain-the-iran-nuclear-deal/>

⁴² Batmanghelidj E. Sharp relief: Automatic benefits and the Iran nuclear deal // European Council on Foreign Relations. 11.11.2021. URL: <https://ecfr.eu/article/sharp-relief-automatic-benefits-and-the-iran-nuclear-deal/>

⁴³ Parsi T., Khajehpour B. Ibid.

verification mechanisms when lifting sanctions.⁴⁴ The Iranian parliament came up with a preliminary assessment of the time Tehran needed to verify Washington's compliance with its part of the deal, arguing that it would take between six months and up to a year,⁴⁵ while the Iranian Parliament Research Centre produced a detailed paper on this matter.⁴⁶

However, all these suggestions, proposals and estimates became irrelevant after the negotiating process broke down. Western countries accused the Iranian leadership of violently suppressing the autumn 2022 protests in the country, as well as siding with Russia in the Ukraine conflict.⁴⁷ In the summer of 2023, the United States and Iran reached a separate, albeit informal, deal which did not require parliamentary approval. Still, it did inspire some hope that the negotiating process could resume. According to official reports, the two countries carried out a prisoner exchange involving five prisoners on each side, and agreed to refrain from attacking each other in the Middle East. The United States agreed not to impose new sanctions against Iran and authorised a South Korean bank to transfer \$6 billion it froze under Trump to an Iranian account with a Qatari bank for humanitarian purposes. As for Iran, it agreed not to enrich uranium beyond 60 percent purity.⁴⁸ But the October 7, 2023, escalation in the Israeli-Palestinian conflict closed this window of opportunity too with the United States and Iran siding with the opposing parties. They stopped the negotiating process and made ambiguous statements on whether Tehran would be able to use the funds deposited on the Iranian account in Doha,⁴⁹ while then Iranian Foreign Minister Hossein Amir-Abdollahian said that reviving the nuclear deal did not make much sense anymore considering

⁴⁴ Маргоев А., Хейрие Д. Возможна ли верификация снятия санкций как гарантия иранской ядерной сделки? // Пути к миру и безопасности. 2021. № 2(61). С. 110-128. URL: <https://doi.org/10.20542/2307-1494-2021-2-110-128>

⁴⁵ Zaman-e rastiazmayi shesh mah ta yek sal ast [The verification time will be from 6 months to one year.] // Entekhab. 15.12.2021. URL: <https://www.entekhab.ir/002jic>

⁴⁶ Elzamat va shakhesha-ye rastiazmayi-ye vaghe'i-ye raf'e tahrimha dar dastyabi be manafe'e eqtesadi-ye Jomhuri-ye Eslami-ye Iran [Necessary conditions and signs of valid verification of the lifting of sanctions to achieve the economic interests of the Islamic Republic of Iran] // Markaz-e Pazhuheshha-ye Majles [Research Center of the Majlis]. URL: <https://rc.majlis.ir/fa/news/show/1649865>

⁴⁷ Barak Ravid. U.S. «not going to waste time» on Iran deal right now, official says // AXIOS. 31.10.2022. URL: <https://www.axios.com/2022/10/31/iran-nuclear-deal-talks-biden>

⁴⁸ Crowley M., Fassihi F. and Bergman R. Hoping to Avert Nuclear Crisis, U.S. Seeks Informal Agreement With Iran // The New York Times. 14.06.2023. URL: <https://www.nytimes.com/2023/06/14/us/politics/biden-iran-nuclear-program.html>

⁴⁹ Amiri F. House passes resolution to block Iran's access to \$6 billion from prisoner swap // AP News. 01.12.2023. URL: <https://apnews.com/article/iran-6-billion-biden-prisoner-exchange-congress-19623bb2c8ca9436e0526f9fafa596c5>; Iran says released assets in Qatar accessible. Xinhua. December 4, 2023. URL: <https://english.news.cn/20231204/887cca6fcd2942e89ec7c507550870b8/c.html>

the situation at that moment.⁵⁰ As the Biden administration prepares to leave the White House, any contacts between Iran and the United States are viewed as an effort to set the stage for the Democratic victory in the 2024 US presidential election. Otherwise, there is little chance that Tehran and Washington would be able to agree on anything.

The negotiating process has been dragging on for twenty years, but has so far yielded disappointing results. Iran and the six international negotiators did succeed in agreeing on the nuclear deal, and it remains in force, at least on paper, despite the withdrawal by the United States. Still, the sanctions pressure Iran is currently facing has increased several-fold compared to where it was before the negotiating process even started.

Second shock. An attempt to adapt

In 2018, having realised the futility of negotiating with the United States while [Donald] Trump was in power, the Rouhani administration took steps to normalise relations with the outside world, but did not undertake structural reforms that would have made the economy more resilient to sanctions pressure. The Iranian government's response was limited to attempts to cushion the external shock and support the socially vulnerable segments of the population. Accordingly, the government tried to keep the currency exchange rate stable and contain inflation; however, not only did it fail to achieve its goals, but also provoked new economic and social problems.

In modern economic science, the gold standard of monetary policy is the combination of a floating exchange rate and inflation targeting, as price stability is an important factor of economic growth, while a floating exchange rate helps absorb external shocks.⁵¹ However, since the revolution, Iranian governments have been tolerant of high inflation and multiple exchange rates.

In April 2018, in anticipation of US sanctions, the Rouhani government set a single foreign exchange rate at 42,000 Iranian rials to US dollar, and the Central Bank of Iran (CBI) launched the Foreign Exchange Management

⁵⁰ Iran says reviving nuclear deal 'useless' // Arab News. 09.12.2023. URL: <https://arab.news/nvmjb>

⁵¹ Матюнина Л.Х. Выбор режима валютного курса: возможности и вызовы // Восточная аналитика. 2017. № 4. С. 47.

Integrated System (NIMA), requiring exporters to sell between 50 and 90 percent of their foreign exchange earnings on that platform.⁵² However, the CBI proved unable to support the government-enforced exchange rate due to a lack of foreign exchange reserves: the IMF estimated them at \$122.5 billion in 2018, but most of the assets were frozen, while Iran had retained access to only about \$12 billion.⁵³

As a result, the country was unable to support the single foreign exchange rate, and soon enough, in the summer of 2018, a system of three different exchange rates emerged.⁵⁴ Essential goods such as food, medicines and medical equipment were imported at the government-subsidised exchange rate of 42,000 rials per dollar. The NIMA exchange rate was used by importer companies, while other transactions were executed at the open market exchange rate. Moreover, the divergence between the official and market rates began to widen rapidly (see Figure 5), which increased the burden on the country's budget: the government was forced to spend more and more on subsidising the exchange rate for imports of essential goods. The average rate of depreciation of the rial against the dollar was 33 percent in 2018–2023. In comparison, between 1989 and 2017, the rial depreciated against the dollar at an average annual rate of 18 percent.

Administrative bans on imports of certain categories of goods were another way to support the national currency. In 2018, Iran banned imports of 1,339 goods, notably some food products, clothing and furniture, and by 2023, this list was expanded to 2,500 items.⁵⁵

In the 2018/19 Iranian year, half of Iran's imported goods (\$31 billion) were purchased at the government exchange rate.⁵⁶ Due to the growing cost of compensating for the difference between the official and market exchange rates, by September 2021, the government cut the list of essential commodities from 25 to 7 items: wheat, corn, barley, oilseed, edible oil, soya

⁵² Tavakol M. Iran's economy and the burden of multiple exchange rates // Atlantic Council. 12.05.2020. URL: <https://www.atlanticcouncil.org/blogs/iransource/irans-economy-and-the-burden-of-multiple-exchange-rates/>

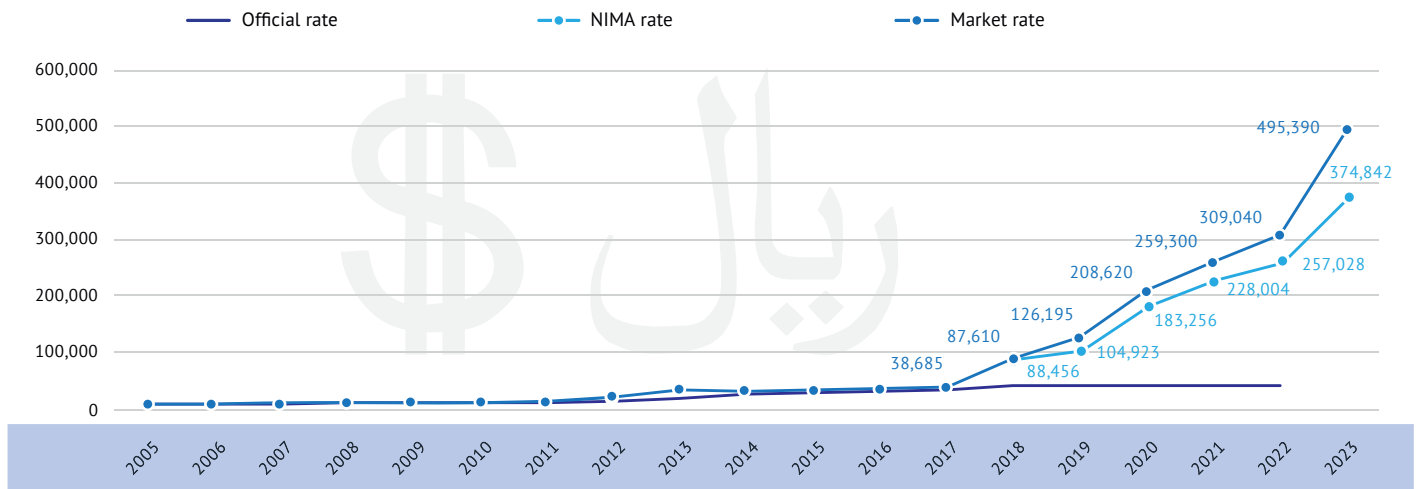
⁵³ Batmanghelidj E. Explainer: Iran's Frozen Assets // United States Institute of Peace. 01.11.2021. URL: <https://iranprimer.usip.org/blog/2021/nov/01/explainer-iran's-frozen-assets>

⁵⁴ In total, up to five different exchange rates were in effect in Iran in the period 2018–2023. For more details, see: Anva-e nerh-e dollarha mowjud dar bazar-e iran (Types of dollar exchange rate available at the Iranian market). URL: <https://tabangohar.com/types-of-dollars-available-in-the-iranian-market/>

⁵⁵ Iran Regulatory Environment // Economist Intelligence Unit. March 1st 2023. P. 53. URL: <https://viewpoint.eiu.com/analysis/geography/XN/IR/reports/regulatory-environment>

⁵⁶ Iran Economic Monitor, Spring 2022: Managing Economic Uncertainties // The World Bank. P. 12. URL: <https://openknowledge.worldbank.org/server/api/core/bitstreams/97235f72-0a51-580d-82a2-9c69f3532729/content>

Figure 5. AVERAGE ANNUAL EXCHANGE RATE USD/IRR



Sources: Iranian Central Bank for official rate
<https://www.tgju.org/> for NIMA rate
<https://www.bonbast.com/> for market rate

bean and pharmaceutical products, including selected medical devices.⁵⁷ Accordingly, in the year 2019/20, imports at the government rate dropped to \$14 billion and in 2021/22, it amounted to \$15.1 billion – about a quarter of the country’s imports.⁵⁸

The growing gap between the official and market exchange rates was exploited by corrupt officials. Companies entitled to foreign exchange at the subsidised rate were selling the currency on the open market instead of importing the declared goods.⁵⁹ It is noteworthy that during the multiple exchange rate period, Iran’s ranking dropped from 20.48 in 2017 to 14.15 in 2022 according to the World Bank’s Control of Corruption Index (see Figure 6).

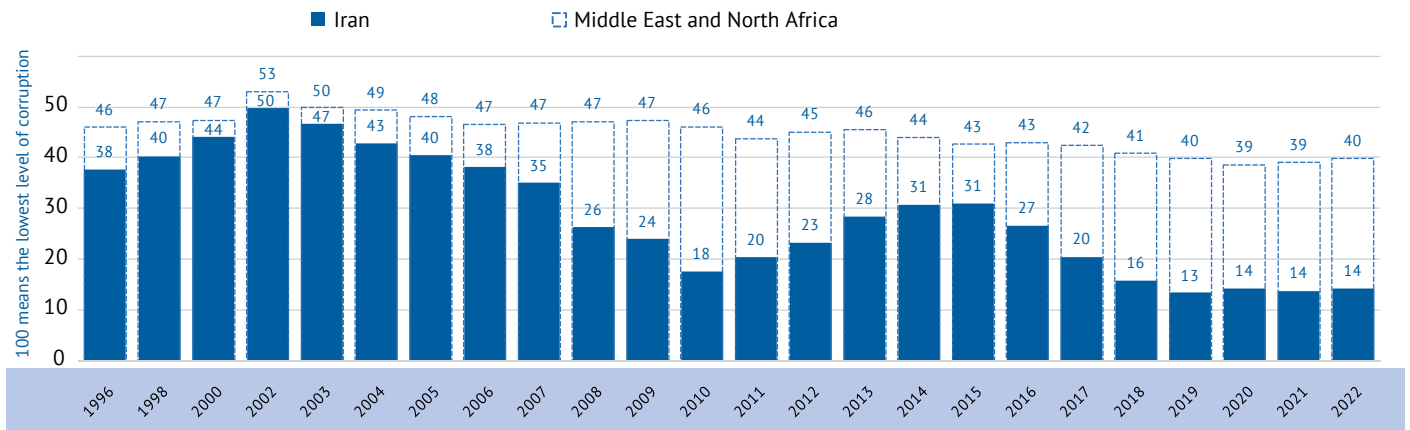
In February 2021, Majlis deputies voted for raising the subsidised exchange rate to 175,000 rials per dollar when discussing the draft budget, but the Rouhani cabinet opposed the measure. As a result, the government rate stood at 42,000 rials per dollar until May 2022 when it was cancelled by the government of Ebrahim Raisi. That caused a sharp spike in inflation: in

⁵⁷ Khajehpour B. Iran’s plan to get rid of the subsidized exchange rate // Al-Monitor. 29.10.2021. URL: <https://www.al-monitor.com/originals/2021/10/irans-plan-get-rid-subsidized-exchange-rate>

⁵⁸ Iran Economic Monitor, Spring 2022: Managing Economic Uncertainties // The World Bank. P. 12. URL: <https://openknowledge.worldbank.org/server/api/core/bitstreams/97235f72-0a51-580d-82a2-9c69f3532729/content>

⁵⁹ Government Changes Import Subsidy Allocation System // Financial Tribune. 11.05.2022. URL: <https://financialtribune.com/articles/113454/government-changes-import-subsidy-allocation-system>

Figure 6. CONTROL OF CORRUPTION INDEX*



Source: Worldwide Governance Indicators

*A CCI of 14 indicates that 14 percent of countries ranked have a higher level of corruption than this country.

June 2022, it reached 12 percent month-on-month,⁶⁰ while prices of certain foodstuffs surged by three to four times. Cash benefits were introduced to support the population: 4 million rials for the poorest deciles 1-3, and 3 million rials for deciles 4-9.⁶¹ However, with inflation above 30 percent, the cash payments began to depreciate rapidly as well.

The Iranian authorities failed to achieve their main objective of curbing inflation by setting a fixed exchange rate. Despite the negative experience, the Central Bank continued attempts to build a system of multiple exchange rates. For example, in December 2022, newly appointed Central Bank Governor Mohammad Reza Farzin announced setting the NIMA exchange rate for imports of essential goods at 285,000 rials per dollar⁶² for one year. The market rate at that time was 397,000 rials per dollar. In that situation, the rial continued to depreciate rapidly: the average market exchange rate in 2023 was close to 500,000 rials per dollar.

⁶⁰ Monthly inflation (CPI m/m) reflects the average change in the prices of goods and services in the consumer basket for a certain period (in this case, a month).

⁶¹ Government Changes Import Subsidy Allocation System // Financial Tribune. 11.05.2022. URL: <https://financialtribune.com/articles/113454/government-changes-import-subsidy-allocation-system>

⁶² News conference of Iranian Central Bank Governor Mohammad Reza Farzin (in Farsi) // Dolat.ir. 31.12.2022. URL: <https://dolat.ir/detail/402509>

The fiscal crisis caused by the reinstated oil embargo became an equally serious challenge: in 2019, Iran's oil revenues fell to one-third of the 2018 level. At the same time, government spending continued to grow, primarily on various subsidies: food import subsidies as mentioned above, as well as energy subsidies – for fuel, gas and electricity. According to the International Energy Agency, while energy subsidies amounted to \$86 billion (18.8 percent) of Iranian GDP in 2019, they increased to \$127 billion (36 percent of GDP) by 2023.⁶³ Head of Iran's Planning and Budget Organisation Masoud Mirkazemi cited similar figures in May 2022.⁶⁴

The main problem with the state budget was the difficulty in finding new sources of financing in the absence of access to foreign capital markets. Privatisation was chosen as one of the ways to replenish the state coffers. Privatisation revenues totalled almost 6 quadrillion rials (about \$108.5 billion) between 2001 and 2022, but most of this came in during Ahmadinejad's presidency.⁶⁵ The most profitable state-owned companies were privatised during his tenure. For this reason, the effect of privatisation on the budget under Presidents Rouhani and Raisi was limited: in 2018–2022, Iran received about \$14.8 billion through privatisation.⁶⁶ At the same time, in 2022/23, only 23 percent of the privatisation plan incorporated in the budget was actually implemented,⁶⁷ indicating the gradual exhaustion of this source of funding. Nevertheless, the country's budget for the year 2023/24 envisions a 49 percent increase in revenues from the sale of state property, although, with the current inflation rate, the real growth will be around zero. In total, privatisation is expected to finance 36 percent of the budget deficit.⁶⁸

The issuance of Islamic bonds has become an important source of revenue for Iran. According to the Majlis Research Centre, the government

⁶³ Value of fossil-fuel subsidies by fuel in the top 25 countries // International Energy Agency. 2022. URL: <https://www.iea.org/data-and-statistics/charts/value-of-fossil-fuel-subsidies-by-fuel-in-the-top-25-countries-2022>

⁶⁴ Senior Official Says Iran Paying \$100 Billion In Energy Subsidies // Iran International. 09.05.2022. URL: <https://www.iranintl.com/en/202205093109>

⁶⁵ Iran Regulatory Environment // Economist Intelligence Unit. 01.03.2023. P. 11. URL: <https://viewpoint.eiu.com/analysis/geography/XN/IR/reports/regulatory-environment>

⁶⁶ Ibid.

⁶⁷ Iran Economic Monitor, Spring/Summer 2023: Moderate Growth amid Economic Uncertainty // The World Bank. P. 22. URL: <https://openknowledge.worldbank.org/server/api/core/bitstreams/1c94cb80-5f40-408f-a5c7-c7cfd97dc438/content>

⁶⁸ Ibid.

issued 5.1 quadrillion rials (\$102.6 billion) worth of such bonds between 2016 and 2022.⁶⁹ In the 2023/24 Iranian year, bond issuance is scheduled to increase by 80 percent, financing 63 percent of the deficit. However, World Bank analysts estimate that more than 90 percent of the funds raised will be used to pay current interest on the country's sovereign debt.⁷⁰

Amid the fiscal crisis, the government has stepped up tapping the National Development Fund.⁷¹ According to the Majlis Research Centre, monthly withdrawals from the fund were \$453 million under Ahmadinejad, \$700 million under Rouhani and \$1.1 billion under Raisi.⁷² According to Mehdi Ghazanfari, Chair of the Fund, \$100 billion of the fund's \$150 billion in assets were withdrawn by previous governments, with another \$40 billion given to the government in the form of loans.⁷³

In addition, the government tends to rely on some overly optimistic revenue expectations in its budget planning. Although oil revenues in the year 2022/23 grew by 70 percent year-to-year, they were 20 percent less than the budgeted target.⁷⁴ To compensate for the shortfall, the government started borrowing from banks, and the banks borrowed from the Central Bank. As a result, the unsecured money issue became one of the pro-inflationary factors. The M1 monetary aggregate growth accelerated from 16.7 percent in 2000–2017 to 40.2 percent in 2018–2022⁷⁵.

The Iranian Central Bank's monetary policy has not helped stabilise the macroeconomic situation after the 2018 sanctions shock: under a 1983

⁶⁹Vaz'iat-e bedehi-e dowlat va enteshar-e owraq-e mali [Government debt and bond issuance] // Research Center of the Majlis. P. 12 URL: <https://rc.majlis.ir/fa/report/show/1781617>

⁷⁰Iran Economic Monitor, Spring/Summer 2023: Moderate Growth amid Economic Uncertainty // The World Bank. P. 23. URL: <https://openknowledge.worldbank.org/server/api/core/bitstreams/1c94cb80-5f40-408f-a5c7-c7cfd97dc438/content>

⁷¹Iran's sovereign wealth fund was established in 2011. Under the current fiscal rule, 40 percent of oil export revenues go to the Fund, 14.5 per cent is transferred to the National Iranian Oil Company, and the rest goes to the state budget.

⁷²Barrasi-e gozash-e amalkard-e sanduq-e towse'e melli [Analysis of the report on the activities of the National Development Fund] // Research Center of the Majlis. P. 16. URL: <https://rc.majlis.ir/fa/report/show/1781135>

⁷³News conference of Chairman of Iran's National Development Fund Mehdi Ghazanfari (in Farsi) // National Development Fund of Islamic Republic of Iran. 11.05.2023. URL: <https://www.ndf.ir/news-management/ID/3034/categoryId/1>

⁷⁴Iran Economic Monitor, Spring/Summer 2023: Moderate Growth amid Economic Uncertainty // The World Bank. P. 22. URL: <https://openknowledge.worldbank.org/server/api/core/bitstreams/1c94cb80-5f40-408f-a5c7-c7cfd97dc438/content>

⁷⁵Calculated by the authors based on the *Economist Intelligence Unit* data.

law, banking in Iran was fully converted to Islamic footing, meaning banks were forbidden to charge interest, and the Central Bank's main policy instrument has not been the discount rate, but a corridor of rates for deposits and loans.⁷⁶ In May 2020, the regulator adopted an inflation targeting policy with a target of 22 percent, but the corridor was retained for a transitional period,⁷⁷ at 14–22 percent in 2020–2023, and then raised to 17–24 percent in February 2023.⁷⁸ The maximum annual bank deposit rates in 2018–2023 grew from just 13.5 percent to 20 percent.⁷⁹ In other words, real rates in the banking system were strongly negative. On the one hand, this situation pushed inflation further up, and on the other hand, it reduced the stability of the banking system, as it became more difficult for banks to attract clients' funds. The World Bank estimates that more than 70 percent of Iranian banks do not meet the required capital adequacy ratio and half of them have a negative capital adequacy ratio. In 2020/21, the number of bad loans exceeded 16 percent.⁸⁰ Five of the 17 banks had negative equity capital, i.e. they were effectively bankrupt.⁸¹ The situation was aggravated by an Islamic banking rule requiring banks to participate directly in their clients' projects. Consequently, Iran has developed a strong link between the financial and real sectors of the economy, which runs the risk of a full-scale economic crisis in case the banking system fails.

In addition, the lack of alternatives for savings has led to a surge in investment in the stock market and real estate. In early 2020, the government eased access to trading on the Tehran Stock Exchange for private investors, and lifted restrictions on trading in the “justice” shares that had been handed out to the poor during Ahmadinejad's privatisation period.⁸² The number of private investor accounts soared from 4.5 million to 50 million and the

⁷⁶ Zahedi R., Azadi P. Central Banking in Iran, Working Paper 5 // Stanford Iran 2040 Project, Stanford University, June 2018. P. 14.

⁷⁷ Iran's CB to Implement 'Inflation Targeting' Policy // Financial Tribune. 15.05.2020. URL: <https://financialtribune.com/articles/business-and-markets/103384/irans-cb-to-implement-inflation-targeting-policy>

⁷⁸ Central Bank of the Islamic Republic of Iran. URL: https://www.cbi.ir/PolicyRates/policyrates_en.aspx

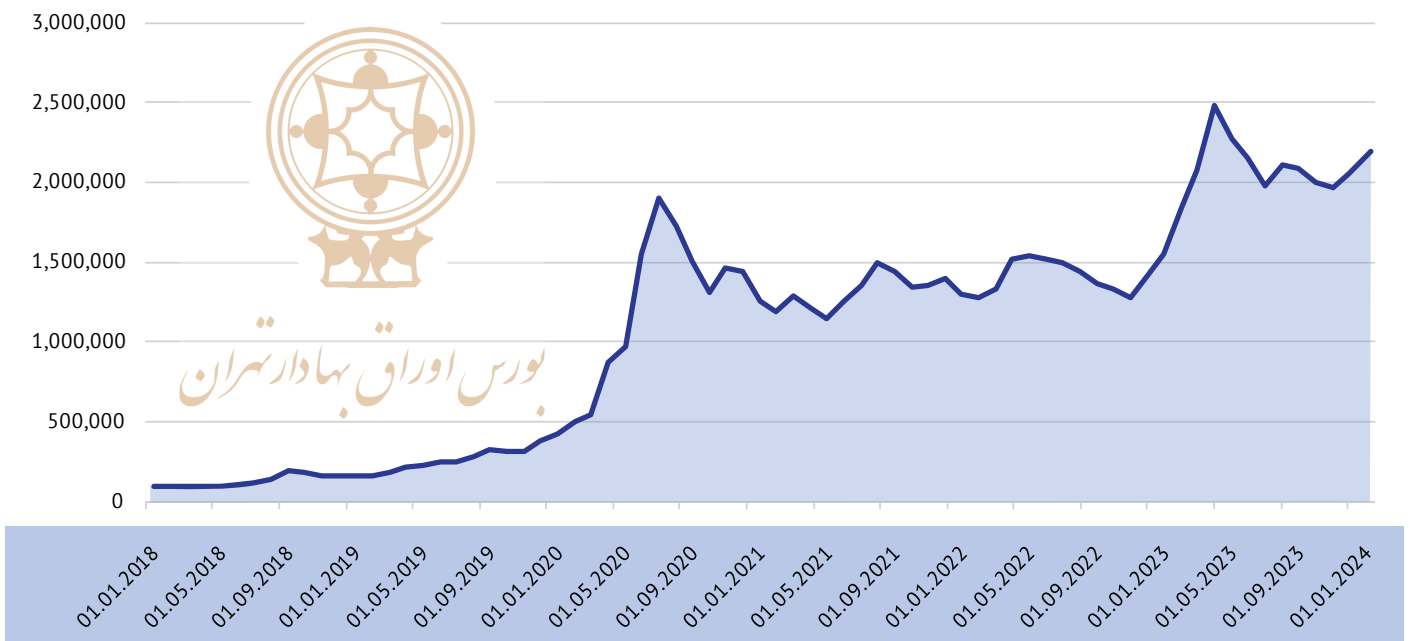
⁷⁹ Economist Intelligence Unit. URL: <https://country.eiu.com/iran>

⁸⁰ Iran Economic Monitor, Spring/Summer 2023: Moderate Growth amid Economic Uncertainty // The World Bank. P. 28. URL: <https://openknowledge.worldbank.org/server/api/core/bitstreams/1c94cb80-5f40-408f-a5c7-c7cfd97dc438/content>

⁸¹ Financial services: Iran // Economist Intelligence Unit. 15.09.2023. P. 6. URL: <https://viewpoint-eiu-com.proxy-um.researchport.umd.edu>

⁸² Khajepour B. How Iran created 50 million new market stakeholders // Amwaj Media. 24.09.2021. URL: <https://amwaj.media/article/how-iran-created-50m-new-market-stakeholders>

Figure 7. IRANIAN STOCK MARKET INDEX (TEDPIX)



Source: Trading Economics

number of active investors, from 700,000 to 5 million during the year.⁸³ As a result, the Iranian stock market more than quadrupled in January–August 2020 amid the rial meltdown, rampant inflation, and government advocacy of equity investment. State-owned companies were predominantly privatised through the sale of their shares on the stock exchange, and the 0.5 percent tax on transactions was an important source of budget deficit.⁸⁴ Already by the end of 2020, the market had fallen 35 percent and the exodus of private investors had begun (see Figure 7). From January 2021 to January 2024, the Iranian stock index TEDPIX grew at an average annual rate of 16.3 percent, i.e. at a rate below inflation. Many private investors who invested at the market peak in 2020 lost their money in real terms.

⁸³ The tale of Iran's stockmarket bubble is familiar – but also strange // The Economist. 17.10.2020. URL: <https://www.economist.com/finance-and-economics/2020/10/17/the-tale-of-irans-stockmarket-bubble-is-familiar-but-also-strange>

⁸⁴ Ziya M.H., Vatanka A. The Iranian government's risky stock market bet // Middle East Institute. 14.09.2020. URL: <https://www.mei.edu/publications/iranian-governments-risky-stock-market-bet>

The only way to protect one's savings was to invest in the property market. The average cost of one square metre in Tehran rose almost nine-fold between October 2018 and October 2023, from 86 million rials to 760 million rials⁸⁵ (around \$605 and \$1,520 at market exchange rates). Notably, about 15 percent of properties in Tehran are vacant,⁸⁶ meaning that owners are using them solely as a safe harbour for their money in the face of double-digit inflation and currency depreciation. In this situation, housing is becoming less and less affordable for ordinary citizens: in the 2020/21 Iranian year, rent averaged 43 percent of an urban household's monthly expenditure, compared to just 28 percent in the mid-2000s.⁸⁷

The Iranian Government and the Central Bank have failed to ensure macroeconomic stability in the face of sanctions. The rejection of market-based policies in favour of administrative regulation has not only prevented the economy from adapting to the new conditions, but has also led to greater economic imbalances. The spiralling inflation and its persistent high levels, as well as the continuous depreciation of the national currency are clear manifestations of a failed economic policy.

Raging inflation has been a permanent fixture in the Islamic Republic since its inception, with an average rate of about 20 percent in the last thirty years. The lack of a coherent policy to curb inflation may be partly due to narrow corporate interests at play: high inflation brings down the value of debt in real terms, which benefits the banking system's largest debtors, primarily the government. This approach becomes especially relevant when the government is unable to ensure fiscal discipline. By financing the budget deficit through inflated money supply, the government and the Central Bank are actually charging a hidden inflation tax to all citizens.

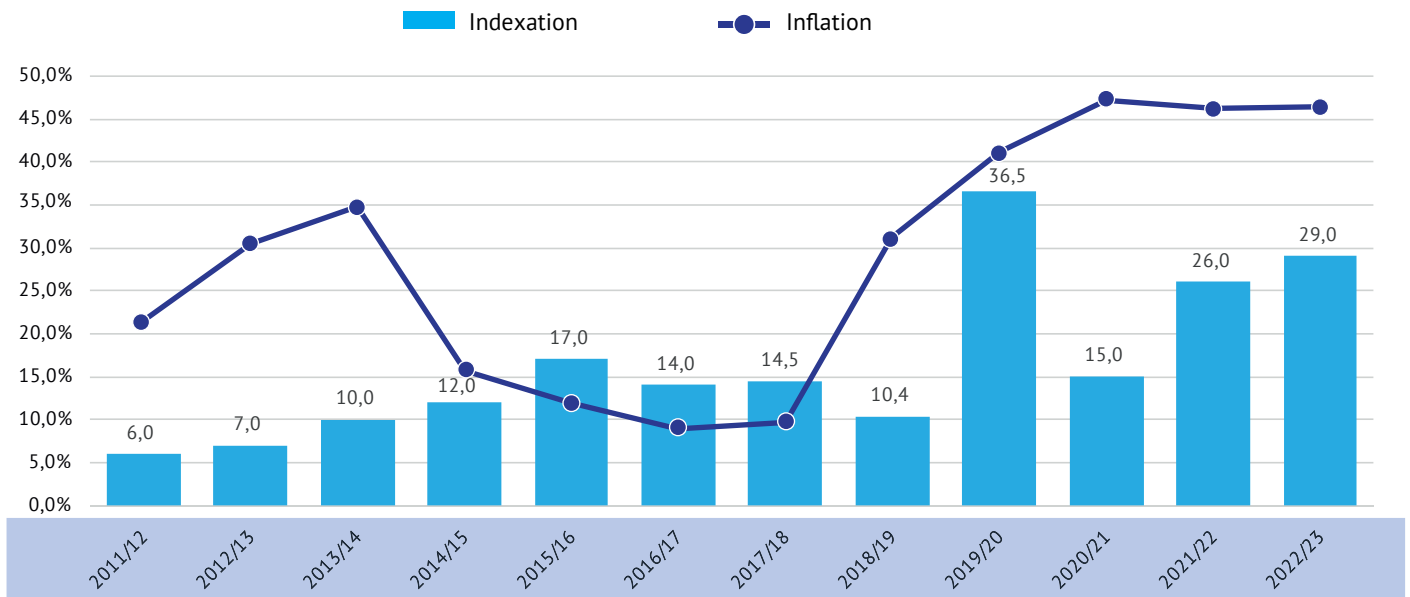
That inflation tax distribution pattern has changed in recent years. Until May 2022, the country used a subsidised exchange rate for imports

⁸⁵ Surge in Tehran Real Estate: 60 Meter apartments become unaffordable // Tehran Bazar. 17.11.2023. URL: <https://open.substack.com/pub/tehranbazaar/p/surge-in-tehran-real-estate-60-meter>

⁸⁶ Tehran's empty houses doubled – Tejaratnews // Parto News Agency. 19.12.2022. URL: <https://partonews.ir/en/tehrans-empty-houses-doubled-tejaratnews/>

⁸⁷ Fiscal 2020-21 Increase in Rental Housing Expenses Unprecedented // Financial Tribune. 13.12.2021. URL: <https://financialtribune.com/articles/business-and-markets/111581/fiscal-2020-21-increase-in-rental-housing-expenses>

Figure 8. INDEXATION OF WAGES VS INFLATION, % y-o-y



Sources: Iranian Ministry of Labour, CBI

of essential goods, and since this group of goods dominated the spending patterns of the poor, the inflation tax burden mostly fell on the better-off. When the subsidised exchange rate was cancelled, the situation reversed. World Bank analysts note that over the past five years, accumulated inflation for the lowest deciles 1–3 of the population has been 25 percentage points higher than for the top three deciles.⁸⁸

Galloping inflation gave rise to greater inequality. To a certain extent, this had to do with the annual indexation of wages which lagged significantly behind inflation,⁸⁹ i.e. the incomes of wage earners were decreasing in real terms (see Figure 8). According to the latest available data from the World Bank, the Gini index, which reflects the level of social stratification, rose from 37.4 to 40.9 from 2013 to 2019 in Iran.⁹⁰

⁸⁸ Iran Economic Monitor, Spring/Summer 2023: Moderate Growth amid Economic Uncertainty // The World Bank. P. 25. URL: <https://openknowledge.worldbank.org/server/api/core/bitstreams/1c94cb80-5f40-408f-a5c7-c7cfd97dc438/content>

⁸⁹ Iran's Supreme Labour Council, which includes representatives of the Ministry of Labour, business associations and trade unions, determines the minimum wage and the level of wage indexation (for workers employed under the Labour Law) on an annual basis.

⁹⁰ The World Bank. URL: <https://data.worldbank.org/indicator/SI.POV.GINI?locations=IR>

A comprehensive study of inequality in the Middle East found that the wealthiest 10 percent of Iran's population accounted for 48 percent of national income; the middle class, which includes 40 percent of the population, accounted for 35 percent; and the poorest 50 percent accounted for just 17 percent of national income. By comparison, in Western Europe, 37 percent of national income falls on the top decile (47 percent for the United States).⁹¹ Although the Iranian political system is based on ideas of Islamic justice and support for the disadvantaged, the level of inequality in the country is roughly the same as in the United States.

The Majlis Research Centre estimates that the poverty rate in Iran has risen from 19 to 30 percent in ten years, and the poverty gap index⁹² reached 27 percent in 2021/22, the biggest in recorded history.⁹³

According to surveys, 63 percent of respondents believe that corruption and mismanagement have had the greatest negative impact on Iran's economy, while only 34 percent blame it on the sanctions.⁹⁴ Confidence in the government has dropped from 80 percent in 2011 to 59 percent in 2021.⁹⁵

An (un)competitive economy

Iran has succeeded by focusing on specific technologies and teams, but has so far been unable to scale up this approach and make it operational at the national level. At least three cases demonstrate the effectiveness of the country's technology policy. The state acted as a customer, investor, initiator and manager in two of them.

⁹¹ Alvaredo F., Assouad L., Piketty T. Measuring Inequality in the Middle East 1990-2016: The World's Most Unequal Region? // World Inequality Lab. 2018. P. 21.

⁹² The poverty gap index refers to the extent to which individuals on average fall below the poverty line.

⁹³ Gozaresh-e vizhe az gostaresh-e faqr dar keshvar [Special report on the level of poverty in the country] // Khabar Online. 26.05.2023. URL: <https://khabaronline.ir/xk4pn>

⁹⁴ Iranian public opinion as Raisi takes the stage // IranPoll. 15.10.2021. URL: <https://static1.squarespace.com/static/5525d831e4b09596848428f2/t/616d9ee5bb6a230ee56e3057/1634574054598/2021-Sept-IranPoll-CISSM+-+Trend+Tables.pdf>

⁹⁵ Iranians More Positive About New President // Gallup. 21.10.2021. URL: <https://news.gallup.com/poll/355973/iranians-show-faith-new-president.aspx>

Gas turbines

It took Iran 15 years to learn to make the engines it needed for its power plants.⁹⁶ The country's authorities established *MAPNA* in 1994 and tasked it with building power plants, while the mission to develop indigenous gas turbines was assigned to a competing company as well. In 1999, the Energy Ministry helped *MAPNA* set up the *Turbine Engineering and Manufacturing Company (TUGA)* as its affiliate, while the *Oil Turbo Compressor Company (OTC)* was created in 2001, this time with input from the Ministry of Petroleum. The two received large, equally sized orders. Having the state as a long-term partner, and operating as both an investor and a customer, the two companies benefited from guaranteed return on their investment, while also offering foreign suppliers attractive opportunities.

The effort to localise gas turbine manufacturing can be described as a sequence of three five-year cycles. Iran started by assembling them under a license, then went on to create joint manufacturing ventures with an effort to increasingly localise manufacturing, and finally had to learn to make gas turbine all by itself in 2010. Facing harsh sanctions, the country had to step up its R&D to design these turbines on its own. By the time *Siemens* stopped working with Iran, despite the fact that their ties dated back to 1868, the National Iranian Gas Company received only 13 out of a hundred turbines *OTC* was expected to make as part of their joint venture, while the rate of localisation stood at 52 percent. *OTC* turned to the Iran University of Science and Technology and asked it to master the know-how it lacked. This is how the Gas Turbine Institute was established.⁹⁷

Not only the Iranian companies learned to make gas turbines on their own to serve their national economy during this third five-year cycle, but they also benefited from government support to start shipping them to Iraq and Syria. Moreover, the Iranian authorities lowered import duties before sanctions in order to test whether domestic companies would be able to survive in a more competitive landscape. They used a brief respite from the sanctions pressure after signing the nuclear deal to sign contracts and order new models from international suppliers. While Iran managed to catch up

⁹⁶ Safdari Ranjbar M., Ghazinoori S. and Manteghi M. Evolution of Iran's gas turbine sectoral innovation system as a complex product system (CoPS) // African Journal of Science, Technology, Innovation and Development. Issue 4. Vol. 14. 2022. Pp. 1102-1116. URL: <https://www.tandfonline.com/doi/abs/10.1080/20421338.2021.1936888>

⁹⁷ Gas Turbine Institute. URL: <http://gti.iust.ac.ir/>

with its foreign competitors in terms of gas turbine manufacturing, it has yet been unable to create a foundation for getting ahead of competition in terms of innovation.

Petroleum refining catalysts

Iran has also built a track record of success in the petrochemical industry. In 2000, the National Iranian Oil Company ordered its affiliate, the Research Institute of Petroleum Industry, to work with the Sharif University of Technology and the Shahid Beheshti University on the physical properties of catalysts. They produced the first samples in 2007, and since then Iran has launched into production 28 out of 40 catalyst groups.⁹⁸ According to Iran's estimates, in 2020 the country became the biggest catalyst exporter among OPEC+ countries.⁹⁹

Iran exports its catalysts to Iraq, Armenia, Pakistan, Syria and Kazakhstan, and has also developed a catalyst for making car fuel for Venezuela's *PDVSA*.¹⁰⁰ According to Iranians, Russian specialists have tested Chinese catalysts but were not happy with what they saw. Today, Russian petrochemical plants use about a tonne of catalysts made in Iran and keep ordering new batches.¹⁰¹

Nanotechnology

Over the past two decades, Iran has made a huge leap forward in terms of developing its nanotechnology capabilities. In 2001, Iranian researchers published just nine articles on this topic in international peer-reviewed magazines. Fast forward 20 years, and Iran ranked fourth with over 11,000

⁹⁸ Russian petchem complexes using Iran-made catalysts: NPC head // Tehran Times. 09.12.2022. URL: <https://www.tehrantimes.com/news/479509/Russian-petchem-complexes-using-Iran-made-catalysts-NPC-head>

⁹⁹ Савосин Д. В Иране будет запущено производство катализаторов для изготовления полипропилена и полиэтилена высокой плотности // Neftegaz.Ru. 13.04.2021. URL: <https://neftegaz.ru/news/neftechim/675916-v-irane-budet-zapushcheno-proizvodstvo-katalizatorov-dlya-izgotovleniya-polipropilena-i-polietilena/>

¹⁰⁰ Алифирова Е. В Иране представлен первый экспортный катализатор нефтепереработки для производства бензина // Neftegaz.Ru. 11.08.2023. URL: <https://neftegaz.ru/news/neftechim/789961-v-irane-predstavlen-pervyy-eksportnyy-katalizator-neftepererabotki-dlya-proizvodstva-benzina/>

¹⁰¹ Tehran Times. 09.12.2022. Ibid.

articles. In the overall country ranking by the number of publications on this topic, Iran beat Russia and ranked two places above it with 93,000 papers against 74,000.¹⁰²

But it went beyond research articles. In 2008, all sectors of the Iranian economy combined made just 11 nanotechnology products. By 2021, there were 834 nanotech solutions on the market. The key driver behind this process was the decision by the Iranian authorities to enable researchers to register intellectual property in their own name without having to settle any accounts or assign any rights to universities, and also to create knowledge-driven start-ups benefiting from extensive government protection and support. This is how Iran nurtured a whole network of high-technology companies standing in between universities and major corporations. There were more than 8,300 companies of this kind in 2023.¹⁰³

How have the Iranian researchers become so productive? The effort to adopt a collaborative approach may be part of the answer, along with the effort to launch a project exchange platform within the sector. Established in 2004, the Iran High-Tech Laboratory Network built a registry of the equipment the country had at its disposal. Sanctions made purchasing this equipment impossible or extremely challenging, so there was hardly a laboratory which did not need something. At the same time, it was quite common for the equipment which was already in Iran to be used only occasionally and depending on the research needs of the specific institutions which owned it. By bringing all these devices under a single umbrella of a national shared use centre, the Iranians in charge of developing this sector provided researchers access to some of the equipment they needed and ensured their effective use. By 2021, the project included 10 companies, 50 universities and 25 research centres with a total of 2,800 pieces of equipment in their arsenal. And those behind this project decided to go even further by creating an international network of laboratories along these lines with the view to enabling more stakeholders to combine their efforts while facing sanctions.¹⁰⁴

There is another project exchange platform created in 2016 that helps its users find the nanotechnology solutions they need to deliver on their manufacturing goals. In five years, it processed 3,500 requests and helped carry out 312 projects across a wide range of nanotechnology applications.

¹⁰² Progress Review of Iran Nanotechnology Plan // Iran Nanotechnology Innovation Council (INIC). September 2023. URL: <https://en.nano.ir/static-page/content/VjVKaTAza21QYnhhbFFPUTdGT3ladz09/>

¹⁰³ Iran's Knowledge-Based Companies Grew by 90% Last Year // Azad News Agency. 02.05.2023. URL: <https://ana.press/en/news/2295/irans-knowledge-based-companies-grew-by-90-last-year>

¹⁰⁴ Members // International Laboratories Network. URL: <http://intlabsnet.com/members>

Factors of success.

What enables Iranian researchers to develop new technology?

There is no getting away from the fact that it takes a team to achieve a technological breakthrough. But what sets a specific team apart from others? Judging by Iran's experience, there are four main features here.

Leadership

“Iran did not succeed on all fronts. There is a weak leader behind every failure,” Professor Saeed Sarkar from the Tehran University of Medical Sciences said during a seminar in May 2023, held by one of the institutes affiliated with the Russian Academy of Sciences. Having earned a PhD in nuclear medicine in the United Kingdom, Professor Sarkar heads a research laboratory, as well as five high-technology companies, which he also founded. One month after his presentation, an article appeared in the Russian media titled Tehran and Moscow to Develop a Robot-Assisted Surgery System.¹⁰⁵ Called *Sina*¹⁰⁶ and manufactured by an Iranian company,¹⁰⁷ the robot is an equivalent of the US-made *Da Vinci* surgical robot. Iran has already delivered it to Indonesia.¹⁰⁸

Lobbyism

Acting as an entrepreneur is not enough for Iranian researchers to achieve the desired results. For example, until January 2023, Professor Sarkar had to juggle several roles, which included serving as Secretary General¹⁰⁹ of the Iran Nanotechnology Innovation Council.¹¹⁰ Established in 2003, this council helped many nanotechnology solutions become a reality by working at a national level or focusing on specific sectors.

In a 2021 survey, founders of Iranian start-ups were asked to share their recurrent problems. Sanctions ranked only sixth among their concerns, even if four out of the top five issues they mentioned were entailed by the sanctions pressure in one way or another, but it was “rules and state regulation” which dominated the list of the problems they faced.¹¹¹ It is for this reason that researchers must be able to change the legal framework by working through sectoral associations serving as focal points for universities, businesses and the relevant government bodies.

¹⁰⁵ Тегеран и Москва произведут робот-ассистированную хирургическую систему // РИА Новости. 19.06.2023. URL: <https://ria.ru/20230619/meditsina-1879216273.html>

¹⁰⁶ Abu Ali Ibn Sina is a medieval Persian scholar, philosopher and physician from Bukhara, better known in Europe as Avicenna

¹⁰⁷ Sina Robotics and Medical Innovators Co., Ltd. URL: <https://sinamed.ir/>

¹⁰⁸ Sina telesurgery robot was installed and launched with the presence of the Vice-President of Science // Government of the Islamic Republic of Iran. 27.05.2023. URL: <https://irangov.ir/detail/413514>

¹⁰⁹ Sarparast-e Setad-e Vizhe-ye Touse'e-ye Fanavari-ye Nano Mansub Shod [Head of Special Headquarters for Nanotechnology Development Appointed] // Dowlat-e Jomhuri-ye Eslami-ye Iran [Government of the Islamic Republic of Iran]. 24.01.2023. URL: <https://dolat.ir/detail/404301>

¹¹⁰ Iran Nanotechnology Innovation Council. URL: <https://en.nano.ir/>

¹¹¹ Mapping of the Existing Innovation Ecosystem in the I.R. of Iran // UNDP. November 2021. URL: <https://www.undp.org/publications/mapping-existing-innovation-ecosystem-ir-iran>

Competences

Iran has been training legions of researchers and technology specialists, and has left developed countries behind in terms of women's empowerment and inclusion in this regard, according to experts. In fact, data from World Economic Forum specialists show that 335,000 Iranians graduated with degrees in natural science, technology, engineering and mathematics in 2016.¹¹² One article¹¹³ after another¹¹⁴ claimed that women account for 70 percent of the students enrolled in these degree programmes, although the available Iranian statistics have not confirmed this fact.

To obtain a rough estimate of the share of Iranian women seeking a bachelor's or higher academic degree in engineering and natural science, we have to sift through a wide range of sketchy data¹¹⁵ and make sure to eliminate any contradictory assumptions.¹¹⁶ It seems that a double rule of thirds can be used by applying it to the overall number of students. According to the calculations by the authors of this report, there were 438,000 people who graduated from Iranian universities in 2019, and it seems that 134,000 of them graduated with higher education degrees in engineering and natural science, and 43,000 of them might have been women.¹¹⁷

Commitment

By choosing not to leave Iran despite the economic challenges the country is facing, researchers demonstrate their commitment to delivering on the national development goals as part of their teams. The Iranian authorities have been referring to this sense of righteous devotion as a "scientific jihad." They came up with the notion of a "resistance economy," which means a set of measures to make the national economy less vulnerable in the face of external pressure.¹¹⁸

¹¹²The Human Capital Report 2016 // World Economic Forum. 28.06.2016. URL: <https://www.weforum.org/reports/the-human-capital-report-2016/>

¹¹³Merelli A. The West is way behind Iran and Saudi Arabia when it comes to women in science // Quartz. 08.03.2018. URL: <https://qz.com/1223067/iran-and-saudi-arabia-lead-when-it-comes-to-women-in-science>

¹¹⁴Aryafar K. How Iranian immigrants can be role models for diversity in STEM // The Hill. 05.02.2020. URL: <https://thehill.com/changing-america/opinion/481684-how-iranian-immigrants-can-be-role-models-for-diversity-in-stem/>

¹¹⁵Statistics of Higher Education in Iran (A Brief). 2020-2021 // Department of Statistical Research and Information Technology, Institute for Research & Planning in Higher Education. Ministry of Science, Research and Technology. URL: https://irphe.ac.ir/files/site1/files/Statistics_at_a_Glance/2020-2021.pdf

¹¹⁶Guttman A. Set To Take Over Tech: 70% Of Iran's Science And Engineering Students Are Women // Forbes. 09.12.2015. URL: <https://www.forbes.com/sites/amyguttman/2015/12/09/set-to-take-over-tech-70-of-irans-science-and-engineering-students-are-women/>; Cole J. Muslim Women at forefront of Science: 70% of Iranian Women Graduates come out with Science Degrees // Informed Comment. 03.10.2018. URL: <https://www.juancole.com/2018/03/forefront-science-graduates.html>; Saadia Zahidi Says More... // Project Syndicate. 29.11.2022. URL: <https://www.project-syndicate.org/onpoint/interview-saadia-zahidi-government-spending-debt-distress-gender-equality-iran-protests-2022-11>

¹¹⁷Sadeghpour F., Jafari M. and Elmi Z. Investigating The Effect of Gender Inequality in the Academic Education of Sciences, Engineering, and Mathematics (STEM) on the Economic Growth of Iran: A Structural Time Series Approach // Macroeconomics Research Letter. Volume 16. Issue 32. Autumn and Winter 2021. Pp. 191–217. URL: https://jes.journals.umz.ac.ir/article_4176_802ee0290638956bade484e8b44a3739.pdf?lang=en

¹¹⁸Десять пунктов «экономики сопротивления» // Коммерсант. 27.09.2018. URL: <https://www.kommersant.ru/doc/3753096>

While Iran has succeeded in developing specific sectors, its economy as a whole has become less competitive due to the external sanctions pressure. In the late 1990s and early 2000s, the country launched a series of reforms in order to transition to a market economy, which propelled it in 2012 to the 62nd position in the World Economic Forum's global competitiveness ranking of 142 countries.¹¹⁹ This was the highest result for Iran on record. After that, there was a clear pattern: in 2015, just before signing the JCPOA, Iran was 83rd in the same ranking,¹²⁰ but was able to recover some of the lost ground in 2017 by ranking 69th,¹²¹ only to recede to the 99th place (out of 141) in 2019 after the United States withdrew from the JCPOA.¹²²

The decline was mainly attributable to three pillars. In terms of Institutions, Iran moved from the 72nd to 120th place over a period of seven years ending in 2019. In the Macroeconomic Stability pillar, it ranked 134th, down from 27th place, and in the Product Market pillar Iran came in at 133rd place, down from 103rd. These trends reflect the impact of sanctions on the national economy in their various aspects. They produced an economic shock and resulted in higher inflation, the rial lost much of its value while GDP growth decelerated. The state had to respond to these challenges by tightening regulations.

In addition to this, the main obstacles for doing business in Iran as highlighted by the survey participants remained unchanged, including access to funding, lack of a stable regulatory framework, high inflation, red tape, poor infrastructure, labour laws and foreign exchange regulations. Moreover, business leaders have been pointing to these challenges when the sanctions pressure was at its peak as well as when the external environment seemed to normalise, which may suggest that what the Iranian businesses really want is a change in government policy rather than simply lifting the sanctions.

Iran succeeded in transitioning to more advanced technological exports compared to the shah era, even if low-tech products still dominate what it sells abroad. The Economic Complexity Index measures the high-technology content of exports using a scale from -2.5 to 2.5. On this scale,

¹¹⁹ The Global Competitiveness Report 2012-2013 // World Economic Forum. URL: https://www3.weforum.org/docs/WEF_GlobalCompetitivenessReport_2012-13.pdf

¹²⁰ The Global Competitiveness Report 2014-2015 // World Economic Forum. URL: https://www3.weforum.org/docs/WEF_GlobalCompetitivenessReport_2014-15.pdf

¹²¹ The Global Competitiveness Report 2017-2018 // World Economic Forum. URL: <https://www3.weforum.org/docs/GCR2017-2018/05FullReport/TheGlobalCompetitivenessReport2017%E2%80%932018.pdf>

¹²² The Global Competitiveness Report 2019 // World Economic Forum. URL: https://www3.weforum.org/docs/WEF_TheGlobalCompetitivenessReport2019.pdf

Iran rose from the 94th position out of 102 countries in 1974 to the 67th position among 131 countries in 2021 with an ECI index of -0.09.¹²³ The level of diversification of its exports remains quite low. According to Iran's Customs Administration, the top five non-oil exports between 21 March 2022 and 22 January 2023 included natural gas and petrochemical products, which accounted for over 30 percent of the country's exports.¹²⁴ One thing to keep in mind here is that the Iranian export statistics omit crude oil.

The Iranian processing sectors mostly focus on serving the domestic market and are unable to compete on the global market. Moreover, Iran has been keen to shield its domestic market by introducing high import duties at an average rate of slightly over 20 percent, WTO data show.¹²⁵ There are also all kinds of non-tariff barriers, which can play an even bigger role. Car manufacturing provides a case in point here. Iran decided to support its national manufacturers by slapping car imports with duties ranging from 90 percent to 130 percent. In 2018, the country banned these imports altogether in an effort to stop capital outflow and as part of the resistance economy policy.¹²⁶

This meant that domestic companies could benefit from a monopoly, which prompted them to switch to a rentier approach: prices of domestically produced vehicles soared, while their quality declined. In the summer of 2023, a new *Peugeot 206* made in Iran cost 5.2 billion rials, or about \$10,800, which was 15 times higher compared to May 2018.¹²⁷ Iranians often refer to the domestically produced cars as the "chariots of death"¹²⁸ due to their low safety standards and poor quality of materials. For example, a big car accident happened in January 2022 in Behbahan, a city in the country's southwest. It resonated across Iran and led to some intense parliamentary debates. Among the 59 vehicles involved in the crash, there was not a single

¹²³ The Observatory of Economic Complexity. URL: <https://oec.world/en/rankings/eci/hs6/hs96?tab=rank>

¹²⁴ Iran's Non-Oil Exports Exceeds \$45 Billion // Fars News Agency. URL: [https://www.farsnews.ir/en/news/14011117000896/Iran%27s-Nn-Oil-Exprs-Exceeds-\\$45-Billin](https://www.farsnews.ir/en/news/14011117000896/Iran%27s-Nn-Oil-Exprs-Exceeds-$45-Billin)

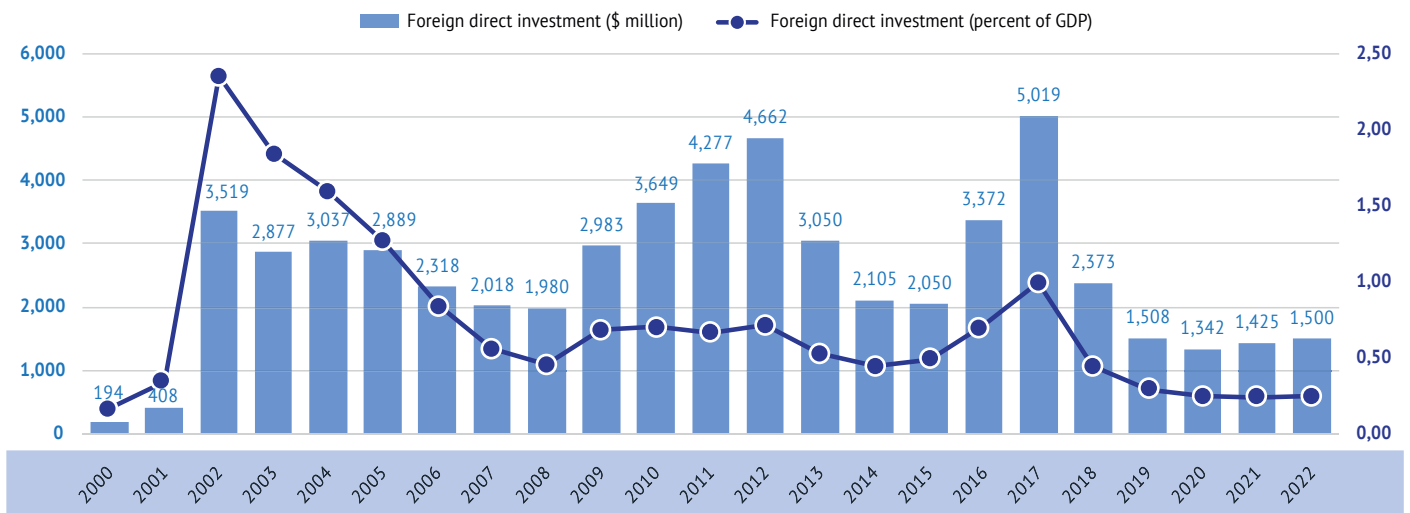
¹²⁵ World Trade Organization. URL: <https://stats.wto.org>

¹²⁶ More than 1,400 items were banned from import // Iranian Automobile Importers Association. URL: <https://ia-ia.ir/en/news/news8264/>

¹²⁷ Bozorgmehr N. Iran's car sector buckles under impact of sanctions // Financial Times. URL: <https://www.ft.com/content/f55ab564-7cea-4520-bfa2-a9382b3a8de1>

¹²⁸ Fallahi: arabeha-e marg-e irani bishtar az chingizhan-e moghol Iranian ra koshte and [Fallahi: Iran's Death Chariots Have Killed More Iranians Than Genghis Khan] // Iranian Students' News Agency. URL: <https://www.isna.ir/news/1401021107421/> فلاحی-ارابه‌های-مرگ-ایرانی-بیشتر-از-چنگیزخان-مغول-ایرانیان-را

Figure 9. FOREIGN DIRECT INVESTMENT IN IRAN



Source: United Nations Conference on Trade and Development

car with functioning airbags.¹²⁹ The government mitigated the import ban in the spring of 2022 in order to prevent further price increases, and in July 2023, the Guardian Council approved a draft law to lift the import restrictions altogether.¹³⁰

Car manufacturing has shed light on another issue the Iranian economy has been facing. In fact, the Iranian companies struggle to make competitive goods unless they can work with major transnational corporations, since these partnerships facilitate advanced technology transfers and the acquisition of know-how. The path to achieving self-reliance and self-sufficiency after the revolution de facto placed Iran off limits for international investors. In 2002, the country adopted a law on encouraging and protecting foreign investment as part of its market reforms, which at the beginning did help significantly increase direct investment in the economy (see Figure 9).

¹²⁹Vorud-e majles be baz nashodan-e airbagha dar tasadof-e zanjire-i Behbahan [Parliament discusses why airbags did not deploy in Behbahan accident] // Farda News. URL: <https://www.fardanews.com/بخش-سیاست-73/1123631-ورود-مجلس-به-باز-نشدن-ایر-بگ-ها-در-تصادف-ز-نجیر-ه-ای-بهبهان>

¹³⁰Iran lifts curbs on car imports to control prices // Press TV. URL: <https://www.presstv.ir/Detail/2023/07/15/707125/Iran-car-imports-restrictions-removal>

However, many of the regulatory restrictions remain in full force and effect. For instance, Article 81 of the Iranian Constitution forbids the “granting of concessions to foreigners for the formation of companies or institutions dealing with commerce, industry, agriculture, services or mineral extraction.”¹³¹ A law adopted in 2002 provides for referring any disputes between the Iranian government and foreign investors to Iranian courts (Article 19). Accordingly, Iran does not recognise the London Court of International Arbitration, or any other international investment arbitration institutions, including the World Bank’s International Centre for Settlement of Investment. Transferring capital abroad required an approval by the Foreign Investment Board and the Minister of Foreign Affairs and Finance (Article 14).¹³²

Taken together, these measures have been keeping foreign direct investment at a low, albeit stable, level of less than 1 percent of GDP. The further tightening of sanctions after 2018 reduced foreign investment to the lowest level since 2002. According to UNCTAD data, Iran attracted just \$1.5 billion in 2022.¹³³

The situation on the labour market has been a major factor in terms of competitiveness. An increase in the birth rate in the first years after the Revolution created a unique window of opportunity for Iran in terms of demographics in the 21st century: in 2016, people between 15 and 64 years old accounted for 71 percent of the country’s population, while retirees accounted for just 5 percent.¹³⁴ For many years, the Iranian economy struggled to create enough jobs to absorb its growing working-age population, and this was even before Iran was hit head-on with the sanctions. Between 2006 and 2011, the country created just 14,000 jobs per year, while about 700,000 people entered the workforce.¹³⁵

¹³¹The Constitution of Islamic Republic of Iran, Chapter VI, Article 81. URL: http://www.iranchamber.com/government/laws/constitution_ch06.php

¹³²Foreign Investment Promotion and Protection Act. URL: <https://www.iraninsuranceint.com/Other/Laws/FOREIGN-INVESTMENT-PROMOTION-AND-PROTECTION-ACT-FIPPA>

¹³³UN Trade and Development (UNCTAD). URL: <https://unctadstat.unctad.org/datacentre/dataviewer/US.FdiFlowsStock>

¹³⁴Roudi F., Azadi P. and Mesgaran M. Iran’s Population Dynamics and Demographic Window of Opportunity, Working Paper 4 // Stanford Iran 2040 Project, Stanford University. October 2017. P. 14.

¹³⁵Salehi Isfahani Dj. Iran’s economy 40 years after the Islamic Revolution // The Brookings Institution. 14.03.2019. URL: <https://www.brookings.edu/articles/irans-economy-40-years-after-the-islamic-revolution/>

Therefore, a substantial share of the workforce – just under 50 percent in 2022/23 – has been left outside of the labour market, and there has been a major gender imbalance too: the labour force participation rate for women and men is 13.6 percent and 68.2 percent respectively.¹³⁶ There is also another anomaly since having a higher education degree elevates unemployment risks. According to the Statistical Centre of Iran, between 22 December 2022 and 20 March 2023, unemployment among university graduates was equal to 12.8 percent, while the overall rate was 9.7 percent.¹³⁷ In fact, people with higher education degrees accounted for 37.2 percent of the unemployed in the country.¹³⁸

This placed Iran among the worst-affected countries in terms of the so-called brain drain. According to the *Stanford Iran 2040 Project*, the number of emigrants of Iranian descent increased from 0.5 million in 1979 to 3.1 million in 2019, or from 1.3 percent to 3.8 percent of the country's population.¹³⁹ The Iranian authorities believe that there are about 4 million compatriots living abroad.¹⁴⁰ When making this assessment in 2020, the country's Foreign Ministry may have focused on the ethnic background, rather than citizenship status. Emigration among specialists has already resulted in staffing shortages for certain sectors, for example in IT¹⁴¹ and healthcare,¹⁴² which had a negative bearing on economic growth prospects and undermined competitiveness.

¹³⁶ Iran Economic Monitor, Spring/Summer 2023: Moderate Growth amid Economic Uncertainty // The World Bank. P. 20. URL: <https://openknowledge.worldbank.org/server/api/core/bitstreams/1c94cb80-5f40-408f-a5c7-c7cfd97dc438/content>

¹³⁷ Under the Iranian statistical methods, persons who work at least one hour per week are viewed as being employed. Therefore, a relatively low unemployment rate may actually be attributable to a high level of partial employment.

¹³⁸ Graduate Unemployment at 12.8% in 4th Quarter: SCI // Financial Tribune. URL: <https://financialtribune.com/articles/domestic-economy/117741/graduate-unemployment-at-128-in-4th-quarter-sci>

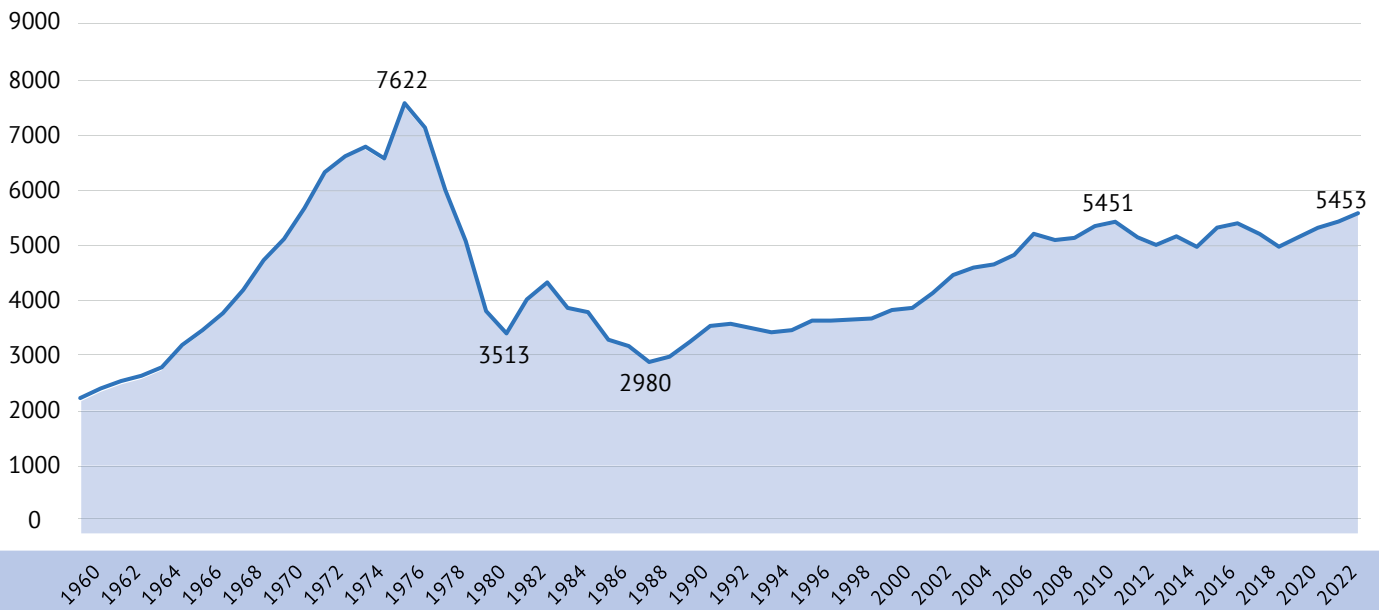
¹³⁹ Migration and Brain Drain From Iran // Stanford Iran 2040 Project. 2020. P. 8-9. URL: <https://iranian-studies.stanford.edu/iran-2040-project/publications/migration-and-brain-drain-iran>

¹⁴⁰ Amar-e parakandegi-e Iranian-e moghim-e kharej az keshvar [Statistics on the distribution of Iranians living abroad] // Ministry for Foreign Affairs. URL: <https://iranian.mfa.ir/files/mfairanian/Amar.pdf>

¹⁴¹ Bizaer M. Escalating emigration and the “drought” in Iran's IT industry // Middle East Institute. URL: <https://www.al-monitor.com/originals/2017/08/iran-irgc-economy-footprint-khatam-olanbia.html>

¹⁴² Official: Huge numbers of Iranian nurses migrating to foreign countries // Iran Front Page. URL: <https://ifpnews.com/official-huge-numbers-iranian-nurses-migrating-foreign-countries/>

Figure 10. PER CAPITA GDP (CONSTANT DOLLARS IN 2015 PRICES)



Source: World Bank

Neither the post-Revolutionary economic model, nor the policy by the Iranian leadership to counter sanctions succeeded in putting the country on the path towards sustainable development. Real GDP growth averaged 10.5 percent during economic reforms in 1963–1977.¹⁴³ It was about 4.5 percent between 1997 and 2011, and further decelerated to 1.37 percent in 2012–2022.¹⁴⁴

Iran was the world's 14th largest economy by its nominal GDP on the eve of the 1979 Islamic Revolution, and the shah wanted the country to become the world's top 5 economy. However, by 2022, Iran was down to the 40th position.¹⁴⁵ According to the World Bank, at its peak in 1976, the per capita GDP in Iran in constant 2015 dollar prices was equal to \$7,622, and

¹⁴³ Economy in the Pahlavi period // Encyclopaedia Iranica. URL: <https://www.iranicaonline.org/articles/economy-ix#prettyPhoto>

¹⁴⁴ Economist Intelligence Unit. URL: <https://country.eiu.com/iran>

¹⁴⁵ World Development Indicators // World Bank. URL: <https://datahelpdesk.worldbank.org/knowledgebase/articles/906522-data-updates-and-errata>

since then Iran has been unable to make any headway (see Figure 10). A recovery trend emerged in the 1990s on the back of market reforms and the end of the war with Iraq, but the sanctions Iran faced in 2012 stopped the country in its tracks, leading to a period of stagnation.

Iran has a limited exposure to the international division of labour, which is due to two main reasons: the country is committed to shielding its domestic producers from foreign goods, which could compete on price and quality, and wants to ensure that the essential goods its people need are manufactured domestically. This explains the protectionist policy, even if its masterminds recognised its shortcomings and deficiency, as demonstrated by the car manufacturing industry. In this situation, the sanctions-related risks overlap with the risks of doing business in Iran, dissuading most of the foreign investors from working with this country.

Iran may have a lot of potential in terms of its demographics, but has been unable to tap it for developing its economy. Its private companies have had to operate in an extremely challenging economic environment, preventing them from creating a sufficient number of jobs in order to match the demand within the Iranian population in terms of employment opportunities, especially for people with higher education. Some people opted for relocating abroad to find a job or build a better life, while others have been unable to enter the workforce or had to accept lower-skilled positions. Therefore, Iran has failed to benefit from the demographic dividend at a time when its working age population exceeded the share of dependents several times.

Iran could well overcome this stagnation by undertaking structural reforms. In fact, there were attempts to do just that under several administrations, including attempts to tax companies owned by Islamic funds, privatise major corporations, or cancel the fixed foreign exchange rate. But the lack of consensus within the country's elite prevented these reforms from becoming a reality. It would take an all-out policy effort with a focus on creating a favourable environment for all economic operators, including foreign investors, in the strategic sectors as designated by the state and beyond, to generate sustained economic growth.¹⁴⁶

¹⁴⁶ Смородинская Н.В., Катуков Д.Д. Иранский опыт пребывания под санкциями: макроэкономические итоги и выводы для России // Вестник Института экономики Российской академии наук. 2023. № 6. С. 26-42. URL: https://doi.org/10.52180/2073-6487_2023_6_26_42

Annex 1.

Economic sanctions against Iran¹⁴⁷ – Timeline

Period	United States	Other countries	United Nations
1979–1995 Unilateral US sanctions	<p>1979</p> <ul style="list-style-type: none"> The United States froze the assets of the Iranian government and Central Bank reserves after American diplomats were taken hostage in Tehran (Executive Order 12170). 		<p>1980</p> <ul style="list-style-type: none"> The USSR vetoed a UN Security Council resolution imposing economic sanctions against Iran (S/13735).
	<p>1980</p> <ul style="list-style-type: none"> A ban on trade and financial transactions with Iran (Executive orders 12205, 12211). 		
	<p>1981</p> <ul style="list-style-type: none"> Under the Algiers Accords, hostages were released and sanctions lifted. 		
	<p>1984</p> <ul style="list-style-type: none"> The US Department of State designated Iran as a state sponsor of terrorism, resulting in a ban on exports of dual use goods and providing financial assistance. 		

¹⁴⁷ The table is compiled based on the following works: Тимофеев И.Н., Соколыщик Ю.С., Морозов В.А. Санкции против Ирана: уроки для России в новых международных условиях // Вестник Санкт-Петербургского университета. Международные отношения. 2022. Т. 15. Вып. 4. С. 405–420. URL: <https://doi.org/10.21638/srbu06.2022.404>; Тимофеев И.Н. Пиррова победа? Опыт санкционной войны против Ирана. Валдайская записка № 84 // Международный дискуссионный клуб «Валдай». 09.04.2018. URL: <https://ru.valdaiclub.com/a/valdai-papers/valdayskaya-zapiska-84/>; Тимофеев И.Н. Санкции США против Ирана: опыт применения и перспективы развития. // Полис. Политические исследования. 2018. No 4. С. 56-71. URL: <https://doi.org/10.17976/jpps/2018.04.05>

Period	United States	Other countries	United Nations
<p>1979–1995 Unilateral US sanctions</p>	<p style="text-align: center;">1987</p> <ul style="list-style-type: none"> Embargo on imports from Iran, except for petroleum products refined from Iranian crude oil in a third country (Executive Order 12613). <p style="text-align: center;">1992</p> <ul style="list-style-type: none"> Ban on the deliveries of dual use goods and conventional weapons (Iran-Iraq Arms Non-Proliferation Act). <p style="text-align: center;">1995</p> <ul style="list-style-type: none"> Ban on investment in the oil industry (Executive Order 12957). Ban on exports to Iran and investment in assets held by the Iranian government (Executive Order 12959). 		
<p>1996–2009 Sanctions expand to reach a global scale</p>	<p style="text-align: center;">1996</p> <ul style="list-style-type: none"> Ban on supplies of petroleum products, providing and insuring ships; introducing the notion of extra-territorial/secondary sanctions (Iran and Libya Sanctions Act). The United States government bound to vote in international organisations against granting loans to Iran as well as denying financial assistance to countries engaged in arms trade with Iran (Anti-Terrorism and Effective Death Penalty Act). 		<p style="text-align: center;">2006</p> <ul style="list-style-type: none"> Ban on the supply of goods and other equipment related to Iran's nuclear programme, as well as associated financial transactions (UNSC Resolution 1737). <p style="text-align: center;">2007</p> <ul style="list-style-type: none"> Call to refrain from providing financial and other kinds of assistance (except for humanitarian aid), as well as lending to Iran (UN Security Council Resolution 1747).

Period	United States	Other countries	United Nations
1996 – 2009 Sanctions expand to reach a global scale	<p>1997</p> <ul style="list-style-type: none"> Consolidating the applicable sanctions provisions regarding Iran (Executive Order 13059). <p>2008</p> <ul style="list-style-type: none"> Ban on U-Turn transfers in the interests of the Iranian banking sector (The Iranian Transactions Regulations, 31 CFR part 560). 		<p>2008</p> <ul style="list-style-type: none"> Tightened sanctions targeting the provision on financial and logistics services to Iran, as well as granting export loans (UNSC Resolution 1803).
	<p>2010</p> <ul style="list-style-type: none"> Lowered the threshold for transactions with sanctioned sectors by a factor of two, banned US exports to Iran and imports from Iran, reinforced extra-territorial sanctions, especially regarding the banking sector (Comprehensive Iran Sanctions, Accountability, and Divestment Act). 	<p>2012</p> <ul style="list-style-type: none"> Ban on supplying Iranian oil and petroleum products to EU countries (EU Council Decision 2012/35/CFSP). Preventing the Iranian banking system from accessing SWIFT in the context of a ban on financial services to Iran (Council Regulation (EU) No 267/2012). Ban on Iranian gas supplies to the EU (Council Decision 2012/635/CFSP). 	<p>2010</p> <ul style="list-style-type: none"> Ban on any foreign investment in technology and projects dealing with missile and nuclear technology; ban on financial transactions with Iranian banks suspected of accompanying the nuclear programme, as well as ban on opening their branches outside of Iran (UNSC Resolution 1929).
2010 – 2013 A concerted sanctions effort			

Period	United States	Other countries	United Nations
2010–2013 A concerted sanctions effort	<p style="text-align: center;">2012</p> <ul style="list-style-type: none"> Sanctions against ship suppliers for transporting Iranian oil and insurance companies; financial sanctions expanded to cover Iran's sovereign debt (Iran Threat Reduction and Syria Human Rights Act). Expanded sanctions targeting the financial and energy sectors, ships and ship owners, while easing restrictions on oil purchases by third countries in emergency situations (Iran Freedom and Counter-Proliferation Act). 		
2014–2017 A diplomatic respite	<p style="text-align: center;">2014</p> <ul style="list-style-type: none"> Restrictions on Iranian exports of oil and petroleum products, trade in gold and precious metals, supplies of parts and services for the civil aviation sector placed on pause (JPOA). <p style="text-align: center;">2016</p> <ul style="list-style-type: none"> Lifting restrictions targeting Iran's oil and gas industry and its banking sector (JCPOA). 		<p style="text-align: center;">2015</p> <ul style="list-style-type: none"> Suspended preceding resolutions subject to Iran's compliance with the JCPOA with an option to cancel them in 10 years (UNSC Resolution 2231).

Period	United States	Other countries	United Nations
<p style="writing-mode: vertical-rl; transform: rotate(180deg);">2018 – 2024 Maximum pressure by the United States</p>	<p style="text-align: center;">2018</p> <ul style="list-style-type: none"> ● Re-imposing sanctions against Iran (Executive Order 13846) by reinstating bans on: <ul style="list-style-type: none"> ● buying Iranian oil and petroleum products and entering into transactions with companies in this sector ● supplying goods and services to companies from the Iranian automotive sector (cars, trucks, buses, motorcycles and the related parts) and making settlements with them ● providing financial, material, or technological support for, or goods and services to the Central Bank of Iran ● significant transactions related to the purchase or sale of Iranian rials or a derivative, swap, future, forward, or other similar contract whose value is based on the exchange rate of the Iranian rial ● maintaining significant funds or accounts outside the territory of Iran denominated in the Iranian rial ● providing financial, material, or technological support for, or goods or services in support of, the purchase or acquisition of US bank notes or precious metals by the government of Iran. 	<p style="text-align: center;">2018</p> <ul style="list-style-type: none"> ● Ban on access to SWIFT for Iranian banks reinstated. <p style="text-align: center;">2020</p> <ul style="list-style-type: none"> ● Launching the Instrument for Supporting Trade Exchanges between the EU and IRAN (INSTEX) with a single transaction worth 500,000 euros. <p style="text-align: center;">2023</p> <ul style="list-style-type: none"> ● INSTEX cancelled. 	

Period	United States	Other countries	United Nations
2018–2024 Maximum pressure by the United States	<p style="text-align: center;">2019</p> <ul style="list-style-type: none"> Sanctions targeting the Iranian metals industry – a ban on significant transactions to sell, supply or transfer iron, steel, copper and aluminium to Iran (Executive Order 13871). <p style="text-align: center;">2020</p> <ul style="list-style-type: none"> Sanctions targeting machine building, textile and construction sectors and banning significant transactions and settlements with Iranian companies from these sectors (Executive Order 13902). 		

Annex 2.

Shady schemes.

How Iranians evade US sanctions

When asked to describe the methods they use to evade sanctions in international transactions, Iranian businesses sometimes joke that they have to operate much like drug traffickers. Those taking part in these schemes in violation of the US sanctions against Iran run similar risks, judging by the regular news releases coming from the US Department of the Treasury¹⁴⁸ and Department of Justice.¹⁴⁹

Sector: Trade transactions

- Using shell companies in third countries in order to conceal the ultimate purchaser of goods subject to an export embargo to Iran. These networks purchase goods subject to export controls from foreign suppliers so that these products can be delivered to intermediary jurisdictions such as Turkey or the UAE and later shipped to Iran.
- Buying goods and technology from countries with weak export controls or limited ability to enforce sanctions.
- Transferring payments to foreign suppliers using accounts in third countries, while the suppliers continue to work through their offices in Tehran.
- Providing suppliers, dealerships, brokers, re-insurance agents and other intermediaries false information pretending that Iran is no longer subject to the sanctions in question.
- Misleading counterparts by pretending that the Office of Foreign Assets Control (OFAC) does not ban specific activities without producing copies of the relevant approvals and authorisations.¹⁵⁰

Sector: Shipping

- Manipulating automatic identification systems on sea vessels by turning off transponders or otherwise obscure their movement (spoofing), changing ship names, seven-digit IMO identification numbers, and even concealing the next port of entry or information about the rout.
- Painting over the IMO number in order to conceal the fact that the ship belongs to Iran or to pose as a different ship.

¹⁴⁸ Treasury Targets Large Iranian Military Financial Facilitation Networks // U.S. Department of the Treasury. 29.11.2023. URL: <https://home.treasury.gov/news/press-releases/jy1932>

¹⁴⁹ Telecommunications Consultant Pleads Guilty to Violating Sanctions on Iran // Office of Public Affairs, U.S. Department of Justice. 03.10.2023. URL: <https://www.justice.gov/opa/pr/telecommunications-consultant-pleads-guilty-violating-sanctions-iran>

¹⁵⁰ Iran-Related Civil Aviation Industry Advisory // U.S. Department of the Treasury. 23.07.2019. URL: <https://ofac.treasury.gov/media/16611/download?inline>

- Falsifying dispatch documents by concealing the actual origin of goods, most commonly for oil, petroleum products and metals.
- Engaging in ship-to-ship transfer operation by transferring sanctioned goods from one ship to another, especially during night hours.
- Taking unconventional, diverted routs and stopping at unplanned transit locations in order to conceal the final destination.
- Using foreign flags and changing them frequently, re-registering ships under new state flags or sailing without them.
- Using shell companies to process shipments in order to conceal the actual purchaser, creating complex multi-layered property ownership schemes and constantly changing them.¹⁵¹
- Arranging charter flights for planes purchased in violation of sanctions, declaring an emergency while flying over Iran in order to land on Iranian territory¹⁵²
- Using the Dhow, traditional Arab vessels dating back to the Middle Ages, to carry out illegal sea shipments on relatively small distances, including sending small arms to Yemen.¹⁵³

Sector: Payments

- Relying on Hawala transactions to carry out international money transfers without moving funds across borders.¹⁵⁴
- Using crypto exchanges for carrying out transactions¹⁵⁵ (Iran accounts for about 4.5 percent of the world's Bitcoin mining sector).¹⁵⁶
- Using smart contracts in foreign trade transactions.¹⁵⁷

¹⁵¹ Рекомендации по противодействию практике незаконных морских перевозок и уклонения от санкций // Информационный бюллетень по вопросам санкций для отрасли морского судоходства, топливно-энергетического и металлургического секторов, а также связанных с ними групп. Министерство финансов США. 14.05.2020. URL: <https://ofac.treasury.gov/media/44706/download?inline>

¹⁵² Four Disappeared Airbus A340s End Up In Iran // Iran International. 29.12.2022. URL: <https://www.iranintl.com/en/202212297629>

¹⁵³ United States Files Forfeiture Action Against Over Nine Thousand Rifles and Over 700,000 Rounds of Ammunition Enroute from Iran to Yemen // Office of Public Affairs, U.S. Department of Justice. 06.07.2023. URL: <https://www.justice.gov/opa/pr/united-states-files-forfeiture-action-against-over-nine-thousand-rifles-and-over-700000>

¹⁵⁴ The role of Hawala and other similar service providers in money laundering and terrorist financing // FATF. October 2013. URL: <https://www.fatf-gafi.org/en/publications/Methodsandtrends/Role-hawalas-in-ml-tf.html>

¹⁵⁵ Berwick A., Wilson T. Crypto exchange Binance helped Iranian firms trade \$8 billion despite sanctions // Reuters. 07.11.2022. URL: <https://www.reuters.com/business/finance/exclusive-crypto-exchange-binance-helped-iranian-firms-trade-8-billion-despite-2022-11-04/>

¹⁵⁶ Berwick A., Wilson T. Crypto exchange Binance helped Iranian firms trade \$8 billion despite sanctions // Reuters. 07.11.2022. URL: <https://www.reuters.com/business/finance/exclusive-crypto-exchange-binance-helped-iranian-firms-trade-8-billion-despite-2022-11-04/>

¹⁵⁷ Iran makes first import order using cryptocurrency – report // Reuters. 09.08.2022. URL: <https://www.reuters.com/business/finance/iran-makes-first-import-order-using-cryptocurrency-tasnim-2022-08-09/>

Annex 3.

Red flags. Methods for identifying US sanctions violators

Under the OFAC guidance, those who violate the US sanctions regime tend to engage in the following activities:

- Using corporate vehicles to obscure ownership, source of funds, or countries/entities involved, particularly sanctioned jurisdictions or restricted entities.
- Avoiding sharing information about the end use of a product, including completing an end-user form.
- Declining customary installation, training, or maintenance of the purchased item(s).
- “Cyber spoofing” of email or web addresses to give the appearance that an illegitimate inquiry is coming from a legitimate business.
- Internet or corporate website traffic originating from IP addresses that do not correspond to a customer’s reported location data.
- Transactions involving entities with little or no web presence.
- Using personal rather than corporate email addresses.
- Adding last-minute changes to shipping instructions.
- Conducting payments coming from third countries or businesses not listed on the End-User Statement or another applicable end-user form.
- Using shell companies to conduct international wire transfers, often involving financial institutions in jurisdictions distinct from company registration.
- Adding changes to standard business documents to obscure the ultimate customer.
- Using residential addresses or addresses found to be common to multiple corporate entities.
- Executing transactions associated with atypical shipping routes for a product and destination.
- Routing purchases through certain trans-shipment points commonly used to illegally redirect restricted items to embargoed destinations.¹⁵⁸

¹⁵⁸ Guidance to Industry on Iran’s UAV-Related Activities // OFAC, U.S. Department of the Treasury. URL: <https://ofac.treasury.gov/media/931876/download?inline>

- ✕ Valdai_Club
- 📍 valdai_club
- 📧 valdaidiscussionclub
- 📧 Международный
дискуссионный
клуб «Валдай»

admin@valdaiclub.com



Council on Foreign and Defense Policy



Russian International
Affairs Council



MGIMO
UNIVERSITY



HIGHER SCHOOL OF ECONOMICS
NATIONAL RESEARCH
UNIVERSITY