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Main Article

Do Sanctions Backfire? The Economic Costs of Sanctions for the Sender Country—The Example of Iran as the Targeted Country

Christian Alexander Weutscheck

Abstract *This paper analysis the costs of sanctions by the 'sender country' i.e. targeting country or country imposing sanctions on one or more other countries. It uses the example of the U.S. sanctions against Iran because these are the longest-lasting sanctions in place. It conducts a qualitative analysis of the existing studies of this topic. The findings are, that sanctions come at a price for the sender country too, but these costs vary with the type and the duration of sanctions. It analyses the methodology used for these studies, which is in general apply the econometric Gravity Model of Trade and shows the difficulties applying this model. It also highlights other economic costs for the sender country, apart from the losses in trade. It particularly research financial sanctions, though in the case of Iran these have been de facto general sanctions. It looks into other costs as well; thus even the announcement of sanctions by the sender country creates already costs for the sender country. The results give a comprehensive picture of the costs of sanctions for the sender country.*

Keywords: Iran, Sanctions, Costs, USA, Oil.

1. Economic costs of sanctions to the sender country and third countries

The costs of the sanctions is a question that not often appears in the discussion about literature on sanctions. This is quite stunning, as sanctions are usually not a tiny, little thing, but rather a big macro economical undertaking with often severe financial, socio-economic and geopolitical consequences. This neglect might be caused by the fact that the discussion about and analysis on sanctions is usually lead by political scientist and whose standard field of view in general solely or primarily concern the political implications of sanctions on the target country. The economic implications of sanctions to the sender country are usually out of their field of focus and even recognition.

Not only the United States (U.S.) are using sanctions, the second biggest user of sanctions is the E.U. Sanctions can be an important set of tools for the European Union: "Sanctions are part of a panoply of tools used by the European Union to further the goals of its Common Foreign and Security Policy (C.F.S.P.). Called 'restrictive measures' in official European Union (E.U.) language, they are imposed against target governments, commercial entities, and individuals to penalise a policy or course of action that contravenes international law and political norms.

Over the past two decades, the E.U. has made increasing use of sanctions. Its role as an international sanctions' 'sender' is now comparable to that of the United States, the world's biggest sanctioning power. While its position has historically been complementary to the United Nations' (U.N.) sanctions regimes, the E.U. has in recent years imposed unilateral sanctions more frequently" (Dreyer & Luengo-Cabrera 2015: 7). This development can be partially explained, by the fact that the E.U. lacks a joint army, and the sanctions are its sole enforcement tool (Hufbauer & Jung 2020: 6).

1.1. Costs of sanctions: The case of the Islamic Republic of Iran

Arguably the sanctions against the Islamic Republic of Iran are unique ones in several aspects.

First, the first sanctions were already imposed right after the establishment of the Islamic Republic in 1979, as the United States (U.S.) embassy in Tehran was occupied and U.S. citizens were taken hostage after which the U.S. imposed retaliation sanctions almost instantly. From this time onwards until today Iran was never without sanctions, mainly U.S. and U.S.-led sanctions. The intensity of the sanctions varied during these four decades, but they were never totally removed.

Second, the international community discovered, in 2003, that Iran had a programme for uranium enrichment, which was a violation of the Non-Proliferation Treaty (N.P.T.). The N.P.T. allows limited uranium processing for peaceful purposes. only This led to the introduction of new sanctions. (Giumelli & Ivan 2013: 13).

Also, in intensity, scale and severity the U.S. and U.S.-led sanctions were unique. For a certain period of time, the United Nations (U.N.) and the European Union (E.U.) joined the American. efforts to stop the Iranian nuclear programme. During this time Iran was practically disconnected from any trade with the West and the international monetary system. Perhaps surprisingly, the outcome of this effort was the Joint

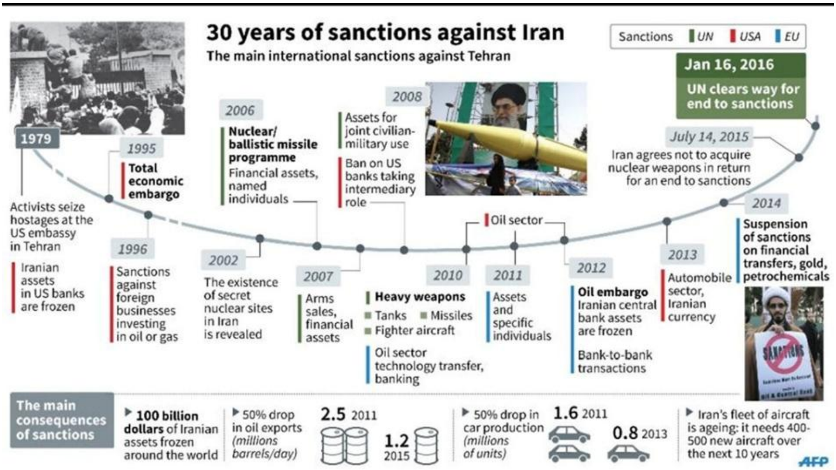
Comprehensive Plan of Action negotiated with the Iranian regime, known commonly as the Iran nuclear deal.

The U.S. sanctions against Iran has been interpreted as a long, Cold War-style standoff (Esfandiary & Fitzpatrick 2011: 153).

Timeline of Iran sanctions

The sanctions against the Islamic Republic of Iran are one of the most comprehensive sanctions in history. It is not practical, nor insightful to list all of these here. Still, the following graphic gives an overview:

Figure 1: 30 years of sanctions against Iran (Bommenel 2016)



A detailed list is available in chapter eight of the source Iran Primer, with a list of sanctions from 1979 to 2021 (Nada & Yacoubian 2021). The E.U. sanctions against in this case Iran are so complex and wide-ranging, that the E.U. has created an entire website dealing with its sanction policy. [1] The sanctions against Iran can be divided in two phases. The first sanction period from 1979 to 2005 mainly concerns U.S. unilateral sanctions while the second sanction period from 2006 to the present, also includes U.N. and E.U. sanctions (Samore 2015: 3-6).

A core reason for the U.N., U.S. and E.U. sanctions policies is Iran's apparent wish for nuclear weapons. Most sanctions are related to this perceived danger and are meant to convince Iran that it is better not to attain such weapons. A problem here is that all permanent members of the U.N. Security Council are nuclear powers themselves, and nuclear weapons are therefore perceived as prerequisite to become on global stage an important country. In 2006, Iran's President Ahmadinejad wrote, that Iran wants to be treated equal by Washington (Bowman 2008: 635). The consequent problem and challenge is that "[...] Tehran must be convinced that the political and strategic gains to Iran of crossing the nuclear weapons threshold will be far outweighed by the political, strategic and economic costs of doing so" (Bowen & Brewer 2011: 943).

Between 2006 and 2010 the U.N. Security Council (U.N.S.C.) passed six resolutions, that targeted Iran's nuclear programmes and missile programmes, after the International Atomic Energy Agency formally referred Iran to the Security Council in 2006, for non-compliance with its nuclear non-proliferation obligations. From 2007 onwards the European Union (E.U.) started sanctioning Iran as well (Samore 2015: 6, 8).

At first the E.U. did not have much enthusiasm for imposing sanctions on Iran. This only changed later, as the E.U. – Iran trade was already at a low level, mainly because of the U.S. financial sanctions against Iran. The E.U. sanctions against Iran were more than purely symbolic, but the costs were already insignificant. This was combined, with a growing fear in the E.U. of proliferation of weapons of mass destruction in Iran (Patterson 2013: 143).

Some researchers conclude that the international and U.S.-led sanctions have actually slowed down Iran's nuclear programme and increased its costs in Iranian economy over the years. Which is a better outcome than the alternatives of a war with Iran or a nuclear-armed Iran (Giumelli & Ivan 2013: 19).

1.2. Financial sanctions, the privatisation of sanctions

After the terror attacks of 9/11 by Al Qaeda against the U.S. a new tool was added to the U.S. sanction's toolbox, that of financial sanctions. Instead of direct sanctions against persons or businesses, financial sanctions are indirect sanctions. Financial sanctions targeting banks and other financial institutions with penalties that who have business relationships with sanctioned entities. These penalties range from financial penalties to loosing access to the Western financial system.

The global banking system work works in ways directly and indirectly relevant to sanctions affecting it. Thus, transactions within banks are communicated with by the Society for Worldwide Interbank Financial Telecommunication (S.W.I.F.T.) (S.W.I.F.T. SC 2022). In 1973 S.W.I.F.T. replaced the T.E.L.E.X. system of text-based messaging via teletypewriters or teleprinters over phone lines and its message. Each S.W.I.F.T.'s message contains the transaction information in a digital code transmitted through the internet. For instance, account 222333 of bank XY in country A wants to transfer EUR 1000.00 to account 444666 of bank AB in country Z. Without S.W.I.F.T. the money cannot be transferred between the banks because the S.W.I.F.T. system has a global monopoly on this service.

The idea behind financial sanctions is that if every person involved in financial transactions needs to use S.W.I.F.T., it can be used to stop the financing of organised crime, terrorism and the proliferation of Weapons of Mass Destructions (W.M.D.s). Therefore, it obliges the banks to check their customers if they have connections with sanctioned entities or do other illicit activities. If they do and are allowed to continue doing it unhindered, the banks in question run the risk of being fined by the sender country or third countries compelled or willing to comply with the sender country's sanctioning regime.

As a result, the compliance costs rise of any bank unwilling to comply. Thus, the bank in question is often forced to shut down the entire business line if the penalising risks and costs outweigh any profits to be made from the transactions by the person or persons. The average compliance costs for banks were 53% higher than 2013 (Arnold 2016: 89).

In the case of Iran, the financial sanctions caused over-sanctioning or over-compliance. To avoid penalties and other problems, banks often stopped the entire business line with Iran by any of their customers, with turned the targeted sanctions in de facto comprehensive sanctions (Giumelli & Ivan 2013: 15).

Financial sanctions in effect represent the privatisation of sanctions. Banks needed to check without guidelines, instructions, or access to secret service information if their customer or customers were behaving illegally or at least suspiciously to ascertain if they could still do business with that customer or customers, without risk of being fined or otherwise penalised by the sanctioning regime themselves.

So nowadays banks must verify whether any of their customers might relate to illegal activities—including those unrelated to any sanctions. That many of those persons, who do not want to be seen and are used to the Western sanction's system, are often using a network of front-end companies and straw men, does not make it easier for the banks to fulfil their compliance obligations. In the end "commercial interests, not government action, dictate whether a financial institution enters or exits a certain market" (Arnold 2016: 92).

The financial sanction costs for banks and clients using S.W.I.F.T. codes also affect their also market shares. In response Russia developed in 2015 its own financial messaging system for the domestic market, mostly to insulate itself from international sanction regimes against Iran, other countries and itself. P.R. China did the same; it also developed a domestic financial transaction system in 2015 (Arnold 2016: 92).

As Drezner pointed out, financial sanctions could overreach and therefore permanently move businesses out of the U.S. (Drezner 2016)—particularly those unable or unwilling to comply with the sanctions the U.S. has imposed and is imposing on Iran and other countries. This paper finds that such sanctions did and do overreach, to the cost of the U.S.

government and economy—negative effects of sanctions by a sender country generally neglected in the literature of sanction studies.

Another possibility needs to be considered: typical sender countries being subjected to sanctions themselves for a change. Thus, financial sanctions in particular be used against the U.S. or the E.U. as well? In theory yes, these countries and collectives of countries are still the biggest and most diversified economies in the world, which would make the burden on the sender country or countries against these entities excessively large. Indeed, the sanctioning costs would be far bigger for them right from the start than any effects of the sanctions on the U.S. and/or E.U. themselves (Berner, Cecchetti & Schoenholtz 2022).

1.3. Costs of sanctions to the U.S. as Sanction's sender country

One venue where one can observe the costs of sanctions to the U.S. is Wall Street, more specifically at the stock market volatility there. A study made by C. Webb (Webb 2020) analysed the effect of sanctions and sanction threats on specific companies with commercial interests in a targeted state. Thus, announcement by U.S. President Donald Trump of new sanctions against Iran lead importers to immediately cut imports from Iran, although no new sanctions were enacted at the time of the announcement (Webb 2020: 753).

There are two major findings from Webb's study about sanctions and stock market volatility. First is, sanctions are always costly for sender country's firms. Second is, sanction threats alone also create costs. Just the mere announcement of sanctions creates stock volatility, even if these are not followed by an actual bill or costs (Webb 2020: 771). The stock volatility can create further costs for these firms, like increase costs on debt or equity financing.

Another study, conducted by Leslie et.al., concluded that the U.S. sanctions against Iran from 1995 to 2012 cost the U.S. economy between $134.7 and $175.3 billion in potential revenues (Leslie, Marashi & Parsi 2014: 12); see also figure 5. This study was conducted with using the econometric gravity model of trade. Another result was that lost export revenues could be translated into an average of 51,043 and 66,436 lost jobs in America each year. The highest potential job losses in that country could have been in 2008 with 214,657 to 257,389 lost job opportunities (Ibid: 12).

There are also other costs. When the Shah Mohammad Reza Pahlavi fell in 1979 and the so-called 'Islamic Revolution' began, the U.S. government stopped the delivery of military equipment to Iran according to the contracts made with the Shah's government. This was to prevent U.S. military equipment end up in a potential adversary of the U.S. Theses foreign military sales (F.M.S.) were worth $400 million at that time. The money was held in the Iran F.M.S. Trust Fund.

When the United States reached an agreement with Iran in 2015 with the Joint Comprehensive Plan of Action (J.C.P.O.A.), they agreed to pay the money back plus interest. The interest accumulated over the decades to $1.3 billion. It was paid from the U.S. Department of the Treasury's 'Judgment Fund'. One must keep in mind that American victims of Iranian terrorism have been awarded a total of $46 billion in courts. A small partition of the F.M.S. fund has been used to pay for these judgments (Katzman 2018: 2).

Additional payments from the U.S. to Iran have included compensation for the mistakenly shoot down Iranian Airbus passenger jet, Iran Air flight 655. The compensation consisted of $300.000 for every wage-earning victim and $150.000 for every nonwage earning victim. The U.S. also provided a used plane as replacement (Katzman 2018: 3).

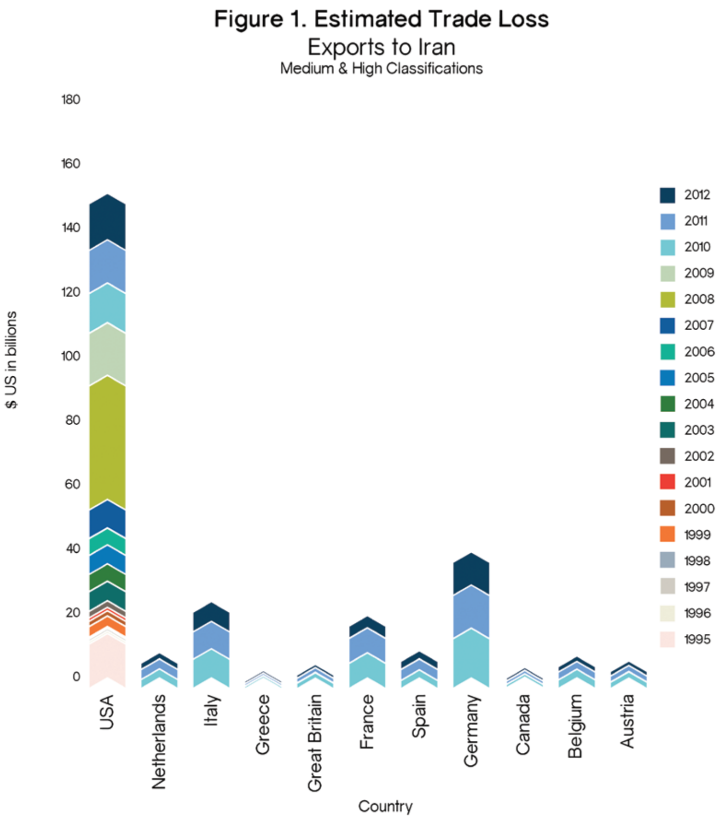
Risk of retaliation by the targeted country

Another risk of sanctions for the sender country found Richard D. Farmer (Farmer 2000), is the risk of retaliation by the targeted country. Farmer argues that retaliation from an industrialised country is more likely, than from a developing country, because for the developing country retaliation could easily escalate in an upward spiral of sanctions, trade restrictions, and related costs it could ill afford (Farmer 2000: 104).

1.4. Crucial steps to help Ukraine win the war against Russia

To reiterate, there are surprisingly few studies about the costs of sanctions or the one or more sender countries and other, affected third countries – in stark contrast to the numerous studies of the costs of sanctions for the one or more targeted countries. Usually, those studies if they include an economical perspective, look only at the economic cost for the target country. One rare study about the costs of the sanctions for the sender country is *Losing Billions. The Cost of Iran Sanctions to the U.S. Economy* by Jonathan Leslie, Reza Marashi and Trita Parsi, published by the National Iranian American Council in July 2014. Their result is shown in Figure 2 below ('Figure 1' in their publication). The U.S. appears to have lost well over $ 140 billion cumulatively in lost trade revenues with Iran due to their sanctions against Iran between 1995 and 2012 alone.

Figure 2: Estimated Trade Loss. Exports to Iran 1995-2012 (Leslie, Marashi & Parsi 2014: 13)



Unfortunately, these numbers can only be interpreted as estimations. The methodology of this study seems to contain several errors, related to the inherent problems with the Gravity Model described before. On the other hand, it shows how important it is that proper research on this subject will be done.
Not having reliable numbers about the costs of sanctions for a sender country poses a major problem of insight on the scale of characteristics of this phenomenon. Not having numbers available at all is even worse, as this helps to account for the general view in the current sanction literature that sender i.e. sanctioning countries incur hardly or no such costs at all. This leads to a careless overuse of sanctions, without taking into account the likely consequences for the 'sanctioners' themselves. Politicians are therefore unable to make a balanced risk-gain/cost-benefit decisions on whether or not to impose sanctions, and which kinds of sanctions if any. The point gain is generally known, but the point risk stays in the shadow.

To understand how the countries of the European Union were affected by the sanctions, one need to look how their trade with Iran changed. A detailed view of what happened with the Iranian trade is present in the trading statistics. These figures show Iran's trade sorted by continents, purple is used for Europe, red for Asia, green for South America, blue for North America, yellow for Africa and orange for Australia. The dimensions of the rectangles are relative to trade of that specific country in Iran's total trade. Unfortunately, the captions of the columns were sometimes bigger generated then the columns are, making these look like as if these were cut off, which is not the case.

Iran's Imports

As Figure 3 below shows, Iran's imports in 2004 reached a total of $39.5 billion before the new sanctions. As Figure 4 further below shows however, Iran's imports in 2016 were still worth a of total $54.2 billion [2], even many years after the introduction of the new sanctions.

Figure 3: Iran's imports 2004, before the new sanctions (Iran's imports 2004: 2019)

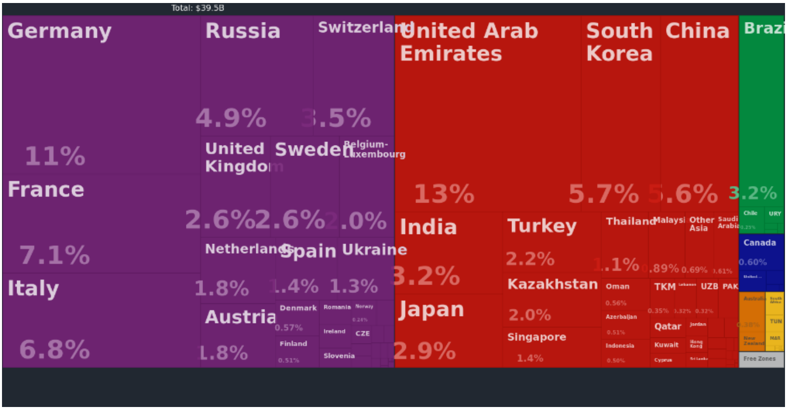
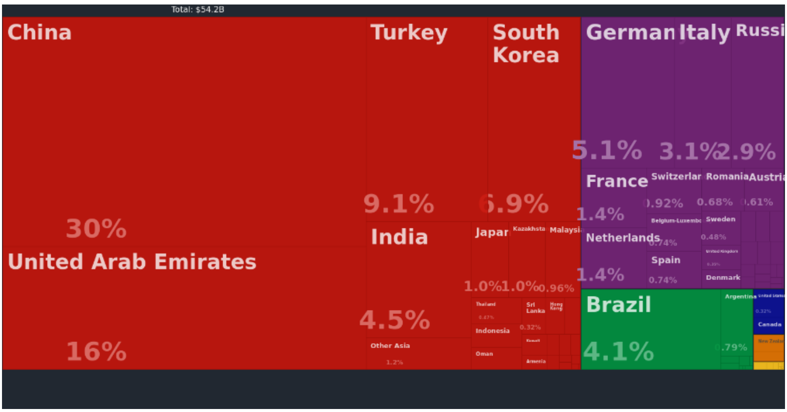


Figure 4: Iran's imports 2016, after the sanctions (Iran's imports 2016: 2019)



Comparing the two graphs clearly show that there has been a swap in trading partners. Before the new sanctions the countries of the European Union have been Iran's biggest trading partners. They are now mainly replaced with countries from East Asia. This shows impressively how big the trade losses for the European Union countries have been as third countries having been largely compelled to go along with the U.S.-led sanctions against Iran.

Iran's Exports

After comparing Iran's imports, we are now going to compare Iran's exports. A concurrent shift in Iran's imports with other major countries after the new sanctions from 2004 onwards can be deduced from the two figures shown below. Thus Iran's exports in 2004 reached a total of $53.1 billion, before the new sanctions. Iran's exports in 2016 still reached a total $40.6 billion, years after the new sanctions.

Figure 5: Iran's export 2004, before the new sanctions (Iran's exports 2004: 2019)

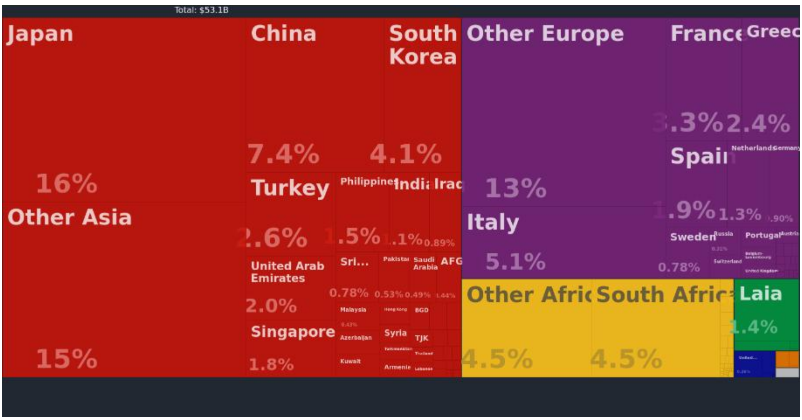
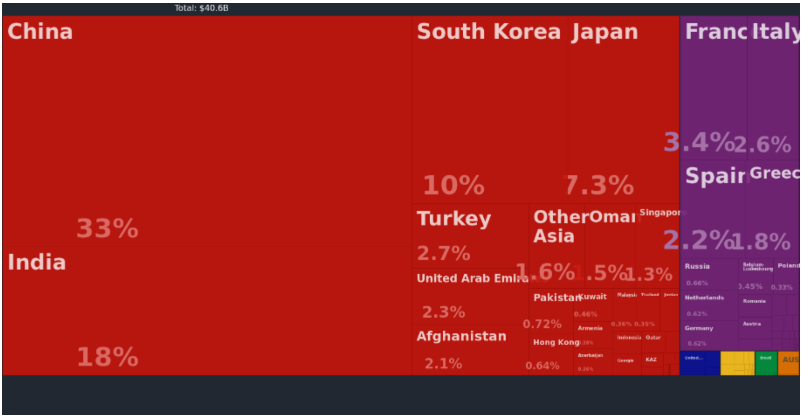


Figure 6: Iran's export 2016, after the sanctions (Iran's exports 2016: 2019)



Before the new sanctions, the European countries had a huge share in the exports of Iran; after the introduction of these sanctions the share has dropped.

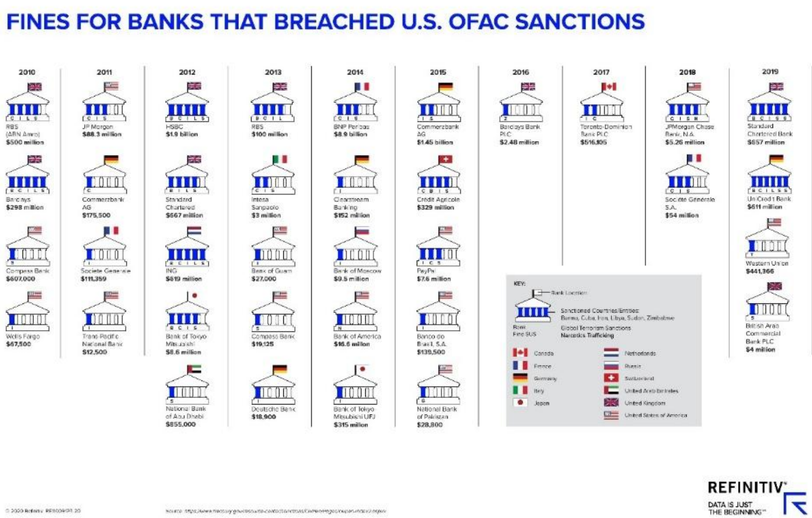
As the trade data in these reproduced figures shows, the comparison of Iran's trade in import and export before and after the new sanctions show a clear picture. The trade balance with Iran clearly developed to the disadvantage for most or even practically all member states of the European Union.

1.4.1. U.S. sanction's fines against European banks

The U.S.-led sanctions against Iran have been costly for European banks as well, particularly in the form of sanction-related fines by the U.S. (and other countries forced to go along) against these banks. To give just one typical example, on 1st July 2014 B.B.C. News reported that "B.N.P. Paribas to pay \$9bn to settle sanctions violations" (British Broadcasting Corporation 2014). The news article states that B.N.P. Paribas found guilty of breaching U.S. sanctions against Iran and other countries from the years of 2004 to 2012. This is one of the highest fines related with sanction breaching ever given. Unsurprisingly B.N.P. Paribas responded that this was an unfair decision.

The following figure gives an overview of the fines imposed by the U.S. for the breach of sanctions against Iran.

Figure 7: Fines for Banks that Breached U.S. OFAC Sanctions (Refinitiv US LLC)



The fines range each from $18,900 to $8.9 billion against bank companies, while most of them are in the range of millions of U.S. dollar. Most fined banks were from the U.S. and the E.U. These fines alone constituted for the European countries' costs totalling more than $10 billion.

1.5. Effects of moderate unilateral U.S. sanctions versus moderate multilateral sanctions on E.U. trade

The effects of U.S. sanctions on E.U. trade with a targeted country are different if there are only unilateral U.S. sanctions against that country or if there are also E.U. sanctions in place. A rare study conducted by Yang et. al (Yang, Askari, Forrer & Zhu 2009) used the Gravity Model to analyse this phenomenon. They found that the effects of U.S. unilateral sanctions against a targeted country have different effects on the E.U. trade with that country over time. In the short term they have a negative effect on the E.U.'s trade with the country in question is subject to U.S. sanctions. This could be caused by reduced purchasing power or a reduced demand (Ibid: 1235).

In the long term moderate unilateral sanctions have a very different effect. The targeted country will look for ways to bypass the sanctions over time—and often increasingly succeeds in doing so. Therefore, it will gradually manage to source the parts of crucial products from other countries. Yang et. al analysed the effect of U.S. sanctions against seventeen countries, including Iran, in 2003. Significantly the sanctions had a positive impact on the E.U. trade with these countries over the long term: "The estimated E.U. gains in 2003 are approximately U.S.$25.1 billion or about 8.3% of the actual E.U. total trade with alle the countries subject to U.S. unilateral sanctions" (Yang, Askari, Forrer & Zhu 2009:

1240). The calculated E.U. export gains with Iran were about U.S.$73 million, the import gains about U.S.$1.530 million and the total trade about U.S.$1.676 million (Ibid: 1239).

Their analysis of the effect of multilateral sanctions showed a different impact on the E.U. trade with the target country. The analysed countries were without Iran, as it was in 2003 only subject to unilateral sanctions. Surprisingly, their analysis found that even moderate, multilateral sanctions had a positive impact of the E.U. trade with the targeted country Iran. In 2003 the E.U. exports to the targeted country decreased by 4.9% or U.S.$0.3 billion due to network effects, but the estimated increases in E.U. imports are U.S.$4.0 billion and in E.U. total trade are U.S.$4.4 billion (Yang, Askari, Forrer & Zhu 2009: 1240).

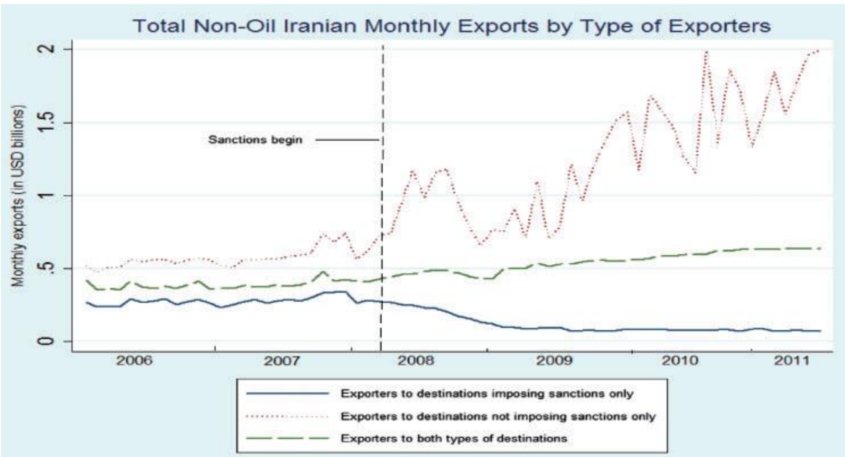
Summarised can be said, that one can conclude that multilateral U.S. and E.U. sanctions have a negative impact on the E.U. trade with the target country in the short term, but if the multilateral sanctions are only moderate, they do not have a negative impact in the E.U. trade with the targeted country—rather the contrary. Therefore, U.S. unilateral sanctions lead in the long term to a transfer of target countries' trade from the U.S. to the E.U. (Yang, Askari, Forrer & Zhu 2009: 1241).

1.6. Sanctions and trade deflection

How does a country continue to trade after it has been targeted with sanctions? Obviously, it tries to export its goods to and via other countries. This is what the study made by Jamal Haidar (Haidar 2017) observed. He analysed the export trade deflection of Iranian non-oil exports in the years 2008 to 2011. The renewed sanctions begin in 2008. This study also used the gravity model.

Haidar used and analysed the export data of Iranian companies, that were before exporting to countries that imposed sanctions, such as the U.S., Canada, Australia, and the E.U. His study excluded companies that were not exporting in these countries, and it excluded oil exports. (Haidar 2017: 337). Haidar found amongst other things, that while the export to sender countries was declining, the export to other countries was growing. In total, the Iranian non-oil export has been growing despite the sanctions, as shown in Figure 8 below.

Figure 8: Iranian exports, by type of exporter (January 2006–June 2011) (Haidar 2017: 332)



If export companies of the target country or countries can replace the sanctioning sender countries with other countries, then one could wonder why these have not done this switch before the often widely expected sanctions or immediately after the announcement of these sanctions? A possible explain could be, that the profit margin is smaller in the new markets (Haidar 2017: 326)—so that the exporting companies in question need to overcome their own initial reluctance and any costs involved in switching to these new markets.

The US and US-led sanctions had not the same effect on all exporters; while Iran's bigger export companies could reorient their export to other countries, small export companies had more difficulty to find new trading partners. Only 16% of the exports of Iran's small companies could be deflected, while it was possible for 86% of the exports of the bigger companies (Haidar 2017: 345).

The new destination markets Iran's companies choose for deflecting sanctioned trade, were those which they were already trading with before. This considerably reduced the market entry costs for them, and they only had to increase the volume of their already existing trade with the markets of these third countries. If a country was political friendly with Iran, then it was more likely that trade was deflected to that country. The probability that a company would deflect trade to a market it was already trading before turned out to be 9.2%, while for a new market it turned out to be only 5.3%. In general, two-thirds of Iran's pre-existing trade with sanctioning countries was successfully deflected to non-sanctioning countries (Haidar 2017: 346-347).

Deflecting trade to other countries is not possible for all kind of products. Homogeneous products[3] have a 5% higher chance of being deflected to new countries, than heterogeneous products (Haidar 2017: 349). Homogeneous products are such products, where it is difficult for the buyer to deduce its place of origin or original producer if the product is from Iran or from the target country, in this case Iran, or from any other country.

That finding that homogeneous products are the easiest products to deflect was also confirmed in another study. In 2014 Russia sanctioned the import of fruit and vegetables from the E.U. Reportedly E.U.'s deflected trade of these goods to non-sanctioned countries such as Belarus and Serbia, although this was difficult to confirm with empirical data (Fritz, Christen, Sinabell & Hinz, 2017: 26).

Haidar's study about Iran's trade deflection contains seven important findings: 1.) two-third of the value hit by sanctions was moved to non-sanctioning countries; 2.) that companies that only had trade with a non-sanctioning country before the sanctions, increased their export to these countries after the sanctions significantly; 3.) exporters deflecting their trade to new destinations, reduced prices, and increased quantities, suggesting that deflecting helped the survival yet reduced the profitability of these exporting companies; 4.) mainly homogeneous products were the type of products deflected; 5.) large companies managed to deflect more, than small companies of the target country, for reasons already discussed; 6.) new export destinations concerned countries that were more politically sympathetic to Iran; and 7.) the probability of deflecting was higher if the company already had ties with the third country in question, suggesting that new, additional exporting costs are important, indeed crucial (Haidar 2017: 326).

The countries that took over much of the trade with Iran during the sanction episode are sometimes called "black knights". Sometimes this term is also applied to smaller trading firms who did not trade before with Iran (Kozhanov 2011: 156).

Did the maximum pressure strategy, with E.U. oil embargo combined with U.S. financial sanctions stop Iranian crude oil entering the global market? No, it only reduced the output quantity and redirected the oil to the Asian markets and countries. This worked only more effectively and punitively, because of its combination with the accumulated effect of other sanctions (Van de Graaf 2013: 159).

The sanctions also include a political dimension. The Iranian regime was and is creating stronger ties with the economies in the East, especially with Russia, China and India to counterbalance the Western sanctions. (Vakil 2010: 61). That Iran switched its main trade to Russia and China has also been interpreted as an intrenching strategy (Takeyh & Maloney 2011: 1310, 1312).

The trade deflections also had impact on trade beyond Iran. Chinese buyers of Iranian oil were shifting away from international shippers to the National Iranian Tanker Company. India found a way to circumvent sanctions against Iran as well, for instance by allowing Iran's Bank Pasargard to open a branch in the country (Rosenberg 2018).

Even legitimate trade was deflected. Several European banks used foreign banks from Turkey and Hong Kong to facilitate their legitimate transactions with Iran, to reduce the risk of fines and other penalties due to sanction violations (Giumelli & Ivan 2013: 16).

What would happen if the sanctions against Iran were lifted? Would Iran switch back to its former trading partners or stay with its the new trading partners? A study (Devarajan & Mottaghi 2015) conducted 2015 by Devarajan and Mottaghi, used the Gravity Model to analyse this: it used data on trade by Iran's trading partners from the years 2000 to 2014 to Iran as basis for its predictive analysis. Their results indicate that after a lift of sanctions Iran's trade would most increase with countries like Great Britain, China, India, Turkey, and Saudi Arabia.

This increase in deflected trade would include a surge in oil and gas exports to India and China. The trade with Russia, South Korea, Tajikistan, Pakistan, and Hong Kong would increase to post-sanction level, but the increase would be smaller than for the former mentioned countries. The trade with France, Germany, Italy and United Arab Emirates (U.A.E.) would only increase slightly. Lifting the sanctions would shift Iran's trade towards Germany, the Netherlands, and the U.S., as well as in Asia towards South Korea, China, and Singapore. Iran's neighbouring countries U.A.E., Turkey, Oman, and Pakistan would also profit from an increase in trade (Devarajan & Mottaghi 2015: 7-8).

After the Iran Nuclear Deal of 2015 an analysis was done of Iran's trading partners, if only because this deal involved lifting or lessening some sanctions. The top ten countries for importation stayed the same. China was still the biggest import partner, but the imports from China declined by 1%. Imports, from U.A.E. increased by 8.9%, while Turkey's exports to Iran increased by 37% (World Bank Group 2017: 11). These trends seem to support to some degree Devarajan and Mottaghi's predicted effects of an overall lifting of sanctions.

1.7. Conclusion on the economic costs of sanctions against Iran

Iran is one the countries which had the most sanctions imposed against it primarily by the U.S., U.N. and E.U. in recent history. An outstanding example here is the United States which has imposed sanctions against Iran since 1979. Although the main intention of the sanctions was to stop the Iranian nuclear programme, they became comprehensive, targeting the entire Iranian economy. Arguably, punishing Iran's theocratic Mullah regime for its internal repression and external 'terrorism' and other violent and disruptive actions in the Middle East and beyond have been secondary yet important if informal intentions of (many of) the sanctions, and help to account for the comprehensiveness and draconian level of these sanctions.

The financial sanctions are actually targeted sanctions but worked in the case of Iran as nearly comprehensive sanctions. Their effects were far-reaching; thus, both legal and illicit financial transactions deflected to other countries. For the banks of sender and third countries, the risks of continuing trade and contacts with Iran generally outweighed the potential profits of doing so; thus, they quite speedily stopped doing business with Iran or transferred their business to countries with fewer regulations.

Countries who were and are less dependent on the United States, established their own banking systems that continued doing financial transactions with Iran. These countries and their banks also did and do have less need, to check if their financial transactions are related to any illicit activities, as their political and judicial systems are further away and thus more immune from U.S. legislation.

The costs of the Iran sanctions to the U.S. economy can be described as significant. For one thing the stocks of U.S. companies tend to react immediately and heftily to any news about possible new sanctions if there are new sanctions irrespective of whether there are actually new sanctions or not. Generally, the sanctions against Iran have costs the U.S. economy more than $100 billion in lost revenues, and more than 50.000 new jobs lost each year, since 1979 to the present day. The held-back Iranian money created over the decades interest of more than $1.3 billion, that had to be paid back.

The costs of the sanctions to the E.U. have been and are rather different. As long as the U.S. had only imposed moderate unilateral sanctions against Iran, the E.U. could deflect the U.S. trade and could still grow its trade with Iran. The extra financial sanctions from 2004-2005 onwards made it more difficult for the E.U. to trade with Iran and reduced the trade significantly. Ironically, after the E.U. trade with Iran became insignificant, the E.U. became willing to impose sanctions on Iran too—suggesting that EU decisionmakers considered/calculated at the time that the benefits of sanction effects and maintaining good relations with the US would outweigh the costs of further loss of trade with Iran as this volume of trad had diminished anyway.

As a result, Iran had to deflect its trade again. Despite the new sanctions from 2004/2005 onwards, two-third of the pre-existing trade had been quite successfully deflected to other countries at any rate. Homogenous products were the easiest products to deflect. Iran's bigger companies managed to deflect more than small companies given their bigger reserves, capacities and contacts with other countries. Since then, Iran's new important trading partners are China, India, and Russia. Even if the sanctions were lifted today or in the near, foreseeable future, these countries would remain important trading partners for Iran if only because the latter would nurse a long memory full of grievances of the US-led, 'Western' sanctions. So even if the sanctioned were to be lifted, Iran's economic and (geo-)political orientation would be geared toward the East rather than the West for a long time to come (when Islamic Republic still exists as an anti-Western state)—which suggests long-lasting lost trading opportunities and revenues for the West with Iran in the future too.

Christian Alexander Weutscheck is a PhD candidate in development studies at the Institute of Social Sciences in the Lisbon School of Economics and Management of the University of Lisbon, Portugal. chris@weutscheck.com
OrcID: 0000-0003-4112-6382

Endnotes—Sources

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2. Source Observatory of Economic Complexity, Date: 1 May 2019. https://atlas.media.mit.edu/en/visualize/tree_map/hs92/import/irn/show/all/2016/.
3. „Homogenous products are considered to be homogenous when they are perfect substitutes and buyers perceive no actual or real differences between the products offered by different firms. Price is the single most important dimension along which firms producing homogenous products compete" (Khemani & Shapiro 1993: 48).

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