The Inflation Weapon
How American Sanctions Harm Iranian Households
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About the Case Study

Since the end of the Cold War, multilateral and unilateral sanctions have become an essential instrument of global and national foreign policy. They are imposed to address international challenges to peace and security, including ending civilian wars and territorial aggression, and thwarting nuclear proliferation, mass atrocities, and terrorism.

Yet, over the past decade sanctions have become deeply entangled in major humanitarian disasters. In the Democratic Republic of the Congo, South Sudan, Syria, and Yemen, sanctions have failed to stifle massive violence, and conversely, ample evidence points to socioeconomic deterioration. Unilateral sanctions imposed by powerful states have contributed to significant, negative socioeconomic impacts on innocent civilians, which became more pronounced during the global COVID-19 pandemic.

To fully scrutinize the humanitarian impact of sanctions, the Sanctions and Security Research Project commissioned case studies on Iran and Venezuela, and collaborated with the Carter Center’s project on Syria, which recommend stronger safeguards to prevent negative humanitarian impacts and offer ways of improving the effectiveness of sanctions and strengthening of incentives.

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The Inflation Weapon
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Acronyms

CISSM  Center for International and Security Studies at Maryland
GDP   gross domestic product
IRR   Iranian rial
JCPOA  Joint Comprehensive Plan of Action
OFAC  Office of Foreign Assets Control
PMI  Purchasing Managers' Index
PPE   personal protective equipment
USD   U.S. Dollar

Months in the Iranian Calendar

1. Farvardin  21 March–20 April
2. Ordibehest 21 April–21 May
3. Khordad  22 May–21 June
4. Tir  22 June–22 July
5. Mordad  23 July–22 August
6. Shahrivar  23 August–22 September
7. Mehr  23 September–22 October
8. Aban  23 October–21 November
9. Azar  22 November–21 December
10. Dey  22 December–20 January
11. Bahman  21 January–19 February
12. Esfand  20 February–20 March
Abstract

In response to threatening trends in Iran’s development of its nuclear capabilities, the United Nations Security Council passed Resolution 1737 (2006) imposing various arms and technological trade sanctions on Iran. In 2007–2008 the U.S. extended its own sectoral sanctions on Iran. In 2012, the Obama administration deepened these sanctions by imposing strict financial sanctions on Iran, effectively cutting off Iranian banks from the global financial system that, in turn, shut down the country’s oil exports and deprived the economy of substantial revenues. These measures served as a major exogenous shock to the Iranian economy, which fell into its first contraction in nearly 20 years. In 2018, after a brief period of multilateral sanctions relief related to the implementation of the 2015 Joint Comprehensive Plan of Action (JCPOA), the Trump administration reimposed U.S. sanctions, moving unilaterally to place Iran’s economy under “maximum pressure.”

This study examines the humanitarian harms of U.S. sanctions on Iranian citizens by focusing on their principal economic impact—high rates of inflation. Although nonexperimental, the study draws upon various data to present a cohesive, if not comprehensive, narrative of the economic shocks that followed the imposition of U.S. sanctions in 2012 and 2018. To trace the connection between the macroeconomic impact of sanctions and the diminished welfare of households, it is possible to focus on the mechanism that made basic goods, including food and medicine, both less affordable and less available. This analysis shows that sanctions had specific impacts on Iran’s finances and supply chains that, in turn, served to induce persistent high inflation. In 2020, dislocations in the global economy of medical supplies caused by the COVID-19 pandemic intensified inflated prices in that sector. By tracing these impacts, and by pointing to the accounts of key American policymakers, this analysis conceptualizes sanctions as an “inflation weapon.” This report concludes with modest suggestions for reforming sanctions with a view to minimizing the humanitarian harms that have been suffered by the Iranian people. It notes the importance of reconsidering whether inflation—particularly when the goal is to induce maximal levels of inflation in the target country—is an acceptable intended impact of sanctions given disproportionate harms inflicted on civilian populations.
Introduction

To read about the intention of sanctions policy is to read accounts of nefarious individuals and entities, of government budgets, and of the flow of goods and capital. To read about the impact of sanctions policy is to read testimonies of ordinary people, their hunger and illness, their anger and their dejection. Why do accounts of the intentions and the impact of sanctions policy differ so greatly? The answer lies in who is doing the writing. Advocates and analysts of sanctions policy have proven far more willing to conjecture about what sanctions may achieve than to assess whether sanctions have achieved much at all. Those chronicling the impact of sanctions, meanwhile, can struggle to disentangle the complex ways in which changes in the value of money and the flow of goods can result in so much human misery. In short, the full story of sanctions has rarely been written, the chapters rarely assembled.

This study assembles the facts to tell the story of sanctions in Iran. This story will not be comprehensive, but it will be intelligible, offering a straightforward way to understand how sanctions have impacted Iran, with a specific view to the economic well-being of ordinary Iranians. To tell this story, this paper focuses on one of the few clear ways to link the intentions of sanctions with their impact—the role of inflation. Persistent high inflation, triggered by the impact of sanctions on Iran’s foreign exchange markets and supply chains, has led to a marked increase in poverty in Iran.1 Prices for goods keep rising, while wages remain flat. Even Iranians who remain employed—and most do—face precarity, if not poverty, as the value of their incomes and savings are eroded. Focusing on inflation provides clarity about what the decision to impose broad economic sanctions on a country entails. Although policymakers can claim that sanctions will interfere with the economic operations of targeted actors, providing a means to coerce those actors to change their behavior, these claims are necessarily an exercise in speculation. What policymakers can be certain of, however, is that broad financial sanctions create inflationary pressures.

This analysis focuses on the impact of U.S. sanctions on Iran. The United States was the architect of the consensus that led to the imposition of multilateral sanctions on Iran beginning in earnest in 2008. But it was U.S. sanctions, not EU or UN measures, that have had the clearest detrimental impact. This is true when examining the role of U.S. financial sanctions, imposed by the Obama administration, in triggering the 2012 economic contraction in Iran—the first time Iran’s economy had contracted in nearly two decades. It is especially true in the aftermath of President Donald Trump’s withdrawal from the Joint Comprehensive Plan of Action in May 2018, which led to the unilateral imposition of U.S. sanctions as part of a “maximum pressure” policy. That the subsequent economic crisis in Iran was as severe as when multilateral sanctions were imposed in 2012 speaks to the unique power of U.S. economic coercion.2

Whether or not the power of U.S. sanctions has served to change the behavior of the Iranian state is up for debate. Some argue that economic pressure forced Iran to the negotiating table—Iran made concessions around its nuclear program in exchange for sanctions relief in the nuclear deal. This paper

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does not engage with that argument. Rather, it focuses on the impact of sanctions that is not up for
debate—pervasive economic hardship, including humanitarian harms. Sanctions have been a dominant
feature of U.S. policy toward Iran for nearly 30 years. Throughout that period, debates around their
efficacy have continued. The fact that the U.S. and Iran continue to be at loggerheads suggests that
sanctions might not work as advertised. The story of sanctions, therefore, is best told by detailing the
impacts about which we can be most certain. This is that story.
Why Sanctions

Initially the objective of U.S. sanctions policy was fairly narrow. Key pieces of legislation, such as the Iran-Iraq Arms Nonproliferation Act (1992) and the Iran and Libya Sanctions Act (1996), were advanced on the grounds of targeting Iranian entities providing material or financial support for the country’s nuclear program or foreign entities transacting with Iranian government organizations or companies linked to proliferation efforts. In this regard, sanctions were intended to raise the costs associated with activities that pose a proliferation risk, while also making those activities harder to conduct. While a U.S. primary sanctions embargo remained in place, broadly speaking, U.S. and European sanctions on Iran were quite targeted until around 2008, at which point a concerted effort was made to hit Iran with multilateral sanctions and to expand the basis of the sanctions program beyond the narrow focus on proliferation concerns.

Over the last decade, Iran has been the test case for developing a new kind of sanctions program, one that would draw much of its power from the use of financial sanctions. Concerns around nuclear proliferation remained the driver for U.S. sanctions policy in this period. Beginning in 2006, the Bush administration sought to create international support for its sanctions program on Iran through the passage of resolutions at the United Nations Security Council. In the subsequent years, the Ahmadinejad administration continued to escalate its nuclear activities, including nuclear enrichment, balking at the sanctions pressure. In the face of this intransigence, support grew for a multilateral sanctions program that would augment the power of U.S. sanctions, particularly U.S. secondary sanctions. China, the European Union, and Russia, and many of Iran’s leading trading partners such as India, Japan, South Korea, and Turkey began to comply with U.S. sanctions measures, lending their tacit support to the overall strategy of sanctioning Iran.3

Many observers see Iran’s decision to enter into serious negotiations with the P5+1 (China, France, Germany, Russia, the United Kingdom, and the United States) following the election of President Hassan Rouhani in 2013 as evidence that the economic pressure exerted by sanctions pushed Iran back to the negotiating table.4 In 2015, Iran and the world powers agreed to the JCPOA, an agreement that saw Iran agree to verifiable limits to its nuclear program in exchange for the lifting of nuclear-related sanctions, including, crucially, U.S. secondary sanctions. The JCPOA was heralded as a unique achievement of diplomacy, one of the world’s most robust arms control agreements, and as an opportunity for the U.S. and Iran to normalize their fraught diplomatic relations. But the achievement was to be short-lived.

The election of President Donald Trump in 2016 cast a shadow on the deal just 11 months after its implementation in January of that year. Trump had promised to “tear up” the agreement and he followed through on that promise in May 2018, launching a “maximum pressure” campaign in which the United States would unilaterally use the full might of its sanctions, and in defiance its European allies, and of

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Russia and China, in an effort to force Iran to end its “malign behavior.”5 The Trump administration’s approach to sanctions was characterized by unclear and unrealistic goals, highly aggressive use of sanctions, and a general disregard for the humanitarian impact of “maximum pressure.”6

The significant investments of diplomatic capital made by the Bush administration, and later the Obama administration, in establishing a major sanctions program should not be taken for granted. The decision to use sanctions to seek a change in Iranian behavior, and to commit to such a strategy over the course of many years, needs to be understood in the context of U.S. military entrenchment in Afghanistan and Iraq and the prognosis for those conflicts by the time the Iranian nuclear crisis was reaching a head. In Afghanistan and Iraq, the United States had sought a military solution to threats emanating from terrorism and proliferation activities. In both cases, the United States and its allies found themselves in a quagmire.

As the international community began to impose sanctions on Iran through the Security Council format, the use of economic coercion was arguably the only policy option available to Western governments, not only because military conflict was considered too costly, given the relative power of the Iranian armed forces, but also because of the clear opposition among the American public against a new military entanglement in Iran. As early as 2006, 70 percent of the American public opposed war with Iran, citing a preference for diplomacy.7 Looking back, the question is whether using sanctions represents a commitment to diplomacy or a way to wage war by other means.

In order to win over more hawkish politicians, American proponents of the expanded use of sanctions, especially financial sanctions, actively sought to position sanctions as an alternative form of warfighting. This conception of sanctions differentiated the sanctions applied on Iran between 2006 and 2012 from earlier sets of sanctions. The move toward a more aggressive conception of sanctions is perhaps best documented in Juan Zarate’s account of the development of financial sanctions, Treasury’s War. An official during the Bush administration, Zarate was the U.S. Department of the Treasury’s first assistant secretary of the treasury for terrorist financing and financial crimes. Zarate and his colleagues “viewed the global battlefield through the lens of dollars, euros, and rials” and “began to devise means of using money as a weapon against terrorists, rogue regimes, and illicit financial actors.” The U.S. Department of the Treasury made Iran’s financial sector a focal point for U.S. sanctions designations in the belief that financial pressure would push Iran’s economy into a crisis, leaving the Iranian government no other option but to make concessions in order to win the reprieve of sanctions relief. In doing so, they launched a “new era of financial warfare.”8

While the international community began imposing multilateral sanctions on Iran in earnest in 2008, it was the Obama administration’s 2012 imposition of strict financial sanctions on Iran, which effectively cut off Iranian banks from the global financial system and sought to cut the country’s oil exports, that served as a major exogenous shock to the Iranian economy. According to the International Monetary Fund, Iran’s economy contracted 7.4 percent that year—its first recession since 1994.9 When the Trump administration reimposed sanctions on Iran in 2018, Iran’s economy was once again thrust into crisis, with the economy shrinking 6.0 percent. This analysis will describe economic impacts that can be observed following the imposition of sanctions in both 2012 and 2018. The manner in which sanctions were imposed and their impacts on the Iranian economy were effectively the same—the only major distinction being that the Trump administration did not impose sanctions as part of a multilateral

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The magnitude of the 2012 and 2018 economic shocks, and the decade of economic stagnation that they underpin, reflect a wide range of mechanisms by which sanctions hamper economic growth, complicating and constricting the flow of goods and capital on which developing economies rely, while also exacerbating the mismanagement and inefficiencies that are characteristic of economies in countries like Iran.
Sanctions and Inflation

The precise mechanisms by which sanctions have impacted the Iranian economy are only now being studied in a systematic way. To trace the connection between the macroeconomic impact of sanctions and the diminished welfare of households, I focus on a mechanism that made basic goods, including food and medicine, both less affordable and less available: the weaponization of inflation.

One of the few books to attempt to tell the story of these sanctions is Richard Nephew’s *The Art of Sanctions*. Nephew, a chief architect of the Iran sanctions program during the Obama administration and now President Biden’s deputy Iran envoy, highlights the ways in which inflation was both the purpose and impact of financial sanctions imposed by the Obama administration in 2012. In Nephew’s view, these sanctions were “a tremendous success” as “Iran’s economy went from GDP growth of 3 percent to a 6.6 percent contraction between 2011 and 2012…. Iranian unemployment and inflation remained in the double digits…. Iran’s currency depreciated threefold in a matter of weeks, resulting in the hemorrhaging of Iranian hard-currency reserves.”

It may seem crude for Nephew to describe the decimation of the Iranian economy in these terms—to his credit, Nephew has written extensively about the importance of minimizing the humanitarian harms of sanctions. Despite this, in recounting how exactly sanctions serve to put pressure on the Iranian economy, Nephew describes how humanitarian imports were instrumentalized to spur inflation.

In Nephew’s retelling, the U.S. tweaked the sanctions program to sustain Iran’s dependence on imports at a time when the country’s currency was experiencing a sharp devaluation. Sanctions were not imposed on food or medicine imports. But they were also not imposed on luxury goods—suggesting altruism wasn’t the sole basis for exemptions. “With Iran’s population technically able to purchase such goods and imports still flowing in, but with the exchange rate depriving most people of the practical benefit of being able to purchase these goods, only the wealthy or those in positions of power could take advantage of Iran’s continued connectedness,” explains Nephew. This strategy took advantage of inelastic demand—the poor would continue to need food and medicine while the rich would continue to yearn for luxuries. Every dollar or euro spent on luxury goods served to increase the cost of imported food or medicine. “Hard currency streamed out of the country while luxuries streamed in, and stories began to emerge from Iran of intensified income inequality and inflation.” In this way, the Obama administration sought to exacerbate inequality and inflation in order to “to drive up the pressure on the Iranian government from internal sources.”

By October 2012, just a few months after the imposition of financial sanctions, Iran saw a wave of protests related to the economic impacts of inflation. Protesters were in the streets “out of frustration over their meager take-home earnings.” Nephew suggests that price increases for certain products “may

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have been crucial in the shifting of Iranian government calculus and popular sentiment.” He points to the increase in the price of chicken, noting that while the U.S. “did not have sanctions in place against Iran’s ability to import chickens.... chicken prices tripled in 2012 due to inflation created by sanctions.” He adds that “the price hike may have contributed to more popular frustration in one bank shot than potentially years of financial restrictions.”

There is an obvious contradiction in Nephew’s description of these events. On one hand, he suggests that inflation was the intended goal of the financial sanctions imposed in 2012. He writes that “sanctions that aim to increase inflation de facto aim to increase costs to average citizens.” On the other hand, he suggests that the increase in the price of chicken was “not planned.” If sanctions are intended to stoke inflation, then higher food prices are necessarily part of the plan—perhaps an uncomfortable fact for Nephew to admit. This was the case following the Trump administration’s reimposition of sanctions over the course of 2018. Looking to consumer price index data compiled by the Statistical Center of Iran, a government agency, general prices in Iran rose 85 percent in the two years following the Iranian calendar month of Azar 1397 (beginning 22 November 2018), the month in which the Trump administration fully reimposed sanctions on Iran (Chart 1). Food prices doubled in the same period, while the price of healthcare rose 67 percent.

**Chart 1: Consumer Price Index in Iran Following Reimposition of Sanctions**

![Chart 1: Consumer Price Index in Iran Following Reimposition of Sanctions](image)

Source: Statistical Center of Iran.

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14 Nephew, The Art of Sanctions, 111, 143.
**Financial Shocks**

Iran’s economy has long experienced high inflation and there are structural factors for this. Yet numerous studies have established that the particularly high levels of inflation experienced in Iran since 2012 are attributable to the impact of sanctions.\(^{16}\) Multiple mechanisms exist by which sanctions work to stoke inflation in Iran. First, sanctions constrain government revenue, leading to budget deficits that need to be financed through expansionary monetary policy—printing money. Diminished oil exports, and thereby oil revenues, are the most widely cited example of the impact of Iran sanctions (Chart 2). As shown during both the Obama administration, where sanctions targeting the oil sector were applied multilaterally, and during the Trump administration, where oil sanctions were applied unilaterally, sanctions have been effective at cutting Iran’s oil exports by around half. Reduced demand and challenges in securing the necessary equipment to keep wells flowing also led to significant drops in Iranian oil production. Most reporting on the sharp decline of Iranian oil exports have portrayed that decline as fundamentally destabilizing to the Iranian economy. In fact, the impact was largely isolated to the energy sector, with a secondary impact on government budgets.

**Chart 2: Iranian Oil Production and Exports Under Sanctions (barrels per day)**

![Chart](chart.png)

Source: OPEC Data via CIEC.

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Looking to national accounts data for Iran from the third quarter of the Iranian calendar year 1390 (the final quarter before the imposition of financial sanctions in 2012) through to the fourth quarter of the Iranian calendar year 1399 (which ended in March 2020) the divergent impact of sanctions on Iran’s economic sectors becomes clear. Under sanctions, the Iranian oil and gas sector tends to shrink by between 30–50 percent (Chart 3). The extent of the contraction depends in part on Iran’s ability to sustain exports to key customers either as part of sanctions waivers tied to capped purchases, which were in place under Obama, or the willingness of certain customers to flout sanctions to maintain some level of imports, as has been the case with China under the Trump and Biden administrations. More significant, however, is the fact that no other economic sector in Iran has experienced such severe contractions. Diminished consumption contributes to a contraction in the retail sector. Cost pressures reduce output and lead to contraction in the manufacturing sector. But overall, in both 2012 and 2018, the magnitude of the economic recessions experienced by Iran were primarily attributable to the contraction of the oil sector.

Iran’s economy is not dependent on oil and is more diversified then widely assumed. Within this period, the oil and gas sector never accounted for more than one-third of gross domestic product (GDP) (Chart 3). At its nadir, it accounted for just 7 percent of GDP. Today, as Iran remains under sanctions, the country’s real estate sector, manufacturing sector, and retail sector are each just about as important contributors to GDP as the oil industry. Moreover, relative to the oil industry, these sectors are a greater source of employment in the Iranian economy—more households depend on jobs in these sectors for their livelihoods.17

Chart 3: Contributions to Iran’s GDP, Selected Sectors

Note: 3-month rolling average of quarterly real value added, IRR billions (Base: 1390 [2011]).
Source: Central Bank of Iran.

Of course, the downturn in Iran’s oil sector was consequential for the wider economy because of the impact on public spending. The legacy of rentierism and lackadaisical diversification of the tax base have saddled Iranian governments with budgets highly dependent on oil sales. As a result, even if declining oil exports are not immediately ruinous for the Iranian economy, they present an enormous challenge for the central government budget. While in office between 2013 and 2021, the Rouhani administration sought to mitigate the impact of sanctions, but it lacked the fiscal space to make major interventions. The government engaged in targeted cash transfers, which are an important feature of the Iranian welfare state. These transfers helped ease hardship for households for a short period, but the programs were less extensive than they should have been.

In general, the Rouhani administration sought to curtail public spending to try to rein in the fiscal deficit. Even so, the deficit remained significant and the political imperatives to preserve spending on welfare programs and security forces saw policymakers respond by printing money. From the first quarter of 2012 to the end of 2020, the money supply in Iran expanded from the equivalent of $300 billion to nearly $800 billion as the government printed money in different periods to compensate for the loss of oil revenues in the government budget (Chart 4).

**Chart 4: Money Supply in Iran Under Sanctions (millions USD)**

Aside from an increase in the money supply, inflation also rose due to the devaluation of Iran’s currency, which created cost pressures around imports, including inputs for goods manufactured in Iran. Although oil does not dominate Iran’s economy, oil exports are the primary source of foreign exchange revenue. The drop in oil exports led to a balance of payments crisis. Faced with such pressures on the national currency and with budget deficits, most countries would tap into foreign exchange reserves to meet government obligations and provide hard currency to importers. But for Iran, tapping reserves was

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not an option. By designating Iran’s central bank, U.S. and EU authorities proved able to significantly diminish Iran’s free and ready access to its ample foreign exchange reserves. Targeting these reserves was a particular focus of the Trump administration, which assessed that by 2020, Iran maintained ready access to just 10 percent of its reserves.19 Looking to the two-year period following the full reimposition of sanctions by the Trump administration in November 2018, we see two clear devaluation episodes.

Between November 2018 and May 2019, the Iranian rial lost around one-fifth of its value in both the free market and the NIMA market, a centralized foreign exchange market used by Iranian importers and exporters and overseen by the Central Bank of Iran (Chart 5). In response to these pressures, the Central Bank of Iran began implementing new systems to streamline the repatriation of hard currency earned by Iranian exporters and the sale of that currency to Iranian importers. The price of the rial stabilized during 2019. Then, in February 2020, the COVID-19 pandemic hit Iran, thrusting the economy back into crisis. The rial lost all its 2019 gains against the dollar, losing around 57 percent of its value as the exchange rate rose from IRR 137,000 in February 2020 to a historic high of IRR 322,000 in October 2020. Between 2018 and the end of 2020, the price of one dollar had risen from IRR 43,000 to IRR 260,000, a devaluation that was similar in scale to the devaluation that occurred following the imposition of financial sanctions on Iran in 2012.20

Chart 5: The Devaluation of the Rial Since the Reimposition of Sanctions (USD/IRR exchange rates)

Sources: Central Bank of Iran and Bonbast.com.

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Although Iran’s large agricultural sectors and manufacturing base mean that store shelves are primarily stocked with goods that are domestically produced, devaluation did have an impact on the affordability of humanitarian goods. Many food products are produced using imported ingredients—for example, Iranian production of meat, eggs, and dairy products depends on imported animal feed. Likewise, while Iran produces a wide range of basic medicines, such that Iranian officials claim that 98 percent of the pharmaceutical doses consumed in Iran each year are domestically produced, many of the ingredients for those medications are imported. Moreover, more advanced therapies such as patented medications, which tend to be more expensive to begin with, are also imported. In this way, the devaluation of the rial had a knock-on effect on the prices of food and medicine.

Historically, the Iranian government has subsidized imports of food and medical products by selling hard currency to importers at a lower official exchange rate. But faced with diminished access to its international reserves, the Central Bank of Iran sought to defend the value of Iran’s currency by curtailing demand for foreign exchange. One key step was to reduce the range of goods for which the government would provide hard currency at the subsidized dollar exchange rate of IRR 42,000. This move had the effect of making many kinds of imported medical equipment more expensive.

**Supply Chain Disruptions**

Alongside rising prices, sanctions served to disrupt the supply chains on which the importation and domestic production of humanitarian goods depend. Even though transactions with designated entities were permitted to facilitate trade in humanitarian goods, such as food and medicine, in practice the designations still served to diminish trade. While licenses and exemptions created by U.S. and EU authorities may have put suppliers of food and pharmaceutical products at ease regarding sales to Iran, critical service providers remained reticent. Few logistics companies continued to service Iran following the imposition of sanctions and even fewer banks proved willing to facilitate the payments on behalf of Iranian importers.

The impact of these supply chain disruptions can be clearly observed in Purchasing Managers’ Index (PMI) data compiled by the Iran Chamber of Commerce. Although the Iranian manufacturing sector has demonstrated an ability to grow despite the impact of sanctions, the high price of raw materials, which are often imported, has been the foremost drag on growth. Manufacturing PMI has been above 50, indicating expansion in the sector, in numerous periods since PMI data was first released in October 2018. However, the sub-index for raw materials inventories never rose above 50 in the period through the end of 2020 (Chart 6). The constrained supply and high cost of raw materials has been a consistent constraint on growth in the manufacturing sector and the wider economy. The cost pressures faced by manufacturers translates into cost pressures for households.

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Supply chain disruptions are difficult to document. For most food and pharmaceutical products, these disruptions did not result in outright shortages. Rather, the increased transaction costs related to the importation of these goods contributed to higher prices, which are themselves difficult to disentangle from the generalized inflation. But systematic and unprecedented disruptions occurred in several categories of humanitarian trade, which serve to illustrate the mechanisms by which sanctions can interfere with the humanitarian supply chain.

Beginning in 2018, with the launch of the Trump administration’s “maximum pressure” campaign on Iran, major commodities traders began to shy away from supplying the Iranian market. During the Obama administration, these traders enjoyed a robust trade with Iran, taking advantage of the clear humanitarian exemptions for trade in agricultural commodities and leveraging their immense logistics and financial capacities to overcome the operational challenges of getting wheat, barley, maize, and soybeans into Iran. But by late 2018, as secondary sanctions were fully reimposed, delays began to hit shipments of these commodities to Iran. Iranian importers were struggling to receive timely allocations of hard currency from the Central Bank of Iran. When those allocations arrived, further difficulties were faced in finding a viable channel through which to make payment to the accounts of the commodities suppliers, which were primarily maintained in Europe. In the past, these payments had been intermediated by banks in the United Arab Emirates and Turkey. But with the Trump administration’s
aggressive approach to sanctions enforcement, as well as local dynamics in each of those countries, the tried and tested payment channels were faltering.24

The delays that manifested in late 2018 ended up becoming the first in a series of recurring delays to hit Iran’s imports of key agricultural commodities. Further delays were noted in summer 2019, and then in fall 2020, with continued payment channels cited by traders as the primary reason for the disruptions.25

These disruptions were not immediately an issue for food security. Iran is largely self-sufficient in the production of wheat—a staple crop in a country with among the highest per capita rates of bread consumption in the world.26 But the disruptions affected other kinds of consumption, such as imports of soybeans and maize, primarily sourced from South America for the Iranian market by global commodities players like Cargill, Bunge, and COFCO.

As a result, prices for these commodities increased, not only because of constraints in supply, but also because shipment costs ballooned as charter companies applied demurrage charges incurred when their cargo vessels remained anchored in the Persian Gulf while waiting for payments to clear. Soybeans and maize are widely used in animal feed, and as the supply chain for these goods was strained, prices for feed began to rise. Price increases have been compounded by a move by the Central Bank of Iran to remove inputs for animal feed from the list of imports eligible for subsidized hard currency. In 2020, production constraints related to the COVID-19 pandemic also created a supply crunch. Taken together, prices for certain kinds of animal feed had tripled in the span of just a couple of years, with the increased cost of inputs being passed on to consumers, thereby contributing to food inflation. Had Nephew been aware of these kinds of supply chain disruptions, the rise in the price of chicken he observed in 2012 might have come as less of a surprise.27

The fragility of the supply chains underpinning humanitarian trade with Iran was also made clear in the first few months of the COVID-19 pandemic. Iran was among the first countries to become a major epicenter of the disease, with cases first identified in the country in February 2020. Iran was also the first country to face the pandemic while under a major embargo. The negative impact of sanctions on the availability of medicine and medical goods in Iran had been well documented. A report published by Human Rights Watch in October 2019 provides a comprehensive assessment of the impact of sanctions on the health of ordinary Iranians.28 But these impacts became even more acute during the pandemic, as disruptions to supply chains exposed a major deficiency in the approach to humanitarian exemptions within U.S. sanctions programs.

The advent of the COVID-19 pandemic saw a sudden increase in demand for certain kinds of medicine and medical goods. The global scramble for personal protective equipment (PPE), which foreshadowed the global scramble for vaccines that would begin one year later, proved immensely challenging for Iranian medical professionals. By most accounts, with one of the first major outbreaks of the disease after China and Italy, Iran should have been at the front of the line as it sought to secure supplies of face masks, face shields, medical gowns, oxygen machines, and other equipment. But in large part due


to the complexities of running even routine humanitarian trade, Iranian medical goods importers found themselves at the back of the line. Iranian doctors experienced shortages of PPE and critical medical equipment for treating COVID-19. Iranian medical goods importers largely failed to cultivate relationships with new suppliers when their existing suppliers were tapped out—setting up the logistics and payments solutions to get goods into Iran can take months and suppliers were so inundated with requests that they fulfilled orders from those countries that were the easiest to supply. In many cases, the sudden resurgence of protectionism among developed countries around exports of PPE prevented sales to Iran and other developing countries anyway, irrespective of need.

The COVID-19 experience exposed that the humanitarian harms of sanctions cannot be judged by looking at present trade volumes alone. Rather, the ability for medical supply chains to adapt to potential future crises is an unaccounted and largely unconsidered aspect of the impact of sanctions on the availability of medicine. The Treasury Department’s Office of Foreign Assets Control (OFAC) acknowledged, obliquely, that sanctions might be having an impact on Iran’s response to COVID-19 by issuing a May 2020 update to its Frequently Asked Questions guidelines. But a more substantive update to the guidance was not issued until June 2021, when the Biden administration aimed to make clearer the provisions under which medical goods suppliers could transact with counterparts in Iran, Venezuela, and Syria. In the end, the provision of new guidance was largely an academic exercise. By then, global medical supply chains had been rejigged and Iranian medical goods importers had, determinedly, figured out how to secure a more regular supply of PPE and medication needed for the country’s ongoing response to COVID-19.

One year into the pandemic, access to vaccines emerged as the new concern for Iranian policymakers. Despite the high degree of governmental organization around the production and distribution of COVID-19 vaccines, Iran once again found itself disadvantaged. Like most developing countries, Iran’s best bet for vaccines was the COVAX program established by the World Health Organization. But from the outset, Iran struggled to get a timely allocation of vaccines, due to issues in making the required payments. Iran intended to use its ample hard currency reserves to make these payments. Yet despite humanitarian exemptions the reserves in countries such as South Korea and Iraq were effectively frozen—the financial institutions in those countries where Iran maintained accounts required a “green light” from the United States in order to act on any payment instructions issued by the Central Bank of Iran. That green light was slow to arrive. Again, a critical supply chain, even one established as part of a global response to a pandemic, proved unresponsive as Iran sought to meet its urgent medical requirements. The devastating human cost of delays in the provision of PPE and vaccines to Iran are difficult to disentangle as Iran, like many countries, generally mismanaged its pandemic response. But there should be no doubt that in many instances, the absence of life-saving medical equipment and vaccines could be attributed to sanctions-related disruptions in the medical supply chain.

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29 Batmanghelidj and Kebriaeezadeh, “As Coronavirus Spreads, Iranian Doctors Fear the Worst.”
Diminished Welfare

Over the last decade, ordinary Iranians have received a brutal education in the ways in which sanctions can interfere with typical economic operations. Changes in the value of money and supply chain disruptions saw significant increases in the price of the most fundamental goods in the consumer basket. Price increases compounded the diminished economic prospects of ordinary households, which faced wage stagnation and worsening unemployment. In this way, sanctions eroded purchasing power, contributing to a significant decrease in the welfare of ordinary Iranians.

In principle, households can bear higher prices if wages rise in step. But real wages have been stagnant in Iran since 2008, when growth was first stymied by the fall in global oil prices, and subsequently by the imposition of financial sanctions on Iran in 2012.33 The drop in real wages and the increased competitiveness of Iranian agricultural products and manufacturing goods did mean that overall employment has been remarkably stable during the sanctions period. It is politically challenging for public sector entities, already bloated, to lay off employees in the face of economic pressure. Private sector companies, on the other hand, have managed to increase hiring in some cases. Although the overall level of employment in Iran has remained largely unchanged, the composition of the Iranian labor force has been impacted. Much reporting on Iran’s economic crisis focused on the anxieties of the country’s middle class. Individuals who once enjoyed the prospect of stable, salaried employment are increasingly making do with part-time or contract-based work. The tenuous nature of jobs means that households remain vulnerable to sudden changes in their economic fortunes.

With prices rising steadily, wages declining in real terms, and employment rates stable, Iran’s economic crisis is characterized by in-work poverty. Since 2010, as Djavad Salehi Isfahani shows, “poverty rates have doubled in rural areas, and increased by 60 percent in urban areas.”34 For those Iranian households that have not slid into poverty, there has still been precarity. In a finding that points to this emergent precarity, Salehi Isfahani uses survey data from 2018–2019 to establish that “conditional on household characteristics, urban residents were more likely to fall into poverty than rural residents.” Salehi Isfahani clarifies that when looking to characteristics such as educational attainment or income level and comparing the average urban household versus the average rural household, in accordance with these characteristics, the average urban household is more likely to face a sudden change in economic well-being and find itself confronting poverty.35 By some estimates, 60 percent of Iranian workers live in relative poverty because wages are insufficient to cover more than one-third of living expenses.36

That Iran is today battling rising poverty and precarity marks a stunning reversal in the country’s economic fortunes. The imposition of financial sanctions in 2012 marked the end of two decades of economic growth in Iran. Although growth was volatile due to its dependence on the cyclical nature of global oil prices, from the end of the Iran-Iraq War in 1988 until 2012, Iranians could reasonably expect

36 Najmeh Bozorgmehr, “Spiralling Poverty in Iran Adds to Pressure on Regime,” Financial Times, 25 January 2021, https://www.ft.com/content/520b54e4-c793-4e7d-84f5-03f71587532d.
that their economic fortunes would continually improve. As Kevan Harris has shown, this expectation undergirded the notion that Iran was a “developmental state,” in which the state garnered legitimacy through its ability to improve the welfare of ordinary Iranians.37 Today, the Iranian government is under increased pressure precisely because of its failure to safeguard the economic well-being of Iranians in the face of sanctions pressure.

There has been a rising tempo of protests and labor mobilizations related to the general economic malaise. In December 2017, Iran saw nationwide protests that reflected a new intensity in public frustration. These protests took place before the Trump administration reimposed sanctions. But they were triggered in part by public anger related to mismanagement in the Iranian financial sector where a lack of regulation and corruption had seen a proliferation of credit institutions offering the promise of high interest rates. This was an attractive prospect for Iranians desperate to protect their savings from the ravages of inflation. Many of these institutions then collapsed, wiping out the savings of tens of thousands.38 The subsequent protests, which quickly spread around the country and expanded in focus to include other economic grievances, made clear that years of economic hardship, particularly in areas of the country that did not experience any real economic uplift in the short period of JCPOA-related sanctions relief, had created deep resentments. Again, in November 2019, a sudden announcement by the Rouhani administration that it would cut fuel subsidies, among the most generous in the world, led to another round of nationwide protests, which elicited a brutal response from the authorities.39

Amid these larger mobilizations, the tempo of strikes and protests led by workers, including oil workers, has increased. Echoing Harris’ analysis, Mohammad Ali Kadivar et al. suggest that these protests reflect an unravelling of Iran’s “post-revolutionary populist social contract” in which the economic welfare of the working classes was paramount. “The accumulation of political and socio-economic crises in Iran, including failures in handling the COVID-19 pandemic, is undermining the efficacy and responsiveness of the political establishment and its institutions,” they write. Moreover, “the expansion of privatization and labor outsourcing,” a part of Iran’s “authoritarian neoliberalism,” has spurred ongoing strikes and protests by workers in various economic sectors.40

The government is clearly under political pressure to respond to the lingering economic crisis, which has been compounded by the public health crisis of the COVID-19 pandemic that has killed more than 100,000 people according to official statistics.41 Growing pessimism is clear in public opinion surveys conducted in Iran (Chart 7). The Center for International and Security Studies at Maryland (CISSM) and IranPoll, a polling company, have been conducting nationally representative telephone surveys in Iran since 2015. The proportion of Iranians who believe that the state of Iran’s general economic situation is “bad” has risen from just under 40 percent to more than 70 percent in the six years since the survey was first administered.

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Perhaps the clearest indication of the extent of public disenchantment came in the June 2021 presidential election. Iranian election turnout has been historically high, often confounding foreign political scientists who assume that turnout would be low in elections that are “engineered” to eliminate a full range of political choice. But Iranian voters have understood that who prevails in elections does have an impact on fundamental aspects of government policy, particularly economic policy. President Hassan Rouhani was elected to his first and second terms on the back of 76 percent and 73 percent turnout respectively. But Iran’s new president, Ebrahim Raisi, has to contend with the ignominy of winning an election with just 48 percent turnout, the lowest turnout for a presidential election in the 40-year history of the Islamic Republic (Chart 8). Iranian voters stayed home both because of the disqualification of all but one of the potential moderate candidates and because of a pervading sense that it no longer mattered who would assume the office of the president—the state was categorically unable to address the many crises facing the country.42 In the aftermath of the election, even Iranian commentators began to question whether the Islamic Republic had lost its legitimacy.43

Clearly, sanctions have put pressure on the Iranian government. But the ways in which this pressure manifests diverges from most accounts on the intention of sanctions policy. Whereas the debate around U.S. sanctions policy has focused on the idea that pressure can be targeted in a manner that denies the Iranian government the financial means for malign behaviors, the mechanisms through which sanctions cause economic pain—financial shocks and supply chain disruptions—have primarily hurt Iranian households through the rise in inflation. Iran’s hardliners, meanwhile, appear content to draw their legitimacy and support from a plurality of conservative Iranians rather than from a clear majority of the electorate. In this regard, sanctions may have even aided the hardliners, as their political rivals were discredited in the eyes of most Iranians.44

Reshaping Sanctions Policy

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mportant work is being done to make sanctions less harmful. On one side, sanctions proponents understand that the political utility of sanctions depends in large degree on the perception that they can be targeted. On the other side, opponents understand that sanctions are here to stay as a tool of American statecraft—and so harm minimization is the realistic goal of advocacy. But the policy recommendations being made by both groups generally miss the important issue of inflation. Efforts to minimize the humanitarian harms of sanctions tend to focus on safeguarding trade in food and medicine. Primarily, this means actions that make clear the permissibility of trade in order to ensure that suppliers of food and medicine products do not mistakenly believe that they must cease sales to the sanctioned country. As was the case during the COVID-19 pandemic, OFAC will issue new licenses or guidance clarifying for companies that trade in food and medical that sales to countries like Iran are broadly permissible and that certain sanctioned entities, such as the Central Bank of Iran, can play a role in the necessary transactions.

But even when trade is permissible, it is not always feasible. As the supply chain disruptions during COVID-19 made clear, even if companies are aware that the sale of food or medicine to a sanctioned jurisdiction is permitted, they may struggle to conduct the necessary financial transactions because of the reluctance of banks to process those payments. During the Obama administration, and less successfully under the Trump administration, the U.S. sought to establish dedicated financial channels that would allow Iran to use foreign exchange to pay for humanitarian goods.\textsuperscript{45} But even if there were many of these channels, fully operational, they would likely still fail to alleviate the humanitarian harms that stem from generalized inflation. As Nephew explains in his account of the impact of the 2012 financial sanctions in Iran, it is precisely the fact that many humanitarian goods continued to be imported, depleting accessible foreign exchange reserves, that contributed to the inflationary pressure.

Food and medicine are only as accessible as they are affordable. It follows, then, that efforts to minimize the humanitarian harm of sanctions must grapple with the issue of inflation. It would be unrealistic to suggest that sanctions ought not cause inflation—that would essentially mean calling for the abolition of financial sanctions. Such an outright “ban” is an impossible goal. But to use a crude analogy, the level of inflation caused by a sanctions program is akin to the explosive yield of a bomb. It may be possible for advocates of a more humane, efficacious approach to sanctions to demand that sanctions programs are designed to ensure the level of inflation in a targeted country remains below a certain threshold. Of course, governments have a hard enough time managing inflation in their own countries, let alone those on which they are waging a financial war.

But the power of the U.S. Department of the Treasury should not be underestimated. Sanctions powers grant the U.S. government effective control over foreign exchange earnings, foreign exchange reserves, and trade flows. These levers are probably sufficient to allow the U.S. government to calibrate the impact

of sanctions with regards to inflation—humane sanctions policy needs an “inflation brake.” Such a brake could be operationalized through the following mechanisms:

- **Limiting Financial Shocks:** Foreign exchange earnings and access to reserves ought to be calibrated on an ongoing basis. If inflation is peaking, whether because of a growing trade deficit, or an increase in money printing because of a government budget deficit, access to foreign exchange reserves could be eased. This would require U.S. policymakers to coordinate with countries in which target countries maintain reserves to increase the proportion of reserves that are readily available for use by authorities in the target country to reduce pressure on the target country’s currency. It would also require efforts to ensure that sufficient foreign exchange liquidity is available to the central bank of the target country for the purposes of currency allocations to importers active in humanitarian trade—this serves to reduce price pressure on humanitarian imports. For countries without significant foreign exchange reserves, and for which the ongoing inflows of foreign exchange revenue are crucial for funding import expenditures, the focus of U.S. policymakers ought to be modulation of the impact of sanctions on the target country’s trade balance. This would entail limiting the extent to which sanctions targeting routine trade would create significant trade deficits. For example, rather than drive key exports, such as oil exports, down to zero, sanctions policy would seek to ensure that export revenues remain a sufficient proportion of normal import expenditures. Within this process, consideration could be given to the different entities involved in the target country's trade. For example, if a certain set of state entities are the primary target of the sanctions program, export earnings of those entities could be driven down more dramatically, but only to the extent that doing so does not create a trade deficit that would undermine the “inflation brake.” The issuance of Significant Reduction Exemptions, waivers that permitted a small number of Iranian oil customers to maintain reduced purchases of Iranian oil on the condition that the revenues could only be used by Iran to pay for humanitarian trade, demonstrates that U.S. policymakers have the means to modulate the earnings and access of foreign exchange as a function of sanctions policy.46

- **Limiting Supply Chain Disruptions:** U.S. policymakers ought to ensure humanitarian payment channels are operational prior to each escalation of the sanctions program. As sanctions programs are expanded, correspondent banking channels are constrained, and fewer companies are willing to transport goods to the target country. U.S. policymakers should ensure that companies engaged in humanitarian trade with targeted countries will not be impacted as banks and logistics companies begin to change their policies regarding the sanctioned jurisdiction. This can be achieved in two ways:

  - U.S. policymakers can establish a network of dedicated humanitarian financial channels in partnership with commercial banks that process a significant volume of transactions related to food and medicine trade. U.S. policymakers would cooperate with these banks to establish compliance frameworks that will ensure humanitarian channels cannot be used to circumvent sanctions programs, while also reducing the administrative burden faced by banks that wish to continue processing transactions that involved a sanctioned jurisdiction.

  - Rather than create specific financial channels, U.S. policymakers could use general licenses and comfort letters more liberally to provide non-U.S. financial institutions and their non-U.S. clients confidence that the continuation of humanitarian and exempt trade is encouraged. This approach would seek to prevent situations where banks acting as payment facilitators for humanitarian trade deny services as part of de-risking. Similar steps should be taken for logistics companies and insurers.

- **Ongoing Monitoring and Reporting:** U.S. policymakers should evaluate sanctions harms in relation to a specific inflation limit. For example, U.S. policymakers might aim to push annual inflation in the target country to 20 percent, a level that is politically inconvenient but not economically devastating.

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46 Esfandyar Batmanghelidj, “Trump’s Iran Waivers Are Not the Concessions They Seem,” Bloomberg, 8 November 2018.
They would not seek to induce the kind of hyperinflation that can precipitate the kind of economic collapse seen in countries such as Venezuela. Compliance with this limit would need to be confirmed as part of regular reporting, which would seek to give different stakeholders an opportunity to provide oversight, whether that includes domestic bodies such as Congress, or third countries impacted by U.S. secondary sanctions. This reporting should explain how U.S. policymakers are accounting for the inflationary impacts, detailing the expected and observed impacts of sanctions actions on financial conditions and supply chains.

These mechanisms, which should be implemented by any country applying sanctions, would help ensure that sanctions function as a drag on growth, rather than as a driver of inflation. Sanctions would still impose a cost on the target government, but that cost would be subject to controls and the measures would be less inherently destructive, but not necessarily less coercive. There are indications that American policymakers may be ready to see extreme inflation as an undesirable externality, rather than a useful one. The policy response to the recent takeover of Afghanistan by the Taliban is indicative of a new sense of humanitarian responsibility. Commentators were quick to point out the risks of cutting off economic lifelines to Afghanistan, whether that entailed the simply withdrawing aid, or actively using sanctions to interrupt financial channels. Citing rapidly rising food prices in Kabul, Adam Tooze writes that it would be a mistake for the international community to withdraw aid and apply sanctions, as doing so would diminish the “material survival” of ordinary Afghans. International concern about the humanitarian situation in Afghanistan compelled the Treasury Department to issue a license clarifying the permissibility of humanitarian trade and to provide guidance on personal remittances. Of course, these actions will not halt Afghanistan’s accelerating economic crisis. The decision to completely freeze the Taliban’s access to Afghanistan’s foreign exchange reserves has had a devastating impact on the value of the afghani and on inflation, contributing to rising refugee outflows. Still, the Treasury Department’s moves marked perhaps the first instance since the invention of the “inflation weapon” that a U.S. administration has exhibited such concern for the possible impact of sanctions before their application. Looking back to Zarate’s telling, the Taliban is precisely the kind of “rogue regime” which sanctions were designed to target. Yet, in the case of Afghanistan, there appears to be some sense that the Biden administration has a duty of care toward the Afghan people that cuts against policies, including sanctions, that would exacerbate inflation. The question is whether U.S. policymakers are ready to limit their own powers and end the weaponization of inflation.

The Biden administration’s recent review of U.S. sanctions policy calls for the “calibrating of sanctions” to mitigate “unintended” humanitarian impacts. The brief discussion of proposed measures focuses on targeting sanctions and providing guidance, rather than grappling with the clear intersection between generalized economic impacts and humanitarian harms. Nonetheless, it may be that the Iran case has helped spur this more cautious approach to sanctions policy. Although Nephew and other sanctions proponents have defined generalized economic contraction and high inflation as markers of the “success” of U.S. sanctions policy in Iran, the ambiguous political outcome of the sanctions program has raised questions over sanctions efficacy. Moreover, public attention to the humanitarian harms of sanctions, particularly the impoverishment of ordinary people, are increasingly weighed as part of the question of efficacy. If sanctions are not serving to change the behavior of the targeted regime, is the generalized economic pain of ordinary citizens in that country a justifiable unintended outcome? And if, as many

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sanctions proponents admit, the generalized economic pain is an intended outcome, is it justifiable to instrumentalize an assault on households to place ineffectual pressure on the target government?

Inflation is an outcome of what we might consider “normal” economic crises. The U.S. does not have a responsibility to prevent inflation wherever it appears. High inflation is an undesirable economic outcome, but not necessarily an immoral one. However, there is a difference between situations where inflation is the product of policy failure rather than policy success—this is what the hardship faced by Iranian households makes clear. The moral failure of U.S. sanctions policy lies in the intention to cause inflation and the treatment of persistent high inflation as evidence of policy success.
The Sanctions & Security Research Project is a leading source of scholarly expertise and analysis on the use of economic sanctions and incentives as instruments of peacemaking and international law enforcement. The project was designed as a research collaboration between the University of Notre Dame and the Fourth Freedom Forum of Goshen, Indiana, and provides research, consulting services, and policy recommendations to governments and organizations seeking to make sanctions and incentives more effective ways to resolve conflict and enforce international norms. The project devotes special attention to United Nations sanctions, especially for controlling nuclear weapons proliferation.