

University of Alabama in Huntsville

**LOUIS**

---

Honors Capstone Projects and Theses

Honors College

---

5-2-2010

## Containing Iran: Sanctions and the Iranian Nuclear Program

Greg Forsythe

Follow this and additional works at: <https://louis.uah.edu/honors-capstones>

---

### Recommended Citation

Forsythe, Greg, "Containing Iran: Sanctions and the Iranian Nuclear Program" (2010). *Honors Capstone Projects and Theses*. 340.

<https://louis.uah.edu/honors-capstones/340>

This Thesis is brought to you for free and open access by the Honors College at LOUIS. It has been accepted for inclusion in Honors Capstone Projects and Theses by an authorized administrator of LOUIS.

## University Honors Program Research Project

### APPROVAL PAGE

Student Name: Greg Forsythe  
 Department: Political Science  
 College: Liberal Arts  
 Degree: B.A.  
 Project Advisor: Dr. Kathy Hawk

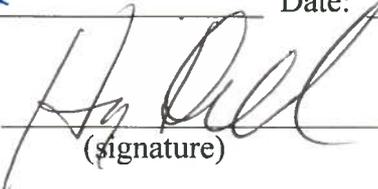
Containing Iran: Sanctions and the Iranian Nuclear Program

Abstract: In recent years, Iran has stepped up its nuclear development program, claiming a right to the peaceful uses of nuclear technology. Yet, the international community has expressed concerns that the Iranian government may be pursuing nuclear weapons. Since the 1970s, the U.S. has imposed a series of economic sanctions on Iran. Recently, the U.S. has called for new sanctions based on Iran's refusal to abandon uranium enrichment. This raises important questions. Have sanctions worked in the past? Would new sanctions, if implemented, have the desired effect of crippling Iran's nuclear ambitions? The effects of current sanctions will be examined from a variety of perspectives. Sources will include the International Atomic Energy Agency, the Iranian government, the United States, and other regional and world powers. The efficacy of sanctions against Iran and other nations will be examined. This analysis will be used to help determine the likely outcome of future sanctions, if implemented.

Approved by:

Project Advisor:  Date: May 5, 2010  
 (signature)

Department Chair:  Date: May 5, 2010  
 (signature)

University Honors Program Director:  Date: 6-1-10  
 (signature)

## **Containing Iran: Sanctions and the Iranian Nuclear Program**

**Greg Forsythe**

May 2, 2010

**Abstract:** In recent years, Iran has stepped up its nuclear development program, claiming a right to the peaceful uses of nuclear technology. Yet, the international community has expressed concerns that the Iranian government may be pursuing nuclear weapons. Since the 1970s, the U.S. has imposed a series of economic sanctions on Iran. Recently, the U.S. has called for new sanctions based on Iran's refusal to abandon uranium enrichment.

This raises important questions. Have sanctions worked in the past? Would new sanctions, if implemented, have the desired effect of crippling Iran's nuclear ambitions? The effects of current sanctions will be examined from a variety of perspectives. Sources will include the International Atomic Energy Agency, the Iranian government, the United States, and other regional and world powers. The efficacy of sanctions against Iran and other nations will be examined. This analysis will be used to help determine the likely outcome of future sanctions, if implemented.

Since the 1950s, Iran has pursued a program of nuclear development. Originally sponsored by the United States, this program was intended to emphasize the peaceful uses of nuclear technology, such as energy production and medical research. In recent years, however, the international community has become increasingly skeptical of the motives behind Iran's nuclear ambitions. Iran is now enriching uranium beyond the level of enrichment needed for energy production, and is within reach of acquiring weapons grade uranium. The United States in particular has begun to view the Iranian nuclear program as a destabilizing force in Middle East. Since the late 1970s, the U.S. has imposed a series of economic sanctions on Iran. More recently, the U.S. has called for new sanctions based on Iran's refusal to abandon uranium enrichment. European Union officials also say they are prepared to move rapidly to implement their own sanctions against Iran. (Wong 2010)

The prospect of new sanctions raises important questions. Have sanctions worked in the past? Would new sanctions, if implemented, have the desired effect of crippling Iran's nuclear ambitions? This project will address these questions and offer guidance for U.S. policy makers.

### **Historical Information**

Before examining the effect of current U.S. sanctions, it is important to note the history of U.S. policy on nuclear proliferation. The problem of nuclear proliferation is one that has confronted the United States since the end of World War II. Iran's nuclear program, in fact, owes its existence to the U.S. policies adopted in the 1950s to address proliferation issues. In 1953, President Dwight Eisenhower addressed the United Nations, declaring that the secret technology needed to build nuclear weapons had spread to other nations and would continue to do so. Eisenhower proposed to emphasize the peaceful uses of nuclear

technology, such as energy production. With this “Atoms for Peace” program, the United States would help other nations develop atomic energy and promote nuclear research. By doing so, the U.S. hoped to discourage a race for nuclear weapons around the world.

Iran was considered a strong ally of the United States during the 1950s and 1960s. The monarch of Iran, Mohammad Reza Shah Pahlavi, turned to the United States in the early 1950s for support against political opponents of his regime. In 1953, the CIA was responsible for inciting a coup which secured the Shah’s regime, overthrowing the democratically elected prime minister of Iran. Throughout the decades to follow, the governments of the United States and Iran enjoyed a close relationship.

With the U.S. as a strong ally after 1953, Iran was an early beneficiary of President Eisenhower’s Atoms for Peace program. The two countries signed a civil nuclear cooperation agreement in 1957. (Bruno 2010) By 1967, the United States had helped establish the Tehran Nuclear Research Center. The U.S. provided Iran with a small reactor and a supply of highly enriched uranium. The Shah announced plans to use this research reactor as the basis for a thriving nuclear power program in Iran. Iran embarked on an ambitious plan to expand its nuclear capabilities to include more than twenty nuclear power plants. Other western nations were eager to support this effort, and construction began on power reactors near the city of Bushehr, on the Persian Gulf.

In the spirit of peaceful nuclear development, Iran signed the Nuclear Non-Proliferation Treaty (NPT) in 1968, and ratified the treaty in 1970. By ratifying the NPT, non-nuclear states such as Iran agreed not to pursue nuclear weapons. They also agreed to be monitored by the International Atomic Energy Agency (IAEA) and submit to IAEA safeguards. Such monitoring is designed to ensure that peaceful nuclear programs are not

converted to weapons programs, in violation of the NPT. In return for these concessions, non-nuclear states are guaranteed an “inalienable” right to pursue “nuclear energy for peaceful purposes.” (NPT 1968)

By the mid 1970s, the United States had begun to develop concerns about its nuclear cooperation with Iran. Signals began to emerge which indicated that Iran might have nuclear ambitions that went beyond the scope of peaceful energy production. In June, 1974, the Shah was quoted as saying Iran would acquire nuclear weapons “without a doubt.” (ISIS 2004) The assessment of the U.S. intelligence community also began to shift toward this view. By 1974, the CIA reported that the Shah’s government intended to make Iran a “power to be reckoned with.” (CIA 1974) While there is no evidence that Iran actively pursued a weapons program in the 1970s, the CIA concluded that Iran wanted the capability to produce nuclear arms if it became advantageous to do so. (CIA 1974) For the first time, the United States considered the possibility that Iran could acquire nuclear weapons. Despite this assessment by the U.S. intelligence community, the U.S. pushed ahead with agreements to provide nuclear reactors, expertise, and highly enriched uranium to Iran. Henry Kissinger, who was U.S. Secretary of State under Presidents Nixon and Ford, has said that weapons proliferation issues were not considered at the time, since Iran was allied with the United States. (Linzer 2005)

The 1979 Iranian Revolution altered US – Iranian relations in a fundamental way. A popular uprising forced out the U.S. backed Shah, who was replaced by an Islamic government headed by Shi’a cleric Ayatollah Khomeini. Relations between the two nations quickly soured, and later events would cement the adversarial relationship. In October, 1979, Iranian students overran the U.S. Embassy in Tehran, seizing 66 American hostages. The

United States ceased diplomatic relations with Iran, a cessation that has endured for more than 30 years. These events surrounding the Revolution would lead to profound changes within Iran. The country's fledgling nuclear program would not be exempt from the impact of the Revolution.

The role of the U.S. after 1979 can be summarized as leading the "global opposition to nuclear assistance" for Iran. (Cronin 2008: 14) Almost overnight, the United States dropped its support for nuclear projects already underway. It also applied pressure on other western governments to do the same. French and German contractors working on nuclear reactors withdrew their employees from Iran in 1979 and the country's nuclear program fell into a period of neglect and decline. (Zarif 2007)

### **U.S. Policy towards Iran – The Emergence of Sanctions**

The shift in U.S. policy towards Iran that came out of the Iranian Revolution would come to be known as "dual containment." Dual containment is defined by F. Gregory Gause III as "isolating Iran and Iraq, cutting them off from the world trade system, and encouraging a regime change in Iraq." (Gause III 1994) The policy of dual containment began in the Carter Administration, though it was not mentioned in those terms until 1993.

(Fayazamanesh 2008: 28) This policy would guide U.S. action toward Iran for many years. With the policy of dual containment, Iran and Iraq were linked in a common U.S. approach. The actions of both governments were considered detrimental to U.S. interests in the region. Of particular concern to the United States were the two nations' support for international terrorism and attempts to gain weapons of mass destruction. In 1984, Iran was first designated a "state sponsor of terrorism" by the U.S. State Department. (GAO 2007: 23) Some have gone so far as to call Iran "the world's foremost state sponsor of terrorism."

(Philips 2009) The human rights records of both Iran and Iraq also came under scrutiny by the United States during this period.

U.S. policy makers turned to economic sanctions against Iran in the late 1970s, initially as a rapid reaction to the taking of U.S hostages in Iran. Later, in the context of the dual containment policy, the United States again turned to sanctions, which would eventually be levied against both Iran and Iraq. The sanctions implemented during this period have shaped U.S policy ever since, in the case of Iran.

Before discussing economic sanctions in depth, it is important to first define what is meant by the term. Sanctions can be defined broadly or narrowly. Using a broad definition, it has been claimed that the United States currently uses economic sanctions against some seventy nations. A more conservative definition yields a much smaller list of just nine nations sanctioned by the U.S between 1993 and 1996. For the purpose of this research, sanctions will be defined as “actions initiated by one or more international actors against one or more others with either or both of two purposes: to punish the targets by depriving them of some value and/or to make the targets comply with certain norms the senders deem important.” (Askari 2003, *Economic Sanctions*: 77) Economic sanctions may be unilateral (imposed by one nation against a target nation) or multilateral (imposed by multiple nations against a single target nation).

Sanctions against Iran became significantly more robust during the 1990s under the Clinton administration. In May, 1993, President Clinton’s Assistant Secretary of State, Dr. Martin Indyk, declared “Iran is seeking a weapons of mass destruction capability including clandestine nuclear weapons capability and ballistic missiles to deliver weapons of mass destruction to the Middle East.” (Katzman 1999: 11) President Clinton’s first sanction on

Iran came on March 15, 1995, in the form of Executive Order 12957, which prohibited any U.S. entity from assisting Iran's petroleum industry. (O'Sullivan 2003: 50) This increase in sanction activity would not be the last during the Clinton years.

In May, 1993, President Clinton announced his intention "to cut off all trade and investment with Iran and to suspend nearly all other economic activity between our nations." (O'Sullivan 2003: 50) Clinton followed through with a ban on most economic transactions with Iran in May, 1995. Between 1994 and 2000, the Administration used several executive orders in an attempt to exclude sophisticated technology from being exported to Iran, and others to punish Iran economically. Congress passed and the President signed the Iran-Libyan Sanctions Act in August, 1996. (Askari 2003, *Case Studies*: 3, 191) Other countries were not exempt from the use of sanctions. Ten Russian entities were sanctioned in 1998 and 1999 for aiding Iran's missile development. (O'Sullivan 2003: 51) Thus, the Clinton Administration persistently invoked biting economic penalties designed to contain Iran's growing regional influence and nuclear development.

### **Calls for New Action**

International pressure against the Iranian regime has intensified in recent years. In 2003, the International Atomic Energy Agency concluded that Iran had systematically failed to live up to its obligations under the NPT. In 2007, the IAEA determined that Iran had not suspended uranium enrichment activities and was not in compliance with IAEA safeguards. At that time, the United Nations Security Council (UNSC) passed Resolution 1747. It required Iran to suspend enrichment of uranium no later than May, 2007. Nevertheless, Iran has consistently refused to suspend enrichment.

As a result of these actions, there have been numerous calls for new sanctions against Iran in an effort to stop Tehran from acquiring nuclear weapons. The U.S. Congress has signaled strong support for expanding sanctions. The Iran Refined Petroleum Sanctions Act passed the U.S. House of Representatives in 2009. President Obama has indicated his support for new sanctions as well. European officials have given support to a new round of sanctions in the early months of 2010. Even Russia, reversing its earlier position, has signaled openness to new sanctions in recent months. (Barry 2010)

The prospect of new sanctions against Iran raises the question of whether such action is justified. Iran claims that its nuclear development is peaceful and necessary because of its growing energy requirements and diminishing oil reserves. At least four factors, however, support the case that Iran intends to acquire nuclear weapons capability.

1. The Iranian regime has a long history of seeking nuclear related equipment and expertise, including the acquisition of nuclear material totally incompatible with peaceful nuclear energy production. It has produced “significant amounts of uranium hexafluoride, and continued work on a heavy water reactor.” (ICG 2004) The Central Intelligence Agency states that Iran tried to buy nuclear technology from the A.Q. Khan network, which is known to smuggle nuclear weapons technology. (Jehl 2004) In a televised interview in August 2009, Kahn admitted that he and other Pakistanis had helped Iran’s nuclear *weapons* program. (Smith 2009)

2. Iran has recently stepped up its enrichment of uranium to levels that are of no value to peaceful energy production, but would be valuable in the pursuit of nuclear weapons. The uranium found in nature contains less than 1% of the U-235 isotope used in nuclear energy production and in weapons production. So called “light water” nuclear

reactors used for energy production require uranium that is enriched to contain between 3-5% U-235. By February, 2010, Iran had begun enriching uranium to 19.8% purity in violation of U.N. Security Council resolutions and Iran's obligations under the NPT. (Jones 2010) Iran's pursuit of highly-enriched uranium (HEU) is indicative of a program whose capabilities go far beyond peaceful energy production.

**3.** Iran has rejected an IAEA proposal that would allow it to use uranium for peaceful energy development. Under the IAEA draft proposal, Iran would ship its uranium to Russia and France, where the uranium would be enriched, manufactured into fuel rods, and returned to Iran. Such fuel rods cannot be used for atomic weapons without further enrichment. The United States believes the IAEA proposal could help to verify that Iran is not pursuing dual use nuclear technology. After initially accepting the offer, Iran later rejected it, and announced in late 2009 that it is testing advanced centrifuges to speed up the process of uranium enrichment.

**4.** Tehran has misrepresented its nuclear activities, hidden nuclear facilities, and repeatedly concealed information from IAEA inspectors. It has not lived up to its commitments under the NPT to provide advanced notice of new nuclear facilities and to allow IAEA inspectors access to all new facilities under construction. Iran is believed to have engaged in numerous suspicious activities, including plutonium separation research, uranium conversion experiments and importing uranium compounds. (Philips 2010)

In light of such evidence, I believe the United States and the international community are justified in taking additional measures in order to deter Iran from advancing its nuclear program.

## **The Goals of Sanctions**

The imposition of sanctions can be used in an attempt to accomplish several policy goals. The direct impact of sanctions is to inflict economic hardship on target nations. Sender nations hope to limit exports, restrict imports, and impede the flow of finance to target nations. (Huffbauer 2007: 44-45) Nations targeted by economic sanctions suffer reduced markets for their goods, pay higher prices for substitute goods, and lose access to critical imports. (Huffbauer 2007: 45) The loss of access to financial resources may also hamper economic development.

Economic distress is not the only intended effect of an economic sanction, however. Rather, it is hoped that economic losses will result in internal strife and political discontent within the nation targeted. This internal upheaval is designed to coerce the targeted nation to modify its behavior in a way that is more acceptable to the issuer of the sanction. By modifying its behavior, the target nation can avoid further economic losses and restore the balance of its political systems. Sanctions, it has been noted, work best when they are directed at nations “brimming with internal political tensions caused by years of stagnation or decline in living standards.” (Salehi-Isfahani 2009)

Sanctions may also be used to deny sensitive technology, especially technology that is not readily available from alternate suppliers. The United States has limited the export of various kinds of military technology since the end of World War II. (Grimmett 2006) By implementing such restrictions, it is hoped that the military potential of a target nation will be reduced, thereby constraining the target nation’s options in the event of military conflict. (Huffbauer 2007: 53)

Finally, sanctions may be used by sender nations to hamper a target nation's relationship with international organizations such as the World Bank and World Trade Organization. In this way, countries such as the United States can apply pressure in pursuit of policy goals. In the 1990s, for example, the United States was able to block IMF assistance to Iran during a period of plunging oil prices that threatened to damage the Iranian economy. (O'Sullivan 2003: 304) In today's highly integrated world, such actions can give sender nations substantial leverage over the policies of target nations.

### **Current U.S. Sanctions**

In the case of Iran, the United States has levied unilateral economic sanctions in three ways. First, American Presidents beginning with Ronald Reagan have issued executive orders designed to hinder Iran's economic development and advance U.S. policy goals. Second, Congress has enacted a series of laws designed to levy specific sanctions against Iran in the hopes of accomplishing similar policy goals. Finally, the U.S. has implemented "financial sanctions that can be used against any party that engages in certain proliferation or terrorism activities." (GAO 2007: 16) Because Iran has been determined by the U.S. State Department to sponsor terrorism, these sanctions have been brought to bear against Iran. (Askari 2003, *Case Studies*: 189) Most of the sanctions levied against Iran in the 1980s are still in place today. As such, economic sanctions are no less relevant today than when they were first implemented, roughly three decades ago.

The first executive order dealing with Iran was issued by President Carter in November, 1979, just after the Iranian Revolution. Executive Order 12170 froze Iranian assets in U.S. banks and their foreign subsidiaries. (Askari 2003: 188) In October, 1987, President Reagan issued an Executive Order 12613, banning U.S. imports from Iran with the

exception of Iranian crude oil. In 1995, President Clinton issued Executive Order 12957, which sanctioned most U.S. transactions related to Iran's oil sector. (Clinton 1995) In 1995, virtually all trade and investment between the U.S. and Iran was suspended by executive order. Finally, in 1997, Executive Order 13059 expanded sanctions to include any nation that attempted to re-export U.S. goods to Iran.

Several major pieces of U.S. legislation also impose sanctions on Iran. In 1979, Congress passed the Arms Export Control Act, which prohibited the export of U.S. military technology to Iran. In 1992, the Iran-Iraq Arms Nonproliferation Act sanctions persons or countries that knowingly aid Iran in acquiring weapons of mass destruction or advanced conventional weapons. The Iran Libya Sanctions Act (ILSA) was implemented in 1996. The ILSA imposes sanctions against companies that invest substantial amounts of capital in Iran's petroleum industry. Finally, the Iran, North Korea, and Syria Nonproliferation Act (INKSNA), enacted in 2000, provides for sanctions against entities that help Iran acquire weapons of mass destruction or advanced missile technologies. (U.S. State Dept. 2006)

The United States also imposes generic sanctions against any party that provides assistance to terrorism or proliferation activities. The International Economic Emergency Powers Act (IEEPA) authorizes such sanctions and has been used to levy financial penalties against around seventy entities as of 2007. (GAO 2007: 17) The broad majority of the entities sanctioned by the IEEPA were individuals engaged in trade with Iran, as opposed to other nations.

### **On the Efficacy of Sanctions**

The efficacy of sanctions is inherently difficult to measure. It has been said that "lack of clarity is the predominant characteristic" on this question. (Askari 2003 *Case Studies*: 76)

Target nations do not exist in a vacuum; they interact with many countries. Even when a positive outcome is experienced subsequent to sanctions, the sender countries cannot easily determine whether the effect was a result of sanctions alone or a combination of other motivators, such as diplomatic efforts or threats of military action. The U.S. Departments of Treasury and State, which oversee U.S. sanctions policy, have stated that the U.S. Government does not even attempt to measure the effectiveness of U.S. sanctions for these reasons. (GAO 2007: 24) For the purpose of this research, the success of sanctions will be evaluated by three criteria: (O’Sullivan 2003: 29)

- Impact: How much political or economic damage do sanctions inflict on a target nation?
- Effectiveness: To what extent do economic sanctions achieve their goals?
- Comparative Utility: How does the effectiveness of sanctions compare with other policy options?

In the area of the impact of sanctions, the evidence suggests that the record in the case of Iran has been mixed. In 1978, before the Iranian Revolution, statistics show that the U.S. played a relatively small part in the Iranian economy. Iran exported about 12% of its goods to the United States, and around 28% of its imports came from the U.S. (Huffbauer 2007: 186) After the imposition of sanctions, those numbers fell to 5% and 1%, respectively. The imposition of sanctions also caused Iran to lose access to U.S. markets for petroleum equipment and technology. Yet, Iran was able to shift to other markets and acquire the desired technologies from Canada, as well as European and Asian countries. (Alikhani 2000: 409)

Iran also lost access to financial markets as a result of U.S. sanctions. In the late 1970s, the U.S. closed its markets to Iran, and the World Bank pressured other nations to limit their investments as well. These sanctions were later strengthened in the 1990s under President Clinton, both by executive order and the Iran Libya Sanctions Act. These sanctions led to an environment that was not conducive to foreign investment in Iran during the first half of the 1990s. Yet, by the latter half of the decade, foreign investment had recovered in a substantial way, with Western companies competing to invest around \$8 billion dollars in various Iranian projects. (Alikhani 2000: 409)

A look at Iran's overall Gross Domestic Product (GDP) from 1990-2001, a period of heavy sanction activity by the United States, is revealing. During this period, the Iranian economy grew by 5.8%, approximately the same rate of growth as the economy of the United States during the same period. (Huffbauer 2007: 186) While it is likely that U.S. sanctions inflicted some damage to the economy of Iran, there is no evidence that suggests the Iranian economy was crippled by U.S. sanctions. Iran has been able to find alternate partners for needed goods and services, and has restored much of its access to world financial markets.

A second yardstick for the efficacy of sanctions is that of effectiveness. To what extent have the sanctions levied against Iran achieved their goals? Again, the record is mixed. The earliest sanctions against Iran were levied as a result of the taking of U.S. hostages in Tehran in 1979. Sanctions, in that case, might be considered a success, as the hostages were released in 1981. Yet, it is unclear that sanctions were the primary motivator in the release of the U.S. hostages. Diplomatic efforts were undertaken during the same period, and the U.S. was actively engaged in planning for military options against Iran, including a hostage rescue mission that ultimately failed. In this context, sanctions should be

viewed only as one of many potential motivators that may have led to the release of hostages. (Taillon 2001: 103)

A secondary goal of sanctions has been to influence Iran to modify its behavior in regard to support for terrorism. By this standard, the effectiveness of sanctions leaves much to be desired. The U.S. State Department first listed Iran as a state-sponsor of terrorism in 1984. Since that time, Iran has not moderated its support for militant organizations. Iran helped found Hezbollah in the 1980s, and continues to support Hamas and Palestinian Islamic Jihad, all of which the U.S. considers to be terrorist organizations. U.S. officials also claim the Iranian government supported the group that carried out the 1996 bombing of Khobar Towers, a U.S. military residence, which killed nineteen U.S. military personnel. (Leonnig 2006) In most respects, Iran continues to be “an open supporter of terrorism and anti-American activity.” (Huffbauer 2007: 186)

The effectiveness of sanctions is directly relevant to the development of Iran’s military infrastructure. As mentioned earlier, a primary goal of sanction activity is to deny military technology to a recipient nation. The United States has attempted to limit the military capability of Iran since 1979, when Congress passed the Arms Export Control Act. The AECA prohibited the export of most U.S. military technology to Iran. The Iran-Iraq Arms Nonproliferation Act, passed in 1992, sought to prevent Iran from acquiring weapons of mass destruction, as well as conventional arms. In the case of conventional arms, sanctions have proven ineffective, failing to prevent Iran from acquiring substantial military capabilities. Iran has an “extensive inventory” of ballistic missiles and is believed to have imported as many as 200 short range missiles from China in the late 1980s. (Cordesman 2002: 151) In 2004, Iran conducted a test of the Shahab-3 missile, which is believed to be

capable of striking Turkey, Israel and some US bases in the Persian Gulf. Iran has been able to acquire ballistic missile technology from Russia, China and North Korea. (O'Sullivan 2003: 82-83) Iran's prototype ballistic missiles, the Shahab-3 and Shahab-4, appear to be developed from the North Korean Nodong missile and Soviet SS-4 technology. (Ventor 1999: 44) Clearly, limiting the exportation of sensitive technology to Iran has not prevented Iran from acquiring similar technology elsewhere. Sanctions have had very limited effectiveness in preventing covert or smuggled technology and materials from reaching Iran.

In the area of nuclear development, U.S. sanctions have also been largely ineffective at stopping Iran from acquiring critical technologies. Only a few international partners have been needed for Iran to continue its pursuit of nuclear technology. Russia's help with Iran's Bushehr reactor is an example of Iran's ability to acquire third party expertise without the help of the United States. In recent weeks, Russian Prime Minister Vladimir Putin announced plans for Russia to complete Iran's stalled Bushehr reactor project, and provide fuel for the project. (Landler 2010) Iran has also been able to acquire extensive uranium reprocessing equipment. As of late 2009, nearly 8700 centrifuges were operating at the Natanz Fuel Enrichment Plant. (Albright 2010, *Iran's Gas*: 3) These centrifuges can be used to enrich uranium to levels suitable for energy and weapons production. Tehran has indicated that the Natanz facility will eventually contain 50,000 centrifuges. It is believed that Iran acquired its centrifuges and related equipment from a "clandestine supply network run by former Pakistani nuclear official Abdul Qadeer Khan." (Crail 2006) There is evidence to suggest that Iran acquired much of this equipment during the mid 1990s, a period characterized by substantial toughening of sanctions by the United States. On April 14, 2010, the director of the U.S. Defense Intelligence Agency, Lieutenant General Ronald Burgess

testified before Congress that Iran now has the capability to produce a nuclear weapon within one year. (U.S. Congress, Armed Services) It is clear that U.S. sanctions have failed to achieve the goal of preventing Iran from developing its network of nuclear facilities and the capability to produce weapons.

A final measure of the efficacy of sanctions is that of comparative utility. That is, how does the efficacy of sanctions compare with other policy options? Apart from sanctions, other options available to the U.S. include military force (or the threat thereof) and diplomatic efforts. Doubtless, the last three administrations have considered the possibility of using military force in dealing with Iran's nuclear ambitions. The chairman of the Joint Chief of Staff, Admiral Mike Mullen, said in January, 2010: "When I speak of leaving all options on the table [for dealing with Iran], certainly it includes the potential for military options." (Quigley 2010) While no one should rule out military action as a last resort, there are considerable doubts about the ability to achieve a favorable result with military action. Most analysts believe the operation would be difficult and its outcome highly uncertain. U.S. Secretary of Defense Robert Gates has given testimony to Congress indicating that a strike against Iran's nuclear facilities would "only buy us time and send the program deeper and more covert", while ultimately failing to prevent Iran from acquiring nuclear weapons. (U.S. Congress, Appropriations) Compared with military options, economic sanctions become a more attractive prospect for policy makers.

In analyzing comparative utility, the efficacy of sanctions should also be compared to that of diplomatic efforts. Though the U.S. has had no formal diplomatic relations with Iran since 1979, it does conduct diplomatic efforts through third parties. In 2008, the U.S. established an "interests section" in Tehran, a diplomatic mission that lacks the stature of a

full U.S. embassy. Despite occasional progress on the diplomatic front, relations between the two nations remain quite poor. One suggested alternative to sanctions has been a “strategy of conditional engagement” whereby the two nations negotiate issues of mutual concern while attempting to forge better relations. (O’Sullivan 2003: 94) Iran has not demonstrated much enthusiasm for such endeavors, and rejected such an offer outright in 1998. It is important to note that diplomatic efforts and economic sanctions have existed side by side in recent years. According to an analysis by the U.S. Government, “it is difficult to know where the effects of U.S. diplomacy end and the effects of U.S. sanctions begin.” (GAO 2007: 24)

### **Case Studies**

Despite the inherent difficulty of measuring the effectiveness of economic sanctions, there are examples of sanction activity that are generally considered to have been successful. In these cases, there is evidence that sanctions were effective in modifying a target nation’s internal behavior. Some instances of successful historical sanctions are:

South Africa. The goal of sanctions against South Africa was to end the government’s *apartheid* policy - the separation of races and discrimination against black South Africans. The first sanctions were issued by the United States in 1962, and sanctions were strengthened in 1986. South Africa became economically isolated, and there is evidence its GDP suffered as a result. (Eyler 2007: 11) The nation finally abandoned *apartheid*. Persistent international pressure likely helped achieve the goal of destroying the *apartheid* system.

Sudan. The original U.S. sanctions against Sudan in the 1990s appear to have realized only minimal economic impact, largely because Sudan was able to shift trading

partners with relative ease. However, by 2001, the United States transitioned to a much more effective tactic in Sudan by coupling assertive diplomacy with incentives. Egypt was successfully employed to encourage stronger regional sanctions on Sudan. Meanwhile, the U.S. administration appointed Senator John Danforth as special envoy to Sudan and agreed to support lifting some UN sanctions in exchange for Sudan's cooperation in anti-terrorism efforts, indicating the value of goal specific incentives for cooperating with U.S. policy. These efforts "transformed minor economic irritants into points of leverage in a broader framework of negotiation." (O'Sullivan 2003: 294) Further diplomatic successes with Sudan followed in 2002.

Libya. U.S. and international sanctions in the 1980s and 1990s probably helped to contain the Qadhafi regime in Libya and may have been instrumental in modifying its behavior. Libya's economy, which had been growing in the previous decade, began to decline about the same time that the United States imposed unilateral sanctions against it. Economic growth rates, which had averaged above ten percent per year in the mid-1970s, reversed rapidly after sanctions were imposed. Real GDP fell at an average of 0.74 percent from 1991 to 1999. (Eyler 2007: 189) Export revenues fell steadily, which, in turn, forced Libya to cut back on several important development projects that could have broadened its economic base. It also had trouble making payments on trade debts. (O'Sullivan 2007: 186-187) After experiencing difficulty making cash payments on large projects, Libya began to rely heavily on barter arrangements. While some analysts believe that U.S. sanctions had limited impact on Libya's overall economy, there is evidence that U.S. sanctions *did* adversely affect the country's ability to attract trade partners and influenced some of its internal policy decisions.

The effectiveness of sanctions against Libya was enhanced by continued U.S. engagement. When the United States demanded that Libya deliver the Lockerbie bombing suspects, it hinted at support for lifting some U.N. sanctions if Libya complied. With assistance from Nelson Mandela and intermediaries from Saudi Arabia, the Clinton administration was able to secure Libyan cooperation after the United Nations passed Resolution 1192, which formally agreed to lift certain sanctions. Libya turned over the Lockerbie suspects to the Netherlands on April 5, 1999. Apparently, Libyan leader Muammar Qadhafi considered such action to be his “most immediate and direct route to a measure of relief from his domestic economic and political woes.” (O’Sullivan 2003: 211) Libya is also a notable example of a nation that abandoned its nuclear program in response to sanction activity. The last U.N. sanctions against Libya were lifted in 2004 after Libya agreed to abandon its nuclear/WMD programs. (Eylar 2007: 189)

Iraq. Iraq is a notable case in the study of sanction activity, and has been called the “Mount Everest of sanctions in the Cold War era.” (Huffbauer 2007: 132) U.S. and international sanctions denied Saddam Hussein’s regime up to \$250 billion in oil export revenues between 1990 and 2000, with those revenues being detoured to a UN oil escrow account. (O’Sullivan 2003: 300) For a while, sanctions did seem effective in containing Iraq’s military adventurism. Sanctions did not prevent Hussein from acquiring conventional weapons, but they did force the Iraqi government to pay a higher price for such weapons. Sanctions were not in place for a sufficient time to remove Iraqi forces from Kuwait, nor did they depose the Hussein regime in Iraq. Yet, years of sanctions may well have delayed and limited Iraq’s ability to acquire modern arms systems, especially weapons of mass destruction. (Huffbauer 2007: 132) It should be noted, however, that the threat of U.S.

military action, including imposition of “no fly zones,” played a large role in the regime’s behavior during the 1990s. Smuggling and the inability to control Iraq’s borders eventually diminished the value of sanctions, leading the U.S. to consider the use military force against Iraq.

### **Potential Shortcomings of New Sanctions**

Economic sanctions suffer from a number of limitations that inhibit their effectiveness. These factors may limit the efficacy of future sanctions as they relate to Iran. First, the effectiveness of unilateral economic sanctions has been diluted in recent years by the integration or globalization of economies and the rapid spread of technology. “The initial shock of U.S. trade sanctions fades quickly, as countries diversify their trade partners...the realignment of trade patterns can be almost seamless.” (O’Sullivan 2003: 303) In the case of Iran, the case for unilateral sanctions by the United States is weakened by one simple reality: “Sender nations must have economic connections with the target to sanction effectively.” (Eyler 2007: 9) Since the United States has severed nearly all primary and secondary trade with Iran, it has lost much of the leverage it previously might have employed to exert influence with the regime. Such limitations speak poorly concerning the future power of U.S. sanctions to limit Iran’s nuclear ambitions.

Time constraints are likely to hamper the effectiveness of any new sanctions. Assuming that estimates are correct and Iran is within twelve months of developing a prototype nuclear weapon, time is short. “Iran needs increasingly few centrifuges to make uranium 235 increasingly potent.” (Broad 2010) For example, approximately four thousand centrifuges are needed to enrich uranium up to four percent, but only one hundred and twenty-eight are needed to enrich to ninety percent, which is the level of enrichment required

for a weapon. Another potential problem with new sanctions in the case of Iran is the prospect that the policy could backfire. There is the distinct possibility that the Iranian regime would try to capitalize on the implementation of harsh U.S. sanctions by rallying popular support in face of worsening living conditions. Iranian President Mahmoud Ahmadinejad owes his rise to power to his “successful exploitation of Iranians’ frustration with their living standards and economic opportunities.” (Brookings 2008) This approach has been used for years by Fidel Castro to deflect responsibility for Cuba’s economic ills. If tough new sanctions are levied against Iran, it seems likely that Iranians could rally around the current regime, negating the desired effect of sanctions.

To the extent that new sanctions are designed to influence domestic policy toward nuclear development in Iran, there is evidence to suggest they may prove ineffective. Although the U.S. has had a sanctions regime in place for more than thirty years, it has not been responsible for meaningful political change in Iran. There is broad agreement among experts on this point. Rather than being a response to U.S. pressure, past “domestic political changes in Iran reflected internal dissatisfaction with the evolution of the Iranian revolution.” (O’Sullivan 2003: 310) It is unlikely that new sanctions will be more effective than past actions at changing the Iranian regime’s policy toward nuclear development. Notably, the nuclear development program enjoys widespread support within Iran. Even in the event of political upheaval (including regime change), it is likely that the Iranian government would continue to support the current uranium enrichment program as a right guaranteed under the NPT.

The illicit trade of weapons also poses serious limitations to further U.S. sanctions on Iran. Nations like China, North Korea, Syria and Russia, may openly or covertly carry on

trade with Iran. Nuclear weapons expert David Albright notes: "...the pathway to obtaining or improving nuclear weapons remains through illicit nuclear trade. Governments' ability to detect and stop this dangerous trade remains limited. Illicit nuclear trade networks remain difficult to detect, and the demand for sensitive goods by proliferant states remains robust." (Albright 2010, *Detecting*) Russia remains a prime target for nations seeking restricted weapons technology. "Russia...lacks sufficient resources to implement its own export control laws and regulations and has a growing and influential business culture that disdains such controls." (U.S. Congress, Governmental Affairs) Even arms dealers in Great Britain are suspected of making weapons shipments to Iran that may include nuclear technology. (Townsend 2008) Iran has a long history of smuggling controlled nuclear-related technology. A.Q. Khan, the founder of Pakistan's nuclear weapons program, has openly admitted that his proliferation network has helped Iran in its pursuit of nuclear weapons. (Phillips 2010) Iran is known to have made numerous attempts to use third countries as trans-shipment sites to import restricted nuclear related equipment. As recently as 2009, Iran was successful in importing nuclear pressure gauges from a Swiss manufacturer through Taiwan. (Brookings 2008) It will be difficult to enforce export controls well enough to prevent Iran from procuring sensitive nuclear technology.

Another challenge for the United States will be achieving international cooperation with new and existing sanctions. Multi-lateral sanctions are generally more effective than unilateral programs. (O'Sullivan 2003: 271) Given the target objective in Iran—trying to stop its weapons program—broad international cooperation will be essential. While there is support for sanctions, it is by no means universal. China, a permanent veto wielding member

of the UNSC, has refused to endorse sanctions, contending repeatedly that they won't work and may stand in the way of negotiated settlement. (Sanger 2010)

### **Conclusions**

“Past experience suggests that sanctions cannot prevent a determined and well-financed country from eventually crossing the nuclear threshold.” (Huffbauer 2007: 145)

Can sanctions stop Iran from eventually developing a nuclear weapon? Probably not. Iran has already acquired the materials, experience, and technology it needs to become a nuclear power. Furthermore, it has already overcome many of the technological hurdles to weapons production, and now stands near the nuclear finish line. If Iran decides to develop nuclear weapons and pursues that goal with all its resources, it will most likely succeed.

Should the United States conclude, then, that new sanctions should not be implemented? I do not draw that conclusion. Now more than ever, the United States and the international community should work to encourage Iran to live up to its obligations under the NPT and bring its nuclear program into full compliance. In this context, sanctions are a useful tool that should be used to increase the costs of developing weapons, while lowering the benefits of doing so.

In the case of Iran, the U.S. has little choice but pursue a “carrot and stick” approach. Sanctions can serve as one potential stick, but carrots must be used as well. Any new sanctions must come with processes whereby sanctions can be lifted if the Iranian regime meets specific goals. By structuring sanctions in this way, the international community can increase their effectiveness. Iran should also know that other incentives exist, if it is willing to bring its nuclear program into compliance with international law.

Admittedly, sanctions alone may prove ineffective in halting Iran's nuclear development. Therefore, I believe the United States should leave military force on the table as an option for dealing with the present crisis. The use of military force comes with substantial risks, and it would come at a very inopportune time, as the United States attempts to wage two wars in the region. Nevertheless, I believe that the U.S. must utilize every tool available if it is to dissuade Iran from crossing the nuclear threshold, and the threat of military force is one such tool. The Iranian regime should not be left with the impression that the United States is unwilling or unable to intervene militarily.

The United States, in my view, must engage in aggressive diplomatic efforts in an attempt to make progress over the Iranian nuclear program. Diplomacy has the potential to be the fastest method of achieving compliance, at the lowest cost. Again, the United States should attempt to incentivize the Iranian regime by laying out a scheme of powerful incentives and strong deterrents with ambitious goals. If Iran is willing to truly dismantle its nuclear program, the United States should be willing to release its hold on Iranian assets, lift economic sanctions in a substantial way, and work toward the restoration of diplomatic relations. The United States could continue to target the sectors of the Iranian regime that support international terrorism, while resuming some trade relations between the two countries. In return for the normalization of relations with the United States, Iran must be willing to not only halt nuclear development work, but dismantle such development to the extent that it cannot be easily reconstituted at a later date. The greatest obstacle to such an approach may well be domestic political realities within each of the two nations.

For the United States to implement an effective policy going forward, support from key players in the international community will be key. Without the support of Russia and

China, any new sanctions regime will likely prove ineffective. This problem poses one of the greatest challenges to U.S. policy makers. The United States must bring the full weight of its influence to bear, not only against Iran, but also against Iran's major trading partners.

Without such cooperation, sanctions have a minimal chance of success.

Ultimately, the choice to build nuclear weapons or abandon them may well lie with the Iranian regime. For the United States, this presents a poor environment in which to achieve U.S. goals in the region. Yet, the current situation also presents an opportunity for the U.S. to reexamine its approach, revise policies that may no longer be effective, and move aggressively to achieve its aims. If Iran is to make the right decision on nuclear weapons development, the time to influence that decision is now.

## **Acknowledgements**

I would like to thank Dr. Kathy Hawk for her gracious assistance in putting this project together on short notice.

I would also like to thank my father, Wayne Forsythe, for his help with sources and fact-checking.

## References

- Albright, David. 2010. "Detecting and Disrupting Illicit Nuclear Trade After A.Q. Kahn." *The Washington Quarterly* (April): 85
- Albright, David. 2010. *Iran's Gas Centrifuge Program: Taking Stock*. Washington: Institute for Science and International Security (ISIS).
- Alikhani, Hossein. 2000. *Sanctioning Iran: Anatomy of a Failed Policy*. London: Victoria House.
- Askari, Hossein G. et al. 2003. *Case Studies of U.S. Economic Sanctions: The Chinese, Cuban, and Iranian Experiences*. West Port, Ct. Praeger Publishers.
- Askari, Hossein G., 2003. *Economic Sanctions: Examining Their Economic Philosophy and Efficacy*. Westport, CT.: Greenwood Publishing.
- Barry, Ellen, and Andrew Kramer. 2010. "China and Russia Press Iran to Accept U.N. Deal." March 24 <http://www.nytimes.com/2010/03/25/world/middleeast/25iran.html> (April 3, 2010).
- Broad, William J. 2010. "For Iran, Enriching Uranium Only Gets Easier." March 8. <http://www.nytimes.com/2010/03/09/science/09enrich.html> (April 22, 2010).
- Brookings Institution. 2008. "Sanctioning Iran: Current Impact, Future Prospects." December 16. [http://www.brookings.edu/events/2008/1216\\_Iran.aspx](http://www.brookings.edu/events/2008/1216_Iran.aspx) (April 30, 2010).
- Bruno, Greg. 2010. "Iran's Nuclear Program." March 10. [http://www.cfr.org/publication/16811/irans\\_nuclear\\_program.html](http://www.cfr.org/publication/16811/irans_nuclear_program.html) (April 27, 2010).
- Clinton, William J. 1995. Prohibiting Certain Transactions With Respect to the Development of Iranian Petroleum Resources, Proclamation 12957. *Federal Register* vol. 60, no. 52.
- Cordesman, Anthony H. 2002. *Strategic Threats and National Missile Defenses: Defending the U.S. Homeland*. Westport, CT.: Greenwood Publishing.
- Crail, Peter. 2006. "Questions Surround Iran's Nuclear Program." <http://www.armscontrol.org/factsheets/Iran-IAEA-Issues> (April 22, 2010).
- Cronin, Patrick M. 2008. *Double Trouble: Iran and North Korea as Challenges to International Security*. West Port, Ct., Greenwood Publishing.
- Eyler, Robert. 2007. *Economic Sanctions: International Policy and Political Economy at Work*. New York: Palgrave Macmillan.
- Fayazmanesh, Sasan. 2008. *United States and Iran: Sanctions, Wars, and the Policy of Dual Containment*. New York: Routledge.

- Gause III, F. Gregory. 1994. "The Illogic of Dual Containment." *Foreign Affairs* (March/April).
- Grimmett, Richard F. 2006. "Military Technology and Conventional Weapons Export Controls." September 29.<http://www.fas.org/sgp/crs/weapons/RS20517.pdf> (May 1, 2010).
- Huffbauer, Gary Clyde, *et. al.* 2007. *Economic Sanctions Reconsidered*. Washington: Peterson Institute.
- International Crisis Group (ICG). 2004. "Iran: Where Next on the Nuclear Standoff?" November 24.<http://www.crisisgroup.org/en/regions/middle-east-north-africa/iran-gulf/iran/b015-iran-where-next-on-the-nuclear-standoff.aspx> (March 15, 2010).
- ISIS-online.org. 2010. "Iran's Nuclear Program." March 22.<http://isis-online.org/country-pages/iran> (April 10, 2010).
- Jehl, Douglas. 2004. "C.I.A. Says Pakistanis Gave Iran Nuclear Aid." November 23.<http://www.nytimes.com/2004/11/24/politics/24weapons.html> (April 1, 2010).
- Jones, Gregory. 2010. "Iran's Increasing Progress Towards a Nuclear Weapons Capability." February 18.<http://www.npec-web.org/1175> (May 3, 2010).
- Katzman, Kenneth. *U.S.-Iranian Relations: An Analytic Compendium of U.S. Policies, Laws and Regulations*. Washington: The Atlantic Council of the United States.
- Landler, Mark. 2010. "Iran Dispute Becomes Focus of Clinton's Russia Trip." March 18.<http://www.nytimes.com/2010/03/19/world/europe/19diplo.html> (April 30, 2010).
- Leonnig, Carol D. 2006. "Iran Held Liable in Kohbar Attack." December 23.<http://www.washingtonpost.com/wp-yn/content/article/2006/12/22/AR2006122200455.html> (May 3, 2010).
- Linzer, Dafna, "Past Arguments Don't Square with Current Iran Policy," *The Washington Post*, 27 March, 2005.
- O'Sullivan, Meghan L. 2003. *Shrewd Sanctions: Statecraft and State Sponsors of Terrorism*. Washington: Brookings Institution Press.
- Phillips, James. 2009. "Time for Tougher Sanctions On Iran's Terrorist Regime." October 9.<http://www.heritage.org/Research/Reports/2009/10/Time-for-Tougher-Sanctions-on-Irans-Terrorist-Regime> (March 29, 2010).
- Philips, James. 2010. "Iran's Nuclear Program: What is Known and Unknown." March 26.<http://www.heritage.org/research/reports/2010/03/iran%20s%20nuclear%20program%20what%20is%20known%20and%20unknown> (April 18, 2010).
- Quigley, Samantha L. 2010. "Chairman Calls Strategy Year's Greatest Challenge." January 10.<http://www.jcs.mil/newsarticle.aspx?ID=205> (April 3, 2010).

- Sanger, David E. 2010. "New Efforts On Iran Run Into Familiar Snags." March 19. <http://www.nytimes.com/2010/03/20/world/middleeast/20policy.html> (April 18, 2010).
- Salehi-Isfahani, Djavad. 2009. "Iran Sanctions: Who Really Wins?" September 30. [http://www.brookings.edu/opinions/2009/0930\\_iran\\_sanctions\\_salehi\\_isfahani.aspx](http://www.brookings.edu/opinions/2009/0930_iran_sanctions_salehi_isfahani.aspx) (May 3, 2010).
- Smith, R. Jeffrey. 2009. "Pakistani Scientists Cites Help to Iran." September 9. [http://www.washingtonpost.com/wp-dyn/content/article/2009/09/08/AR2009090803731\\_pf.html](http://www.washingtonpost.com/wp-dyn/content/article/2009/09/08/AR2009090803731_pf.html) (April 4, 2010).
- Taillon, J. Paul de B. 2001. *The Evolution of Special Forces in Counter-terrorism : The British and American Experiences*. Westport, CT. Greenwood Publishing.
- Townsend, Mark. "British Dealers Supply Arms to Iran." *The Observer*, 20 April, 2008.
- U.S. Central Intelligence Agency. 1974. Special National Intelligence Estimate, 23 August. II.
- U.S. Congress. Senate. Armed Services Committee. 2010. *U.S. Policy Towards the Islamic Republic of Iran*. 111<sup>th</sup> Cong., 2<sup>nd</sup> sess., 14 April.
- U.S. Congress. Senate. Committee on Appropriations. 2009. *Testimony of Secretary Gates*. 111<sup>th</sup> Cong., 1<sup>st</sup> sess., 1 May.
- U.S. Congress. Senate. Committee on Banking, Housing, and Urban Affairs. 2009. *Minimizing Potential Threats from Iran*. 111<sup>th</sup> Cong., 1<sup>st</sup> sess., 30 July.
- U.S. Congress. Senate. Committee on Governmental Affairs. 2002. *Nuclear Non-Proliferation Concerns and Export Controls in Russia*. 107<sup>th</sup> Cong., 2<sup>nd</sup> sess., 6 June.
- U. S. Government Accountability Office. 2007. *Iran Sanctions: Impact in Furthering U.S. Objectives is Unclear and Should Be Reviewed*. Publication No. GAO-08-58.
- U.S. Department of State. 1968. Treaty on the Non-Proliferation of Nuclear Weapons (NPT), 1 July. Article IV.
- U.S. Department of State. 2006. Iran, North Korea, and Syria Non-Proliferation Act Sanctions. <http://www.state.gov/t/vci/inksna/index.htm> (May 4, 2010).
- Ventor, Al. J. 1999. "Biological Warfare: The Poor Man's Atomic Bomb." *Jane's Intelligence Review* 11 (March): 42-47.
- Wong, Edward. 2010. "Sarkozy Urges China to Back Iran Sanctions." April 29. <http://www.nytimes.com/2010/04/30/world/asia/30beijing.html> (May 1, 2010).
- Zarif, Mohammad Javad. 2007. "Tackling the Iran-U.S. Crisis." *Journal of International Affairs* 60 (Spring/Summer).