

**IRAN'S NUCLEAR PROGRAM, 1979-2015:
A STUDY IN NUCLEAR PROLIFERATION AND ROLLBACK**

FARHAD REZAEI

**FACULTY OF ARTS AND SOCIAL
SCIENCES
UNIVERSITY OF MALAYA
KUALA LUMPUR**

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FARHAD REZAEI

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Name of Candidate: Farhad Rezaei

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ABSTRACT

This study constitutes the first full and systematic account of Iran's nuclear program since the Islamic Revolution in 1979 analyzed within the context of proliferation, rollback and sanction theories. Extant literature suffers from polarization; some scholars embrace the neorealist postulation that proliferators are rational actors and, by extension, when overwhelmed by sanctions, they would respond in a rational way and embrace rollback. Others contend that neorealist rationality cannot be applied to new proliferators of the Second Nuclear Age, notably Iran.

The goal of the study is to find out whether Iran fits the profile of a rational proliferator and as such, is likely to respond to sanctions in a rational way. Two questions central to this inquiry are: whether Iran followed the neorealist precepts of proliferation and whether the increasingly punitive sanctions imposed by the intentional community caused it to reevaluate the cost of the nuclear program. The detailed research based primarily on Farsi language sources indicates that Iran can be described as a rational proliferator; seared by the war with Iraq, its leaders decided that a nuclear capability would provide protection from predatory neighbors as well as shield it from the United States. The relative ease of access to nuclear technology and the weak penalties for proliferation reinforced Tehran's conviction that the cost of running the program was low and manageable. When faced with harsh sanctions that increased the price tag of the nuclear program to a level deemed catastrophic to the economy, the regime embarked upon an unprecedented open debate on the cost-benefits of the program. The debate has been complicated by structural segmentation of the political system. But there is a growing recognition among key elites to embrace a rollback in order to obtain sanctions relief and indeed, reintegrate into the community of nations.

ABSTRAK

Kajian ini merupakan usaha pertama ke arah suatu penjelasan sistematik yang pertama terhadap memahami program nuklear Iran sejak Revolusi Islam pada tahun 1979, yang dianalisis dalam konteks pertambahan dan unduran nuklear dan teori sanksi. Tinjauan keatas kajian lepas masih mengalami polarisasi; sebahagian golongan cerdik pandai menerima postulasi neorealist yang menyatakan pihak yang terlibat dalam meningkatkan penggunaan nuklear adalah pelakon rasional dan, selanjutnya apabila terdesak dengan sanksi, mereka akan bertindak balas dengan cara yang rasional dan menerima unduran nuklear. Yang lain berpendapat bahawa rasional ini neorealist tidak boleh digunakan untuk memahami pertambahan nuklear (proliferator) baru dalam Zaman Nuklear Kedua, terutamanya di Iran.

Matlamat kajian ini adalah untuk mengetahui sama ada Iran sesuai dan berpadanan dengan profil proliferator rasional, dan mungkin bertindak, balas terhadap sanksi dengan cara yang rasional. Dua persoalan yang menjadi pokok kepada siasatan ini ialah: sama ada Iran mengikut persep neorealist pertambahan nuklear, dan sama ada sanksi punitif yang dikenakan oleh masyarakat antarabangsa akan menyebabkan ia menilai semula kos projek nuklear. Kajian terperinci adalah berdasarkan kepada sumber-sumber bahasa Farsi yang menunjukkan bahawa Iran boleh disifatkan sebagai proliferator rasional; yang disebabkan oleh perang dengan Iraq, pemimpinnya memutuskan bahawa senjata nuklear akan mempertahankannya dari dimanasakan oleh jiran serta melindungi negara dari Amerika Syarikat. Akses kepada teknologi nuklear yang agak mudah itu dan tindakan punitif yang agak lemah terhadap proliferator memperkukuhkan lagi keyakinan Tehran bahawa kos pengendalian program tersebut adalah rendah dan terkawal. Apabila berhadapan dengan sanksi atau sekatan keras yang meningkatkan kos projek nuklear ke tahap yang dianggap boleh membawa bencana kepada ekonomi, rejim

itu telah memulakan perdebatan terbuka yang luar biasa terhadap kos serta-manfaat projek berkenaan. Perbahasan menjadi rumit kerana segmentasi struktur sistem politik. Tetapi ada pengiktirafan yang kian meningkat di kalangan golongan elit utama untuk mengundur supaya menerima pelepasan dari sanksi/sekatan dan dengan itu sudah tentu dapat diintegrasikan kembali ke dalam komuniti negara-negara sedunia.

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TABLE OF CONTENTS

	Page	
ABSTRACT	III	
ABSTRAK	IV	
ACKNOWLEDGEMENT	V	
TABLE OF CONTENTS	VI	
LIST OF ACRONYMS AND ABBREVIATIONS	X	
CHAPTER 1	INTRODUCTION	1
1.1	Introduction	1
1.2	The puzzle of Iran's Proliferation and Rollback	2
1.3	Research Questions	7
1.4	Research Objectives	7
1.5	Scope of the Study	8
1.6	Literature Review	9
	1.6.1 Introduction	9
	1.6.2 Iran's Nuclear Program: Motivation For Proliferation and Rollback	9
	1.6.3 International Sanctions	14
	1.6.4 The Non-Unitary Actor: The Negotiated Political Order	29
1.7	Methodology and Sources	32
1.8	Contribution and Significance of the Study	34
1.9	Limitations of the Study	35
1.10	Structure of the Study	36
CHAPTER 2	THEORETICAL AND CONCEPTUAL FRAMEWORK	38
2.1	International Relations Theories and Nuclear Proliferation	38

	2.1.1 Neorealism	42
2.2	Nuclear Rationality in the First Nuclear Age: The Emergence of the Mutual Assured Destruction (MAD) Doctrine	46
2.3	The Second Nuclear Age: Proliferation and Nuclear Rollback	47
2.4	Nuclear Rationality in the Second Nuclear Age: Is MAD Dead?	55
2.5	Definition of Terms	60
CHAPTER 3	THE ISLAMIC REVOLUTION AND THE NUCLEAR PROGRAM	64
3.1	The Foreign Policy of the Islamic Republic of Iran: The High Cost of Exporting the Revolution	64
3.2	Building a Respectable Façade: Completing the Shah's Peaceful Nuclear Program	78
3.3	Conclusion	83
CHAPTER 4	RAFSANJANI'S NUCLEAR TAKE OFF	84
4.1	Hiding In Plain Sight: The Legitimate Infrastructure Of A Secret Program	84
4.2	Building Its Own Scientific Cadre: Iran As a Nuclear Science Beacon To The World?	95
4.3	The Pakistani Connection: Making the Dream of a Muslim Bomb a Doable Reality?	98
4.4	Shopping in the A. Q. Khan Nuclear Bazaar: the Centrifuge Blueprint Purchase	102
4.5	Beyond the "Khan Bazaar": Making Pakistani Proliferation Official?	107
4.6	Iran's Compliance with the Non-proliferation Regime	111
4.7	Conclusion	115

CHAPTER 5	KHATAMI'S NUCLEAR DISAPPEARING ACT	117
5.1	Khatami's Vision of Foreign Policy: The Dialogue Among Civilizations	117
5.2	On Khatami's Watch: Speeding Up the Nuclear Project	128
5.3	The MEK's Disclosure and its Aftermath; Adjusting Tactics without Changing Strategy	132
5.4	Khatami: Out of the Loop or Part of the Program?	148
5.5	Slow-Playing The West While Developing The Nuclear Program	155
5.6	Conclusion	158
CHAPTER 6	AHMADINEJAD: THE RISE OF THE NUCLEAR PRINCIPALISM DOCTRINE	159
6.1	Ahmadinejad's Foreign Policy Doctrine: Iran's Place in the New International Order	160
6.2	The Nuclear Program in Ahmadinejad's World View: Nuclear Equality for All	172
6.3	The NPT Dilemma in Tehran: To Stay or Exit?	179
6.4	Security Council Resolutions: Raising the Cost of the Nuclear Program	190
6.5	Conclusion	199
CHAPTER 7	INTERNATIONAL SANCTIONS: UNDERMINING THE NUCLEAR CONSENSUS	200
7.1	Above the Radar: Making Nuclear Progress under a Sanction Regime?	201
7.2	The 2009 Election as a Referendum on Sanctions: Why Did the Supreme Leader Side with Ahmadinejad?	208
7.3	Cutting to the Bone: The Smart Sanctions in Action	214
7.4	The Nuclear Program during Ahmadinejad's Tenure: Measuring Achievements behind the Rhetoric	222
7.5	Conclusion	235

CHAPTER 8	THE ROUHANI PRESIDENCY: THE ROAD TO ROLLBACK?	237
8.1	From Smart Sanctions to Super-smart Sanctions: Putting the Squeeze on the Iranian Economy	238
8.2	Sanctions and Social Instability: A Threshold Condition For Delegitimization?	256
8.3	The Election of Hassan Rouhani: A Victory for the Rollback Lobby?	261
8.4	The Nuclear Program Assessed: The View of the International Atomic Energy Agency	266
8.5	Rouhani's Gamble: Banking on a Rollback and Normalization	271
8.6	The Joint Comprehensive Plan of Action: The Parameters of The Rollback	278
8.7	The JCPOA's Prospects in Teheran: Renegotiating The Negotiated Political Order?	282
8.6	Conclusion	286
	CONCLUSION	287
	REFERENCES	294
	APPENDICES	379

LIST OF ACRONYMS AND ABBREVIATIONS

AEOI: Atomic Energy Organization of Iran

ANRC: Amirabad Nuclear Research Center

AEL: Assembly of Experts of Leadership

CIA: US Central Intelligence Agency

CNEA: Commission Nuclear Energy Argentina

CWC: Chemical Weapons Convention

DPPRC: Damavand Plasma Physics Research Center

DTRA/ASCO: Pentagon's Defense Threat Reduction Agency's Advanced Systems and Concepts Office

ENACE: Empresa Nuclear Argentina de Centrales Electricas

EO: Executive Order

FBI: Federal Bureau Intelligence

FDO: Physical Dynamics Research Laboratory

FY: Fiscal Year

FNA: First Nuclear Age

GCC: Gulf Cooperation Council

GDP: Gross Domestic Product

HEU: High Enriched Uranium

IAEA: International Atomic Energy Agency

IFLB: Islamic Front for the Liberation of Bahrain

INVAP: Argentina's Argentine National Institute for Applied Research, Investigaciones Aplicadas

IRGC: Islamic Revolutionary Guards Corps

IRNA: Islamic Republic News Agency

JPA: Joint Plan of Action

JCPOA: Joint Comprehensive Plan of Action

KCNA: Korean Central News Agency

KEC: Kalaye Electric Company

KRL: Khan Research Laboratory

KWU: Kraft Work Union

MAD: Mutual Assured Destruction

Majlis: Iranian Parliament

MEK: Mujahidin-e Khalq

MEPHI: Moscow Engineering Physics Institute

MINATOM: Russian Ministry of Atomic Energy

MKNRC: Moallem Kalaye Nuclear Research Center

MOIS: Ministry of Intelligence and Security

NCBWS: Nuclear, Chemical, Biological Weapons Systems

NCRI: National Council of Resistance of Iran

NPT: Non Proliferation Treaty of

NSG: Nuclear Suppliers Group

NWP: Nuclear Weapons Program

NWC: Nuclear Weapons Capability

OINPE: Obninsk Institute for Nuclear Power Engineering

OLMI: Organization of Liberation Movements of the Islamic

PAEC: Pakistan Atomic Energy Commission

PINSTECH: Pakistan Institute of Nuclear Science and Technology

PLO: Palestine Liberation Organization

PMD: Possible Military Dimension

PNDC: Pakistan's National Development Corporation

SATJA: The Revolutionary Organization of the Islamic Republic of Iran's People

SCI: Statistical Center of Iran

SCT: Supreme Council of Technology

STRATCOM: U.S. Strategic Command

TNRC: Tehran Nuclear Research Center

USINC: US-Iran Nuclear Cooperation

UNSC: United Nations Security Council

URENCO: Manufacture of Uranium Enrichment

WMD: Weapons of Mass Destruction

Glossary:

Artesh: The Islamic Republic of Iran Army (IRIA) is the ground forces of the Military of Islamic Republic of Iran.

Basji: militia; Iran's paramilitary forces

Fatwa: A fatwa in the Islamic faith is the term for the legal opinion or learned interpretation that a qualified jurist or mufti can give on issues pertaining to the Islamic law.

Quds Forces: Unit that runs terrorist operations abroad

Ummah: Universal Muslim community

Velayat-e-Faqih: The divine rule by a religious guardian

CHAPTER 1: INTRODUCTION

1.1 Introduction

Iran's nuclear ambitions well preceded the rise of the Islamic Republic in 1979. In the mid-1950s, Shah Mohammad Reza Pahlavi showed considerable interest in partaking in the Atom for Peace program offered by the United States to countries interested in peaceful uses of nuclear power. The Shah declared that he wanted to build a nuclear plant to generate electricity, but he did not hide his hope that one day the technology could be used to build an atomic weapon (Melman & Raviv, 2012, pp. 2-5; Khan, 2010, p. 19; Dawson, 2011, pp. 70-71; Tarzi, September 2004, p. 8).

To reach this goal, the monarch and his nuclear advisers wanted to create what is known as a surge capacity, meaning to build the infrastructure and recruit and train the scientific and technical personnel. Once the ground work was laid, Iran could switch to a weapons programme within a reasonably short period of time (Takeyh, 2006a, p 136).

For the Shah, as for the new regime decades later, nuclear technology was a means of delivering security and a matter of prestige - a way of restoring status to the proud Persian people who had once ruled an empire (Takeyh, 2009, pp. 242-243; Corera, 2006, pp. 60-61). The quest for regional hegemony that the Shah aimed at would have been made easier with nuclear capability. From a more immediate perspective, the Shah considered a weapon program to be important because Iran was engaged in a "dual protracted conflict" – with Iraq and the former Soviet Union (Khan, 2010, pp. 47-62). The Shah initial plan to build a reactor in Bushehr was disrupted by the revolution and partially destroyed during the Iran-Iraq war.

If anything, the revolutionary regime had even more of an incentive to pursue a nuclear arsenal. Since 1979, Iran has been engaged in a "triple protracted conflicts" with

the Gulf States, Israel and the United States (Khan, 2010, pp. 63-76). The evolution of the Iranian nuclear program reveals that security threats from its three protracted conflict rivals have primarily compelled the revolutionary leaders to be attracted towards building a nuclear weapons program (Khan, 2010, p. 63).

Although Ayatollah Ruhollah Khomeini, decreed that nuclear weapons are not sanctioned by the Quran, the war with Iraq, Saddam Hussein's use of chemical weapons against Iranians and the fact that international community did not react to Iraq's violation of laws against WMD created a pro-nuclear dynamic (Melman & Raviv, 2012, p. 3; Betts, 1979, p. 1064; Quillen, 2002, pp. 19-20).

Though nominally a continuation of the Shah's programme, the nuclear plans of the new regime triggered a highly negative reaction. Many reasons fed the growing international unease. Its highly unorthodox foreign policy created a perception of an irrational, ideologically-driven regime whose possession of nuclear weapons went beyond the standard dangers of proliferation. The heated and highly politicized debate on Iran has by and large lacked a rigorous analytical firework.

This work will analyze Iran as a case study of the theories of nuclear proliferation and nuclear rollback. The study will seek to explore whether Iran fits the profile of a rational proliferator and, equally important, whether its response to sanctions follows the rational logic that postulates a rollback. To carry out this complex analysis it is essential to find the degree in which key players at a given time period fit the rational proliferator – rollback profile.

1.2 The Puzzle of Iran's Proliferation and Rollback

The possibility that Iran may develop a nuclear weapon has concerned the international community led by the United States and its allies. Proving proliferation, however, was

difficult since Iran was a signatory to the Non Proliferation Treaty (NPT) ever since its entry into force and is subject to the safeguard provisions of International Atomic Energy Agency (IAEA) and had the right to enrich uranium for peaceful use. Therefore, at least Iran on paper has sworn not to seek assistance to divert nuclear energy from peaceful to military purpose that is to manufacture nuclear explosive devices. Finding evidence of efforts to weaponize was highly challenging since the IAEA charged with certifying Iran's NPT compliance, as a rule to rely on intelligence services of a number of countries.

In its influential 2007 and 2011 reports, the IAEA concluded that Iran has carried out the activities that are relevant to the development of a nuclear explosive device but abandoned all military- related nuclear work in 2003, nonetheless pursued enrichment with a view of stockpiling enough fuel for potentially fabricating a bomb. Without explicitly singing onto this conclusion, the IAEA tried to verify the scope and duration of the weaponization process. The breakthrough occurred in 2015 when, following the signing of the Joint Comprehensive Plan of Action (JCPOA), Iran disclosed that it actually stopped weaponization efforts in 2009, thus vindicating previous assumption (IAEA Report, 8 November 2011; Reuters, 2 December 2015; The New York Times, 3 December 2007).

Even without the official acknowledgement, the international community tried to unsuccessfully stop Iran's proliferation in a two decade-long effort based on the carrot of economic inducements and the stick of sanctions. Only after the devastating economic downturn during 2008-2014 triggered by sanctions, however, Iran signaled its willingness to consider a rollback.

This study seeks to provide an integrated analysis of the entire history of the Islamic Republic's nuclear programme. Two assumptions guide this work. Tehran sought to acquire the nuclear capability because of perceived security threats. The relative ease of

access to nuclear technology and the weak penalties for proliferation reinforced Tehran's conviction that the cost of running the program was manageable. More recently, the harsh sanctions have increased the price tag of the programme to a level deemed catastrophic to the economy. Faced with a prospect of losing control, Iran embarked upon an unprecedented open debate about what should be the accepted limit of such costs. Though the internal debate has not been resolved, the Iranian leadership agreed to negotiate with the international community a rollback in exchange for lifting sanctions.

The topic of this dissertation is significant on two counts: (1) Iran's proliferation and possible rollback is central to the scholarly understanding of what motivates proliferators and what convinces them to give up their illicit programme; (2) Iran, located in a strategically sensitive region. There is a virtual consensus that an Iranian arsenal will further destabilize the already fragile regional order, force a nuclear race or perhaps create a nuclear conflagration in the Middle East and beyond.

Iran's proliferation and prospects for a rollback have generated an enormous debate among foreign policy officials, intelligence community, academic experts, and public intellectuals. Much of the discussions of the regime's motives to acquire a nuclear weapon are derived from rational choice models of varying theoretical fidelity. At best this analysis reflects the restrictive mathematical basis of formal rational choice models, at worst it is a projection of the authors' views of what rational behavior should be. As discussed in detail in Chapter Two, the resulting narrative is divided; while some consider the regime to be a rational proliferator driven by security concerns,¹ others view it as

¹Aima. (November 23, 2004). Understanding Nuclear Iran. *Common Dreams.Org*. Retrieved from <http://www.commondreams.org/views04/1123-32.htm>; Takeyh. (2006a). *Hidden Iran: Paradox and Power in the Islamic Republic*. New York: Macmillan, p. 140; Takeyh. (2006b). Iran at the Strategic Crossroads. in Russell (eds.), *Proliferation of Weapons of Mass Destruction in the Middle* New York: Palgrave Macmillan, p. 53; Chubin. (2008). Understanding Iran's Nuclear Ambitions. in Fitzpatrick (eds.), *Double Trouble: Iran and North Korea as Challenges to International Security*, Westport, Praeger. Westport, Conn: Praeger Security International, p. 52; Salmore and Salmore. (1978). Political Regimes and Foreign Policy. in East, Salmore and Hermann (eds.), *Why Nations Act: Theoretical Perspectives for Comparative Foreign Policy Studies*. Beverly Hills, CA: Sage Publications, pp. 103-122; Panofsky. (2007). Nuclear Insecurity: Correcting Washington's Dangerous Posture. *Foreign Affairs*, Vol. 86 (No. 5), p. 109; Esmailian. (2007). *Iran on the Brink: Rising Workers and Threats of War*. London: Pluto Press, p. 181; and Sadjadpour. (2008). *Reading Khamenei: The World View of Iran's Most Powerful Leader*. Washington, D.C.: Carnegie Endowment for International Peace, pp. 23-24.

irrational-messianic entity ready to trigger a nuclear Armageddon.² In the absence of a definitive study, these divisions hardened into rival camps. This led one analyst to conclude that when it comes to Iran, rationality is in the “eye of the beholder” (Seliktar, 2011, p. 193).

In a similar fashion, divergent camps emerged in the literature on sanctions. The so-called sanction optimists hold that, given enough economic pressure, the ‘rational’ Iran would consider rolling back the program.³ The sanction pessimists argue that the sanction system is too porous to stop Iran (or any other state) from pursuing its nuclear objective. Some experts in this group suggest that the regime may be ‘irrational’ enough to continue with proliferation regardless of the high cost of the program.⁴ Alternatively, the regime is seen as confident enough of retaining control in the face of economic adversity, a view that makes rollback unnecessary. Sanction pessimists warn that Iran’s willingness to join the nuclear negotiations in Geneva is part of a strategy of tricking the international community into relaxing the sanctions to manageable levels.⁵

² Stephens. (September 28, 2010). What Ahmadinejad Knows,” *Wall Street Journal*. Retrieved from <http://www.wsj.com/articles/SB10001424052748704654004575517632476603268>; Arbatov. (2008). The Inexorable Momentum of Escalation. in Cronin (eds.), *Double Trouble: Iran and North Korea as Challenges to International Security*. West Port: Praeger, pp. 63-78; Inbar. (2007). The Need to Block a Nuclear Iran. in Lauthland (eds.), *Shia Power. Next Target Iran?* London: Valentine Mitchell, pp. 92-113; Limbert. (2009). *Negotiating with Iran*. Washington, D.C: U.S. Institute for Peace, p. 175; Rubin. (November 2008). Can a Nuclear Iran be Contained or Deterred? *Middle East Quarterly*. Retrieved from <http://www.meforum.org/2004/can-a-nuclear-iran-be-contained-or-deterred>; Martignon. (2001). Comparing Fast and Frugal Heuristics and Optimal Models. in Selton (eds.), *Bounded Rationality*. Cambridge, MA: MIT Press, pp. 148-171; Perry. (2001). Preparing for the Next Attack. *Foreign Affairs*, Vol. 80 (No. 6), pp. 31-45; Chyba. (Fall 2004). Nuclear Proliferation Rings: New Challenges to the Nuclear Nonproliferation Regime. *International Security*, Vol. 29 (No. 2), pp. 5-49; Traub. (13 June 2004). The Netherworld of Nonproliferation. *New York Times Magazine*. Retrieved from <http://www.nytimes.com/2004/06/13/magazine/13NUKES.html>; Eisenstadt. (1999). Living with a nuclear Iran? *Survival*, Vol. 41 (No. 3), pp. 124-148; and Chubin. Understanding Iran’s Nuclear Ambitions, p. 18.

³ Dubowitz. (25 November 2013). Iran Sanctions Relief May Be Hard to Undo. Retrieved from <http://www.defenddemocracy.org/media-hit/iran-sanctions-relief-may-be-hard-to-undo/>; Cassidy. (25 November 2013). Iran Nuke Deal: Do Economic Sanctions Work After All? *The New Yorker*. Retrieved from <http://www.newyorker.com/news/john-cassidy/iran-nuke-deal-do-economic-sanctions-work-after-all>; Sahay. (3 June 2013). Are Sanctions on Iran Working? . *Center for Arms Control and Non-Proliferation*. Retrieved from http://armscontrolcenter.org/assets/pdfs/REPORT_-_Are_Sanctions_On_Iran_Working_-_June_3.pdf; Khajehpour, Nader and Adler. (February 2013). The Nuclear Issue: Why is Iran Negotiating? *Wilson Center, Viewpoints No 21*. Retrieved from http://www.wilsoncenter.org/sites/default/files/the_nuclear_issue_why%20is_iran_negotiating.pdf; and Mark Dubowitz. (10 December 2013). The Real Value of Auto Sanctions Relief to Iran. *Foundation for Defense for Democracies*. Retrieved from <http://www.defenddemocracy.org/media-hit/the-real-value-of-auto-sanctions-relief-to-iran/>

⁴ Eland. (17 January 2012). Iran sanctions won’t work. *The Washington Times*. Retrieved from <http://www.washingtontimes.com/news/2012/jan/17/iran-sanctions-wont-work/>; Esfandiary. (11 October 2012). Actually, the Sanctions on Iran Aren’t Working. *The Atlantic*. Retrieved from <http://www.theatlantic.com/international/archive/2012/10/actually-the-sanctions-on-iran-arent-working/263474/>; Jenkins. (13 February 2013). Whether it’s North Korea or Iran, sanctions won’t work. *The Guardian*. Retrieved from <http://www.theguardian.com/commentisfree/2013/feb/13/west-loves-sanctions-not-much-dictators>; and Robbins. (23 May 2013). Why Economic Sanctions Rarely Work. *Bloomberg*. Retrieved from <http://www.bloomberg.com/bw/articles/2013-05-23/why-economic-sanctions-rarely-work>

⁵ Ottolenghi. (17 September 2014). A Nuclear Deal with Iran and the Perils of Sanctions Relief. *Foundation for Defense for Democracies*. Retrieved from <http://www.defenddemocracy.org/media-hit/emanuele-ottolenghi-a-nuclear-deal-with-iran-and-the-perils-of-sanctions-relief/>; Alfoneh. (7th October 2014). Iran Sanctions Relief Backfires, Benefitting the IRGC. Ibid. Retrieved from <http://www.defenddemocracy.org/media-hit/alfoneh-iran-sanctions-relief-backfires-benefitting-the-irgc/>; and Gerecht. (11 October 2013). Iran Wants the Bomb — and Sanctions Relief. *The Washington Post*. Retrieved from

Pessimists predict that Iranians will not sign any agreement lengthening considerably their breakout period which is currently estimated at less than a year. Like the dispute on nuclear rationality, the debate on the efficacy of sanctions cannot be empirically settled unless an agreement between Iran and the international community is signed and a follow up is available to ascertain the degree of Iran's compliance. In other words, can the cost-benefit analysis that drives the rational choice model be applied to decisions to forsake the pursuit of nuclear weapons in order to avoid the ruinous consequences to the Iranian population is very much a debating issue.

Two major shortcomings of the current research on the subject complicate matters. While the subject has attracted some of the best experts on proliferation and sanctions, the literature suffers from a paucity of Farsi sources. Conversely, Farsi speaking scholars, most of them historians, do not possess the expertise in proliferation and sanction research. As detailed in the next chapter, these problems have produced disjointed and – occasionally- contradictory narratives.

Much as a better understanding of proliferation and sanction theory is essential, two other dynamics need to be incorporated into the research. First, the regime is famously secretive about all aspects of its weapons operation and officially- sanctioned obfuscation and dissimulation permeate official accounting. Developing appropriate methodology for evaluating the empirical base of the narratives is of great importance.

Second, proliferation literature tends to use the unitary actor assumption in both theory and case study work. However, Islamic Republic's complex political structure is uniquely unsuitable for such usage. Conceptualized as a negotiated political order, it features an array of state and parastatal power elites engaged in endless struggles for turf and influence. With few exceptions, proliferation literature and, to lesser extent historians

use the unitary actor construct which is uniquely unsuitable to the understanding of such a fragmented and opaque system. Equally important, the power reconfigurations resulting from the negotiated order require a longitudinal analysis rather than the more commonly used “snapshot” approach. Yet, quotes from past leaders which support contentions derived from a different stage of the weapon programme are standard fare in the literature.

1.3 Research Questions

1. To what degree do key players at a given time period fit the rational proliferator profile?
2. What are the key motivations behind Iran’s nuclear program?
3. To what extent do different key elites agree on a unified set of parameters of a rollback in exchange of lifting sanctions?
4. What is the impact of sanctions on Iran as an oil-based rentier state with a neopatrimonial political economy?

1.4 Research Objectives

The study strives to achieve the following applied objectives:

1. To ascertain whether Iran fits the profile of a rational proliferator.
2. To determine whether its response to sanctions follows the rational modality expectations embedded in proliferation theory.
3. To identify the background of initial decision to pursue the nuclear program with a special emphasis on key motivations and factors that helped to drive it from very modest beginning to a virtual breakout position.
4. To provide a better understanding of how the different administrations have responded to the sanction-rollback initiatives.

5. To evaluate the impact of sanctions on Iran as an oil-based rentier state with a neopatrimonial political economy.
6. To evaluate the prospects for an agreement between Iran and international community based on an analysis of the balance of power between supporters of a rollback and their opponents.

1.5 Scope of Study

To understand whether Iran fits the profile of a rational proliferator both in terms of motivations and its response to the cycle of sanctions, it is essential to find the degree to which key players fit the rational proliferator profile at a given time period. Such an analysis requires a longitudinal perspective rather than the more commonly used ‘snapshot’ approach. For doing so, this study seeks to provide an analysis of the entire history of the Islamic Republic’s nuclear program from 1979 Islamic Revolution up to 2015, where the Joint Comprehensive Plan of Action (JCPOA) is reached. Once the illicit nuclear program was discovered in the early 2000s and subsequently subjected to international sanctions, the elite consensus broke down and in July 2015 decided to negotiate an agreement with the world powers and rollback its nuclear program in exchange of lifting sanctions.

1.6 REVIEW OF LITERATURE

1.6.1 Introduction

Three surveys of the literature on the subject will be offered to increase the scientific precision of the study: First, an analysis of literature on Iran's motivation for proliferation as well as the literature on roll back of the program. Second, an analysis of sanctions literature geared toward finding a linkage between nuclear rationality, sanctions rationality, and nuclear rollback, and third, an analysis of the economic and political system of Iran with a view of evaluating how its various features help or inhibit the decision to rollback.

The first section covers the literature on Iran's key motivations for developing nuclear capability and roll back. Section two, covers the debate between sanctions optimists who believe in the power of sanctions to dissuade proliferators from proliferation, and sanction pessimists who hold that sanction regimes are too porous to stop a would-be proliferator from pursuing its nuclear goal. Section three, covers Iran's complex political structure and inner-elite discourse in which it can indicate whether more coercive actions are needed to stop its possible proliferation.

1.6.2 Iran's Nuclear Program: Motivation For Proliferation And Rollback

Having acquired a leading significance in international relations, Iran's nuclear program has produced a large body of work. However, the literature is not even in terms of topics covered and the scientific objectivity- with the latter ranging from bona fide academic work to downright polemics. To analyze the extant literature, a rigorous survey by categories is needed.

From the nuclear science perspective, only a small number of works are available especially those written by nuclear scientist or scholars with equivalent credentials. Leading the field is the nuclear physicist Jeremy Bernstein, whose *Nuclear Iran*, is a review of the nuclear program from the perspective of nuclear physics. Though not an easy read for a lay person, who may find the mathematical equations quite daunting, the book explains the working of the entire nuclear cycle with a special emphasis on the parts that may indicate Iran's intent at weaponization. Bernstein raises important question with regard to the heavy water reactor in Arak, which, in his view, can produce enough plutonium to build one or two bombs in a year (Bernstein, 2014). But Bernstein concedes that the Iranians have not built a reprocessing facility in Arak to make the plutonium useable for a hydrogen bomb. Bernstein, who like other nuclear experts suspect the regime of pursuing a weapons program, however, cannot provide compelling evidence for this assertion.

On the history of Iran's nuclear programme, the work by David Patrikarakos, entitled *Nuclear Iran: The Birth of an Atomic State*, was quite well reviewed. Patrikarakos provides the history of the Iran's nuclear program starting with the Shah's decision to sign up for the Eisenhower administration's Atom for Peace program. He then reviews the program under the Islamic Republic, ending with the tenure of Mahmoud Ahmadinejad. Patrikarakos spends little time discussing both the scientific parameters of the programme and the internal debates that shaped its evolution. The book suffers from the author's limited familiarity with nuclear science and lack of Farsi language skills. For instance, Patrikarakos does not provide enough information on the different types of centrifuges and the critical Separative Work Unit (SWU) that is used to measure output of the centrifuges. His treatment of the Arak facility is quite superficial, limited to the statement that it can produce plutonium (Patrikarakos, 2012).

Shahram Chubin's *Iran's Nuclear Ambition*, a somewhat dated account, fills many of the gaps that Patrikarakos left. The Farsi speaking Chubin has a good grasp of the internal dynamics and demonstrates a good knowledge of the rational and the decision making process behind the clerical establishment to push with the programme. Chubin is at his best when describing the negotiations strategy of the Iranian, a topic of some fascination to the Western audience not familiar with the array of dissimulation technique at the disposals of Iranian diplomats. Chubin's conclusion that Iran's mastery of nuclear technology with a potential for weaponization would have been less of a problem if it was not for its missionary revolution regime, merits consideration. Since the nuclear programme became embedded in the revolutionary ethos, a compromise deal can be only reached if the regime agrees to become a more "normal" state (Chubin, 2006).

Jungmin Kang's edited work, *Assessment of Iran's Nuclear Program*, provides an interesting history of Iran's nuclear program from the perspective of how difficult it is to assess it. The book starts with the well-known fact that the safeguard program of the International Atomic Energy Agency (IAEA) which indicates that Iran has carried out a structured program relevant to the development of a nuclear explosive device (Kang, 2013). In one of its chapters, Olli Heinonen exploring the scope and actual content of Iran's nuclear program, and arguing Iran's failure in convincing international community about peaceful nature of its nuclear program due to lack of transparency and confidence-building measures (Heinonen, 2012, pp. 91-97).

As a rule, literature on motivation for proliferation is limited to broader cases of proliferation studies. Saira Khan's work, *Iran and Nuclear Weapons*, is an important exception to this rule. In a takeoff on neorealist literature, Khan states that countries in protracted conflict would tend to develop a nuclear weapons program to deter their enemies (Khan, 2010). Applying this theory to the prerevolutionary era, Khan finds that the Shah considered a weapon program because of a "dual protracted conflict" – with Iraq

and the former Soviet Union (Khan, 2010). If anything, the revolutionary regime had even more of an incentive to pursue a nuclear arsenal. Since 1979 Iran has been engaged in a “triple protracted conflicts” with the Gulf States, Israel and the United States (Khan, 2010). Khan spends much of the book discussing Iran’s proliferation within the framework of an asymmetrical conflict with the United States. In her view, the threat perception in Tehran has grown considerably since the American invasion of Iraq in 2003. The work, published in 2009, is too dated to consider the impact of sanctions on Iran’s nuclear resolve.

Iran’s nuclear programme and its international relations comprise by far the largest body of works. Relatedly, Dore Gold’s *The Rise of Nuclear Iran*, is representative of this category. Gold, a former Israeli ambassador to the United Nations, documents in great detail the record of evasion and subterfuge that Iran had used to camouflage its ambitious program. Gold, who advised the Israeli Prime Minister Benjamin Netanyahu, makes clear that this record of cheating makes Iran a poor candidate for a comprehensive nuclear deal. Not incidentally, this finding forms the backbone of Israel’s objections to a deal which would inevitably leave enough loopholes for Iran to evade the Safeguard inspections of the IAEA (Gold, 2009).

Compared to the voluminous literature on proliferation, the body of works on rollback of Iran’s nuclear programme is rather limited. A few of the articles and books that deal with rollback are divided as to the impact of sanctions. By and large, scholars in this category do not give much credit to sanctions with creating a rollback dynamic. They all claim that the regime is too determined to give up the program, even when faced with serious economic deprivation. The notion that regimes can be so highly motivated comes from the Pakistani leader who stated that his country will “eat grass” rather than give up on their nuclear program. Some go so far as to note that sanctions are actually beneficial for Iran because they support economic independence. Flynt Leverett And Hillary Mann

Leveret, two leading pro-Iran activist in the United States, make this argument in a controversial book entitled, *Going to Tehran*. The Leverets, who view sanctions as a misguided and ineffective tool of statecraft, assert that United States and the international community should recognize that sanctions have only made the regime more resistant. They add that: “the notion that sanctions ... will generate strategic leverage over Tehran’s decision making is counter historical and, ultimately, illusory. Indeed, sanctions can encourage greater self-sufficiency.” (Leverett, 2012, p. 281). They advocate accepting Iran as nuclear state and vouch for its nuclear rationality.

In a twist of the sanctions debate, Brendan Taylor’s *Sanctions as Grand Strategy* provides an interesting commentary on the way sanctions can impact (negatively) the trading partners of the countries that engage in sanctions against Iran. Though Taylor does not spell it out, the unanticipated costs of sanctions make countries reluctant to follow the sanction regime. This should not come as a surprise as Iran benefited greatly from the fact that countries such as China and Russia were reluctant to abide by the sanction regime (Taylor, 2012).

An interesting sideline to the Iran’s proliferation and rollback discourse involve assessments of sabotage and other coercive measures. The actions deployed against the Iran’s nuclear program range from malware warfare to assassination of nuclear scientist. Since all of them were covert, information is scarce and difficult to verify. One of the few exception is the book *Countdown to Zero Day* by Kim Zetter, a journalist who investigated Stuxnet, a malware that infected the centrifuges producing enriched uranium (Zetter, 2011). Alleged to be an American-Israeli product, Stuxnet, in conjunction with other covert actions, it was credited with setting back the nuclear programme by a few years.

If sanctions are considered the gold standard for rollback, military action is normally considered a “worse case” scenario for dissuading a country to give up

weaponization. In *Unthinkable: Iran, the Bomb, and American Strategy*, Kenneth Pollack discusses a number of possible scenarios, including an Israeli military raid on the nuclear sites in Iran. Pollock concludes negotiations with the Islamic Republic which included significant concessions and verifications would benefit both sides. Pollock argues that an Islamic Republic with a minimal nuclear arsenal cannot be an “existential” threat to Israel than the current North Korea to South Korea or nuclear Pakistan is to India (Pollack, 2013).

A work by the Rand Corporation, *Iran’s Nuclear Future*, takes the military option one step further. Commissioned by the United States Air Force, the report suggests that, absent a solution, the United States would have to undertake a military action to rollback Iran’s weaponization (Davis, Martini, & Nader, 2011). Though necessary brief, the review of literature indicates piecemeal nature of writing about the Iran’s nuclear program. The major weakness is the lack of understanding how global sanctions have influenced the decision making in Tehran, a topic that requires a more systematic treatment.

1.6.3 International Sanctions

The sanctions literature involves numerous publications, but is typically separated entirely from the literature on nuclear rollback, i.e. works on sanctions do not ask if economic sanctions affect nuclear programs, while those on nuclear proliferation generally do not study if and how sanctions may cause nuclear rollback.

Sanctions are part of international diplomacy, imposed by either the international community or countries that have a strong foreign policy preference, in reaction to specific misdeeds of a target country. Sanctions are normally used to signal resolve toward a transgressor when military actions not feasible and doing nothing is not an

option because of loss of credibility at home and abroad. As one analyst put it, sanctions are “a safe option between diplomatic demarches and military action” (Drezner, 1999, p. 12). One frequently noted function of sanctions is deterrence, the idea that a sanctioning country can discourage objectionable behavior by increasing the ‘associated costs’ of the target country. Sanctions are clearly based on the classic assumption of rational choice theory; a country is forced into a cost-benefit calculus whereby, if the cost of the objectionable behavior exceeds its benefit, it is expected to desist (Hufbauer, Schott, & Elliott, 2007).

In practice, however, the record of sanctions is less clear, leading some to declare the futility of this particular brand of diplomacy. In reviewing the empirical literature known as “first wave” scholars in the 1960s and 1970s, Robert Pape challenges the emerging optimism about the effectiveness of economic sanctions as an alternative to military option. He challenges the causal logic of the theory of economic sanctions, especially whether the nature of modern nation-states provides grounds for today's optimism. He concludes that economic sanctions have little independent usefulness for pursuit of noneconomic goals and argue that changing of government by assassination or military coup is one of the evidences of failure of economic coercion against target country. He believes that many factors notably nationalism make people willing to accept high cost of sanctions and sustain considerable amount of hardship rather than abandoning their national interest (Pape, 1997).

The first wave scholars have been claiming that sanctions are ineffectual, woolly, and even counterproductive. They argue that there have been many times when sanctions didn't really work out as planned namely the U.S. embargoes of Cuba and North Korea, both of which date back more than fifty years; the sanctions that the League of Nations imposed on Italy under Mussolini following his invasion of Abyssinia; and the sanctions

on Zimbabwe by U.S. and European which have been in effect for over a decade (Cassidy, November 2013).

Johan Galtung's work on Rhodesia is also cited in this context. He found that sanctions had a reverse effect on the minority white government; the minority whites mobilized to alleviate the impact of sanctions by taking pride in defying the outside world. In other words, the sanctions created the so called "rally-round-the-flag" effect. Galtung strongly criticized the effectiveness of sanctions, calling them disparagingly the "naïve theory of economic sanctions," because it does not taking into account the possibility that value-deprivation may initially lead to political integration (Galtung, April 1967). Galtung argues that "value-deprivation" creates the conditions among people under which more sacrifice is possible so that the limit for political breakdown may never happen. Galtung argues that people ignore the fact that the sanctioned state is able to get used to economic hardships meaning that the state's breaking point is not a constant (Galtung, April 1967).

Without resorting to name-calling, Margaret Doxey explained that high profile sanctions are more likely to produce defiance rather than compliance when their focus is on deterring, punishment, and-perhaps-end "illegal" behaviour. Sanctions impose costs, in Doxey account, sometimes quite high, on the sanctioning countries as their costs on the sanctioned country. The obstacles to collective action including "inability to agree on sanctionable violations and unwillingness to bear costs" make the 'effective' use of sanctions unlikely, notwithstanding with the fact that the costs to both parties maybe high. In the new edition of her book, she argues that "economic impact on the target is not crucial, and may not even be particularly important" (Doxey, 1996). Doxey concludes that sanctioned states can undermine the effects of sanctions through various measures. Developing alternative sources of supply, stockpiling, imposing counter-

sanctions, and seeking self-sufficiency through import-substitution industrialization were among the steps that could ameliorate the impact of sanctions (Doxey, 1996).

Dating from the 1980s, the “second wave” scholars countered this view, arguing that sanctions were more useful than “commonly thought” or given credit for. Still, there is no consensus that economic sanctions are effective instruments of statecraft. Even the second wave scholars tend to be very cautious, holding that sanctions are not necessarily successful in a majority of the time (Hufbauer et al., 2007; D. W. Drezner, 1999; Rogers, 1996; Klotz, 1999).

To provide a definite answer, in 1982, two former U.S. Treasury officials involved in crafting sanctions and a co-author embarked on a massive historical study of the utility of sanctions. The book, *Economic Sanctions in Support of Foreign Policy Goals* became a virtual bible in the field. The authors proved that, contrary to conventional wisdom, sanctions worked in about 40 of 115 instances, or 35 percent of cases. But, as the extensive data base indicated, the success rate depended on a large number of variables notably the type of pursued objectives, the political and economic situation in the sanctioned country, and more importantly the way that sanctions policy was implemented (Hufbauer, Schott, & Elliott, 1983). The new edition of the book claims that sanctions are still a fairly effective policy tool. It concludes that “at the beginning of the twenty first century...economic sanctions remain an important yet controversial foreign policy tool” (Hufbauer et al., 1983, p. 1).

The authors suggested, however, that sanctions work best when the sanctioning country has limited objectives, when there are generally friendly relations between sanctioning and the sanctioned country, when the sanctioned country is already experiencing economic difficulties, when sanctions entail significant costs for the sanctioned country, when sanctions were vigorously implemented in a single step, when the costs for sender countries is not high, when the sanctions are not accompanied by

military operations or covert actions and when a relatively modest number of countries are called to implement the sanctions regimen. These caveats notwithstanding, sanctions optimists seized upon the study, leading the authors to proclaim: "Proponents of the new conventional wisdom are aware that sanctions have limits and do not always work, but, by and large, they believe that sanctions are often an efficient instrument for achieving important political goals" (Hufbauer et al., 1983, p. 130). Similarly, Daniel Drezner holds that "If the targeted country does not change its policies at all, then the event should be judged a failure. If there is some compromise, however, and the value of the concession outweighs the sender's costs of coercion, then the episode counts as a partial success" (Drezner, 1999, p. 18).

Sanction advocates argue that although sanctions have limits and do not always work, however, they are often an effective tool for achieving political objectives. Elizabeth S. Rogers captures this new found optimism. He argues that contrary to what most analysts believe, economic sanctions are effective foreign policy instruments. According to Rogers, the efficacy of sanctions is under rated in part because unlike other foreign policy tools, sanctions have no natural advocate or constituency. As a result, sanctions successes are widely unreported, while their failures are exaggerated by those with an interest in either using other tools or avoid using sanctions (Rogers, 1996).

Neta Crawford and Audie Klotz offer a useful framework to understand the mechanisms by which sanctions bring about policy change in the target country. The authors argue that sanctions force elites in the target state to reconsider their policy based on a clear cut cost-benefit calculus, concluding that a change in policy better serves the leaders' interests. The sender state or states succeed in convincing the target state that her policy is violating international norms. The target state then changes its objectionable policy in accordance with international norms. The authors further held that sanctions achieve the desired policy change through the mechanism of resources denial in which

the target state needs to implement its policy and ultimately, by triggering a meltdown of domestic resolve. The latter is a critical part of the process, since the internal authority of the target state is weakened by economic hardships brought upon by sanctions, a weakness that causes the target state to change its policy (Klotz, 1999).

Still, sanction pessimists found some points in the study to bolster their stand. They often quote the study's finding that widespread sanction-busting alleviates the cost of the target country. As a rule, commercial interests of other countries and business interests drive sanction busting, but occasionally powerful and wealthy allies of the target country step in to help. Dubbed "black knights," such allies act out of ideological rather than pragmatic reasons. Arguably, the most prominent cases in this category, was Moscow's support for the Cuban economy suffering from American sanctions (Hufbauer et al., 2007). Even though the Soviet Union, the leading "black knight," had collapsed, the effectiveness of U.S. sanctions had declined, corresponding to American economic decline in global economy. The considerable economic heft of Asian countries and their willingness to defy Washington turned them into premier sanction busters at the end of the twenty century and beyond.

With its leverage diminished, the United States has increasingly turned to multilateral sanctions, often orchestrated by the United Nations. In the most prominent application of the United Nations collective will, the Iraqi regime of Saddam Hussein was sanctioned for developing of weapons of mass destruction found after the Gulf War of 1991. Over several years, the sanctions degraded the Iraqi economy, but ended up in a public relations debacle, when the state controlled media in Iraq produced evidence of alleging widespread death of civilians from malnutrition and disease (Seliktar, 2008).

The public backlash against Iraq sanctions created support for what is known as "smart sanctions" first suggested by two scholars associated with the Carnegie endowment for International Peace, George Lopez and David Cortright. Having decried

Iraqi sanctions as a blunt instrument of foreign policy, the two scholars suggested a new regimen of smart sanctions – precision targeting of offending industries, arms embargoes, asset freezes and travel bans that targets elites without harming the population at large (Cortright & Lopez, 2002).

According to these two scholars, regular sanctions were not effective in authoritarian regimes because they spread the pain across the board while allowing the leadership to profit from the humanitarian disaster. Instead, they advocated fine-tuned measure to hit the political elites as well as critical parts of the economy. Though the smart sanction came too late for Iraq, they were subsequently adopted by the United States (US) and led to a revision of sanction protocols of the United Nations (UN) (Cortright & Lopez, 2002).

If the Iraqi case illustrated the humanitarian perils of traditional sanctions, it was also a case study in how sanctions could be evaded. Saddam Hussein was able to set up an extensive network which supplied the regime with banned item; oil was smuggled out through illegal oil pipes and sold at spot markets. Even the UN was not immune from the corrupting influences of sanctions: in one infamous case, the UN managers of Oil for Food Program funneled illegal goods in exchange for bribers. Both the regime and its leaders controlled substantial accounts in foreign banks; the extent of their holdings was only revealed after the capture top regime leaders in the 2003 invasion.

In the end, it was virtually impossible to assess the extent to which sanctions compelled Saddam to give up on his nuclear program. When debriefed by American forces, the dictator acknowledged destroying most of his WMD stockpiles and, indeed, no WMD was ever found. Yet during the prelude to the war, Saddam chose to maintain the appearance of nuclear deterrence by deceiving the UN inspectors and the world about the fate of the weapons (Seliktar, 2008).

Absent a clear way to gauge the impact of sanctions, the perennial debate between sanction optimists and sanction pessimists continued unabated. Lopez and Cortright sought to validate their smart sanction by suggesting that Muammar Qaddafi decided to roll back the Libyan nuclear programme because of sanctions resulted in rollback via the increasing economic hardship from sanctions, which produced political fracture in the form of serious challenges to al-Qaddafi's authority. As beatifying optimist, the authors concluded that "Muammar Qaddafi was once as much an outlaw as Saddam Hussein. But over time, and under the weight of international sanctions, Libya accepted international norms, ended its support of terrorism, and gave up its clandestine efforts to acquire or build WMD" (Lopez & Cortright, 2004, pp. 95-96).

Pushing for their smart sanction protocol, Lopez and Cortright produced a revisions view of the Iraqi sanctions. In their view, Hussein had to abandon the nuclear programme because of the resource denial clause of the sanctions, a condition that likewise eroded much of Iraq's military capabilities. The authors concluded that Saddam had no choice in the latter stages of the sanctions regimen; noncompliance would have demanded resources that were simply unavailable to him (Lopez & Cortright, 2004).

But Gary Clyde Hufbauer and his co-authors disputed the alleged effectiveness of smart sanctions, in a section of their book titled, "the unbearable lightness of smart sanctions," they warned that smart sanctions require a detailed knowledge about the targeted country, groups and particular individuals. In Hufbauer account, Identification of funds belonging to government agencies, individuals and companies can be extremely difficult (Hufbauer et al., 2007). Indeed, in their view, the international community was not set up to follow the complex networks set up by countries trying to evade smart sanctions. Front companies, false provenances and other dual technology were among some of the tools that could be used to evade international inspections.

A response to smart sanctions or not, the erratic behavior of the Iraqi leader focused attention to the decision-making process of top leadership weighing response to sanctions. Empirical evidence suggests that extent to which they will sacrifice the welfare to the population is highly variable. In 1965, Zulfikar Ali Bhutto, Prime Minister of Pakistan, famously stated that “should India get the bomb, we will eat grass or leaves, even go hungry, but we will get one of our own” (Cirincione, 2007, p. 38). This quote has been used to demonstrate the intense desire of leaders to acquire a nuclear arsenal when facing nuclear equipped adversaries. But it also suggests that nuclear weapons in impoverished countries come at a much higher marginal cost to society (Bracken, 2003).

Such considerations add another layer of refinement to the sanction literature. The type of economy and the extent of its globalization matter greatly when a regime contemplates a response to sanction. Clearly, a distinction between North Korea - an international pariah with few domestic resources presided over by a ruthless dictatorship - and rentier states such as Iran, Iraq and Libya has to be made in regards with the efficacy of sanctions (Luciani, 2005). In the latter case, rents accrue directly to the state, replacing the need for taxes, a clear advantage for political elites that can use it to dispense largess to select group without the need for accountability (Waterbury, 1994; Ross, 2001; Ulfelder, 2007; Luciani, 2005). On the negative side, oil rents are sometimes called the “oil curse,” because of the extreme sensitivity of the country to the quantity of oil pumped and the price fluctuation in the international markets. Like other exporters that specialize in one or two commodities, rentier state are assumed to be that specialize in one or two commodities, are assumed to be more vulnerable to sanctions (Drezner, 2 May 2014).

William Kaempfer and Anton Lowenberg offer a microeconomic model stipulating that sanctions are expected to be successful when they “concentrate income losses on groups benefiting from the target government policies”. In many situations, import/export restrictions are less likely than financial sanctions to affect adversely the interests of such

groups, given that they may be more dependent on foreign assets. In effect, freezing foreign assets in this manner directly restricts access to resources of critical importance to elites (Kaempfer & Lowenberg, 1992; September 1988).

Sanctions are more likely to elicit compliance or extract concessions if leaders of the sanctioned country have an incentive to avoid them. If the burden for economy is great or there is low support for the contested issue, it is more likely that public support for the state's policy may diminish over time. Consequently, maintaining and resisting sanctions will accrue political costs. The target government does not want to endanger its hold on power over unpopular sanctions. To ensure political survival leaders will avoid the type of behavior that triggered the sanction regime in the first place (Marinov, 2005).

Assuming that leaders are rational and self-interested, actor who want to maximize their prospect of staying in power, would ideally evaluate their response to sanctions using a cost benefit calculus. This calculus is based on the regime's perception of its capacity to balance the levels of loyalty (based on transfers and concessions) and repression needed to quell possible unrest in the wake of an economic squeeze. In other words, sanctions may weaken such support and an increase in repression could negatively impact the security of the leaders' and the regime's stability. Additionally, sanctions may increase public dissatisfaction and bolster domestic opposition groups against incumbent regime (Escribà-Folch, 2012). In due course, sanctions can increase poverty and inequality- especially if the ruling elite would try to protect their core supporters.

In boom times, the state's ability to placate important social groups by paying them off with income from oil, adds to the regime's longevity in spite of the intrinsic weakness of rentier state institutions. Oil incomes help the regime to create a repressive apparatus to help it stay in power. But sanctions, especially if occurring in tandem with a price collapse in the global market, may exceed the regime's capacity to rule through coercion alone, a factor that arguably enters into the cost-benefit calculus of a rational player.

In the case of Iran, it is a classic rentier state; an oil producer and a member of global energy markets whose economy is dependent on oil as its main source of income. With past efforts to diversify its economic base a resounding failure, oil and gas receipts provide 60 percent of Iran's fiscal revenues, leaving it highly exposed to the ups and down of the commodity cycle. International sanctions on its financial institutions and oil industry have limited foreign investments on Iran oil sector, a key factor that eventually contributed to its failure to sustain the levels of production in mature wells and failure in developing natural gas field of the offshore South Pars. International sanctions on its oil industry also restricted Iran's ability to construct a refining industry able to serve the domestic need and extra production for export (Hajihosseini & Yong, January 2013).

Compelling as the rational choice calculus behind the sanction theory is, it did not settle the dispute between sanction optimists and pessimists with regard to Iran. Sanction optimists argue that the new mix of coercive and punitive measures made the cost of pursuing the nuclear programme too high to pursue, increasing the probability of a rollback. These and other observers point out to the diplomatic offensive initiative by the recently elected Iranian president Hassan Rouhani. In fact, since the election of President Rouhani, the government has indicated that it's not just the Iranian people that want the sanctions relaxed, but political elites are equally keen to recover some of their economic freedom. The run-up to 2013 presidential competition increasingly focused on the played out in public and culminated in a televised debate before the vote, when Saeed Jalili, the sitting nuclear negotiator was roundly censured for failing to predict the impact of sanctions (Maloney, March 2014).

Those that helped craft the sanctions as the best means to achieve a diplomatic resolution to the nuclear dispute between Iran and world powers argue that if sanctions were to cause Iran's rulers to worry whether their drive for nuclear capability is weakening rather than strengthening their grab on power, it might bring a positive results. Or, if the

discomfort caused by the sanctions were to prompt Iranians to rise up even more strongly against their oppressors, that also might lead to a breakthrough (May, 16 December 2015).

Sanction optimists hope that the imposed sanctions on Iran act as a collective punishment on the Iranian populace to pressure them to rise up against the regime. Based on this logic, sanctions will simply make life difficult for the average Iranian people that an opposition movement will manifest from within the despair and topple the government. Some other scholars in the pro-sanctions camp have argued that sanctions will eventually drive Iran's working class to join Iran's indigenous democratic opposition known as the Green Movement (Esfahlani, 2 August 2012).

Some other observers in the pro-sanctions camp attributed the June 2013 presidential election - that led to the winning of a moderate new president - to the impact of sanctions. For instance, Suzanne Maloney, a scholar at Brookings Center for Middle East Policy and Energy Security and Climate Initiative who has conducted a detailed research on Iran and Persian Gulf energy argues that since 2010, the sanctions' impact on Iran has been severe. Due to sanctions impact, a backlash emerged among Iran's political elites against the country's creeping isolation, and the June 2013 presidential election ushered in a moderate new president and the beginnings of a diplomatic breakthrough on the nuclear crisis. She argues that Iran has become the exemplar of successful sanctions in which it offers a wealth of lessons for those seeking to apply this model elsewhere (Maloney, March 2014).

Maloney argues that several conditions will enable sanctions to work against Iran and might work elsewhere if apply similarly. According to Maloney, those conditions are first of all, broad multilateral support is essential for the sanctions to succeed. The case of Iran highlights the significance of global cooperation in forming an effective sanctions regime, and the history of the past 35 years of imposing economic penalties against Iran as an important player in global economy clearly demonstrates just how difficult it is to

generate sustained support for economic penalties, even where the precipitant is shocking and the threat would be obvious. Second, it should be noted that the successful application of sanctions takes time. Third, the sanctions work when they hit Iran where it hurt the most. For example, fortuitous shifts in technology and the global economy in international energy markets worked and became possible to hurt Iran's main income stream without imposing equally painful costs on the global economy. Fourth, symbolic sanctions are impossible to change a state's calculus; education, ingenuity and enforcement are necessary. Fifth, economic sanctions work best against a divided leadership with a limited interest in tolerating the cost (Maloney, March 2014).

But sanction pessimists have been quick to point out that Iran has served as the poster child for the limitations of sanctions as a policy tool. They argue that Rouhani's "charm offensive" is just one more tool in the regime's long history of diplomatic trickery. Critics add that, even Rouhani is sincere, the real nuclear power elite is not ready to give up on its nuclear vision.

Critics hold that history also works against the success of the Iran sanctions. For instance, Simon Henderson, an expert on energy policy in the Middle East, noted, "Iran is unlikely to give up its nuclear program after seeing what happened to Qaddafi and Saddam Hussein, who were both driven from power, after acceding to international pressure to give up their nuclear ambitions." According to Henderson, the sanctions regime, as it has been constituted, has also been doomed for failure because it has yet to be implemented correctly and unwaveringly supported (Henderson, 2013).

Iranian economist Djavad Salehi-Isfahani argues that Iran's populist hardliners have proven that they are able to exploit economic vulnerabilities to consolidate their own political power, investing in working class populations and directly dispersing financial support and even basic goods. As he put it "as basic services deteriorate, and the shortages and long lines that were common sights during the Iran-Iraq war reappear, the government

will once again become not the source but the remedy to their problems.” Hence, as Salehi-Isfahani believes, sanctions have played a major role in the country’s transformation from a theocracy to a “thugocracy.” According to this scholar, with private businesses increasingly being squeezed out by the government, Iranian people are becoming more dependent on the government and therefore “unable and fearful of engaging in civil activism at the risk of losing their livelihood” (Esfahlani, 2 August 2012).

Even Steve Hanke, renowned economist at Johns Hopkins University expressed disappointment with the success of economic sanctions in forcing Iran to abandon its nuclear program, noting that “well, as it turns out, the sanctions have failed to force Tehran to abandon its nuclear program. Indeed, sanctions have a long history of failure” (Hanke, February 2013). According to Hanke, disregards with the fact that sanctions have altered Iran’s finance and commerce modus operandi and have also contributed to its inflation woes by experiencing an annual inflation rate of 110% during 2012 - four times higher than the official rate of 27.4%, however, the Iranian government has tried to prop up its stumbling currency and stop its economy’s death spiral by using oppressive tactics and force, a strategy that Hanke believes it has been “worked.” Hanke concluded that although the collective punishment delivered by the global sanctions has been devastating, it has eventually failed to deter Iran from developing nuclear capability and generated a great deal of resentment. As he put it, “it seems highly unlikely that sanctions will succeed in forcing Iran to abandon its nuclear program... .” (Hanke, February 2013).

Similarly, Ivan Eland, the author of *The Efficacy of Economic Sanctions as a Foreign Policy Tool* noted that “If anything, the sanctions are likely to increase support for the regime as Iranians, like other people in similar circumstances of external pressure, rally around their flag.” (Eland, January 2012). Even the nonpartisan Center for Arms Control and Non-Proliferation expressed doubts about the economic blockade, saying its

effects on Iran, which have included a fall in the country's oil production, a collapse in the value of its currency Rial, and a big jump in the county's inflation, were mainly hitting ordinary Iranian people rather than the country's leaders. According to the report "Paradoxically, economic woes have allowed the government to take greater control over the economy, and to use patronage, favors, and other methods to shield regime allies from the pain of sanctions," the report said. "On the other hand, those hit hardest by the sanctions seem to be precisely those who otherwise would support a more moderate government in Iran, and who look favorably on the U.S" (Heeley & Sahay, June 2013).

Some analysts in the pessimists' camp argue that economic sanctions are entrenching parastatal forces like the Revolutionary Guard (IRGC). The IRGC, as Iran's quasi-state, quasi-military, quasi-business conglomerate, has been the main benefactor of global sanctions, and has established a near-economic monopoly in the county as the global sanctions have driven the middle class out of legitimate businesses and crushed Iran's private sector. The IRGC itself has been largely untouched from the global sanction's economic impact (Esfahlani, 2 August 2012).

Sadeghi Esfahlani and Jamal Abdi argue that if sanctions trigger a domestic backlash, it may come in the form of a food riots that will provide an easy target for the government's apparatus of repression. The Revolutionary Guards *modus operandi* has been to prepare to demolish any internal unrest in its primary stage, and bread mobs will provide the Guards with a perfect pretext to consolidate its power by using overwhelming force to crush any demonstration and eradicate the domestic opposition paving the way for the Guards towards military dictatorship (Esfahlani, August 2012).

The debate about Rouhani's true intentions has raised the question of who really speaks for Iran. Under normal circumstance, it is assumed that the regime is a unitary actor, a convention used in both proliferation and sanctions literature. But the unique political system that has existed since the 1979 revolution can be hardly squared with the unitary actor construct.

1.6.4 The Non-Unitary Actor: Negotiated Political Order

The Islamic Republic of Iran founded in 1979 in the wake of the revolution that overthrew the monarchy has defied standard political science classifications, triggering a fierce debate among observers. Exposing the limits of Western political vocabulary, the academic discourse led to a variety of definition such as Islamic theocracy, Islamic police state, a barrack regime, clerical oligarchy, Islamic neo-patrimonialism or theodemocracy (Seliktar, 2010).

To understand the Iranian regime, it is necessary to analyze the legitimacy base on which it rests. As well known, Max Weber postulated that individuals are persuaded to obey political authority and to comply with its coercive power because they imbue the system with legitimacy. Weber identified three pure claims to legitimacy – rational, traditional and charismatic – which have often been conflated into two categories: the rational-legal and the numinous-traditional. The former is said to be derived from the consent of the members of a collective and is contractual in nature; the latter is based on claims of a divine right which is conferred on a designated representative of the super-rational authority. Procedural rules required to establish and maintain rational-legal legitimacy obviously include those employed by democracies (for example periodic elections), but rules pertaining to numinous-traditional authority are vague. Complicating dependence upon simplistic constructs, regimes have historically used a bewildering combination of validity claims to legitimize their rule; various mixes of traditional, charismatic and rational-legal claims have been bolstered by either restricted or ‘ritualistic’ elections (Weber, 1968).

Students of legitimacy maintain that, in legitimizing the political system, a mix of three models are guiding individuals: “an integrative mode based on a diffuse sense of support for the authority system, an exchange mode based on benefits that it provides to

individuals, and a threat system based on its coercive power.” The integrative mode followed by the exchange mode is dominant in democratic systems. In autocratic systems, the threat mode is dominant in creating the appearance of legitimacy, with exchange considerations substituting for intrinsic support (Seliktar, 1986).

Weber’s analysis offers important insights into how the Iranian clergy constructed the system. Even before coming to power, Ayatollah Rouhollah Khomeini laid the foundation for a numinous system of authority; he introduced the novel doctrine of Islamic governance of *velayat-e-faqih*, the divine rule by a religious guardian (Khomeini, 1993). As Khomeini loyalist Hamid-Reza Tariqi, member of Islamic coalition Society put it, “The legitimacy of our Islamist establishment is derived from God. The legitimacy will not wash away, even if people stop supporting it” (Takeyh, 2006a, p. 36). While this was clearly a prescription for a religious theory, Khomeini and his followers could not ignore the democratically-minded revolution that overthrown his predecessor. Khomeini was forced to add a contractual component to the Islamic Republic, paving the way to an elected assembly, the Parliament, and an elected presidency.

While Khomeini avoided the high costs of coercion needed to impose a pure theocracy on a restive population, the mixed system was extremely complex. The 1979 Constitution safeguarded the dominance of the *velayat-e-faqih*, turned into a Supreme Spiritual Leader. An Assembly of Experts of Leadership *Majles-e Khobregan* or *Majles-e Khebregan-e Rahbari*, also translated as Council of Experts, a deliberative body of 86 *mujtahids* (Islamic theologians who are qualified to exercise *ijtihad*), elects the Supreme Leader and supervises his actions (IPRC, 1979). Members of the *Majles-e Khobregan* are elected from a list of candidates approved by the government via direct vote for a period of eight year. The charismatic Ayatollah Khomeini, who became the country’s Supreme Leader before the establishment of *Majles-e Khobregan*, controlled all aspects of governance, including the judiciary and the armed forces (IPRC, 1979).

The Council of the Custodians of the Constitution, *Shora-ye Negahban-e Qanun-e Assassi* (a.k.a The Guardian Council of the Constitution) whose twelve members are not popularly-elected, extends the reach of Islamic governance; it approves the credentials of candidates for the presidency and the parliament and judges the compatibility of parliament legislation with Islamic principles. In a unique arrangement, the Rahbar serves as the commander-in-chief and the head of the Supreme National Security Council *Showrāye Āliye Amniyate Mellī* (SNSC) (IPRC, 1979). Clashing imperatives of such bifurcated legitimacy created an extremely complex power arrangement in which a large number of elites compete in the state arena.

In 1979, the Islamic leaders created the Islamic Revolutionary Guards Corps *Sepāh-e Pāsdārān-e Enqelāb-e Eslāmi* (IRGC) – commonly referred to as the Revolutionary Guards, or Guards - and its Basij militia that unleashed a “reign of terror,” the bloody suppression of leftists, liberals and labor. Increasingly, the Revolutionary Guards duplicated the role of the regular military (the *Artesh*) that the regime did not trust. Responding only to the Supreme Leaders, the Guards are a parastatal organization, with few obligations to the state (Alfoneh, September 2008). The Ministry of Intelligence and Security (MOIS) is another enigmatic organization with complex links to the Supreme Leader, the Guards and their elite Al-Quds unit that runs terrorist operations abroad. This negotiated political order poses a particular problem for Western observers who tend to consider a country to be a fairly unitary and hierarchal system with well-established lines of authority.

The quest to understand the political system goes beyond the academic community. In fact, the issue has vital practical significance since Iran’s nuclear programme follows the complex contours of the negotiated political order. It is generally assumed that the program is under the personal supervision of the Supreme Leaders, but different elites,

notably the parastatal Revolutionary Guard, seem to exercise control as well.⁶ The input of the state through its elected representatives – the President and the Majlis- is rather negligible though the semi-independent Atomic Energy Organization of Iran (AEOI) is more involved. In any event, the vague, fluid, and ever-changing boundaries of the competing power centers need to be explored in greater detail in order to understand the evolution of the nuclear process.

1.7 Methodology and Sources

To improve prediction, this study will evaluate the inter-elite discourse using a number of measurements. First, I developed a special measure of the amount of dysfunction in the society known as social instability, resulting from a breakdown of standards and values. An index of anomic behavior will be compiled (rates of suicide, homicide, death from overdose, drug addiction, divorce, infertility, robbery, street fighting, petty crime, corruption, vagrancy, and school drop-out). Second, the responses of representative figures among Normalizers, the Principalists, and the Rahbar circles to the anomic threat will be analyzed. As a rule, those with low tolerance for social instability are expected to advocate rollback; those who display high tolerance for social instability are expected to oppose rollback.

Testing the twin hypothesis of this dissertation – proliferation rationality and rollback rationality – requires a methodology grounded in theory. The survey of literature guides the construction of the methodology. Key concepts derived from each domain – namely realism, nuclear rationality and sanctions rationality - will be used to provide a detailed history of Iran's nuclear program. A longitudinal analysis of the nuclear

⁶ See for instance: Abdo. (2004). Iran's Internal Struggles; Overview. in Sokolski and Clawson (eds.), *Checking Iran's Nuclear Ambitions*. Washington: The Strategic Studies Institute pp. 39-60

programme is essential as it allows for applying the various concepts to real-time dynamics. By structuring each chapter in a chronological-thematic way, this work will reflect on the goals and motivation of the nuclear weapons programme as they refracted in the negotiated political order.

The debates on the subject have been conducted almost exclusively among Western observers with limited use of Farsi language sources. To the extent that Iranian sources were used, they were either derived from secondary accounts and, not infrequently, they were selective quotes designed to support a particular hypothesis or a particular political agenda of the commentator. In other words, determination of Iran's alleged rationality or lack of it was essentially a projection of outside observers. Only original material can provide a crucial test of the degree to which theoretical concepts such as nuclear rationality developed during the Cold War are applicable to a non-Western regime with strong ideological and, by some estimates, messianic leaning.

To overcome the paucity of indigenous perspectives in the literature, Farsi language sources will be extensively used. In the past few years, key figures in the nuclear program such as Ayatollah Akbar Hashemi Rafsanjani and Hassan Rouhani published memoirs that shed considerable light on two aspects of the programme: the decision making process of the 'nuclear sanctum,' and the inner, highly secretive working of the programme.

Additionally, primary material will be gleaned from Farsi websites and semi-structured interviews (appendix A), whenever possible. Official publications, government reports, speeches by Supreme Leader, Presidents and foreign affairs officials and political leaders, letters and feature articles by ambassadors, biographies, memoirs, treaty documents, disclosure in media and other official sources are highly useful in providing necessary data and information for this research.

Also highly relevant is data obtained from World Bank, Central Bank of Iran, Iran Statistical Center, U.N. reports, IAEA reports, international conference reports, magazines, newspapers, and reports published by financial organizations such as the Institute of International Finance (IIF). Secondary sources are based on the large volume of books, articles in popular and academic journals, and newspapers.

1.8 Contribution and Significance of the Study

1. This work attempts to use a rigorous methodology based on concepts derived from theory of proliferation to systematically track the development of the Iran's weapon programme,
2. The study attempts to provide a full thematic-chronological discussion of the Iran's nuclear programme,
3. The research attempts to formulate a relation between two issues that are often discussed separately— the rationale and goal of proliferation and the reaction to sanctions and willingness to consider a rollback,
4. The study attempts to use mostly Farsi language sources to provide an insider view of the thinking and deliberation within the regime's nuclear sanctum. These and other original materials can provide a crucial test of the degree to which theoretical concepts such as nuclear rationality developed during the Cold War are applicable to a non-Western regime with strong ideological leaning.

The study advances current knowledge on the sanctions' impact on nuclear rollback, in significant part due to the dearth of existing work on the subject. It brings together insights from the two largely separate bodies of works on proliferation and sanctions respectively.

Due to the broad consensus that sanctions are weak instruments, the literature does not expect them to be successful in issues of “high politics” such as nuclear proliferation.

The present case study can also contribute to the general sanction literature. The use of social instability is an important contribution to the field of sanctions; it provides a way of linking sanctions to regime legitimacy. Experts use standard economic indices such as inflation, unemployment, and others to measure the impact. This approach however, does not fit Iran, where the neopatrimonial economic system prioritizes certain sectors to sustain its legitimacy. Ironically, the uneven distribution of “pain” creates a deeper backlash that can be tracked through the socio-economic construct of eudemonics, a composite measure of well-being guided by a normative component of what well-being should be. A drop in the level of eudemonics, combined with an increase in anomia, is a better prediction of the sanctions impact than standard economic indices.

1.9 Limitations of the Study

The study has a number of limitations, all of which stem from the extreme secrecy of Iran’s nuclear programme. Even with use of Farsi language sources, some lacunae in the decision-making process and the technical evolution of the programme remain. These gaps cannot be filled at present as the IAEA has failed to interview key technical personnel involved in Iran’s weaponization activities. A related issue is the uneven quality of sources. The most secret part of the program involved the role of the Revolutionary Guards, a virtual ‘state within a state’ and the relations of the Guards to the Supreme Leader. Only relatively few sources attributable to the Guard have surfaced over time. To overcome the limitations, Leaks from defectors and leaks associated with internal rivalries and scandals are obviously of a possible source of information but need to be scrutinized very carefully. In addition, since it is impossible to conduct interviews with

key nuclear players in Iran; the interviews which I plan to conduct are either with minor players or observers are only a substitute.

1.10 Structure of the Study

This research is organized into eight chapters which reflect the research goals outlined above. Chapter one sets the goals, parameters, and methodology of the study and offers a survey of the literature on Iran's nuclear program and the effectiveness of sanctions. Chapter two covers theoretical and conceptual framework of the study. Chapter three details the intense debate in the inner circle of Ayatollah Rouhollah Khomeini about nuclear program, adopting a *realpolitik* view compatible with neorealism in regards with nuclear programme.

Chapter four covers the nuclear take-off under Ayatollah Akbar Hashemi Rafsanjani. The chapter analyzes the strategies and tactics that the Iran successfully used to set up a network of legitimate projects and develop Iran's nuclear program.

Chapter five provides an overview of the progress achieved during tenure of President Mohammed Khatami. The architect of the universally hailed Dialogue of Civilizations, called for Iran's rapprochement with the West and reintegration into the community of nations. Whether by design or default, the Dialogue provided continuous coverage for the nuclear programme, keeping its cost low.

Chapter six discusses the first term of President Mahmoud Ahmadinejad, a nuclear Principalist, who openly defied the nonproliferation regime, a strategy that triggered a round of rather mild sanctions. By ignoring the sanctions Ahmadinejad violated the cost-benefit rationality embedded in the sanction model, prompting the international community to increase the severity of economic punishment.

Chapter seven analyzes the impact of double whammy delivered by sanctions; as a rentier state uses oil receipts prop up its legitimacy, the regime was forced into a cost-benefit analysis of the nuclear programme. Chapter eight discusses the election of President Hassan Rouhani within the context of the cost-benefit debate. The Last chapter, sums up the findings that support the work's hypothesis, namely that Iran is a rational proliferator and, as such is inclined to respond rationally to sanctions by considering a rollback.

CHAPTER 2: THEORETICAL AND CONCEPTUAL FRAMEWORK

This chapter covers theories of nuclear proliferation and nuclear rollback. The chapter's key assumption is that rational choice models behind dominant IR theories – realism and neorealism- drive proliferation as well as rollback. At the same time, the phenomenon of Second Nuclear Age proliferators has raised trenchant questions about the applicability of traditional proliferation theories.

Section 2.1 reviews realism and neorealism with a special emphasis on proliferation. Section 2.2 explores scholarship that expands the realist and neorealist tenets to include the idea of 'secondary drivers' of proliferation, namely that national pride, the needs of legitimacy, and other domestic consideration may drive proliferation. While security considerations are fairly immutable, secondary driving factors are more flexible, thus providing rollback opportunities. Section 2.3 reviews the driving factors of nuclear proliferation and rollback at the second nuclear age. Section 2.4 explores rationality of the second nuclear age proliferates both in terms of proliferation and rollback. Section 2.5 is definition of terms.

2.1 International Relations Theories and Nuclear Proliferation

Nuclear proliferation is a highly important topic in international relation, since it threatens to undermine the fragile order created by the Non Proliferation Treaty (NPT) a regime that created a five member "nuclear club" of United States, Russia, China, Great Britain and France. While sanctioning the nuclear arsenal of the five, the NPT has tried to prevent other countries from acquiring a nuclear weapons capability.

The relative increase in the number of countries seeking nuclear weapons poses a potential threat to humanity, thus making non-proliferation a vital goal of international

relations. The nuclear order created by the NPT – the signature achievement of the Cold War and the First Nuclear Age it had ushered - has been challenged by a variety of new contenders whose fitness to steward a nuclear arsenal has been questioned. How to deal with these new proliferators and craft strategies of rollback has become the singular preoccupation of the Second Nuclear Age debate.

It is hard to understand the reasons for which a country chooses to obtain nuclear weapons because of variability and speculative nature of factors involved in it. Proliferation scholars have argued that the reasons of opting to nuclear option can be different for different states. Many analysts have noted that it is difficult to explain nuclear proliferation since the sample of states that acquired nuclear weapons is small (Krieger, 1975, November 2005; Sagan, Waltz, & Betts, 2007).

However, as Zachary Davis points out, these scholars overlook the fact that many states could have acquire nuclear bomb but chose to not acquiring them (Davis & Frankel, 1993). The sample can be enlarged because the decisions to acquire or not to acquire nuclear weapons belong in the same domain. The understanding of why some countries decided to build nuclear bomb is essential to understand why other states decided not to do so (Davis & Frankel, 1993). Therefore, in order to find the best way to roll back a nuclear weapons programme, it is essential to understand the factors driving nuclear proliferation at the first place.

Since nuclear weapons are the ultimate threat to the world security, political leaders, scholars and scientists have engaged in a feverish debate on the topic. The dominant IR theories - realism and neorealism - served a logical platform for launching assumptions about nuclear proliferation since scholars working within this tradition have made a number of claims about states' behavior in general and conflict in particular (Singh & Way, 2004; Paul, 2000). Rational theorists of Realist School of IR have agreed that states tend to achieve nuclear weapons when they face security challenges from external sources

and when they perceive nuclear deterrence will maximize their security (Fair & Shellman, 2008).

As Mearsheimer put it, states are always strive to maximize their power over their rivals with hegemony as their ultimate objectives. Realists argue that this situation drive states to be revisionist with the exception of those states that achieve preponderance and strive to remain status quo powers. In fact, the anarchic nature of international system encourages players to seek for opportunities to enhance their power vis-à-vis other players. From realists' perspective, states look for opportunities to maximize their power due to number of reason; first, because of the anarchic system of the international environment. Second, offensive military capability enables great powers to destroy their rivals. Additionally, there is always uncertainty about other states' intention. Besides, great powers are rational actors and survival is their ultimate goal. States know the international system and think strategically about how to survive in this system (John J Mearsheimer, 2003).

In this context, the realists and neorealists postulate that states strive to acquire a nuclear arsenal because of their security needs. Since the international system is said to be anarchic and due to the uncertainty associated with it, nuclear weapons, the golden standard of deterrence, enhances the security of a state. In other words, the perceived utility of a nuclear arsenal is the key variable in the decision of a state to proliferate (Hymans, Fall 2006). Thereof, realists predict that security policies compel states to achieve nuclear weapons. The key argument of realism is that anarchy is a major driving factor for states to protect themselves, even if they do not face existential threat yet (Tagma, 2010; Weber, Winter 1990).

Hence it becomes fairly evident that the International system is a complex organization where each one of the actors are in a constant conflict for power and security. Due to the high degree of uncertainty in such system, states do not trust on actions of

other nations that could jeopardize their security, hence they succumb to security dilemma - defined as the inability for states to maximize their own power and security without threatening the security of other states - a fundamental driver of global politics. Even though some studies indicate that there is anecdotal evidence that nuclear proliferation destabilizes the international system and threaten the security of other states in a way that fits into a security dilemma perspective, however, history of those countries which developed nuclear weapons suggests that proliferation causes proliferation as it threatens the security of others while a proliferator trying to maximize its own security (Beardsley & Asal, March 2011).

Nuclear weapon programs may not necessarily give additional bargaining power to states, but they carry a strong potential for greater bargaining power in the future, and it is this issue that threatens the interests of other actors in the global system (Beardsley & Asal, March 2011). In security dilemma, states prefer to be safe than sorry, thus having too much security is their ultimate goal. The “more is better” logic is reflected in the so-called “countervailing” strategy and doctrines such as Mutual Assured Destruction (MAD) that advocated by some American nuclear strategists (Jervis, 1984).

According to Leah Kuchinsky, proliferation occurs when a state possesses a level of development that ensures it's acquiring of the technological resources necessary to develop and sustain weapons production. Kuchinsky argues that the level of global isolation may be a propelling or constraining factor for nuclear proliferation. The third and final propelling factor is level of insecurity. The extent to which a state feels it possesses a level of insecurity that requires a nuclear deterrent to respond to the threat it faces is a driving factor behind nuclear proliferation (Kuchinsky).

Dong-Joon Jo and Erik Gartzke argue that states may consider nuclear weapons in order to neutralize a conventional threat. however, there is a lower willingness to pursue

nuclear weapons program or proliferation by those states that facing threat from nuclear powers because of fearing nuclear preemption (Jo & Gartzke, 2007).

These scholars noted that regional powers are more prone to develop nuclear weapons programs but they are only slightly likelier to produce weapons. Similarly, pariah states are neither more likely to initiate nuclear weapons programs nor to possess nuclear weapons. The two scholars contend that there is a least difference between autocracies and democracies but when a nuclear weapons infrastructure is in place, democracy turns out to intensify the spread of nuclear weapons (Jo & Gartzke, 2007).

2.1.1 Neorealism

Neorealism, also known as structural realism, is the most popular IR theory to date. Neorealism postulates that, since no single entity governs the international system, a state of anarchy exists, prompting national actors to worry about their existence and stay highly vigilant, lest their existence and security is jeopardized. States do not trust the actions of others and strive to remain strong and independent from all external constraints. In this view, states are security-conscious entities, and their military policies are driven by their “most probable threat appraisal” as opposed to the worst-case assessment (Waltz, 1981; Paul, 2000).

The strongest explanation for the acquisition of nuclear weapons derives from realism. Realists hold that states basically seek to achieve arms to protect their interest. States are more concerned regarding their security due to lack of trust toward other states. Hence, they need to be prepared by obtaining weapons in order to deter any potential attack (Paul et al., 2000).

According to neorealists, in a high-level zone of conflict which is specified by constant violence and mistrust, states engage in enduring rivalries and protracted

conflicts. Regional countries that have nuclear-armed enemies and those states which are not protected by the superpowers are more prone to obtain nuclear weapons in order to deter any potential attack by their adversaries (Paul, 2000; Mark T, 2001).

The deterrent power of nuclear weapons is linked to their status as the ultimate source of coercion in the international system. Coercion is deemed to be successful when an actor adopts a particular behavior in compliance with or in anticipation of another actor's demands, wish or proposals, largely due to fear of sanctions or threat of force (Jo & Gartzke, 2007). Neorealists argue that deterrence is presumed to be the most significant outcome of the coercive quality of nuclear weapons. Nuclear weapons also provide the holder "an infrangible guarantee" of its independence and physical integrity. As many analysts believe, Nuclear weapons capability gives structural power to their possessor, which is the uppermost form of military supremacy as well as diplomatic power in the international arena (Paul, Harknett, & Wirtz, 2000).

Assuming that countries are rational players, would-be aggressors can be dissuaded from acting by performing a simple cost-benefit analysis. As Sagan put it "A state's life in the state of international anarchy will be nasty and brutish, but it need not be short, if its leaders prepare for war and use military power in a cold and calculating manner to protect themselves from current and potential enemies" (Waltz & Sagan, 2003; Sagan, 2004, p. 74).

Waltz, considered the 'father' of neorealism, used this rational to claim that obtaining a nuclear capacity was a highly rational act on the part of a state. Moreover, in his view, ethical concerns can have little influence in this vision of a dog-eat-dog international system. For neorealist, the international anarchic system does not allow states to be moral. Consequently, states have to be ready to do what is vital for their interest as they define it. As Walt put it, "anarchy is a realm where all can, and many do, play dirty pool" (Art & Waltz, 1983, pp. 6-7). Strategic interdependence and the absence

of morality mean that each state, if it wishes to be effective, must be prepared to play according to the rules set by the “dirtiest” player (Art & Waltz, 1983).

According to Waltz, the desire for obtaining nuclear weapons is attributable to the number of factors. First, proliferation is a reaction to the possession of such weapons by other powerful nations. Second, states need to protect their own security and when there is uncertainty of a powerful ally coming to their aid in the event they are attacked. The third reason is when a state have no nuclear ally if some of its adversaries have them (Waltz, 1981).

The next in line in which a country may seek nuclear weapons is that some states may want nuclear weapons because they live in fear of its adversaries' conventional strength. Additionally, some countries may find nuclear weapons a cheaper and safer alternative to running economically ruinous conventional arms races. More, some countries may want nuclear weapons for offensive purposes. Ultimately, a country may hope to enhance its international standing by achieving nuclear weapons. A nation may enjoy the prestige that comes with nuclear weapons, and indeed a yearning for glory (Waltz, 1981).

According to Waltz and other neorealists, in an anarchic international environment, conflict is a given. Each state needs to be more powerful than the other. This leads to a permanent action–reaction policy expressed in the realm of military capabilities. To Waltz and neorealists, arms race is a crucial and persistent feature of conflict. Once a player achieve a nuclear capability, it is more likely that the other player or players might follow the same path. The argument that “parity preserves peace” is based on the history of the Cold War where none of the nuclear actors crossed the threshold into a nuclear conflagration (Khan, 2010).

If the neorealist logic applies to the global players, it makes equal sense in conflicts between global and regional powers. No regional actor can match a global player without

possessing nuclear weapons. The weaker state uses such weapons as a force multiplier, especially as they have no hope of amassing a large conventional arsenal. Having successfully proliferated, the weaker player acquires the ultimate war-detering capability that only nuclear weapons can provide. Deterrence apart, the bomb offers additional advantages to regional actors. They signal the state's putative adversaries to take it seriously and signal its "rightful" status in the region (Khan, 2010).

Clearly, neorealists believe that a decision of a weak player to acquire nuclear weapons is a rational response to a serious security dilemma. Such countries are characteristically unable to protect their vital interest or stand up to major powers by relying on conventional deterrence. Conversely, giving up such weapons is perceived as a dangerous act since it requires placing trust in other states' actions (Clark, 2001). A technologically capable state in a high conflict region that forgoes nuclear weapons normally amassed security equivalents – either a credible guarantee provided by a big power or countervailing capability in conventional, chemical and biological weapons. But even such states would have ground to doubts their security according to the neorealist creed (Paul, 2000).

To Waltz, a staunch neorealist, a state needs to bolster its security with nuclear weapons and their deterrent power. As he put it, "peace has become the privilege of states having nuclear weapons, while wars have been fought mainly by those who lack them" (Waltz, 1995, p. 11). According to Waltz, the possibility of conflict declines when defensive and deterrent capabilities are enhanced: "in the presence of nuclear weapons, there is less possibility for wars to start. Since they do, the gradual proliferation is more to be welcomed" (Waltz, 1981, p. 8).

Though the neorealist logic gained prominence in the discursive arena, it was not entirely clear how a balance of terror contributed to global peace. It took the field of game theory to provide an answer to this quandary.

2.2 Nuclear Rationality in the First Nuclear Age: The Emergence of the Mutual Assured Destruction (Mad) Doctrine

The proliferation at the end of WW II caused fears of a nuclear Holocaust. As noted, by the early sixties the nuclear club featured the United States, the Soviet Union, People's Republic of China, France and Great Britain, and, with more countries signaling the desire to join. How to prevent a conflagration among the nuclear powers and dissuade others from proliferating engendered a fierce debate among politicians, nuclear experts and scholars. While realists and neorealists declared that proliferation was a rational act, (Mearsheimer, 2005) they were less clear whether the rationality that led players to acquire weapons will prevent them from using their arsenal. Waltz himself was vague on the issue, leaving others to imply that rationality would prevent use (Schelling, 1981). Since there was no historical precedent of a nuclear conflict, the literature amounted to little more than speculation. Indeed, the term "nuclear optimists" and "nuclear pessimists" coined at the time reflected the fact that much of the writing was a argument (Keohane, April 1987).

Schelling, a leading strategic theoretician, broke the impasse by using rational choice theory to model nuclear reasoning. He postulated that "the high cost of nuclear attack followed by a counter attack will deter any would-be user" (Schelling, 1981). Subsequently labeled Mutual Assured Destruction (MAD), it became the official policy of the United States and was widely shared by the scholarly community. MAD was credited with preventing the Cold War into spiraling into global conflagrations despite numerous regional skirmishes and local wars by proxies. Indeed, Waltz's comment about "nuke owners" enjoying peace while others were fighting traditional wars was inspired by the Cold War realities.

Even so, MAD found some detractors among scholars and practitioners. In the 1970s, Richard Pipes, an expert on Soviet Union at Harvard University, led a group known as Team B to challenge the official CIA assumption that the Soviet Union was rational enough not launch a nuclear attack on the United State. According to Pipes, the Soviet leaders were rigid ideologues bent on world domination and reckless enough to back it up with a nuclear strike. Lasting for more than a decade, the Team B debate ended after the collapse of the Soviet Union (Seliktar, 2004).

2.3 The Second Nuclear Age: Proliferation and Nuclear Rollback

While the end of the Cold War was widely expected to improve global security, the reconfigured international reality produced new challenges. The relatively stable bipolar world gave way to a more chaotic and unstable international system. True to their theory, neorealists rushed to proclaim the benefits of expanding the nuclear club; Waltz and his disciple, Mearsheimer, urged letting Germany, Japan and even Italy to acquire a nuclear arsenal (Waltz, 1981; Mearsheimer, August 1990).

The neorealists argued that encouraging proliferation should be attractive for a number of reasons. It would give strategic flexibility to the smaller states to address serious threats to their security and help them use their resources more effectively. Additionally, in a multipolar situation the reliability of security guarantees by big power was expected to decline, sending signal to some states that had previously refrained from going nuclear to develop their own programs (Clark, 2001; Krieger, November 2005).

The essence of the nuclear proliferation is to achieve more political, military and economic power. A nation wants to enhance its power to improve its global standing and increase its influence over other nations. Some states view nuclear proliferation as a means to promote their security, improving their economic conditions, enhancing their

prestige and augmenting their influence. William Epstein argues that whether a state will act on these views depends on the perception of its leaders toward the global environment and on their assessments of the best ways to accomplish national objectives (Epstein, March, 1977).

Number of factors which have motivated first nuclear age countries to develop nuclear weapons program may also motivate the second nuclear age countries. Achieving military superiority over an adversary, preventing a perceived enemy from achieving superiority or achieving an effective deterrent capability against a hostile nuclear power are among those driving factors. More importantly, states in the second nuclear age may want to ensure that they have nuclear weapon capability before an adversary does or to achieve military independence without having to rely on the support of a nuclear power (Epstein, March, 1977).

However, proliferation theory postulates that factors other than strict security calculations can prompt countries to embrace a nuclear weapon program and national identity and pride are among the things most often mentioned in this context. National elites can use a nuclear project to enhance their legitimacy by creating or bolstering a new unifying identity and, in some cases, nuclear proliferation is placed at the core of such a nationalist identity, often described as “civil religion.”

In constructivist terminology, the effect of social construction is a very important factor in nuclear proliferation. According to constructivists, the prevalence of nuclear weapons and states’ nuclear dominance constitute social facts. Nuclear weapons demonstrate the states’ commitment to their constructed social purpose, specially maintaining power, dominance and prestige (Levornik, 2011-03-16 ; Van Wyk et al, 2012).

For states, in constructivist terminology, nuclear technology remains a status symbol, which distinguishes nuclear possessors from those that do not have them. The

development of such weapons necessitates a very sophisticated scientific community, an asset that only small number of countries can afford. Nuclear technology has also added a form of technological and political determinism in global affairs. Once a state has achieved nuclear technology, it is possible to develop it through a dedicated nuclear programme and produce nuclear weapons (Van Wyk et al., 2012).

Beside of these rationales, other benefits like economic or global power statuses may also encourage states to develop nuclear weapons. It follows that internal publics should also aim nuclear programs for the identical rationales. Eventually, expectations about individuals yearning survival, power, prosperity and status, seem plausible (Fair & Shellman, 2008).

Some states of the second nuclear age, perceive the acquisition of nuclear technology and nuclear weapons as a mean to enhance their prestige and status in the world. Possession of these arms give greater weight to their possessor in the entire range of foreign policy matters and their views are treated with greater respect. Potential great powers, maybe attracted to weaponization by the larger voice they would receive both in regional and global affairs. Therefore, the acquisition of nuclear weapons maybe considered as a way to achieve great power status or as Sagan put it “to be assured of a seat at the ‘head table’ in international forums” (Sagan, 1996). Two additional reasons may cause some states to roll forward to proliferation; first, to remove discriminatory aspects affecting their status and their prestige, such as the distinction between nuclear and non-nuclear powers or having to accept safeguards on their nuclear activities. Second, to demonstrate self-reliance and political independence, and to be able to resist political pressures from the nuclear superpowers (Epstein, March, 1977).

Economic considerations are a close reflection of the political considerations. They affect both the developed and developing countries. It is widely believed that the peaceful applications of nuclear energy, mainly as a source of cheap power, could be a major

driving factor in promoting a country's economic position and improving its living standard. Some countries are interested in developing a peaceful nuclear industry because of the potential military spinoff benefits attached to it, even if they have no present intention of going nuclear (Epstein, March, 1977).

Thus, the symbiotic nature of the nuclear energy is perceived as providing spinoff benefits in both peaceful and military directions. In any case, countries interested in nuclear energy are the best samples that like to be in the front rank of technology because they believe that the achievement of advanced nuclear technological capability will elevate their economic power and prestige and help them to close the economic gap between themselves and the rich countries (Epstein, March, 1977).

It is generally believe that, once a country has established a domestic nuclear power industry, it can readily produce nuclear weapons at very low cost, since the major costs have been paid in the creation of the nuclear industry. Perhaps most important of all the economic incentives is that the formerly colonies countries may perceive the acquisition of nuclear capability as a mean to free them from dependence on the former colonial powers. Similarly, some Third World countries that are committed to the creation of a new world economic order may perceive obtaining of a nuclear capability as a mean to give them greater bargaining leverage over the rich industrial countries to resist nuclear blackmail in the economic field (Epstein, March, 1977).

But it was the fact that some countries decided on a nuclear rollback - the decision to give up their program - that presented the neorealists with a formidable theoretical challenge. In trying to explain why states would voluntarily get rid of their nuclear capability, some experts counseled switching from the international system to domestic decision-making. Scott Sagan, a leading nuclear theoretician, was one of the first to urge considering the domestic scene: "The domestic politics model envisions nuclear weapons

as political tools used to advance parochial domestic and bureaucratic interests” (Sagan, 1996, pp. 63-64).

Advocates of the domestic politics model, known in IR theory as neoliberals, explain that public opinion and certain elites - including the military or nuclear scientists - played a role in nuclear acquisition decisions. In this scenario, political leaders may seek to achieve nuclear weapon capability to strengthen their own power through public opinion support or to please influential elites. It is often the case that during the internal debates, a nuclear arsenal acquires a positive symbolic image, a valuation that helps the nuclear advocates (Sagan, 1996).

Sagan’s domestic politics model focuses on the internal players who persuade or dissuade governments from obtaining nuclear weapons. Disregard with the fact that pursuing of nuclear bomb serves the states national interest, it is probably to serve the actors political interest or ‘Parochial Bureaucratic’ within the country. According to Sagan, three kinds of actors commonly appear in historical case-studies of proliferation; military or nuclear scientists and politicians in states in which individual parties or the mass public strongly favors nuclear weapons acquisition. When such actors form coalitions that are strong enough to control the government's decision-making process- either through their direct political power or indirectly through their control of information-nuclear weapons programs are likely to thrive (Sagan, 1996).

Some states and in order to distract domestic attention from unfavorable internal affairs may pursue nuclear ambitions. In words of Sagan, “States facing domestic turmoil may pursue nuclear weapons programs as a method of diversion.” The nature of the regime has also a potential impact to influence spread of nuclear weapons decisions. According to the proliferation scholars, dictatorial governments are probably in the proper position to control internal objections and seeking to obtain of nuclear weapons.

Conversely, Jo and Gartzke argue that, populist politicians scrambling to mobilize public opinion may be tempted to pander to nationalist hysteria (Jo & Gartzke, 2007).

Sagan concludes that the domestic discourse is highly significant in producing the bifurcated outcome - either supporting or opposing nuclear weapons. Unlike the neorealists who black-box domestic factors, Sagan maintains that a country may execute a nuclear U-turn because of shifts in domestic politics rather than changing foreign threats. Domestic dynamics that terminate a quest for nuclear weapons can be triggered by a range of factors; a new set of rulers may find it easier to change direction when it can blame its predecessors for failed policies; domestic players who support a weapons programs may lose a power struggle to actors with different interests; an outgoing regime may terminate its program out of fear that its successor would not be a reliable enough guardian of nuclear weapons (Sagan, 1996).

For all his emphasis on the domestic factor, Sagan nevertheless does not reject the neorealist security considerations. Accordingly, in the international system certainly there are potential threats to security of states, but in this model, threats are seen as being more subject to interpretation and produce a range of reactions from domestic players (Sagan, 1996).

In an important contribution to the subject, Etel Solingen added another layer of political complexity to Sagan's model. She emphasized that in some countries tension between those groups who promote openness and globalization, and isolationists who want to maintain the minimum amount of foreign contact is correlated with the nuclear debate. According to her research, the former reject the acquisition of nuclear weapons or favor a rollback of an extant arsenal, while the isolations are more inclined toward a nuclear program (Solingen, 1994).

According to Solingen, if the 'liberalizing' coalition triumphs over the 'nationalistic' coalition then it is more likely for a state to forgo its weapons programme.

Solingen suggests that those who pursue economic liberalization are more likely to embrace nuclear regimes compare to their nationalist and radical counterpart. Those that might pay little attention to their country's nuclear posture become more attentive to the elements of the international bargain (Solingen, 1994).

Solingen's input makes it clear that a relatively quick shift can occur in both directions of the proliferation-rollback equation. The trend toward individual-level analysis, notably the state leaders' motivations, has become increasingly prominent in international relations scholarship (Solingen, 1994).

Sagan's argument indicates that resource factors or supply-side issues are very important. Nuclear proliferation cannot occur without necessary financial resources and technological capability. Therefore, nuclear rollback could be caused by insufficient economic and technical capability. A country may stop its nuclear program due to its economic burden or becomes overwhelmed by the scientific requirements of fabricating nuclear weapons. The necessary technological capabilities include scientific know-how, industrial production capacity, and the engineering technology of nuclear weapons as well as the physical resources such as raw materials (Meyer, 1984). According to Meyer, such factors tend to be overlooked when determining a state's technical capacity and can be essential in affecting its ability to produce nuclear weapons. Meyer maintains that the lack of technical capability explains why many countries did not initially pursue nuclear weapons (Meyer, 1984).

Technological capability aside, nuclear weapons programme also needs economic sustainability of the project. Nuclear weapons programs entail considerable costs in part due to the ever-increasing quest for bigger arsenals and delivery systems. Analysts point out that in the early 1980s the number of nuclear programs (civilian and military) declined because the operating costs had skyrocketed (Potter, 1982; Jo & Gartzke, 2007). More recently, however, there have been some interesting reversal in the cost equation. Some

scholars now argue that the vigorous global economic growth may enable many countries to pursue nuclear weapons without crippling their economies (Häckel, 1992; Erickson, 2001). Some of the Second Nuclear Age actors benefit from the so-called 'free ride to nuclear know-how'. Unlike the situation faced by the nuclear pioneers, much of the know-how and technology underpinnings of producing nuclear weapons is easy to access and no longer required expensive and difficult research and development.

Still, as Häckel observed, the economic burden argument can cut both ways. Economic hardship or insufficient technical capability could ultimately lead to nuclear rollback (Häckel, 1992). As a matter of fact, the cost of a weapons program is a major setback for proliferation. It would be difficult for those states with small GDP to develop sufficient fund to a weapon program in order to reach positive result within a reasonable period of time (Erickson, 2001). Indeed, as discussed in the preceding chapter, sanctions are designed to both damage the economy of a target country and cripple its technical capacity, a dynamic that may affect a rollback (Häckel, 1992).

Severe economic woes could lead a state to conclude that the price tag for developing a nuclear program is high or running it is infeasible. Economic hardship more likely make a state to be responsive to incentives to roll back its nuclear program. A state with poor economic condition may seek greater economic and technological relationship with the other countries, which could require it to give up its nuclear aspirations, given the likelihood of global sanctions aimed at "resource denial" (Blankenship, 2013).

It is important to recall that economic vulnerability was a significant factor in persuading Kazakhstan and Ukraine's decision to disarm and give up their nuclear weapons. Faced with devastating economic hardship, Kazakhstan and Ukraine traded away their nuclear weapons in exchange for economic benefit and security insurance (Cortright & Väyrynen, 2010).

Even the most determined nuclear visionaries, have to reckon with the costs of launching and maintaining a nuclear weapons project in defiance of the nonproliferation regime. In order to dissuade would be proliferators the NPT architects developed a rollback plan based on economic sanctions which, like nuclear rationality, sanction, are predicated on a cost-benefit calculus based on the idea that by raising the cost of “doing business” the targeted country will eventually desist from their activities. The literature indicates that certain categories of countries - oil dependent, rentier states among them - are particularly sensitive to international sanctions. Put differently, the high cost of acquiring a nuclear weapons capability may alter the leaders since their desire to have a nuclear program must be balanced with the danger of economic collapse and the loss of political power (Kaempfer, Lowenberg, & Mertens, 2004; Escribà-Folch, 2012; Rogers, 1996; Hufbauer, Schott, & Elliott, 1990).

In sum, economic restraints persuade states to a nuclear roll back by making them sensitive to sanctions and compelling them to reassess the financial costs of the programs and reconsider their foreign economic strategies. Therefore, this leads them to view nuclear roll back beneficial to their wider economic objectives.

2.4 Nuclear Rationality in the Second Nuclear Age: Is MAD Dead?

Actually the debate was not entirely new, as during the Cold War doubts were raised about the rationality of Mao Zedong who engaged in fiery rhetoric against the West. In the 1970s, Richard Pipes, an expert on Soviet Union at Harvard University led a group known as Team B to challenge the official CIA assumption that the Soviet Union was rational enough not launch a nuclear attack on the United State. According to Pipes, the Soviet leaders were rigid ideologues bent on world domination and reckless enough to back it up with a nuclear strike (Seliktar, 2004).

The end of the Cold War and the appearance of new nuclear contenders raised serious doubt about the soundness of the NPR regime and the MAD doctrine. In a vigorous discourse dubbed the Second Nuclear Age, experts lamented that the NPT was not robust enough to prevent countries from developing their own arsenal. Some of the actors in the second nuclear age benefit from the so-called free ride to nuclear know-how. Much of the technology underpinnings and planning of nuclear weapons is open to actors no longer required to undertake difficult and expensive research and development (Haffa Jr, Hichkad, & Johnson, 2009).

In an influential book Paul Bracken cautioned against using First Nuclear Age terminology to describe Second Nuclear Age nuclear dynamics. He asserted that the “ages are fundamentally different,” because of the forces of nationalism underpinning the nuclear project of second tier players. As Bracken put it, “passion, hatred, hysteria are excluded from the crises of the first nuclear age.” The use of “ill advised, shrill rhetoric,” compared poorly to the more disciplined and tight lipped communication of the First Nuclear Age (Bracken, 2014).

This free ride enables the Second Nuclear Age players to estimate whether the benefits of pursuing or expanding a nuclear weapons capability outweigh the risks. There are several consequences of such latent proliferation. First, actors with relatively modest technical and economic resources can potentially go nuclear or, in some cases, to grow existing nuclear capabilities. Second, identifying opportunities and actions to dissuade those actors from going nuclear have met considerable challenges. Finally, it falls to the United States and its closest allies to offset or counter these nuclear choices (Haffa Jr, Hichkad, & Johnson, 2009).

Worse, some of features of the post-Cold war demonstrate seriously unnerving dynamics. The most striking difference between the two periods is the heightened sense of nationalism driving the nuclear hopefuls. Emerging from colonial rule in the later

1940s, they came of age in the nuclear era. For such countries nuclear weapons are more than a mere security- military instruments, propelling the bomb to the center of the state-making project. They may use the nuclear project to reinforce the national identity and cohesion that globalization has been destroying. As improbable as it seems, nuclear weapons are used to demonstrate national capacities and are symbols around which nationhood is being built. Closely related, the nuclear endeavor is a convenient shortcut to regional hegemony or the world state (Bracken, 2003; Haffa Jr et al., 2009).

These so-called secondary drivers - prestige and political currency - are not merely peripheral or causally insignificant factors. Status and prestige concerns, used in conjunction with the security language used to justify acquisition, are not mere forethought; at times they inform or cause proliferation decisions. Clearly, the Seeds for Peace program – based on rational-utilitarian consideration – would not have satisfied the more affective proliferators of the Second Nuclear Age (Cha, 2001).

The symbiotic relations between the emotional needs of states, their leaders and the nuclear project are something that the theorists of the First Nuclear Age theorists would have a hard time envisioning. Such a relation is also bound to disappoint observers who have long argued that globalization will render national identity obsolete and vanquish its darker twins – paranoia and xenophobia. Most worrisome in this context is the behavior of rogue states and their leaders. Pointing to the erratic behavior of Saddam Hussein and the Kim dynasty of North Korea, Second Nuclear Age scholars raised alarm about the ability of rogues to comport to Schelling's generic- universal model of rationality (Gray, 1999; Payne, 1996; Bracken, 2000).

It has been argued that the so-called rogues motivated by religious zeal or non-state actors that might gain rudimentary nuclear weapons and delivery systems can trigger a nuclear catastrophe. Religiously driven leaders, in particular, may believe that there is a heavenly realms of greater importance than the here and now. Under the right

circumstances, they might sacrifice lives — including their own — to serve the divine will as they interpret it (Feldman, 2006; Haffa Jr et al., 2009).

The Islamic bomb is a case in point. It would have probably never occurred to the pioneers of First Nuclear Age to refer to their arsenal as a “Christian bomb” or a “Jewish bomb” (in the case of Israel). An Islamic bomb, on the other hand, carries a high emotional load; although its history is still being written, it would ultimately depend on the meaning Muslims give it and the uses to which they will put it (Feldman, 2006).

If the domestically-oriented strategists worry about peculiarities of behavior and question whether some of the rogues are rational, some in the realists and neorealist fraternity do not share Waltz’s optimism about the allegedly peace generating properties of nuclear weapons. They pointed out that the Second Nuclear Age, spearheaded by Asian countries, created a very different type of nuclear context than the one epitomized by the Cold War. The tier one United States and the Soviet Union were followed by the tier two Great Britain, France, and China; generally, the five players displayed a reasonable amount of uniformity and even cooperation, not to mention that it was essentially a two-player game. In a two-player duel the question is simple: whether to shoot or wait; Shelling incorporated it into the formula leading to MAD that favored the “wait” strategy (Bracken, 2003; Doyle, 2006).

Conversely, Second Nuclear Age boasts a large number of possible game configurations that are beyond the scope of this study to describe. Still, one n-player game is particularly relevant to the Middle East. In a multiple-player game of *truel* each of three competitors is in direct opposition against the other two. The players have to decide whether to shoot at all, and, if so, which countries to shoot at, with how many missiles, at what targets, and in what order. A three-player contest is complicated; what passes for an optimal strategy in a two-person contest can produce irrational and destabilizing behavior in the three-person case. With three players no solutions to the problem are known that

do not require more stringent assumptions about communication, trust, and commitment. Strategic calculations become impossibly complex in a truel because the number of possible scenarios is enormous, compared to the two-person duel. Clearly, concepts of stability and deterrence embedded in the intellectual architecture of a two player game during the Cold War are a poor guide for games with more players. Yet, analysts predict that the strategic landscape of the Middle East is a likely candidate for playing out an n-player game (Bracken, 2003; Williams, 2013; Doyle, 2006).

Whether viewed from a domestic perspective or leaders' behavior or the neorealist international level constructs, the Second Nuclear Age is extremely challenging when trying to evaluate the behavior of a proliferator (Hague, 2008). As noted, in the case of Iran, the complexity of determining rationality has essentially created two contending camps. A survey of a representative sample culled from more than two thousand assessments- by scholars and lay observers - revealed the difference between the nuclear optimists and the nuclear pessimists cannot be explained in a systemic scientific way. Both sides used the same criteria to arrive at different conclusions and, most ironic, some changed their opinion over time. Schelling who once warned that "assorted dictators" could not be trusted to stick to MAD's rationality, professed faith in Iran: "There is an established nuclear taboo which would inhibit Iran from actually using a nuclear weapon. Iran must be cognizant of this taboo" (Schelling, April 10, 2010).

The paucity of information on the Iran's internal decision making has left a vital dimension of Iranian rationality outside the purview of observers. The complexity of the decision making process is another barrier -there can be rational and non-rational or irrational actors at the same time, rational and non-rational or irrational actors on the same issue at different times or rational and non-rational/irrational actors on different issues at the same time. In the absence of pertinent information, the validity of optimism and pessimism has been difficult to ascertain (Seliktar, 2011).

Since the question of whether a nuclear Iran can be trusted to behave rationally cannot be determined with any degree of confidence as the concept itself is deeply contended, some experts focused on the issue of rollback. Compared to voluminous literature on proliferation, the theory of sanctions is much more limited.

2.5 Definition of Terms

For clearer understanding of the terms used in this study, followings are their definition. The dependent variable is nuclear rollback, defined as the scaling back of efforts at a nuclear weapons program or complete stop or dismantling of existing nuclear weapons program. Rollback may be the result of changes in either motivations of the state, or of technical/economic pulls it faces. Nuclear rollback may be intentional (motivational) or unintentional.

Economic sanctions: defined as “the deliberate, government inspired withdrawal, or threat of withdrawal, of customary trade - levels of trade and financial activity that would probably have occurred in the absence of sanctions - or financial relations,” (Hufbauer, Schott, & Elliott, 2007, p.3) is a key variable. In keeping with the sanctions literature, the terms ‘sanctioning’ and ‘sanctioned’ were applied, where ‘sanctioning’ refers to the country or group of countries as well as international organization imposing sanctions and ‘sanctioned’ refers to the country against which sanctions are imposed. Because they are political instruments, sanctions are measured according to the declaration or communication by the sanctioning to the sanctioned, such as enacting laws prohibiting trade with the target. In other words, an economic sanction is deemed to have been threatened or imposed based on evidence that the sender articulated such a policy.

Rentier Economy: The first use of the ‘Rentier state’ concept dates back to Hossein Mahdavy’s description of the pre-revolutionary Pahlavi regime in Iran in 1970.

According to Mahdavy, “Rentier States are defined as those countries that receive on a regular bases substantial amount of external rents...paid by foreign individuals, concerns or governments to individuals, concerns or governments of a given country” (Mahdavy, 1970, p. 428). After Mahdavy, Hazem Bablawi (1990) were the first scholar to use the concept of rentier states to describe the post oil boom Arab peninsula. In his book Beblawi defines the concept “where rent situation is predominating, and there is a weak domestic productive sector with single good economy, and having a limited part of the population involved in the generation on of rent and eventually, the state is the biggest recipient of the rent” (Beblawi, 1987, pp. 383-398).

Iran secures the majority of its incomes directly from export of hydrocarbon and not from domestic tax collection. It can be said that Iran is well positioned to enjoy total autonomy and control society. As a classic rentier state, Iran is an oil producer and a member of global energy markets whose economy is profoundly dependent on oil and gas as its main source of income.

Neo-patrimonial Economy: Defined by Christopher Clapham, Neo-patrimonialism is a “form of organization in which relationships of a broadly patrimonial type pervade a political and administrative system which is formally constructed on rational-legal lines” (Clapham, 1985, p. 48). Neopatrimonialism is a system of social hierarchy where patrons use state resources in order to secure the loyalty of clients in the general population. Iran is a neopatrimonial state, a term that denotes a particular political-economic set up. The regime using oil revenues to draw legitimacy from payoff to selected segments of the population. Patrons (political elites) use state resources to buy the allegiance of clients (select categories of citizens). In a neopatrimonial situation, the legitimacy of the regime depends on the ability to hand out jobs, subsidies, and other forms of welfare. As a rentier state, Iran depends on oil receipts to pay off its citizens and sustain its legitimacy that has been strained by the coercion required to impose the Islamic life-style. Since anomic

behavior challenges the Islamic identity project - the hallmark of the Islamic revolution - the regime must double up on coercion to keep the population in check.

Rational Proliferator: Rationality - as one of the central themes of strategy in the Second Nuclear Age - refers to the states as unitary rational actors of the international system which seek survival. It also refers to a situation that a particular proliferator is able to handle nuclear weapons because of the fear of Mutual Assured Destruction (MAD), a model derived from rational choice theory. Under such foreboding circumstances, no rational state actor could gain an advantage in starting a nuclear war - thus assuring mutual deterrence, a decision made by a rational proliferator. Political scientists assume that states' action - like individuals - is fundamentally 'rational' in character and calculate the likely costs and benefits of any action before deciding what to do.

Non-Unitary Actor: Much of international relations theories are based on the assumption that the State is a unitary actor. Theories of nuclear deterrence also rely on the assumption that nuclear competitors are "unitary rational actors." Bruce Bueno de Mesquita and William H. Riker concisely express this assumption: "national decisions of such magnitude as acquiring a nuclear capability or using such a capability in a war are made by a single, dominant leader who is an expected utility maximizer."⁷ Therefore, if a state is not functioning as a unitary actor (non-unitary actor), or is not perceived to be by those who seek to deter it, the implications for deterrence stability are profound. To the extent that analysts and policy-makers have worried in recent years about instances when the unitary rational actor model might not obtain, they have tended to focus on the problem of irrationality.

Negotiated Political Order: The Iranian system is polycentric, creating a negotiated political order. It features an array of state and parastatal power elites engaged in endless

⁷ Bruce Bueno de Mesquita and William H. Riker, "An Assessment of the Merits of Selective Nuclear Proliferation," *Journal of Conflict Resolution*, Vol. 26, No. 2 (June 1982), p. 292.

struggles for turf and influence, in addition to clashes between the clerical establishment and the legislative body. With few exceptions, analysts use the unitary actor construct which is uniquely unsuitable to the understanding of such a fragmented and opaque system. Adding to the confusion, each of these elites has fragmented internally along ideological and/or personal lines. The chaotic, fluid and opaque nature of Iranian politics stems from the fact that power is negotiated among the various groups, sometimes in highly dramatic ways, but more often through subtle, barely detectable symbolic exchanges. This negotiated political order poses a particular problem for Western observers who tend to consider a country to be a fairly unitary and hierarchal system with well-established lines of authority. At the foreign policy level, the habit of viewing Iran as a unitary actor has impeded the understanding of the internal dynamics of its negotiated political order.

CHAPTER 3: THE ISLAMIC REVOLUTION AND THE NUCLEAR PROGRAM

This chapter analyzes the path that led the Islamic Republic to adopt proliferation and lay the foundation for a system that evaded the high cost of punitive Non Proliferation Treaty (NPT) sanctions. Surprising many in his own movement, Ayatollah Ruhollah Khomeini, decreed that the new regime would dedicate itself to spread the revolution in the region and beyond. This seemingly idealistic mandate created a security circumstance that, in terms of the neorealist theory, made the subsequent decision to proliferate a rational choice.

Section 3.1 examines the complex ways in which Ayatollah Khomeini's revolutionary edict inflicted security and diplomatic costs on the regime and the country. Section 3.2 discusses the ways in which other leaders utilized the negotiated political order to pursue the neorealist goal of nuclear program.

3.1 The Foreign Policy of the Islamic Republic of Iran: The High Cost of Exporting the Revolution

Decades before Ayatollah Khomeini came to power in February 1979, he nurtured an ambitious vision of a pan-Islamic world empire. As early as 1944 Khomeini discussed a plan to change the global political map in his treatise *Kashf-ol-Asrar*. He stated that "it is the Islam's role to dismantle the borders in the world and establish a global government by gathering all mankind under a same flag and Islamic sharia" (Khomeini, 1992, pp. 470-480).

Much as Khomeini's vision seemed novel at the time, it was well within the traditional understanding of Islam as a savior of mankind. What was unusual, however, was his commitment to change the international order by exporting the pan-Islamic

revolutions to other countries. The 1975 book *Velayat-e Faqih*, considered to be Khomeini's political manifesto, offered a blueprint: "it is the duty of every single Muslim in his or her own country to assist Islamic-political revolutions to be successful" (Khomeini, 1993, p. 42; Khomeini, 2008, p. 63). Once triggered, the chain of Islamic revolutions was expected to undermine the international political order grounded in global injustice, a system that allowed Western powers to oppress Muslims, along with other developing populations (Karsh, 2002).

Khomeini postulated that the new Islamic international order would replace the nation-state, a Western invention, with the broader entity of the Ummah (the universal Muslim community). In his words, "we will export our revolution to the entire world ... until the call 'there is no God but Allah and Muhammad is the messenger of Allah' are heard all over the world." Since the Islamic republic of Iran was the only state where the 'Government of God' had been established, its holy mission was to serve as the core of the Ummah while taking the lead in spreading globally Islam's holy message (Karsh, 2002). Khomeini further elaborated that "in order to achieve unity and freedom of Muslim nations we must overthrow tyrannical and puppet regimes and then establish an Islamic government which is based on justice and services to the people" (Khomeini, 1993, p. 40; Khomeini, 2008).

This "Trotskyite" mandate was taken seriously enough to make it into the preamble of the new Constitution of the Islamic Republic promulgated on 3rd December 1979. The document declared that "the way of Islamic ruling" was based on the Islamic content of Iran's revolution. Stating that the constitution provided for the continuation of the revolution domestically and abroad. The document was seen as paving the way for creating the global Ummah (Jomhori-e-Eslami, 21 April 1980). Specifically, articles 11 and 154 of the document declared that it is Iran's duty to support the *mustazafeen*, the oppressed, in

the Islamic world and export of the Islamic revolution (*sodur-e eneqelab-e esliami*) (IRI, 30 March 1979).

Soon after, Khomeini, empowered by the title of Supreme Leader, reaffirmed the revolutionary intention of the new regime by declaring the export of the revolution to the Muslim world to be a sacred duty of Iran. As he put it, “we [the revolutionaries] must resist and oppose the United States and Soviet Union because they seriously intend to destroy oppressed nations,” adding that “and show them that we can treat them with a powerful stance” (Doa'ei, 11 February 1980 & 21 May 1980; Hiro, 1989, pp. 32 & 108).

While some of the top revolutionary leaders were most likely influenced by Ayatollah Khomeini, others received their inspiration from Ali Shariati, an Iranian social thinker and political activist considered as one of the most prominent Iranian intellectuals of the 20th century and the 'ideologue of Iran's Islamic Revolution.' Shariati was best known for his so-called “Third Way,” a philosophical quest to merge the best of Islamic and Western traditions. When living in exile in Paris, he became familiar with the revolutionary exploits of the Vietcong and came to believe that the Islamists could replicate its success. But Shariati concluded the Shiite ideal of martyrdom could provide a real advantage, a theme he expanded upon in numerous speeches. Subsequently published in two volumes, *Shahadat* (Martyrdom) and *Pas az Shahadat* (After Martyrdom), the ideas created considerable interest in holy death and martyrdom (Shariati, 1973).

Shariati died in 1977, but some of the top revolutionary clergies adopted his vision. For example, Ayatollah Morteza Motahari, one of the theoreticians of the Islamic revolution and a close ally of Khomeini, warned that limiting the revolution to the Iranian borders, would slow it down and ultimately destroy it (Motahari, 1989). Ayatollah Hussein-Ali Montazeri, a high ranking clergyman with his own following in the city of Qom, was another dedicated revolutionary exporter. Montazeri's son, Mohammad who

acquired an appreciation for military action while training in Lebanon with the Palestinian Liberation Organization (PLO) in the late 70s, was among the first to call for semi-military organization to disseminate the revolution (Seliktar, 2012). The founders of the Islamic Revolutionary Guard Corps (IRGC) or *Sepāh-e Pāsdārān-e Enqelāb-e Eslāmi*, commonly referred to as the Revolutionary Guards, a revolutionary militia created in 1979, seemed to have embraced the idea of revolutionary export.

Ayatollah Mohammed Beheshti, Hojjatoleslam Akbar Hashemi Rafsanjani, Ayatollah Hussein Ali Montazeri, Mohsen Rafighdoost, Mustafā Chamran, Mansoor Kochak Mohseni and Davood Karimi were all in favor. Some, including Montazeri, Chamran, the first Minister of Defense in the Islamic Republic, and Rafighdoost, the first commander of the Guards took the lead. Chamran, who organized the Islamic revolutionary movement in the Middle East, trained Islamists from Algeria, Egypt, Syria, and the Amal fighters in Lebanon. He served as a personal military aide to Khomeini and, in 1980, was elected to the Majlis where he became the reigning Trotskyite. After his death in 1981, Montazeri and his son Mohammad carried on the revolutionary export legacy (Seliktar, 2012).

Two small groups evolved to implement this mandate. In the spring of 1979, Mohammed Montazeri and Seyed Mahdi Hashemi – the brother of Hadi, Montazeri’s son-in-law - created the Revolutionary Organization of the Islamic Republic of Iran’s People or *Sazman-e Anghelabi-e Todehay-e Jomhory-e Islami* (SATJA) and the Organization of Liberation Movements of the Islamic World. After the death of Mohammad Montazeri in a bomb explosion in the offices of the Islamic Republic Party on 27 June 1981, the SATJA joined the Islamic World Liberation Movement under the leadership of Mahdi Hashemi. An initially modest outreach to a number of Arab terror groups, the aim of both organizations was to create an Islamic republic based on the *faqih*

principle in neighboring countries such as Lebanon, the Gulf Emirates and even Saudi Arabia (Rajaneews, 20 April 2011; Rahetudeh, 25 August 2008).⁸

Lebanon was a logical starting place for those eager to expand Islamism and export the revolution. Many leaders of the revolution or their children had trained in Lebanon during the late 1970s. Starting with Amal, Iranian volunteers branched out to a number of independent terror groups that would eventually form Hezbollah. Iran's military experts in Lebanon began to develop suicide bombing tactics as postulated by Shariati, then a novel form of Islamist warfare first practiced by volunteers from a Revolutionary Guards unit commanded by Mohsen Rezaei. In 1982 Ayatollah Khomeini issued a fatwa legitimizing suicide bombings and bestowing martyrdom on the volunteers. This theological innovation turned suicide missions into a mainstream tactic in the service of the Islamic revolution (Rajaneews, 20 April 2011; Rahetudeh, 25 August 2008; Khomeini, 1980).⁹

Ayatollah Fazlollah Mahallati pioneered the "suicide squads" while training top Revolutionary Guard commanders in the Manzariyeh camp near Tehran in the early 1980s. Brigadier General Mohammad Ali Jafari, a fast rising star in the Guards, who would go on to become the head of the Strategic Center at the War University of the Revolutionary Guards, argued that turning civilians into targets of suicide bombing was an effective technique against the West, which placed a high value on human life (Seliktar, 2012).

Other groups came to adopt suicide bombing as well. The Islamic Revolution Council's Gulf and Arabian Peninsula Office run by Ayatollah Mohammad-Taqi Modarresi formulated plans for fomenting revolutions in Saudi Arabia and Kuwait. Modarresi's brother, Hadi, the director of the Islamic Front for the Liberation of Bahrain

⁸ Interview with IRGC's Member, 9-12 August, 2012. His name is confidential as for security reasons.

⁹ Ibid.

(IFLB), targeted Bahrain. Mohammad Mousavi-Khoeiniha, the spiritual leader of Students Following the Line of Imam (*Daneshjoyan-e Peyrove Khate Imam*), the leader of the attackers on U.S. embassy in Teheran in November 1979, was in charge of destabilizing the government of Saudi Arabia (Rajanews, 20 April 2011; Rahetudeh, 25 August 2008; Seliktar, 2012).

Khomeini and his revolutionary exporters saw abundant opportunities in the region. Used in conjunction with other tactics, the violence destabilized neighboring countries. Between November 1979 and February 1980 widespread riots erupted in the Shiite town of Hasa, an oil-rich Saudi province that left dozens of casualties. At the same time, similar turmoil occurred in Bahrain, while Kuwait became the target of constant terrorist attacks and revolutionary campaigns. Suicide bombing was also used for exporting the revolution to the Gulf States (Karsh, 2002).

In December 1981, the Bahrain security forces seized a group linked to Modarresi which intended to foment a coup in the government. Two years later, in 1983, the security forces of Qatar discovered a plot to assassinate the president of the Gulf Cooperation Council (GCC). That same year, Raad Mefel Ajeel, directed by Iranian authorities, intended to carry out a suicide bombing at the U.S. embassy in Kuwait. The plot failed and the Kuwaiti security forces captured 17 Hezbollah members and sentenced seven to death, among them Hassan Mousavi and Mustafa Bader a-Din, brother-in-law of Emad Mughniyeh, the mastermind of the Hezbollah operation in Lebanon (Seliktar, 2012).

By embarking on a high-profile revolutionary export venture, Khomeini's government challenged the legitimacy of neighboring countries. It was hardly helpful that some high-ranking government officials took to claiming that states in the region were not entirely sovereign and should not be allowed to pursue an independent foreign policy, at least not with regard to the United States and its allies. Needless to say, the upheaval

alarmed not only the rulers of the countries targeted but also their ally, the United States (Karsh, 2002).

After overcoming the initial shock of losing the Shah, the Carter administration formulated the Carter Doctrine pledging defense of the Gulf region and beyond. When Ronald Reagan came to power in 1981, he made it abundantly clear that Washington would not tolerate revolutionary adventurism against Saudi Arabia and other American allies in the Gulf. To increase the 'cost of doing business' for the regime, the White House enacted a series of sanctions on Iran starting in 1979. A ban on oil imports was imposed, followed by a general embargo of trade and travel to Iran and 12 billion dollars of Iranian assets in American banks were frozen (Stork, September/October 1980; Donovan, 2011).

The prospect of ruffling Washington's feathers – and, by extension, creating a negative reaction in the international community – generated a fierce debate within the Iranian regime. Prime Minister Mahdi Bazargan, the head of the interim coalition government, and his Foreign Minister Dr. Ibrahim Yazdi took a dim view of such foreign adventurism, tried to water down the revolution export mandate imposed by Khomeini. They argued that Iran should build a prosperous and sophisticated society, a model that others would find attractive enough to follow on their own volition. Beholden to traditional norms of international behavior, the two leaders of the interim government stressed that the export of revolution was against the principles of 'non-intervention in the domestic affairs' of other countries. In one of his speeches Ibrahim Yazdi went so far as to contravene Ayatollah Khomeini by stating that "we are not going to export our revolution" (Yazdani, 16 February 2009). What worried Bazargan and Yazdi was the very real prospect that the rhetoric and praxis of revolutionary export would enmesh Iran in a conflict with one or more of its neighbors (Yazdani, 16 February 2009).

At the other end of the political spectrum were those who went beyond the letter of the law to call for an immediate and permanent revolution. Labelled as "Trotskyites" after

Leon Trotsky, who pushed for expanding the Bolshevik revolution to other countries, they formed a small but influential group. In addition to Montazeri and his relatives mentioned above, it included the high profile Ayatollah Mahmood Taleghani and his sons, Ali Akbar Mohtashemi-Pur, Hojjatoleslam Mohammad Mousavi-Khoeiniha and the brothers Hassan and Mahdi Karroubi. Khomeini's son Ahmed, who was close to Mohtashemi-Pur, Mousavi-Khoeiniha and Chamran, was also known to belong to the revolutionary exporters (Buchta, 2005).

Akbar Hashemi Rafsanjani and Ali Akbar Velayati, who replaced Yazdi in the Foreign Office, were positioned themselves in the middle. Though firmly committed to the revolutionary ideals, they felt that a more covert strategy offering Tehran plausible deniability was in order. They were particularly unhappy with the freelancing Mahdi Hashemi, by then at the head of the Office of the Liberation Movements and the independent power base he had built up in. In 1984, in what was an astute bureaucratic maneuver, the Office was disbanded and its functions transferred to the Foreign Ministry and MOIS. Hashemi moved to Qom, where, funded by Ayatollah Montazeri, he set up the short lived Office for Global Revolution. But, in a move to consolidate the revolutionary export project, the Revolutionary Guards formed the elite Quds Force, a foreign operations unit headed by Ahmed Vahidi. Its General Staff for the Export of Revolution was divided into geographical areas covering the Middle East, Muslim Africa, and Europe (Seliktar, 2012).

Iraq, with a large Shiite majority under the brutal dictatorship of Saddam Hussein, was a tempting revolutionary target. As early as June 1979 Tehran began openly encouraging the Iraqi Shiites to rise up and overthrow the secular Ba'ath regime, which had ruled Baghdad since 1968. Ayatollah Khomeini called on the population to "wake up and overthrow this corrupt regime in your Islamic country before it's too late. It is Haram

for you [army] to stay and follow this blasted [Saddam] man...you have to rise against him” (Kayhan Newspaper, 19 April 1980).

A few months later the regime escalated its campaign by restarting its support for the Iraqi Kurds (which had been halted by the Shah in 1975), providing support to underground Iraqi Shiite movements that conducted terrorist attacks against top Iraqi officials. These provocations reached a peak on 1 April 1980 when the Iraqi deputy Prime Minister, Tariq Aziz narrowly escaped an assassination attempt while making a public speech in Baghdad. Two weeks later, Iraq’s Minister of Information, Latif Nusseif al-Jasim evaded a similar attempt. But others were less lucky; in April 1980 alone, at least 20 Iraqi officials were assassinated in bomb explosions by the Shiite resistance movement organized by Iran (Karsh, 2002).

To the Iraqi leader Saddam Hussein, this threat seemed particularly ominous. For all his military power and ambitious designs, the Shah was viewed in Baghdad as an unpleasant but rational. But the Ayatollah and his frenzied followers were considered to be unpredictable and menacing and unlike anything that the Iraqi leaders had encountered before. At the same time the Iraqi dictator was eager to exploit the growing post-revolutionary chaos in Iran to achieve some territorial gains of his own. Assured by his intelligence service that the Arabs of Khuzestan were ready to secede and hoping to rally loyalist forces for a counterrevolutionary offensive, Saddam took a series of escalatory steps to repel Iran’s Islamic ‘fundamentalist crusade.’ On 20 September 1980, the Iraqi army invaded Khuzestan along a broad swath of the common border (Karsh, 2002; Pelletiere, Johnson, & Douglas, 1991).

The history of the bloody eight year war between Iran and Iraq is well known. The second longest encounter of the twenty-century, has been frequently compared to World War I because of its reliance on trench warfare, human wave attacks, indiscriminate assaults on civilian population, and, most importantly, the use of chemical weapons. Iraq

used the two latter tactics to break a stalemate that had developed after the first two years of the war (Dorraj, 2006; Seliktar, 2012). Though Iraq was a signatory of the 1925 Geneva Protocol outlawing chemical weapons, Baghdad deployed both chemical and biological weapons against Iranian troops as early as September 1980 and used them against civilians for the first time in May 1982. During the war there were 3500 chemical weapons attacks out of which 30 were directed against civilians. The cost of war to the Iranians was enormous; some 222,085 dead, 320,000 wounded and 2 million left homeless by SCUD missile attacks on cities (Piri, 18 September 2011; Asriran, 17 February 2014; IRNA, 14 May 2013; Chubin & Green, 1998).

The war left a deep psychological scar on the Iranian collective psyche, imbuing it with a deep sense of insecurity and vulnerability. The legacy of the chemical warfare has been ongoing; in March 1998, an official Iranian report stated that 100,000 people including 5,000 women were affected by chemical weapons and 8,000 of them required ongoing medical treatment. Many of this 100,000, have died and current report shows that around 60,000 of them are still alive but under serious medical treatment (Dorraj, 2006; Eisenstadt, 2011; Asriran, 17 February 2014; IRNA, 14 May 2013).

Both the leaders of the regular armed forces, the *Artesh*, and the Revolutionary Guards, who fought in some of the most ferocious battles of the war, understood that Iran had little in terms of conventional equipment to deter Iraq from launching missile attacks. The embargo on weapon sales to Iran pushed by Washington after the seizure of its embassy in Tehran in November 1979 made military purchases difficult and made such plans unachievable (Church, 17 November 1986). The ballistic capability needed to deter Iraq from attacking the cities was beyond anything that Tehran could hope. The purchase of standard weapons and munitions on the black market involved extremely complex arrangements. The situation became extremely dire when, at the request of Baghdad, the

United States launched Operation Staunch to prevent all weapons transfers to Iran in 1983 (Parsi, 2007).

Congressional inquiry into the 1986 Iran-Contra scandal provided but a glimpse of the machinations involved in some of the weapons transaction. President Ronald Reagan desperate bid to free Americans kidnapped by the Hezbollah in Lebanon led him to offer weapons to the equally desperate regime in return (Parsi, 2007).

Other than this rare occasion of American-Iranian collaboration, Tehran was fully aware of the significant role the United States played in propping up the flagging Iraqi war effort. In addition to Operation Staunch, Washington provided intelligence on the movement of Iranian troops which, according to Iran, was used in gas attacks (Borger, 31 December 2002; Harris & Aid, 26 August 2013). Lined up behind the United States were France, Great Britain, Germany, Saudi Arabia, Egypt, Kuwait and Jordan. While not enthusiastic about the Iraqi dictator, they hoped that Iran's Islamic regime would collapse. Some, inspired by an extreme realpolitik assumptions, hoped that Tehran and Baghdad would engage in a mutual 'controlled' degradation of power (Karsh, 2002).

If the weapons embargo was standard realpolitik practice, the reaction of the United States and the international community to Iraqi use of chemical weapons was, in the eyes of the Iranian policy makers, bordering on the sinister. American and international public opinion took little notice of Baghdad's use of chemical warfare, the first such instance since World War I (Borger, 31 December 2002; Harris & Aid, 26 August 2013). The tepid response carried into official policy; Washington had little to say about the attack and did not sever its newly established diplomatic relations with Baghdad. The United Nations Security Council, a forum responsible for monitoring violations of the Geneva Conventions, was also conspicuous in its silence (Jones, 1998; Sherrill, 2012).

Of course, there were some good reasons for the reluctance to confront Hussein's chemical barrages. By violating diplomatic and international conventions, Tehran engineered its own status as an international pariah and, arguably, could expect little international protest when it was on the receiving end of the abuse (Korb, 2010). However, the regime also noted that the international community did little to condemn Saddam Hussein for his well-documented and widely publicized chemical attack on the Kurdish town of Halabja on 16 March 1988 (Jones, 1998). Viewed from Tehran, the international order embodied in the Geneva Conventions was nothing but perverse. The UN limited the ability of its member-states to defend themselves through compliance with arms control conventions, but did not react when a member was subjected to attacks using weapons that it had banned. As one analyst put it, "Iraq initiated the use of chemical warfare and the international community did nothing" (Jones, 1998, p. 3).

There has been a virtual consensus among experts that the Iran-Iraq war played a profound role in shaping the strategic thinking of the regime. At its core was the view that Iran's existence in an unstable, and dangerous environment was precarious and that it had suffered horribly at the hands of others. In one sense the war with Iraq was a classic case of a structurally-determined rivalry between two players vying for regional domination, something straight out of the playbook of realists and neorealists (Quillen, 2002; Dueck & Takeyh, 2007; Mayer, 2004; Melman & Raviv, 2012; Dorraj, 2006; Chubin & Green, 1998; Taremi, 2005; Kemp, 2001; Jones, 1998; Khan, 2010). But the rulers in Teheran seemed to have ignored the fact that the instability and the war were clearly exacerbated by Iran's drive to export the revolution, a goal that the regime was not willing to forgo in the face of extreme hardship.

Indeed, by refusing to end the war, even after the Iraqi military withdrew from the bulk of Iranian territory, Khomeini sent a powerful signal that ideological

considerations trumped standard cost-benefit realpolitik. Factoring the ideological imperative into Iran's strategic equation required a very strong deterrent. As one analyst put it, "a hostile Saddam, who waged a merciless eight year war against Iran in which he deployed chemical weapons against Iranian troops, gave Iran a protracted and brutal lesson in the strategic advantages conferred by weapons of mass destruction (WMD)" (Takeyh, 2003, p. 22).

Opting for WMD, rather than conventional weapons, was linked to yet another lesson drawn from the war. A fully mobilized Iraq could expect 2 million men under arms—some 75 percent of all Iraqi men between ages 18 and 34. Equipped with the latest Soviet and French technology, it was the fourth-largest standing army in the world (Globalsecurity, May 2013). The Islamic Republic had neither the time nor the economic means to rebuild the crumbling *Artesh* or turn the Revolutionary Guards into a mass force. Taking a WMD shortcut was a rational low-cost measure to safeguard the existential imperative of the regime and, equally to the point, provide a protective umbrella to its revolutionary mission. In other words, a WMD capable Iran could risk destabilizing neighboring countries without incurring the usual cost associated with foreign policy adventurism.¹⁰

The war offered two more lessons. First, the weapons embargo impressed upon the regime that in a crunch Iran could only count on its own resources for self-defense. A stringent quest of 'self-sufficiency' in acquiring both conventional and WMD capability was the response. Many analysts found this single-minded exercise in self-production of military and related civilian technology to be the most distinctive characteristic of Iranian strategic thinking (Dueck & Takeyh, 2007; Chubin & Litwak, 2003; Chubin, 2001; Ehteshami, 2010). Not incidentally, this resolve went hand-in-hand with the considerable pride that the regime had in Iranian science which,

¹⁰ See for instance Quillen. Iranian Nuclear Weapons Policy: Past, Present and Possible Future pp. 19-20.

according to Islamic sources, was said to rival that of the West. To those familiar with the writings of Shariati, this assertion more than a passing echo of the call for a Third Way, described as the merger of the best of Islamic and Western scientific traditions.

Second, the perceived hypocrisy of the international community in handling Saddam Hussein's breach of the Geneva Protocol on WMD reinforced Iran's leadership's deep mistrust and loathing of the international system. To recall, the Supreme Leader had denounced the global order as a proxy of Western imperialism. The war experience convinced many Iranians that international guarantees were only useful to actors who were clients of the major powers. It was because of American patronage that Iraq, a signatory to the Geneva Protocol, could engage in chemical warfare and be rewarded with support for its war effort (Jones, 1998).

Though faced with a virtual economic collapse triggered by post-revolutionary chaos and the huge outlays for the ongoing war, key leaders in the regime were eager to implement the lessons of war. As a first step, in 1984, with the blessing of Ayatollah Khomeini, the government decided to develop a domestic industry capable of building ballistic missiles. There was a consensus on the need for a credible delivery system. With the blessing of Ayatollah Khomeini, Hashemi Rafsanjani, the Speaker of the Majlis, and President Ali Khamenei, and Revolutionary Guards commanders took the lead. By securing the ballistic assignment, the Guards made an important step toward controlling special ventures of the Islamic Republic. The Guards were put in charge of manufacturing the missiles, setting a precedence for all future special projects (Taremi, 2005; Kemp, 2001; Mayer, 2004; Cordesman & Loi, 2011; Russell, 2006; Fiore, 2011; Kibaroglu, 2006).

But the ballistics project could provide only a modest sense of security for a nation badly shaken by the ongoing, brutal war with Iraq. Even among ordinary people there was a clear understanding that only weapons of mass destruction, notably nuclear

weapons would have offered an iron-clad guarantee against the likes of Saddam Hussein. For the Islamist elite the benefits of nuclear weapons, as noted earlier, extended well beyond existential needs to cover their revolutionary export mission. Unlike missiles, however, a nuclear capability posed a question of comparability with the Quran's teaching on waging war. How to interpret an ancient text to fit modern war technology turned into a theological challenge that plunged the leaders into a device debate.

3.2 Building a Respectable Façade: Completing the Shah's Peaceful Nuclear Program

Under the Shah, Iran took steps to develop nuclear energy. In what promised to be its flagship project, in 1974 the German company Siemens/KWU was contracted to build a nuclear reactor in Bushehr. Iran also signed contracts with the French company Framatome to build two 950 MW (e) pressurized water reactors and the site preparation work began in 1974 Darkhovin on the Karoon River near Ahvaz, on the southern tip of Iran's border. In 1975 Iran purchased a 10 percent share in Eurodif, a joint venture uranium enrichment company of France, Belgium, Spain and Italy. The contract with Eurodif envisaged a supply of almost 270 tons of 3 percent enriched uranium (LEU) and Iran's share in Eurodif Enrichment Company in Tricastin in France would have provided Tehran with enough quantities of LEU for its nuclear program until mid-1990s. Equally important, the agreements provided for a large number of Iranian nuclear scientists, technicians, and students to travel to France to advance their knowledge and skills in nuclear physics, nuclear engineering, and related fields (Kibaroglu, 2006).

Along with much of Iranian infrastructure, the two Bushehr reactors, one of which was 90 percent completed, suffered considerable damage in repeated Iraqi bombings. The

provisional government of Prime Minister Bazargan felt that the economy faced too many pressures to allow for a costly and seemingly purposeless nuclear program. He halted the construction of the Bushehr plant in spite of the DM 6 billion that Iran had already paid to the German contractors. Additionally, all agreements for the building of other power plants were cancelled and the Atomic Energy Organization of Iran (AEOI) drastically cut back its activities (Naji, 2008).

Iran cancelled its contract with the Framatome and Eurodif consortiums, demanding full repayment of the \$1 billion loan it provided for the construction of the Tricastin plant. The government also stopped payments for future enrichment services (Kessler, 1987). Bazargan's reluctance was more than matched by Ayatollah Khomeini and likeminded clerics who argued that the nuclear power plants amounted to the continuation of technological subjugations to the West, a dependence they had castigated the Shah for. They further noted that nuclear power plants were a waste of money for a country that was blessed with a sea of natural oil and gas.

Other core leaders, however, held diametrically opposed views. They wanted to restart the Bushier facility in order to create an infrastructure for an illicit weapons project. Ayatollah Mohammad Beheshti, second in command to Khomeini, was a keen advocate of weaponization. Beheshti, who lived in exile in West Germany prior to the revolution, was knowledgeable about nuclear issues. He was reportedly a believer in Mahmood's Islamic bomb theory and often stated that it was incumbent upon all Muslim states to acquire nuclear weapons to counter the Israeli and American arsenals. Once in power, Beheshti was eager to restart the shuttered civilian project with a possible view of creating nuclear weapons. Rafsanjani, whose relations with Beheshti were generally competitive, shared a similar outlook on the importance of nuclear deterrence (Hedges, 5 January 1995; Naji, 2008; Spector & Smith, 1990; Seliktar, 2012).

Fereydoon Fesharaki, a nuclear expert under the Shah who stayed in Tehran after the revolution, provided a detailed account of an encounter with Beheshti in May 1979 shortly before his death in a bomb explosion in 1981. Fearing arrest and execution, a fate that had befallen many other officials of the royal regime, Fesharaki was surprised when Beheshti urged him to join an ultra-secret project to build an Iranian nuclear bomb. During the meeting Beheshti allegedly stated that: "It is your duty to build this bomb for the Islamic Republic," adding that "our civilization is in danger and we have to do it" (Spector & Smith, 1990, p. 175; Naji, 2008, p. 117). Fesharaki explained that the program would be very costly, prompting Beheshti to reply that "the costs are tolerable and we must start. It is our duty to start" (Segal, 12 April 1987). Fesharaki convinced Beheshti that in order to assemble a nuclear-weapons team he would need to find six of the top scientists who had fled Iran. Fesharaki volunteered to travel abroad to persuade them to return home, but after receiving an exit visa, he defected to the United States where he would head the energy program at the East-West Center in Honolulu (Segal, 12 April 1987; Tarzi, September 2004).

Under the capable leadership of Rafsanjani, who took over the unofficial nuclear portfolio, the program survived both the defection of Fesharaki and the death of Beheshti. Arguably, Rafsanjani benefited from the 1981 resignation of Bazargan who, together with his Foreign Minister Ibrahim Yazdi, stocked Khomeini's opposition to reviving the Shah's program (Segal, 12 April 1987; Naji, 2008).

Even though Ayatollah Khomeini was still opposed to all things nuclear and convinced that Iran had no need for nuclear energy, Rafsanjani and Mousavi, presiding over a significant domain of the negotiated political order, were powerful enough to keep the idea alive (Takeyh, 2009). With the war going from bad to worse, more figures in regime came out in favor of weapons of mass destruction. The most committed –

Rafsanjani, Ali Khamenei, Mousavi and Hassan Rouhani - formed an unofficial nuclear sanctum.

It is not entirely clear to what extent Ayatollah Khomeini's fatwa stood in the way of fabricating any WMD. According to the recollection of Mohsen Rafighdoost, minister of the Revolutionary Guard, the Iraqis, who first employed chemical weapons in 1983, increased their use dramatically in February and March of 1984 during an Iranian offensive. After failing to get assistance from several governments, the Defense Ministry determined to develop their own chemical capability. But as Rafighdoost recounted, he was rebuffed by Khomeini, who insisted that chemical warfare, along with biological and nuclear one, was against Quranic principles. Still, acting on his own, Rafighdoost authorized the development of chemical weapons after the Iraqi air force attacked the city of Sardasht with chemical weapons on 28 June 1987. The Minister insisted, however, that even the horrific attack on civilians Khomeini was not impressed, telling him that chemical warfare was *haram* (forbidden) (Porter, 16 October 2014; Mehrnews, 25 January 2014).

Rafighdoost account, given to the journalist and pro-Iranian activist Garret Potter in 2014, was contradicted by a number of key regime players. Hassan Rouhani, at the time a Majlis member, recalled in an 2008 interview how the regime, desperate to counter the Iraqi offensive, decided to go ahead with chemical weapons and even secured a grudging permission from Khomeini in 1985. Rouhani noted that "in the face of Saddam's air strikes on our cities by chemical weapons, we realized that we should retaliate in kind. Mr. Rafsanjani and I shared it with the Imam [Ayatollah Khomeini] and he eventually allowed similar attacks to be carried out" (Rouhani, 25 September 2008).

Driving the pressure to launch a WMD project was from the Revolutionary Guards, a force that the Supreme Leader could not ignore. That the Guards were fully

committed to a nuclear weapon was made clear from a letter that Guards commander Mohsen Rezaei, had send to Ayatollah Khomeini on 23 June 1988. Khomeini brought up the Guards' report in his own missive to political and military leaders penned on 16 July 1988.

Released by Rafsanjani in September 2006, the letter mentioned "a shocking" report that the commander of the Revolutionary Guard Mohsen Rezaei had sent him. Rezaei expressed utter despair at the course of the war and was unequivocal in his conclusions: "If we were to come out of the war with our head held high, we would need many sophisticated weapons, including nuclear ones" (Fars-News-Agency, 29 September 2006). After the letter appeared on an Islamic Republic News Agency (IRNA) site, apparently the Supreme National Security Council (SNSC) ordered the word 'nuclear' to be removed from the text.

If there was any doubt about the power of the Guards, their June letter should have dispelled it. The Supreme Leader, who for the longest time adamantly refused to consider suing for a cease fire, was forced to change his mind. On 18 July, Iran accepted UNSC resolution 585 that ended the war with Iraq. Defeated and bitter, Khomeini famously compared the decision to drinking from a chalice of poison (Mayer, 2004; Chubin, 18 October 2010; Najj, 2008).

While the nuclear program was still a top secret, the tenor of the discourse changed. On 7 October 1988, Rafsanjani, who added the job of the chief of all the military forces to his Majlis speakership, told a group of Revolutionary Guards officers that "with regard to chemical, radiological, and bacteriological weapons, it was made very clear that having these weapons are very vital at the time of war" (Solingen, 2009, pp. 165-166).

Two weeks later, on 19 October 1988, in a speech in the Majlis Rafsanjani talked about the defensive and offensive use of chemical, bacteriological and radiological weapons. Significantly, he stressed that Iran could not rely on the world for protection

because the “the war with Iraq taught us that international laws are just scraps of paper” (*IRNA*, 19 October 1988; Spector, 1993, p. 143; Bowen & Kidd, 2004, p. 264; Eisenstadt, April 1994, p. 18).

Khomeini died in 1989 and was replaced by Ali Khamenei who, as noted, part of the nuclear sanctum and an energetic booster of the illicit weapons in his own right. With the blessing of the new Supreme Leader, Rafsanjani was free to launch what would become the most ambitious undertaking of the Islamist regime.

3.3 Conclusion

This chapter offered a detailed analysis of the path to nuclear proliferation in Tehran. Admittedly, in strict realist and neorealist terms, revolutionary export should be considered an idealist position, its consequences - the war with Iraq and a collision with the United States and its allies - created an unprecedented security predicament. Iran’s precarious security stand galvanized the realpolitik leaders into creating the ‘nuclear sanctum.’ Convinced that Iran was located in a ‘dangerous neighborhood’ and could not count on international protection, these leaders overruled Ayatollah Khamenei’s idealist doctrine that nuclear weapons are not compatible with the tenets of Islam.

In yet another indication of a rational choice calculus, the same leaders acted to lower the potentially high cost of defying the NPT. By setting up a system of hiding the illicit program within plain site, the regime avoided the sanctions designed to stop would-be proliferators.

CHAPTER 4: RAFSANJANI'S NUCLEAR TAKE OFF

The goal of this chapter is to discuss the sophisticated structure that Ayatollah Akbar Hashemi Rafsanjani, the architect of the Iran's nuclear program, constructed to launch Iran's nuclear program. After Iran failed to secure assistance of foreign countries to develop its nuclear program, Iran decided on the alternative plan of indigenous production, a monumental undertaking considering the devastated economy and the scarcity of technological know-how. Iran has invested substantial human and financial resources in its nuclear program. In addition to relying on foreign technology, material, and equipment, Iran has developed an indigenous nuclear expertise.

Section 4.1 discusses how Iran used the legal Bushehr nuclear site and research centers at various local universities to enhance its nuclear program. Section 4.2 analyzes how Rafsanjani built Iran's own scientific cadre. Section 4.3 discusses the initial, clandestine help of elements of the Pakistani military to help Iran overcome the difficulties it faced in procuring nuclear technology. Section 4.4 details the extensive nuclear network of A. Q. Khan, known as Khan's "nuclear bazaar" that benefited Iran. Section 4.5 investigates the Iran's official connection with Pakistani officials who helped in purchasing dual use materials, among others. Section 4.6 offers analytic account of how the Iranian regime managed to make substantial headway toward achieving nuclear capability in spite of considerable legal and economic problems.

4.1 Hiding In Plain Sight: The Legitimate Infrastructure of a Secret Program

By the mid- 1980s, the internal political developments in Iran became auspicious for a serious push toward the nuclear program. As noted in the preceding chapter, the leaders who resisted reviving the Shah's program, had either died, resigned or had been eliminated. The inner sanctum within the regime were virtually unanimous in supporting

the development of nuclear weapons program.

To recall, they all agreed that such weapons would have protected Iran from the Iraqi aggression. Equally important, a defensive nuclear umbrella was considered ideal for spreading the revolution abroad, a notion held dear by the so-called Trotskyites in Tehran. But even their opponents were convinced that Washington would try to push for a regime change either through a regional proxy or direct action. Therefore, a nuclear capability was seen as crucial for the protection of the regime. Years later, Yahya Rahim-Safavi, the former Revolutionary Guards commander turned adviser to the Supreme Leader, made this view clear. As reported by the press at May 1998, at a closed meeting with the Guards high command, Rahim-Safavi was quoted as saying that: “can we withstand U.S. threats and protect the Islamic Republic from international Zionism with a detente policy or by signing conventions to prevent the spread of chemical and nuclear weapons?” (Fars-News-Agency, 1 May1998).

Much as the nuclear program represented the collective will of the Islamist leaders, it was Rafsanjani, first as Majlis speaker (1980-1989) and then as president (1989- 1997) who drove the project through passionate dedication and excellent diplomatic skills. In the words of one analyst “the nuclear program, especially its secret components, has been the ‘baby’ of a small group of people, among whom Hashemi Rafsanjani is the most prominent” (Chubin, 2008, p. 5). Unlike the belligerent Khomeini who mixed Islamism with anti-Americanism typified by the “Great Satan” mantra, Rafsanjani was the architect of a non-confrontational strategy of denial interspersed with negotiations by delay. The benefits of this approach were clear: the regime sought to improve relations with Washington while secretly seeking assistance to create nuclear weapons (Seliktar, 2012).

Rafsanjani was a skillful politician whose many roles in the revolutionary regime, including creating a vast network for purchasing illegal weapons during the war with Iraq, made him ideally suited for running the nuclear program. Hassan Rouhani, a close

associate of Ayatollah Khomeini and a future nuclear negotiator, credited Rafsanjani's 'resolute dedication' with laying the groundwork for the program (Rouhani, 2012).

But picking up the nuclear pieces was not easy. The 1979 revolution left Iran with a ruined economy, a paltry scientific and technological base, and a burden of fighting a devastating war. According to Fereydoun Fesharaki, the energy adviser to the Shah, in spite of Rafsanjani's strong commitment, it was difficult for Iran to concentrate on anything for any length of time that is not directly related to the war, "given the circumstances, they just don't have the manpower; they don't have the money; they don't have the contacts" (Segal, 12 April 1987).

Emblematically, the Bazargan government turned the two unfinished Bushehr reactors into a grain storage facility. The corruption, inefficiency, and mismanagement that became endemic under the new regime constituted a hindrance which, according to some observers, enveloped the Atomic Energy Organization of Iran (AEOI) under Reza Amrollahi. Most consequentially, pressure exerted by the United States were key in denying Iran reliable international partners in proliferation (Takeyh, 2009).

Still, Rafsanjani decided to assemble the elements of an independent and indigenous nuclear fuel cycle by using every possible means. Rouhani disclosed that more than any other leader, Rafsanjani was convinced that, should it be necessary, Iran could produce nuclear fuel on its own. In Rafsanjani's view, Pakistan was able to fabricate a nuclear cycle, thus, there was no reason why Iran could not duplicate this feat. With his characteristic hands-on approach, Rafsanjani ordered the available scientists to search in publicly accessible technical literature for any information regarding the mastering of the complex technology (Rouhani, 2012).

If Pakistan served as an inspiration, it also provided a model for subverting the strict guidelines of the Non Proliferation Treaty (NPT). To recall the theoretical chapter, the NPT was in many ways a 'gentlemen's club' where members were expected to honor their

commitment to pursue a peaceful nuclear program. Drafted in the 1960s, where nuclear technology was complex and difficult to obtain, the protocol could not foresee the progress made in subsequent decades, as the nuclear physicist Jeremy Bergstein noted (Bernstein, 2010).

Unlike Pakistan, Iran was a member of the NPT and could use the legitimate nuclear energy program to hide secret one. In this sense, the much-derided Shah's venture turned out to be a blessing. Acting against some pressure from hardliners to quit the NPT, Rafsanjani decided to hide the weaponization process among the network of legitimate civilian-use components.

Restoring the research faculties that had survived the revolution was a logical place to start. As part of the Atom for Peace program, Iran received a 5 MW research reactor, known as the Tehran Research Reactor (TRR) located at the Tehran Nuclear Research Center in Amir Abad, a suburb of Tehran. In 1982 the reactor was reopened and the government provided new funds to the research teams operating it, although it continued to operate the reactor under IAEA safeguards (Cordesman, 2000, p. 5). In 1984 the University of Isfahan inaugurated a Nuclear Research Institute where a future experiments were to be conducted. A year later, in 1985, the government secretly allocated US800 million dollars to create additional centers. One of the recipients was the Department of Physics at Amir Kabir Technical University - renamed Department of Physics and Nuclear Sciences in 1988. The Isfahan center was also the beneficiary of the government's nuclear largess (Wright, 2010; Watch, 2 March 2005).

Rebuilding the Bushehr plant was much harder. In the summer of 1982, in a reversal of Mehdi Bazargan's decision, Rafsanjani and the AEOI initiated confidential negotiations with the original West German builder, Siemens/Kraftwerk Union AG (KWU) to complete the water pressurized reactor. While eager to resume work, the KWU could not proceed because of a complex series of delivery and financial arrangements that

were pending in arbitration court since 1982. In February 1984, the KWU engineers visited the facility to assess war-related damage, but one month later the Iraqis bombed the plant again and inflicted heavy damage. They launched more raids in February and March of 1985, prompting the KWU to announce that it would not resume construction until the end of the war. Though the ostensible reason was the fear of sending German workers into a war zone, as noted previously, behind the scene pressure from Washington played a large part in the decision (Segal, 12 April 1987).

Still, the Germans urged an international consortium to take over the task. Spanish and Argentinean companies that operated KWU-type reactors were part of the new line-up. In November 1985, an Iranian team visited Buenos Aires to discuss Argentina's possible involvement at the construction of the reactors of Bushehr plant along with Spain. A month later the negotiations were broadened to include additional issues (MacLachlan, 1986; Kessler, 19 March 1987).

However, under the guise of officially sanctioned businesses, some Argentinean companies made secret overtures to sell illicit materials, often using third country intermediaries. According to American sources, part of a shipment of 1496 kg of uranium dioxide sent in January 1986 from Argentina to Algeria ended up in Iran. Once informed, the Argentinean Foreign Ministry vetoed the deal, but other avenues remained open (Spector, 1987).

On 5 May 1987, after almost 18 months negotiations, Argentina and the AEOI signed a \$5.5 million deal to supply Iran with a new core for its US-supplied research TRR. Argentina modified the core to operate with 20 percent enriched uranium instead of the original 93 percent American design. As part of the agreement, Argentina provided Iran with the 115.8 kg of uranium from its Pilcanyeu enrichment plant. In addition Argentina agreed to train Iran's nuclear technicians at its Jose Balaseiro Nuclear Institute to assist in the completion of the work on Bushehr reactor (Cordesman, 2000).

In 1989, Argentina, signed an \$18 million contract with Iran to build a series of unsafeguarded facilities for processing uranium ore. Argentina intended to build a milling plant and a separate facility for fabricating nuclear fuel that could be used in a 27 MW research reactor purchased from China that same year. The Argentine government announced in January 1992 that under U.S. pressure it was withdrawing from the agreement, although no mention was made of how much equipment had actually been shipped to build the plants (MacLachlan, 1986; Cordesman, 2000; Timmerman, 30 September 1995).

In early 1989 a new round of talks with the German-Spanish-Argentinean consortium were held, but disagreements, delays and occasional intervention of the IAEA persuaded the Iranians to expect little. While the Bushehr plant was strictly within the NPT guidelines, Washington understood that a civilian reactor could give the Iran access to illicit technology. Expecting more pressure from the United States on its allies, the regime resolved to do its nuclear shopping in countries that were much more resistant to American manipulation.

Thus, it came as no surprise when, on 3 July 1989, Iranian Finance Minister Mohammed Javad Iravani announced that Germany had no interest in pursuing the project and the Soviet Union and other countries might be better future partners, a foregone conclusion given the strong American pressure exerted on its Western allies (Tyler, 3 July 1989; Hibbs, 1991).

Indeed, shortly before that, on 22 June, Rafsanjani and the Soviet President Mikhail Gorbachev signed an agreement that included nuclear cooperation. Following a number of reports on the budding cooperation between the two countries on March 1990 Moscow and Tehran signed an official nuclear cooperation agreement under which the Soviet Union agreed to finish the Bushehr project, among others (Tyler, 3 July 1989; Hibbs, 1991).

The demise of the Soviet Union in 1991 did little to hamper the profitable cooperation between the two countries. To the contrary, Russia, facing a bleak economic situation was becoming entrepreneurial and most eager to sell its nuclear wares. Another cooperative agreement between Iran and Russia on the peaceful use of nuclear energy, including the construction of two reactors units in Bushehr was reached on 25 August 1992. The final agreement of 8 January 1995 signed by the Russian Ministry of Atomic Energy (Minatom) and Iran, stipulated the main contractor, Atomstroyexport, was to install a V-320 915 MW VVER -1000 pressurized water reactor into building 1 of Bushehr (Orlov & Vinnikov, 2005; Wehling, Winter 1999).¹¹

In defense of its decision, Russia explained that Iran did not violate any of the NPT provisions. Moscow further maintained that the Bushehr light water reactor would not pose a serious challenge to proliferation since it was under the IAEA safeguards. What is more, the Russian reactor was of the same type that the United States had agreed to sell Pyongyang in the “October 1994 Agreed Framework.” Most importantly, Russia declared that it would supply uranium to the reactor and return the spent fuel back to Russia for the duration of the reactor’s life. As a result, Iran would not be able to process the plutonium contained in the spent rods. Soon after, however, the United States discovered that the Bushehr plant was only the tip of the iceberg. In a secret protocol to the January accord, Minatom committed itself to provide Iran with key fuel cycle facilities, including fuel fabrication facilities, light water research reactors, and a uranium enrichment centrifuge plant (Einhorn & Samore, 2002).

The Clinton White House faced a quandary. Either the Russian authorities had misrepresented the extent of their cooperation with Iran or Minatom made sensitive pledges behind Moscow’s back. The secret agreement strengthened the Washington’s

¹¹ VVER is the Soviet designation for a pressurized water reactor. The number following VVER, in this case 1000, represents the power output of the original design.

suspicion that the Iranians were seeking a bomb under the coverage of a peaceful nuclear energy program. After President Clinton objected during a summit in Moscow in May 1995, the Russian President Boris Yeltsin quickly relented, pledging to scrap any aspects of the contract that could potentially assist Tehran to weaponize. The two presidents assigned their deputies to work out the details; in December 1995 Prime Minister Viktor Chernomyrdin sent a confidential letter to Vice-President Al Gore committing Russia to limit its cooperation to just one unit in the Bushehr facility and a minimal amount of training (Wehling, 1999).

On paper the agreement represented a victory for the United States. Moscow promised not to provide Iran with additional power reactors or fuel-cycle assistance for at least a five-year period. In fact, many Americans analysts and policy-makers predicted that the Bushehr power plant would never be completed because of the numerous financial, safety, and technical problems that plagued the facility. They assumed that Iranians would ultimately lose interest in what was dubbed the ‘white elephant’ project once they realized that the Russians were reluctant to go through with the secret side deliveries of fuel-cycle technology (Einhorn & Samore, 2002).

Largely ignored at the time was the fact that Evgeny Adamov, then director of the Research and Development of Power Engineering Institute (NIKIET) and later head of the Atomic Energy Ministry (Minatom), opened a clandestine channel to Iran. Later identified by the Israeli intelligence as the middlemen in illicit transfers, Adamov was known as a wheeler dealer; he was later convicted by a Moscow court of embezzlement. At the time, NIKIET in collaboration with the Mendeleev University of Chemical Technology, a premier research facility in Moscow, was negotiating to sell a 40 MW heavy water reactor to be based in Arak. Although Moscow decided to formally withdraw from the sale, there is evidence that the Iranians were provided with blueprints and

information to build their own reactor on the site (Caravelli, 2011; Melman & Javedanfar, 2008; ISIS, 2011).

Moscow was not the only destination in Iran's turn in what became known as the turn to the East. Since the mid-1980s, independently and through North Korea, the regime had made overtures to China. This resulted in a number of purchases that comported with the NPT guidelines. China's role in facilitating this enrichment was central as it supplied the fissile material for all four reactor cores at Isfahan Nuclear Technology Center (INTC) (Garver, 2006). Much of what China had actually provided, including support for uranium enrichment, had a military dimension. From 1985 to 1996, China provided Iran with various types of critical nuclear technology and machinery and helped it to acquire others, assisted Iran in uranium exploration and mining, and helped the latter master the uses of lasers for uranium enrichment (Harold, 2012). Even after China signed the NPT in 1992, it continued to supply Iran with an unknown quantity of tributyl phosphate, a chemical used for extracting plutonium from depleted uranium. At the same time, China allegedly supplied Iran with technical data on plutonium separation. Later, China reportedly sold Iran anhydrous hydrogen fluoride used in production of uranium hexafluoride (Garver, 2006).

In 1985 China supplied the Isfahan center with a training reactor. Five years later in June 1990 the two countries signed an agreement for constructing a micro-nuclear research facility in Isfahan. A more comprehensive agreement that included building of a 27 MW plutonium reactor in Isfahan followed. According to Chinese officials, these agreements resulting, among others, in the transfer of smaller nuclear reactor and an electromagnetic isotope separator (Calutron) for commercial and peaceful uses (Wright, 2010).

Though the Chinese equipment was not capable of producing weapon grade material, it gave Iran to experiment with enrichment technology. Some Iran watchers and

U.S. experts assumed that the Chinese had provided Iran with know-how of additional enrichment technologies, chemical separation, assistance in processing yellowcake and the design for facilities to convert uranium to uranium hexafluoride suitable for making reactor fuel and help with laser technology (Cordesman, 2005; Harold, 2012).

At the request of the military and the Revolutionary Guards, China allowed a team of Iranian military personnel and nuclear experts to observe its scheduled nuclear test. China also trained some ten Iranian nuclear technicians at its nuclear weapon test sites (Brief, 1 October 1996). There is also substantial evidence that many scientists were trained in China in the mid-to-late 1980s, even before the ten-year China-Iran nuclear cooperation agreement was signed in 1990, but the United States immediately protested and, consequently, the agreement was cancelled and the trade was postponed (Jones et al., 1998; Cordesman, 2005).

American intervention made Iran's dealing with the Czech equally difficult. During the summer of 1993, a number of Iranian officials visited Prague to try finalizing several deals negotiated by the AEOI. On 28 October 1993 the Czech company Skoda Plzen signed an agreement with Iran to provide it with necessary technology for nuclear reactors in exchange for oil products (Menem, September 1993).

But American intelligence believed that the Czech supplier could assist Iran with nuclear waste from which it could extract plutonium for a nuclear weapon. According to some analysts the waste came from the 100 kg depleted uranium in the core of TRR, which had never fully accounted for (Menem, September 1993; Bernstein, 2010). Earlier the Czech Minister of Industry and Trade had defended the deal between Iran and Skoda, but pressure by Washington caused the Czechs to retreat. In December 1993 the Czech government issued a statement: "the Czech Republic has not decided, nor does it intend to decide in the foreseeable future, on any shipments of nuclear technology to Iran" (Menem, September 1993, p. 95). However, some reports indicated that the Czechs firms

had continued to supply Iran with dual use technology. According to intelligence sources, Skoda Plzen did not stop transferring of nuclear technology to Iran, but also gave American Westinghouse and German Siemens companies a backdoor access to the Iranian nuclear market (Keshem, 17 December 1993).

American action had blocked Iran's access to the newly independent Kazakhstan awash with large quantities of Soviet era nuclear resources. On 25 October 1993, *US News and World Report* claimed, based on unidentified intelligence sources that Iran was seeking to procure weapons-grade uranium from Russia's nuclear program based in the Aktau breeder reactor in Kazakhstan (Al-Shura, 1 November 1993). Iran's plans were dashed, however, when in 1994 in a secret operation codenamed 'Project Sapphire,' the United States shipped 581kg (1,278 pounds) of weapon grade uranium from a storage at the Ulba Metallurgical Plant in Ust-Kamenogorsk to Oak Ridge, Tennessee (Hoffman, 21 September 2009).

But even the best intelligence could not monitor all the transactions within the complex illicit network set up by Iran. Although many of details have never been made public, the known incidents hint at the scope and sophistication of the Iranian operation. For instance, in 1993 Italy captured a shipment of eight steam condensers that could be used in a covert reactor program. In January 1994, the Italians seized in Bari cargo originating in Slovakia and destined for Iran via Greece containing equipment for high technology ultrasound used for testing reactors. To avoid detection, the regime also used transshipment with the consent of the relevant governments, commonly through Syria and Pakistan. In July 1996 British customs officials captured 110 pounds of maraging steel ready to be shipped to Tehran (Cordesman, 2006).

Quite clearly, the expanding array of facilities and the large quantities of dual-use technology legally contracted for or smuggled indicated needed to be matched by a large

nuclear labor force. This was, by far, a more challenging task for Rafsanjani and the nuclear sanctum leaders.

4.2 Building Its Own Scientific Cadre: Iran as a Nuclear Science Beacon to the World?

But the 1979 revolution triggered an exodus of upper middle classes and the cultural elite. Out of the 120 professors in the chemistry and physics departments at Tehran University in 1979, only eight remained. All together an estimated 4,500 nuclear scientists and affiliated workers fled abroad (Segal, 12 April 1987; Tasnim, 7 November 2013).

With the debacle of Fereydoon Fesharaki fresh in mind, Rafsanjani decided to recruit and train nuclear scientists - a task compared to the Manhattan Project. Reflecting a hands-on approach, he even ordered the available scientists to search in publicly accessible technical literature for any information regarding the mastering of the complex nuclear technology. As the nuclear cheerleader-in-chief, Rafsanjani tirelessly exhorted the scientists to make Iran a nuclear nation (Rafsanjani, 2002). In addition, the government encouraged creating (or upgrading) several nuclear science institutions, including the Sharif Technical University in Tehran (Rafsanjani, 2002).

Before the ambitious nuclear program could be launched, however, there was a need to restructure the organizational infrastructure. Reflecting the new power realities, the civilian AEOI was supplemented by two new bureaucracies - the Strategic and Nuclear Energy Unit of the Revolutionary Guards and a parallel unit within the Department of Defense under the Guards' Brigadier General Dr. Seyed Ali Hosseini-Tash (Jafarzadeh, 2007). His appointment was a clear indication that the Guards were intent on keeping control of the project regardless of its location in the organizational charts. According to an unidentified intelligence source reported by *US News and World Report*, Iran has

divided the weaponization program into five separate units to avoid Western and IAEA surveillance (Freerepublic, 25 October 1993).

The consolidated nuclear bureaucracy embarked on a number of programs. To keep up with the ambitious expansion of the facilities, the regime needed to fill positions fast. Drawing from the large pool of qualified Iranians abroad was deemed a viable option despite the defection of Fesharaki. On 6 November 1985, Rafsanjani's office ran an announcement in the airmail edition of the *Kayhan* newspaper urging Iranian nuclear engineers and scientists living outside of Iran to attend at a full- expenses paid symposium in March 1986 (Timmerman, 30 September 1995; Venter, 2005).

With recruiters acting as hosts, the conference, held under the auspices of the AEOI in Bushehr on 14-19 March 1986, proved to be a success. So much so that in January 1987, Fesharaki – encouraged by a new generous amnesty – returned home to assume a position within the nuclear establishment (Boureston & Ferguson, May/June 2004; Timmerman, 30 September 1995).

But Rafsanjani was less happy with the slow pace of the recruitment process – a feeling he had conveyed to Amrollahi on two separate occasions. Under Rafsanjani's 1993 plan for 'attracting talent,' special recruiters were sent to nuclear science conferences and seminars in the United States and Europe to find candidates and lure them back. The combination of a the lucrative incentives offered by the regime and appeal to the scientists' sense of patriotism prompted some 100,000 Iranians to return home, but only a small contingent was suitable for nuclear work (Boureston & Ferguson, 2004).

To augment this number, Rafsanjani prevailed upon the government to release some scientists who had been imprisoned since the revolution. In his recollections published in 2011, he acknowledged that the release program had helped to build a team of mostly American-educated nuclear scientists (Rafsanjani, 2011; Sciolino, 30 November 1992 a).

Training scientific personnel abroad was another promising, albeit long term prospect. Starting in the mid-1980s, the regime had begun offering scholarships to students willing to be trained abroad. According to estimates, over time some 15,000 student would take advantage of the program (Timmerman, 1992; Boureston & Ferguson, May/June 2004). With its advanced higher education, the United States was one attractive destination. The number of those sent by the regime is not known but Israeli intelligence took notice. According to Shabtai Shavit, the former head of the Mossad, the air attaché in the Israeli embassy in Washington, brought to his attention the large number of Iranian students in nuclear related programs in the 1990s (Melman & Javedanfar, 2008).

Russia became another attractive venue, especially as it was engaged in completing the Bushehr plant. Some five hundred Iranians travelled to Russia, most of them to the Moscow Engineering Physics Institute (MEPHI). In 1995 Moscow National University and Bauman Moscow State Technical University offered additional programs. Some six hundred and fifty Iranians trained in Novovoronezh Center of the Rosenergoatom Atomic Energy Concern in Voronezh. An additional two hundred students completed the four years training program in Obninsk Institute for Nuclear Power Engineering. Both groups were trained to work for Reactor I in the Bushehr plant. The training program in MEPHI was terminated in 2000, after the United States had threatened Russia with sanctions (Boureston & Ferguson, May/June 2004; IRNA, 2 March 2005).

If training Iranians was a long-term prospect, the dissolution of the Soviet Union in 1991 provided an immediate opportunity to recruit suddenly unemployed nuclear scientists. In 1992 and 1993, fourteen Russian nuclear scientists were hired for a reputed US 20,000 dollars monthly salary; six worked in the Karaj nuclear site and the rest were split among Gorgan secrete nuclear research facility known as al-Kabir Center or Neka and other nuclear centers (Watts, 15 March 1993).

Damavand Plasma Physics Research Centre (DPPRC) recruited Vyacheslav Danilenko who, according to documents handed subsequently to the IAEA, worked there for some years on developing and testing an explosives package for a nuclear warhead. Additional Russian experts, along with a number of South African technicians hired in 1996 did research on laser separation of uranium, an area in which Russia and South Africa are known to have collaborated (Spillius, 7 November 2011; Thornycroft, 15 August 1997).

Open source literature was yet another way in which the Iranians tried to enhance their knowledge. There is evidence that Iranian scientist compiled a large database of Western articles with weapons designs applications. In addition, research published by Iranian scientists at Shahid Beheshti University and Amir Kabir University indicated that experiments into separation of plutonium, in addition to papers relating to the generation, measurement and modeling of neutron transport, boosting approach and using of tritium that had applications to nuclear bomb (Cordesman, 2014).

Despite all this effort, it was clear to the Rafsanjani and other nuclear sanctum leaders that Iran needed serious external help with its program. Given Rafsanjani's view that Pakistan was a successful role model of proliferation, making contacts with Islamabad was high on the regime's agenda.

4.3 The Pakistani Connection: Making the Dream of a Muslim Bomb a Doable Reality?

Though the idea of the Muslim bomb originated within the nuclear establishment in Pakistan, there was no conclusive evidence that the Islamist President Mohammed Zia ul-Haq was keen on promoting it in Iran. Some observers argued that Zia had mixed emotions on the subject. On the one hand he was interested in building good political

relations with the new regime but on the other, as a Sunni, he was apprehensive about the Shiite ascendancy advocated by Ayatollah Khomeini. Still, by the mid-1980s Pakistan began importing Iranian oil, giving Rafsanjani an opening for a highly secret outreach to the top echelon of the Pakistani leadership (Corera, 2006).

While President Zia might have been a reluctant partner, his deputy Chief of Staff General Mirza Aslan Beg, was an enthusiastic supporter of Iran, not least because he harbored a deep dislike of the United States. Beg believed that Muslims need to have their own bomb to push against Western nuclear dominance (Beg, 7 March 2000). Studying and teaching nuclear proliferation convinced him that the United States and its allies have engaged in ‘nuclear outsourcing’ to friendly regimes acting as regional nuclear proxies. In his view, such practices contributed to the virtual “death” of the non-proliferation system that they had created in the first place. As a consummate realist in the tradition of Kenneth Waltz, Beg was convinced that the ‘dying system’ should be replaced by free proliferation (Beg, 7 March 2000).

On 19 February 1986, Beg visited Iran where he was entertained; soon after, a delegation from the AEOI met with Abdul Qadeer Khan. Beg’s trip and the meeting with Khan paved the way for a secret collaboration between Iran and Pakistan in the nuclear field. The regime offered financial support to Pakistan in return for training some of its scientists. But the relation was complex (Seliktar, 2012; Russell, 2005).

On 18 August 1986, Rafsanjani was informed that President Zia denied Iran’s request to weapons technology and know-how, while soon later he approved the sale of civilian nuclear technology (Rafsanjani, 2009). The talks between Iran and Pakistan resulted in a secret bilateral agreement that was signed at a secret meeting in Vienna at the end of May 1987 in which provided *inter alia* for the training of Iran’s nuclear scientists at the Pakistan Institute of Nuclear Science and Technology (PINSTECH). Thirty one Iranian nuclear scientists travelled to Pakistan within a year where they trained

in several essential parts of producing weapon including extraction of plutonium and enrichment of uranium. Reports at the time indicate that Iranian scientists were in the habit of inquiring about ‘non-peaceful nuclear matters’ (Corera, 2006; Bazoff, 12 June 1988; Bodansky, 1998; Mishra, 2004; Russell, 2005).

The training program boosted the confidence of Rafsanjani and the nuclear circle in Iran. Returning scientists such as Saeed Reza (a.k.a Seyyed Reza) and Hadi Ranbshahr (a.k.a Rambashahr) took up senior positions in Iran’s nuclear hierarchy. Equally important, on home leave, trainees who met with the nuclear sanctum leaders, argued that the technology was not very complex and expressed confidence that Iran could master the enrichment process (Rouhani, 2012; Bodansky, 1998; Gorwitz, 1998).

Rafsanjani was very pleased with the training program, but still was apparently not entirely happy with the speed of the process. Speaking to a gathering of nuclear scientists on 13 October 1988, he declared that “from the nuclear issue perspectives, we are not at the stage that we deserve [to be]” (Rafsanjani, 2011, p. 298).

Tanvir Ahmed Khan, Pakistan’s ambassador to Tehran from 1987 to 1989, offered another insight into the complexity and ambiguities of the relations between Iran and President Zia. The ambassador was invited to a meeting with Rafsanjani and the inner nuclear sanctum on 9 January 1988. According to the ambassador, the assembled leaders wanted to know whether Pakistan would help them on the nuclear side (Schippert, 12 May 2006).

Appealing to General Beg was a convenient way to get around Zia. Theory of proliferation aside, Beg had practical reason to support Iran’s nuclear quest. Alarmed by Pakistan’s nuclear ambition, the American Congress was seeking ways to punish Islamabad. In August 1985 Congress passed the “Pressler Amendment,” named after Senator Larry Pressler, requiring yearly certification from the White House that Pakistan did not weaponize (Mahmood, October 1994).

Failure to certify would have triggered a suspension of arms sales to Pakistan, a prospect that infuriated Beg. The deputy chief of staff was also known for his strong anti-Israeli opinions, a sentiment he shared with Tehran. During a meeting with an Iranian delegation, he actually advised his interlocutors to “degrade the defense systems of Israel, and harass it through the Hezbollah movement in Lebanon” (Dailytimes, 14 May 2006). Arguably most compelling was Beg’s desire to partake in the financial bonanza that the deal offered. As one analyst put it, Beg was “in favor of very close cooperation with Iran in the nuclear field in lieu of financial assistance promised to him toward Pakistan's budget shortages that plagued defense budget” (Kumar, 2008; Al-Zahed, 14 March 2010; Shana, 21 January 2004; Warrick & Wilson, 14 March 2010).

Beg’s policy of cooperating with Iran created tensions in Islamabad. A number of accounts held that General Zia was pressured by Saudi Arabia and the Gulf States to drop all plans to help Iran nuclear project. Watching the terror campaign waged by Teheran to promote its revolution, Zia came to agree with Riyadh that Iran was destabilizing force in the region. But Beg, by then Chief of Staff, was unbending, which prompted some analysts to suggest that the conflict led to the elimination of Zia who died in a mysterious plane crash on 17 August 1988 (Ahmed, 8 December 2012).

Whatever the cause of the accident, the death of Zia gave Beg more leeway to proceed with his Iranian nuclear program. He was eager to advise the Iranians on how to deflect American pressure by following the Pakistani model of maintaining a policy of ambiguity about the program. When asked about purchasing nuclear weapons, however, Beg refereed them to Prime Minister Benazir Bhutto, Zia’s successor. His parting advice was that Iran should create indigenous weapons with Islamabad’s help: “You have the money, we have the technology” (Smith & Warrick, 14 March 2010). Bhutto telling him that “the Iranians had offered more than four billion dollars, a huge sum of money considering the military’s chronic financial problems” (Rajghatta, 14 May 2006).

Encouraged by the political change, Brigadier General Ali Shamkhani, deputy commander of the Revolutionary Guards, travelled to Islamabad on 25 January 1989 to press for three nuclear weapons that were allegedly promised to the Iranians. A key player in the nuclear sanctum, Shamkhani told Admiral Ifikhar Ahmed Sirohey, the chairman of Pakistan's Joint Chiefs of Staff committee: "I came to collect the promised nuclear bombs" (Mostafavi, 21 January 2014, 23 October 2013). When the chairman suggested discussing other matters first, Shamkhani apparently became annoyed (Mostafavi, 23 October 2013) Abdul Qadeer Khan who participated in the meeting recalled that Sirohey was unbedding on the issue of transferring nuclear weapons.

Still General Beg urged Bhutto and her military advisor "to honor his [Beg's] commitment" (Smith & Warrick, 14 March 2010). A high ranking Pakistani government official at the time confirmed that "Shamkhani thought he had a deal when he came to Islamabad" (Al-Zahed, 14 March 2010; Shana, 21 January 2004). Rafsanjani's account of the same meeting differed slightly. He related that upon returning to Iran on 1st of February, Shamkhani had informed him that the Pakistani government was ready to cooperate in all military areas, especially in building submarine and missiles. With the government difficult to budge, Beg decided to help Iran by involving Abdul Qadeer Khan (A. Q. Khan), considered the 'father' of Pakistan's nuclear bomb (Rafsanjani, 2011; Corera, 2006).

4.4 Shopping in the A. Q. Khan Nuclear Bazaar: The Centrifuge Blueprint Purchase

Abdul Qadeer Khan, a Pakistani nuclear scientist credited with developing Pakistan's nuclear weapons program, earning him the name of the "father of the Pakistani nuclear bomb," started his career at Physical Dynamics Research Laboratory (FDO), a uranium

consortium owned by the Netherlands, UK and West Germany. Khan's exploits made him a national hero, (Sanger & William, 4 January 2004).

Khan opposed the NPT because, in his view, it had limited developing countries from gaining nuclear weapons and ignored the nuclear arsenal of Israel. As one scholar stated, Khan was one of a growing cadre of scientists, academics, and politicians who subscribed to the so-called theory of "nuclear apartheid" (Singh, 1998). In their view, the NPT made it impossible for developing countries to join the 'nuclear club.' In what looked post factum as public defiance, Khan and his scientific team published a number of papers on the fabrication and testing of uranium centrifuges. In 1987, one year before Pakistan's nuclear test, he boasted about his desire to "pierce the clouds of the so-called secrecy" that the NPT had forced on aspiring nuclear countries (Broad, Sanger, & Bonner, 12 February 2004; Sanger & William, 4 January 2004).

To help interested countries to acquire nuclear technology, Khan created a complex and illicit procurement network that, over time, evolved into a vast consortium of nuclear-black-market activities. The so-called "Khan bazaar" offered a wide range of blueprints and parts for fabricating weapon-grade uranium. By the mid-1980s, Khan was not only proliferating the Muslim bomb but turning a good profit for himself and his partners (Albright & Higgins, 2003; Albright & Hinderstein, 2005; Hersh, 2005; Stork, 1986; Broad, Sanger, & Bonner, February 13, 2004; Frantz, 2011).

Khan posed a unique challenge to the nonproliferation system designed to deal with state actors driven by perceived national-strategic goals. The Pakistani scientist was essentially an entrepreneur willing to deal with anyone who was ready to pay including Libya, North Korea, and Iran. And for the first time in nuclear history, a dangerous array of materials were available entirely through the black market, beyond state control, creating a 'Wal-Mart of private-sector proliferation' (Allison, October 2004; Doyle, 2008; Landler, January 23, 2004).

Khan's confessional account of 2004 as well as quotes attributed to him support this conclusion. For instance, in his view, "all Western countries, including Israel, are not only the enemies of Pakistan but in fact of Islam. Had any other Muslim country instead of Pakistan made this progress, they would have conducted the same poisonous propaganda about it. The examples of Iraq and Libya are before you" (Mishra, 2002; Windrem, 18 October 2002).

The voluntary export controls were easy to subvert, giving Khan's illicit network an opening. With the assistance of his global associates, Khan and his team managed to procure and sell technologies essential for designing and assembling nuclear weapons. The resourceful scientist also inflated the quantity of some components ordered for the Pakistani program and diverted them to Iran and other customers. All in all, his operation was extremely successful as he eluded the non-proliferation organizations and world's best intelligence agencies for more than two decades. This was all the more remarkable because the CIA actually induced the Tanners to sell defective components to Khan's clients (Albright & Hinderstein, 2005; William J Broad & Sanger, 23 December 2010; Albright, 2010).

Sales to Iran – as to other customers — were conducted through several 'nodes': Turkey, United Arab Emirates (UAE), Malaysia, and South Africa in addition to various personal houses across the world. There were dozens of 'workshops' around the world, with United Arab Emirates, conveniently located near Iran, serving as the main platform for re-exporting. To camouflage the traffic, Khan created numerous shell companies, some only for a single transaction (Tertrais, 2008b).

Though some fifty individuals were involved in the Khan 'bazar' but only a handful played a significant roles in the Iran venture. There have been strong indications, however, that the CIA used some of the individuals like the Tinner family to send faulty

components to sabotage the Iranian program (Broad & Sanger, 23 December 2010; Albright, 2010).

Khan's role in Iran's proliferation cannot be overstated. As Khan wrote "it was not only big money, but also cooperation with a trusted friend." According to Khan's report, after the Zia's death in 1988, Beg and the new President Ghulam Isaq Khan, encouraged him to cooperate with Iran. According to his version, clandestine trade with Iran was explicitly authorized by Beg and encouraged by Prime Minister Benazir Bhutto's military adviser General Imtiaz Ali, who allegedly set up a meeting between Khan and the Iranians in Karachi in November 1989 (Tertrais, 2008b; Tertrais, August 2007; Corera, 2006, pp. 59-60; Post, 14 March 2010).

In February 1986, Khan made a secret visit to Bushehr. In January 1987, on orders of Rafsanjani, he was flown on a private plane to meet with Iran's top leadership in a guesthouse run by the Ministry of Intelligence and Security in Parchin, south of Tehran, home of a huge military base. Iran's president Ali Khamenei, who co-sponsored the nuclear program with Rafsanjani, also took part in the conference. Khan also met Iran's leading nuclear scientists gathered for a high level conference held in Amir Kabir University. (Seliktar, 2012; Tasnim, 7 November 2013). Khan strongly advised his hosts to stay in the NPT using the Bushehr reactor, the Sharif Technical University, and Tehran University nuclear centers as decoys for the secret nuclear weapon program (Aftab News, 1 December 2004; Javadi, 19 September 2009; Smith & Warrick, 14 March 2010, Spector & Smith, 1990).

He also sold Iran a 'starter package' that included a number of items: set of technical blueprints for a Pakistani P-1 centrifuges, a starter kit for a gas centrifuge plant, centrifuge component samples, and instructions for enriching uranium to weapons grade levels. In addition, he delivered several Pakistani-made centrifuges, a design for atomic weapon, and an address book of his suppliers (Stricker & Albright, 2011; Melman & Javedanfar,

2008). According to the Pakistani intelligence agency, Inter-Service Intelligence (ISI), Khan was paid US 5 million dollars deposited in a Dubai bank account in the name of Haider Zaman, a name he used in a government-issued passport to hide his overseas travels (Smith & Warrick, 14 March 2010).

As mentioned, Khan strongly advised his hosts to stay in the NPT and use the Bushehr reactor as the legitimate site. In line with Khan's advice, the AEOI appealed to the IAEA for help with rebuilding the Bushehr reactor. Hans Blix, IAEA's chief, a strong advocate of peaceful nuclear programs in developing countries, visited Bushehr on 23 June 1989. Having secured Blix's blessing for the civilian project, on 25 June 1989 Rafsanjani and Hassan Rouhani, who acted as his national security advisor, left for Moscow to discuss a US1.8 billion dollars bid to complete the Bushehr project (Rouhani, 2012).

As Khan suggested, the clandestine experiments were hidden in a number of existing sites or new ones created for deceiving the IAEA. Though under IAEA supervision, the TRR housed a secret experiment centrifuge program since 1988. Another one was located in the Technical Research Center at Lavizian-Shian, the site of the giant Defense Industries Complex (Javadi, 19 September 2009; Smith & Warrick, 14 March 2010, ; Spector & Smith, 1990; Seliktar, 2012).

The Messiah Company, a front for the Revolutionary Guards, set up the Kalaye Electric Company, an alleged electric clocks workshop in 1995. In 1995 all experimental work with centrifuges in TRR was transferred to Kalaye. All along the nuclear sanctum was hoping to broaden its ties with Pakistan. (Maerli & Lodgaard, 2007; Timmerman, 1992; Melman & Javedanfar, 2008; Bernstein, 2010).

4.5 Beyond the “Khan Bazaar”: Making Pakistani Proliferation Official?

By early 1990, Rafsanjani, ever the shrewd observer of the diplomatic scene, was in contact with General Beg who assured him that Pakistan was moving closer to Iran. In February 1990 Beg travelled to Tehran to participate in an exchange on nuclear matters. Robert Oakley, the then U.S. ambassador to Islamabad, recalled a discussion with Beg in which the latter told him about talks with Rafsanjani and Revolutionary Guards commanders. Oakley maintained that Beg had believed that “Iran is willing to give whatever it takes, \$6 billion, \$10 billion. We can sell to Iran at any price” (Alam, 2004, p. 541). Beg, who received assurances that Tehran will back Pakistan in its dispute with India over Kashmir, mentioned to Oakley the Iranian request for the bomb later that year (Tertrais, 2008b).

But the pro-Western Benazir Bhutto was not willing to oblige. Rafsanjani recalled speaking to Bhutto during a reception in Tehran on 15 May 1990 where she rebuffed an offer allegedly made by her own generals to transfer nuclear weapons and technology: “I met with Ms. Benazir Bhutto and we talked about nuclear weapons in a private meeting.” But Bhutto told him that she objected to such transactions and would prevent it (Rafsanjani, 2013, p. 149; Rafsanjani, 15 May 1990).

A few months after this conversation a series of events in Pakistan and beyond improved Iran’s chances. On 1 October 1990, under considerable congressional pressure, President George H. W. Bush refused to recertify Pakistan as nuclear weapon free, triggering the Pressler Amendment sanctions. The military was hit especially hard because it could not obtain the F-16s aircraft or the spare parts that had been ordered, a disappointment that provoked intense anti-American feelings (Tertrais, 2008b; Kumar, 2008). Nawaz Sharif, the head of the Pakistani Muslim League who replaced Bhutto in November, was never a friend of Washington and was more open to Iran’s entreaties.

The Gulf War of January 1991 to dislodge Saddam Hussein's occupation of Kuwait in the previous summer, revealed that Iraq, a NPT signatory had an advanced nuclear program. The news created a firestorm in Tehran where, as discussed in chapter three, nuclear weapons were considered essential in deterring Baghdad. The regime redoubled its effort to pressure Pakistan. True to form, Beg was still the driving force behind Iran's nuclear requests (Timmerman, 2005; Tertrais, August 2007).

The accelerated negotiations paid off when Pakistan agreed to receive Iranian oil in exchange for conventional weapons, cooperation on peaceful nuclear issues, and political support on Kashmir. Subsequent negotiations conducted between the fall of 1993 and October 1994 apparently pertained to illegal items. On 20 December 1994 the Pakistani newspaper *Dawn*, reported that Rafsanjani offered US\$3.2 billion dollars to finance Pakistan's nuclear weapons program in exchange for transferring unspecified nuclear technology (Tertrais, 2008; Zarif, 24 July 2009; Wilson, 4 October 2004).

Against the background of this close official collaboration, Khan's second delivery took place between 1994 and 1996. Among the items were diagrams for P1 and P2 centrifuges, a Pakistani version of the original G-1 and G-2 models. The latter model, which had the aluminum rotor replaced with one of maraging steel, had double the spinning speed. Also transferred were 500 used P1 disassembled centrifuges and a 15-page document describing, among other things, parts of the enrichment cycle (AFP, 31 January 2006).

The second phase transfer raises interesting questions about the extent of official Pakistan's involvement. Some observers contend that Iran and Pakistan discussed the possibility of a bilateral defense treaty and that the second delivery contained items from the Pakistani program (Tertrais, 2008b; Zarif, 24 July 2009). In his memoir Rafsanjani confessed that Iran had sought materials on the black market, but denied that Pakistan

supplied illicit technology. To prove his point, Rafsanjani quoted the above conversation with Bhutto but made no comments about his dealings with Sharif (Rafsanjani, 2012).

When the A.Q. Khan network was exposed by the CIA in 2002, President Pervez Musharraf, and Sheikh Rashid Ahmed, his Minister of Information, refuted these charges. But facing incontrovertible evidence, the Pakistanis were forced to admit in January 2004 that A. Q. Khan had provided Iran centrifuges for enriching uranium and unauthorized technical aid to Iran's weaponization program in the late 1980s and early 1990s. They vigorously rejected, however, any governmental involvement in illicit nuclear commerce (Agency France Press, 18 February 2004; Theguardian, 10 March 2005; Wood, June 2013).

Such denials did not convince those who claimed that Khan had not acted alone. Given Pakistan military's tight control over the nuclear weapons program, it would have been hard for Khan to hide his actions from the authorities. Moreover, subsequent commercial satellite photographs showed considerable similarity between Iran's Natanz nuclear facility and the Pakistan's Kahuta enrichment plant (Kumar, 2008; Henderson, 8 May 2006).

In a September 2004 report, the IAEA provided corroborating evidence. The Agency's inspectors detected HEU in Iranian centrifuges and a substantial transfer of technology and materials used for nuclear weapons (IAEA Report, 1 September 2004). Iranians confessed that they obtained these centrifuges through the Khan 'bazaar,' which prompting the IAEA to ask Pakistan to permit it to visit its nuclear sites to determine the HEU's origin. Islamabad resisted inspection and sent some second hand centrifuges to the IAEA for tests. The IAEA team concluded that Pakistan had transferred nuclear technology blueprints of P-2 advanced centrifuges to Iran in 1987, a fact subsequently confirmed by Rouhani. Iranian leaders later told the IAEA that a Pakistani network in 1987 offered a package of centrifuge blueprints, centrifuge-related equipment, and

specifications; they revealed a document detailing how to shape HEU for use in a weapon (Rouhani, 2012).

Some analysts concluded that Khan's assistance to the Iranians was pushed by General Beg and his colleagues behind the back of the civilian leaders. According to Leonard S. Spector, director of the James Martin Center for Nonproliferation Studies, "Khan is clearly out to vindicate his reputation, but the issues remain murky enough that you can't be certain when he is telling the truth and when he is embellishing." Whether Benazir Bhutto's government knew or approved of the Khan initiative is not entirely clear (Smith & Warrick, 14 March 2010).

After receiving evidence from the United States and a letter from the IAEA, Pakistani officials eventually sought to justify the overt and covert collaboration with Iran by stating that "due to religious and ideological affinity, Pakistanis had great affection for Iran." For his part, Khan cited Iran's promise of financial support to Pakistan and Islamabad's desire to punish the United States for its alleged hegemony in the region as a contributing factor (Smith & Warrick, 14 March 2010; DH, 25 September, 2011).

Whatever the motivation, the nuclear connection between Iran and Pakistan showed weakness of the NPT in stopping a determined state proliferator aided and abated by an individual who acted upon a mix of ideological imperatives and profit considerations. A broad clandestine network with ties to elements of the Pakistani establishment had eluded the NPT watchers. When discovered, Pakistan was not blacklisted and there was little international protest when Khan, still considered a national hero, virtually escaped punishment. Needless to say, the Khan-Pakistani contribution was a personal triumph for Rafsanjani who noted in his memoir that Iran had outsmarted the international community (Mishra, 2004; Rafsanjani, 2013).

4.6 Iran's Compliance with the Non-proliferation Regime

Even though critical parts of the above detailed analysis were not known at the time, unease in the West began picking up in the 1980s. Intelligence sources in the United States, Europe, and Israel reported on suspicious procurements and nuclear activity that, for all intent and purpose, had exceeded peaceful uses. But for the IAEA to move against Iran incontrovertible evidence was needed, a difficult task in lack of any clear evidence against Iran's nuclear activities. Rafsanjani's creative diplomacy to deflect potential pressure made the task even more difficult.

The Iranian president, who acquired a reputation as a moderate among Western observers, became the nuclear spokesman for the government. He reminded the western observers that Iran has been always a peace loving country that did not need and, more to the point, could not afford a weapon program. Additionally, Iran's strict adherence to the tenets of Islam did not allow it to develop destructive and anti-human nuclear weapons (NTI, 11 February 1995).

On 31 January 1993, at a news conference in Tehran, Rafsanjani denied foreign reports that Iran was seeking to obtain weapons of mass destruction including nuclear ones. He reiterated that: "Iran cannot afford to buy and will never try to procure nuclear weapons. Western reports that Iran is trying to produce nuclear weapon have political motivations" (Murphy, 1 February 1993). According to Rafsanjani, such criticism was aimed at trying to force the Arab states to be more worried about Iran than about Israel. Like Rafsanjani, Ayatollah Khamenei was an accomplished master of deception by deflection who blamed the West for maligning his country. As he often put it; "such allegations are merely American and Israeli propaganda that is totally baseless" (Andisheh, 14 January 2004).

When, on 18 February 1993, the CIA National Intelligence Estimate concluded that Iran "was making progress on the nuclear arms program and could develop a nuclear

weapon by 2000,” (Sciolino, 30 November 1992b) an array of regime leaders took turn attacking the report and emphasizing Iran’s total disinterest in nuclear weapons. For instance, on 13 March 1993 the chief of AEOI Amrollahi refuted a BBC claim that Iran was trying to obtain nuclear weapon-related technology from Kazakhstan. He was quoted as saying that “we don’t have a nuclear weapon and will not seek for it. We are against nuclear bombs because of our religious beliefs” (Reuters, 13 March 1993; BBC, 5 August 1991). To back up Amrollahi’s statement, the IRNA news agency declared that “Iran literally has no aspiration of becoming a state armed with nuclear weapons. Because of its interests, Iran does not, and will not engage in a nuclear weapons program” (IRNA, 8 January 1995).

In a 24 May 1993 *Time* interview Rafsanjani asserted that it would be illogical for Iran to devote its limited resources to develop nuclear bomb and that such weapons can never be used in the region. Rafsanjani said that “even if Third World countries acquired nuclear weapons, they could never compete with the major nuclear powers” (Prager, 24 May 1993, pp. 46-49).

Much the same type of response followed reports in the early 1990s that North Korea had assisted Iran’s nuclear weapons development, including uranium exploration and mining (Bermudez, 1991). Rafsanjani was steadfast in contesting the veracity of these reports during a special news conference in August 1994. At that time, he rejected the notion that Iran had attempted to purchase nuclear bombs from North Korea, and stated that “even if North Koreans had developed nuclear bombs, Iran did not want them” (NPR, June 1994; NPR, Winter 1995; ADJ, August 1994).

It was infect adopting a reasonable policy when Rafsanjani and other regime officials were undoubtedly encouraged by their experience of joining the Chemical Weapons Convention (CWC) in 1993. As part of the protocol Tehran declared that it had formerly possessed “capabilities” that were dismantled; neither the United States nor any

other country asked for a “challenge inspection” of undeclared locations – part of a process of verification authorized by the CWC (Clawson & Rubin, 2005).

Towards the end of his tenure, Rafsanjani still used his stock complains about the “American propaganda” campaign against his country. In an interview with the Voice of the Islamic Republic of Iran, he repeatedly stated that Iran’s strict fealty to the Islam tenets did not allow production of “weapons of mass destruction.” He reiterated Iran's determination to develop civilian nuclear capability and urged Russia to proceed with agreement and sale of technology to Iran despite the U.S. “inappropriate” opposition (Reuters, 1 July 1995). He ended the interview by appealing to the American people that: “The benefits of nuclear technology are numerous and we cannot forgo its peaceful uses. But the American nation should rest assured that Iran is not on the path of obtaining of nuclear bomb and will not pursuing it in the future” (IRNA, 11 July 1995).

It was reasonable when Rafsanjani also stressed that the IAEA had verified and vouched for the peaceful use of the nuclear technology, a claim legitimized by the IAEA chief Hans Blix who repeatedly denied that Iran was trying to weaponize (BBC, 11 February 1995). The IAEA’s clean bill of health was a critical tool in its campaign to project a peaceful atomic intention. Not surprisingly, reference to Blix became de rigueur among Iranian officials. A 1997 article in *Ettelaat* newspaper was characteristic in this context. Rafsanjani stated that “Iran’s nuclear program is transparent and for civilian purposes,” and quoted Blix as saying that “the various inspections of Iranian nuclear installations conducted by the IAEA indicated that Iranian nuclear program is for humanitarian purposes” (Ettela’at, 24 July 1997). Rafsanjani was especially fond of repeating Blix’s praise about ‘how he [Blix] appreciated Iran’s cooperation’ and the easy access that it provided to all its facilities (Ettela’at, 24 July 1997).

On 23 March 1997 a journalist from the CBS's 60 Minutes asked Rafsanjani whether Iran was pursuing nuclear weapons. He duly replied: “Absolutely not. We hate

such weapons” (IRNA, 23 March 1997). When asked whether he would “swear by Allah,” Rafsanjani stated: “There’s no need to take an oath. We are honest nation. We make missiles and we tell everybody that our missile industry is strong. But we're not after nuclear bombs and we won't go after biological and chemical weapons” (IRNA, 23 March 1997). He stressed that it is necessary for Iran to have nuclear energy to meet electricity needs, and reminded his audience that the United States had supported Iran’s nuclear program when the Shah was in power (MacLachlan & Knapik, 29 December 1997; Gilmore, 16 August 1997; IRNA, 23 March 1997; Television, 24 March 1997).

In spite of no clear indication claimed by the Iranian officials, doubts about Iran’s weaponization goal did not disappear. As a matter of fact, the Mujahedeen el Khalq (MEK), a Marxist-Islamist opposition group had reported on suspicious nuclear sites and Iran’s alleged purchase of nuclear warheads from Kazakhstan, but the CIA was not able to substantiate the information (Melman, 18 October 1992). On 17 April 1997 Robert Einhorn and David Welch, two U.S. State Department officials, appeared before the Senate Foreign Relations Committee to report on the issue. They stated that Iran had shown its determination to produce nuclear weapons, by procuring ballistic missiles capable of delivering, and developing nuclear technologies entirely incompatible with a civilian nuclear program, a claim that was hard to proven at the time (Helms, 6 May1997). Einhorn and Welch told the Committee that the U.S. government had successfully dissuaded a number of countries from conducting any nuclear deals with Iran but failed to persuade Russia and China. Welch and Einhorn noted that current U.S. tools such as economic sanctions reached their limits of effective unilateral initiatives. The officials suggested that the nonproliferation regime would have been more successful had Washington persuaded more countries to abstain from aiding Iran (Helms, 6 May1997).

The Welch-Einhorn statement was a fitting commentary on one of the factors behind Teheran’s nuclear program. The combination of complexity and the eagerness of

the third parties, including members of the NSG, to sell nuclear technology to Iran vindicated Rafsanjani's assumption that developing of the nuclear program would be relatively easy and, most important, would not bring penalties in the form of damaging sanctions. In his memoir, Hassan Rouhani, by then the secretary of the Supreme National Security Council (SNSC), made a special point of praising Rafsanjani's contribution to the speeding up the process of advancing the nuclear program without invoking a hostile reaction from the international community (Rouhani, 2012).

4.7 Conclusion

This chapter provided a detailed analysis of the way in which Iran exploited the many loopholes in the NPT to create an elaborate framework for the nuclear program. Each of the sections represents a different facet of the sophisticated maneuvering around what was supposed to be reasonably sound barrier against the spread of nuclear weapons. The weakness of the NPT pertained to the blurred lines between legal nuclear transfers and its illicit uses, a product of the technological advances made since the writing of the treaty. The same advances in nuclear science made it easier to adopt dual technology to the fabrication of weapons. Both Russia and China could thus claim that they broke no rules, while at the same time helping Iran to create a nuclear infrastructure and educate a cadre of nuclear workers.

The ability of the Pakistani nuclear scientist A. Q. Khan, colluding with elements of Pakistani high command, was not anticipated in the NPT protocols. Indeed, because of its novel character, the Khan bazar was not picked by Western intelligence services for a long time. Tehran's ability to set an extensive addition, Iran demonstrated its impressive ability to set up an extensive network of front companies tasked with purchasing of dual-use technology, the willingness of the IAEA under Hans Blix to certify the program as

peaceful.

But it was the intense personal involvement of Rafsanjani and his nuclear sanctum that contributed the most. The detailed listing of trips, meetings, and conferences, provided above is as much a chronology of the nuclear program as a reflection of the unique dedication of its leaders to push for developing Iran's nuclear program. There is little doubt that without Rafsanjani and his skillful diplomacy, Iran would have failed to overcome the huge obstacles to a successful nuclear bid.

CHAPTER 5: KHATAMI'S NUCLEAR DISAPPEARING ACT

The key objective of this chapter is to analyze Iran's sophisticated tactics to evade United Nation's sanctions following the exposure of the program in 2002. The effectiveness of some of the tools, including the novel outreach to the West known as the 'Dialogue among Civilizations' and the more traditional use of dissimulation and obfuscation are being evaluated.

Section 5.1 discusses President Khatami's foreign policy vision embedded in the 'Dialogue among Civilizations.' Section 5.2 probes the progress of the nuclear program during the Khatami era. Section 5.3 analyzes the change of tactics after the program was exposed by Mujahedeen el Khalq (MEK). Section 5.4 settles the debate of whether President Khatami was "out of the loop" on the nuclear program or part of the deception strategy. Section 5.5 offers a detailed analysis of the post-MEK deception strategy known to ward off sanctions, thus keeping the cost low.

5.1 Khatami's Vision of Foreign Policy: The "Dialogue among Civilizations"

On 23 May 1997, Mohammad Khatami, a former member of the Majlis and the Minister of Culture and Islamic Guidance was elected to replace Ayatollah Akbar Hashemi Rafsanjani as Iran's president. Khatami came to power on a platform of liberalization and reform, both domestically and abroad. His campaign stressed themes like 'building of a civil society, rule of law, the protection of civil liberties guaranteed by the Islamic Constitution, and a moderate foreign policy' (Holliday, 2010; Ashraf & Banuazizi, 2001).

Khatami's election marked the culmination of a more pragmatism spirit in the country. He reflected a growing societal desire for less ideological politics, and a yearning for political freedoms, economic well-being, and a more pragmatic attitude toward the

outside world. Unlike previous ballots, the 1997 election was greeted with heightened expectation of a dramatic policy change at home and abroad (Menashri, 20 August 2010; Gasiorowski, Spring/Summer 2001). Though few scholars and lay observers predicted Khatami's victory, post-election commentary postulated that the event was a watershed in both domestic and foreign policy. Plucked from relative anonymity, the new president raised extravagant hopes, mainly among Western analysts. Some observers described the election as "the dawn of a new era,"¹² "a new stage in the history of Islamic Republic,"¹³ and even a "second revolution"¹⁴ (Traxler, 2 June 1997; Kinzer, 25 May 1997; Mojtabeh-Zadeh, 2001, pp. 53-62; Petrossian, 6 June 1997, p. 5; Amuzegar, Winter 2006, p. 59).

The anticipation was that Khatami would protect human rights, support political and cultural openness, strengthen burgeoning democratic efforts, liberalize the economy, integrate Iran into the community of nations, and pursue peaceful relations with the world. There were those who considered Khatami the Muslim Martin Luther about to usher the long-awaited Islamic Reformation, a reference to the religious liberalization akin to the Protestant Reformation (Amuzegar, Winter 2006).

One Western observer wrote that Khatami is not an average clergy, but a president with "one foot in Western civilization" (Lancaster, 25 May 1997). A newspaper article noted that Khatami is a different prototype of ruling system whose worldview differs to a large extent with that of the ruling system. A Lebanese scholar added that "above all else he is an intellectual" (Al-Riyad June 8, 1997, quoted by Menashri, 1998, p. 14). Ray Takeyh and Ali Ansari both suggested that the "Khatami revolution" was irreversible, making a return to the pre-1997 situation impossible. These and other scholars

¹² Traxler, G. F. (2 June 1997). Iran's Khatami. *Los Angeles Times*. Retrieved from http://articles.latimes.com/1997-06-02/local/me-64783_1_iran-s-khatami-election-of-mohammad-khatami-embracing

¹³ Kinzer, S. (25 May 1997). Moderate Leader Is Elected in Iran by a Wide Margin. *The New York Times*. Retrieved from <http://www.nytimes.com/1997/05/25/world/moderate-leader-is-elected-in-iran-by-a-wide-margin.html>; Mojtabeh-Zadeh, P. (2001). Geopolitics and reform under Khatami. *Global Dialogue*, 3 (2-3), pp. 53-62.

¹⁴ Petrossian, V. (6 June 1997). Khatami Promises a Fresh Start. *Middle East Economic Digest*, Vol. 41 (No. 23), p. 5; Amuzegar, J. (Winter 2006). Khatami's legacy: Dashed hopes. *The Middle East Journal*, 60 (1), p. 59.

emphasized that Iran's economic predicament had brought pragmatism to Tehran (BISCMEP, 23 November 2004).

There was also some optimism in Iran. Because of Khatami's focus on modifying the revolutionary system, some Iranians have referred to Khatami as "Ayatollah Gorbachev," a reference to Gorbachev efforts to reform Communism and open the Soviet Union to the West in the late 1980s (Lancaster, 25 May 1997). Others viewed him a "peaceful evolutionist" who could lead to an Iranian-style perestroika. Even those who were not expecting a Martin Luther or a Mikhail Gorbachev to materialize in Teheran, were optimistic about the new president. Most of this euphoric commentary in the West drew from Khatami's unique foreign policy vision that became known as the 'Dialogue among Civilizations' (Menashri, 1998; Takeyh & Gvosdev, 2004).

Unlike the parochial and insular leaders of the revolution, Khatami was a well-educated man with knowledge of Western history and culture and a keen eye for the discursive practices of the international community. It was not lost on the new president that after years of revolutionary excesses and brutal repression at home, the image of Iran was badly tarnished. Nor was he oblivious to the fact that Western misgivings about militant Islam as embodied by the regime became conceptualized as the Clash of Civilizations. Bernard Lewis, an eminent scholar of the Middle East, first warned about the coming clash between the West and the Islamic world in an article in the *Atlantic*. Samuel Huntington, a prominent political scientist elaborated on this theme in an iconic essay "The Coming Clash of Civilizations" in *Foreign Affairs* and a subsequent book (Lewis, September 1990; Huntington, Summer 1993; Huntington, 2011).

Khatami's version of the Dialogue among Civilizations was essentially a call for a new paradigm in international relations. According to Khatami, the dialogue was designed to facilitate communication, which would finally lead to tolerance, coexistence and global collaboration (S. M. Khatami, 2005). To make the dialogue effective, however,

required an understanding of the philosophy and culture of the participants: “An effective engagement in a dialogue among civilizations and across cultures requires an understanding of essential concepts and relationships” (S. M. Khatami, 2005, p. 72). This was another way of saying that the international culture needed to be less Europocentric. Khatami explained that the global culture was imposing itself on local cultures while ignoring their unique characteristics (S. M. Khatami, 5 September 2000; S. M. Khatami, 2000).

The president asserted that a new, syncretic paradigm must be constructed through a “sacred conversation” between all parties: “We could know ourselves by taking a step away from ourselves and embarking on a journey away from self and homeland and eventually attaining a more profound appreciation of our true identity” (S. M. Khatami, 2000). Such a discourse, in Khatami’s opinion, would lead to a “unified identity,” a fusion of Western and nontraditional forms of knowledge. Not surprisingly, Khatami foresaw a leading role for purveyors and interpreters of culture; ‘scholars, philosophers, theologians, thinkers, and artists’ – all aiming at a ‘meta-historical discourse’ (S. M. Khatami, 5 September 2000a; M. Khatami, 5 September 2000).

Much as Khatami viewed the Dialogue as a cultural manifesto, it was also intended as message that Iran was ready to come out of isolation and assume a more active role in regional and global affairs. In practical terms, Khatami hoped that the discursive paradigm would lead to “a reduction in international tensions” and “a détente with the outside world.” As he noted; “foreign policy does not mean guns and rifles but utilizing all means to convince others” (S. M. Khatami, 5 September 2000a; S. M. Khatami, 1999, pp. 14-15). For those who looked deeper, there was an implicit acknowledgment that the isolation of the Islamic Republic from the international community stemmed partly from its own conduct and its penchant for subversion in other countries and its irresponsible statements (Takeyh, 2009).

The plea for a reduction of tensions (*tashanoj zadaei*) in particular raised hopes for a possible reconciliation with the United States (Rubin, March 2000). During his Majlis swearing-in ceremony on 4 August 1997, Khatami stated: “We are in favor of a dialogue among civilizations and a détente in our relations with the rest of world” (IRNA, 6 August 1997). He brought the same message – dignity, wisdom and prudence in international relations to the 1997 Organization of the Islamic Conference, a gathering attended by countries still rattled by Iran’s revolutionary export. He assured the participants of Iran’s desire to usher a new era of economic and political relations across the region and the world (Sabet-Saeidi, 2011).

In yet another dramatic move, Khatami chose an interview with CNN’s correspondent Christiane Amanpour in 7 January 1998, to declare Iran’s readiness to improve relations with the United States. Using a conciliatory tone, he even came close to apologizing for seizing American diplomats in Tehran in 1979. Khatami acknowledged the hurt the American people felt regarding the hostage crisis and confessed to regretting the incident: “I do know that the feelings of the great American people have been hurt, and of course I regret it” (Amanpour, 8 January 1998). The president denounced terrorism in all its forms, and even found that there were commonalities between the Iranian theocracy and the American republic founded by the Puritans. Indeed, Khatami lavishly praised the values and principles that underpinned America’s political, social, and moral system (Amanpour, 8 January 1998).

Perhaps as striking in this respect was Khatami’s willingness – a first on the part of an Iranian leader- to acknowledge America’s sensitivities and interests. The president noted “No one ever had the intention of insulting the American nation, and we even consider the American government a legitimate and lawful representative of its people.” He proposed using the Dialogue for ending years of mistrust between the United States and Iran, but cautioned that the time for government-to-government talks was not ripe

yet. Instead, he suggested a more modest beginning at the “people-to-people level” – via cultural, academic, and athletic exchanges (Amanpour, 8 January 1998). As a matter of fact, Khatami advocated duplicating the cultural exchanges between the United States and the Soviet Union that had helped to break the ice between the two superpowers during the Cold War.

The Iranian president received some high level support from U.N. Secretary General Kofi Annan who urged the General Assembly to name 2001 as the “Year of the Dialogue among Civilizations.” Passed on 4 November 1998, the resolution called to seek better ways to understand diversity and improve dialogues among the populations of the world. In the years to come, many of the UN’s civil and cultural forums developed special programs inspired by Khatami’s Dialogue (U.N.G.A. Resolution, 1998).

Though Khatami conceived of the Dialogue as a civil society- level outreach, the response from governments must have been quite gratifying. In particular, the Europeans who maintained a low profile “critical dialogue” with Iran during the 1980s, elevated it to a higher level “constructive engagement.” Under the new policy prohibitions on ministerial meetings were lifted and there were plans for a full resumption of commercial relations (Takeyh, 2009).

Invited by President Jacques Chirac, Khatami was the first Iranian head of state to visit France since the revolution. In 1999, Pope John Paul II gave Khatami a private audience - the first papal encounter with an Iranian head of state since the days of the Shah. During his stay in Rome, Khatami signed three memoranda of understanding and an economic agreement. His Foreign Minister, Kamal Kharrazi, and his Italian counterpart, Lamberto Dini, signed an agreement on collaboration in an anti-drug campaign, in addition to agreements on academic and technological cooperation (Tazmini, 2009, p. 86).

Much as Khatami appreciated his European success, the Dialogue was also directed toward the United States. In his second term of office and looking for a legacy achievement, President Clinton was eager to score some diplomatic points of his own. The White House welcomed Khatami's gesture stating that: "I have never been pleased about the estrangements between the people of the United States and the people of Iran" (Clinton, 1998, p. 675). As for the call for a "thoughtful dialogue" with America, President Clinton responded that he would "like nothing better," and praised Iran's rich Persian heritage (Clawson & Rubin, 2005, p. 152).

In a subsequent statement, Clinton noted that "we believe that Iran is changing in a positive way, and we want to support that" (Clinton, 1998, p. 982). His Secretary of State, Madeleine Albright, followed up by calling on Iran to join the United States in devising a roadmap to normalized diplomatic relations (Takeyh, 2009).

On 17 June 1998, the State Department responded to Khatami's CNN interview: "We welcome the fact that he wants a dialogue with the American people . . . ultimately, real improvement will not depend upon what the government of Iran says but what it does" (Findley, April 1998). To maintain the momentum, the administration made some positive gestures toward Iran, most notably by endorsing the idea of cultural exchanges between two nations in line with Track Two diplomacy (Pollack, 2004).

The president and his officials clearly felt that Khatami represented a genuine break from Iran's orthodoxy, a view that many in the intelligence community and political establishment supported. The prevalent assessment was that Khatami's election was a precursor to a major change in the Iran's domestic and foreign policy. In the words of one high-level intelligence official: "It is clear to us that Khatami is the real thing [and] that he wishes [to turn] Iranian policy with regard to terrorism in a direction that would relieve some of impediments to improve relations with the West" (*The Washington Post*, 5 May 1998).

When critics pointed out that Iran was still sponsoring terrorism, the intelligence community was ready with an answer. Testifying before the Senate Select Intelligence Committee, the CIA director George Tenet argued that Khatami was sincerely trying to end his government's support of terrorism, but he needed more time to consolidate his control over the intelligence and security services. Having agreed on Khatami's bone fide, the White House was eager to offer some conciliatory gesture designed to help Khatami and his moderate followers in their struggle with conservatives and hard-liners (*The Washington Post*, 5 May 1998).

On a symbolic note of high importance to the Iranians, Albright apologized for America's role in the coup that had deposed the nationalist Prime Minister Mohamed Mossadegh in 1953. In another gesture, Albright expressed regret for America's assistance to Iraq during its war with Iran (Fayazmanes, 2008; Takeyh, 2009). For all intent and purpose, this was most significant expression of American interest in rapprochement since the 1979 revolution. Key supporters of Khatami in the sixth Majlis, such as Behzad Nabavi, praised the Clinton administration's stand, describing it as a victory for his foreign policy (Sick, Spring/Summer 2001).

Symbolic gestures aside, the administration worked hard to limit the scope of the Iran–Libya Sanctions Act (ILSA) passed by Congress in 1996. The bill imposed penalties on foreign firms that had invested in the Iranian oil and gas industry, including a pipeline carrying Caspian oil to Iran. European governments complained that ILSA amounted to an extension of American law to European firms, an argument that the administration accepted. When the French oil company Total proceeded to bid US 2 billion dollars on a contract to develop the giant South Pars gas field, Washington, in a gesture to Khatami, agreed to waive the secondary sanctions mandated by ILSA (Sick, Spring/Summer 2001).

However, the sheer friendly words may start normalizing relations, but they can hardly impress a people who remain the target of some of the most drastic economic

sanctions ever imposed. Responding to Albright's admission of US arming and encouraging Iraq to invade Iran in 1980 was "short sighted", Iranians invited her to draw a positive conclusion from it, namely by preventing a repeat of the same "short sightedness" with regard to American support for UAE claims to the Iranian islands. Iran made it clear that it expects the United States to consider implementing the real measures of confidence building. For instance, ending the anti-Iranian policy of diverting Caspian–Central Asian oil and gas pipelines away from Iran, and freeing Iran's frozen assets, ending the so-called D'Amato Law that imposes sanctions on companies investing in the Iranian oil and gas sectors, as well as lifting all economic sanctions and embargos against Iran. More, ending policies that put Iran's national unity and territorial integrity in question (Mojtahed-Zadeh, 2001). In November 1999, in the context of a general review of U.S. sanctions, the State Department authorized the sale of parts to upgrade Iran's aging Boeing 747 fleet. In March 2000, Albright announced the end of the ban on imports of agricultural and handicraft products (Clawson & Rubin, 2005).

In 2000 the Clinton administration initiated a secret channel to Khatami through Giandomenico Pico, an Italian diplomat working for the United Nations. As a "good will deposit," Washington halted some of the sanctions that had originated in the previous administration (Taheri, 2006, p. 104). In what was arguably a crowning moment for Khatami's Dialogue initiative, Clinton offered a 'Grand Bargain.' The United States would recognize the Islamic Republic as a regional power in exchange for Iran's commitment to desist from terrorism and end its opposition to the peace process between Israel and the Palestinians (Taheri, 2006).

Less grandiose but highly significant was the decision of the State Department to designate the MEK as a terror group in 1997. The decision triggered fierce criticism from the Republicans but the Clinton administration felt that Khatami, who personally lobbied

on the issue, should be rewarded in order to demonstrate his foreign policy acumen in Tehran (Masters, 18 July 2012; Katzman, 2014).

In making the decision to bolster Khatami, the administration relied on the assumption that the hardliners in Tehran would be on match for the reformists, a belief that Khatami had worked hard to cultivate (Hunter, 2010; Litwak, 2004). As he put it, “we may be able to close the door to a certain extent, and in some areas, but given the way the world is progressing, tomorrow it would be impossible to close the doors” (Takeyh, 2009, p. 186). Many in Washington embraced this prognosis. In June 1998, John C. Gannon, chairman of the National Intelligence Council, reported that Khatami was the harbinger of a new generation of leaders favoring political change. Gannon’s conclusion was based on a survey of Iran experts and international relations scholars. Puneet Talwar, an official on the State Department policy planning staff, was optimistic that the demographic dynamics that propelled Khatami into power would prevail against the conservative old guards (Ansari, 2000; Zahedi, 2000; Falk, 2003; Talwar, 2001).

Unfortunately for the White House, Talwar’s faith in demographics was at odds with the reality in Tehran where the conservatives felt threatened and betrayed by the Dialogue. Reacting furiously, the hardliners insisted that the revolution must be preserved from the West and particularly from the ‘humiliating influence’ of the Americans. Conservative media asserted that Khatami had no right to open an official dialogue with the United States since it was not within the prerogative of his office. More ominous, Ayatollah Khamenei made it clear in a Friday prayer meeting that reports of rapprochement between Iran and the United States were nothing but worthless propaganda. The Supreme Leader warned that Khatami’s conciliatory approach was a “Trojan Horse that enabled our enemies to strike [against] Islam at home” (Sciolino, 8 January 1998; Haas, 2012, p. 71).

In what was one of the many paradoxes of the negotiated political order, Khatami kept pushing his Dialogue with its “deep-rooted understanding,” while Khamenei was delivering fiery speeches boiling over with hostility toward the United States and the West. The Supreme Leader blamed the “hidden hands” of arrogance for undermining the Muslims. He explained that the “the West in its all-rounded invasion has targeted our Islamic faith and character. It has intensely and persistently exported to our country’s the culture of laxness and disregard for religion and ethics” (IRNA, 9 December 1997; Khamenei.de, 9 December 1997).

Ali Akbar Velayati, Khamenei’s foreign policy adviser, was similarly critical of Khatami, stating that sheer talk of dialogue only serves Iran’s enemies. In this view, advocates of such a policy were either stupid or dependent on foreigners, Velayati warned that the Dialogue among Civilizations might lead to the defeat of the revolutionary ideas of Islamic resistance (Kayhannewspaper, 16 February 1998). Likewise, Ayatollah Mahmoud Hashemi Shahroudi, the Chief of Judiciary, stated that “We condemn any cowardly stance toward America and any word on compromising with great Satan” (Pollack & Takeyh, March-April 2005, p. 2).

Much as the Dialogue was appreciated, for the United States and the international community anxious about proliferation, Khatami’s stand on the nuclear issue had mattered the most. Here again experts were ready to reassure policy makers that Iran was pragmatic enough to realize the folly of pursuing the bomb. At the very least they were convinced that the Khatami government was in charge of the nuclear program. At a symposium in the prestigious Brookings Institution in Washington, Shaul Bakhash, a prominent historian of Iran, stated that the Ministry of Foreign Affairs had asserted control of the nuclear project and that Hassan Rouhani, the new nuclear negotiator was the right person for the position (BISCMEP, 23 November 2004).

In reality, however, Khatami's elaborate discourse on the new international order did not go beyond his predecessors routine assurances about the peaceful nature of the nuclear program. For those looking for concrete signs of change, the opaque world of Iran's nuclear works was as challenging as ever.

5.2 On Khatami's Watch: Speeding Up the Nuclear Project

By the time Khatami assumed office, his predecessor, Ayatollah Akbar Hashemi Rafsanjani, had laid the foundation for a non-conventional program that would have been difficult to reverse. However, there was no evidence that Khatami tried to clamp down on either the public or secret parts of the program. In what was an indication of an efficiency-driven shake up of the nuclear bureaucracy, Reza Amrollahi, plagued by rumors of corruption and mismanagement, was replaced by Gholam Reza Aghazadeh at the helm of the Atomic Energy Organization of Iran (AEOI). The appointment of Aghazadeh, an energetic politician with a string of senior positions in the government, was a clear indication that the government was determined to streamline the growing nuclear enterprise. In yet another bureaucratic reshuffle in 1997, the Supreme Council of Technology (SCT) was created, tasked with advanced planning of both the legal and the illicit part of the programs. According to subsequently released information the Council prepared an outline for mastering the front end parts of the enrichment cycle: mining uranium ore and milling it to produce uranium oxide concentrate, known as yellowcake, converting the yellowcake into hexafluoride gas (UF₆) and enriching it to weapon-grade strength (Rouhani, 2012; Baeidinejad, 2005).

As before, the Bushehr plant, the public face of Iran's nuclear project, was eagerly promoted. After a series of delays and construction mishaps, a breakthrough occurred when the Russian Minister of Atomic Energy Yevgeny Adamov took it under his wings.

At the end of November 1998 Adamov announced that under a new agreement, Russia would complete the first reactor at the cost of US800 million dollars and three additional ones estimated at US3-4 billion dollars. He added that Iran was serious about its nuclear energy and stressed that the technology was 'strictly peaceful' (Wehling, 1999).

Moscow's formulaic assurances of peaceful use did little to dispel allegations that Moscow engaged in illicit collaboration. The media also focused on missile propulsion technology sold to the Iranian regime. In September and October 1997, *The Washington Times* reported that Russian technology used in the RD-214 rocket engine powering the SS-4 medium range ballistic missiles were transferred to Iran. Around the same time it was revealed that missile guidance components were also sold (Gertz, 10 September 1997).

The Russian Central Aerodynamic Institute was said to have concluded an agreement for the construction of a wind tunnel and other facilities for the Iranian missile program. Along the way, the Russians provided the know-how and training in nuclear and missile sciences to Iranian students and engineers in a variety of universities and technical institutes. The Baltic State Technical University in St. Petersburg, Bauman Moscow State Technical University, and the Moscow Aviation Institute were among the locations mentioned in *the Washington Times* and other media reports (Wehling, 1999).

As noted in the preceding chapter, Russian assistance with the nuclear program in Iran created anxiety in Washington and Israel, which has run its own surveillance operations. Indeed, as early as January 1999, the Mossad disclosed that there were some 10,000 Russian personnel helping with the entire spectrum of the fuel cycle and the relevant ballistics (O'Sullivan & Davis, 21 January 1999). Prodded by Israel and Congress, the Clinton administration put significant pressure on Moscow to stop providing nuclear assistance to Iran only to be rebuffed by Vladimir Putin, the acting

President of Russia, who had replaced Boris Yeltsin in December 1999 and was elected president in August 2000 (Keck, 20 July 2014).

Unlike the liberal, pro-Western Yeltsin, Putin was a hard line nationalist who harbored plans to restore Russia's regional and global influence. Emboldened by the change of guard, Adamov, a skillful nuclear salesman, increased both the scope and the pace of cooperation with Tehran. Putin, Adamov, and an array of spokespersons for the government vehemently denied that Russia engaged in illicit activities, but skepticism in the West was widespread. As one report stated, Russian foreign policy became 'privatized' and 'profit orientated,' a setup that was ideal for mixing sales of legitimate technology and services with illicit ones (Larsen, Nielsen, & Damkjaer, 20 September 1998).

Faced with denial and obfuscation in Moscow, in March 2000, Congress passed the 'Iran Nonproliferation Act' that imposed sanctions on Russian companies suspected of transfer of prohibited technologies and materials to Iran. In retaliation, on 11 May 2000, Putin changed Yeltsin's 1992 presidential decree thus allowing Russia to sell nuclear technology to countries that were not fully monitored by the IAEA such as Iran. Moreover, in a highly unusual step, on 19 December 2001, the Russian parliament, the Duma, ratified a cooperation treaty with Iran. Admitting the obvious, John Wolf, Assistant Secretary of State for Proliferation, noted that: "U.S. failed to stop Russian nuclear assistance to Iran" (Congress, 2000, p. 163; AFP, 19 December 2001).

On balance, Washington had better results with China, which, as noted, was an important exporter of nuclear hardware. China had assisted in the development of Iran's nuclear program via the transfer of technology and machinery. Both countries secretly agreed to coordinate the building of the Isfahan Nuclear Research Center (INRC), which was not brought to the knowledge of the IAEA until 2003 (Garver, 2006). After a series of meeting between Chinese and American officials in 1998, China's leaders agreed to

end their assistance to Iran's nuclear program, stop selling of anti-ship cruise missiles and stop help with the ballistic missile program (Burman, 2009).

Under Khatami, the network of smuggling along old and new routes was also flourishing. A long list of intercepted cargo indicated Iran's continuous interest in material and components required for nonconventional use. Though not known at the time, Iran was pushing hard to complete an indigenous nuclear fuel cycle. According to Hassan Rouhani, research and development of centrifuges was conducted in a secret research and development center at Kalaye Electric Company (KEC) (Rouhani, 2012; Rouhani, May 2013).

But it was the SCT's plan to construct a much larger enrichment facility housing up to 50,000 gas centrifuges which signaled a new and bold phase of the program. Located at Natanz, in the Isfahan Province, the secret construction started in March 2000, according to Rouhani. It was built in a 25 feet underground space covered by cement and concrete (Sadjadpour & Vaez, 2013; Warrick, 2 May 2010). Inside there was a 164 x 12 foot pilot-scale facility where nuclear engineers tried to modify the Khan's P1 and P2 centrifuges into the slightly faster running IR1 and IR2 models. In Arak, progress was made on the construction of the IR-40 reactor; once fully operational, it was expected to produce nine kilogram of plutonium annually, enough material for two bombs (Spector, 16 May 2003).

The combined Arak and Natanz facilities would have allowed Iran to fabricate highly enriched uranium, some of which had a legitimate civilian uses, but most of it was indicative of clandestine research. Rouhani was quite concerned about the vulnerability of the Natanz complex, writing that Iran had planned to ask Moscow for the powerful S-300 surface to air missiles (Ehsani & Toensing, Winter 2004; Spector, 16 May 2003; Rouhani, 2012).

In spite of the rapid progress on the fuel cycle front and the ballistics, the IAEA was highly complementary of Iran's allegedly peaceful nuclear track. Mohamed ElBaradei who replaced Hans Blix on 1st December 1997 was quite keen to refute mounting allegations of Iran's proliferation. For its part, the Khatami government, eager to score on the public relations front, basked in the Agency's seal of approval. On 16 March 1999, Foreign Minister Kharrazi appeared together with ElBaradei to thank the Agency for its support of Iran's nuclear program (IRNA, 16 March 1999). On 23 March 2000, David Kyd, the IAEA spokesman, noted the peaceful nature of the program, giving Teheran's public relation campaign yet another victory (IRNA, 23 March 2000).

There was even more jubilation in Tehran when, on 3 July 2001, ElBaradei stated that; "he had seen no evidence of Iran's violation of the NPT," followed by a similar statement by the United Nations' Secretary General Kofi Anan on 14 March 2002 (Edwards, 3 July 2001; Financialtimes, 14 March 2002). Anan's blessing was undoubtedly a moment of triumph for those who put their faith in A.Q. Khan's strategy to hide the weapon program in plain sight. Unfortunately for them and for Khatami's Dialogue, five month later, the cover on its illicit activities was blown wide open.

5.3 The MEK'S Disclosure and its Aftermath: Adjusting Tactics Without Changing Strategy

For all its savvy in hiding the non-conventional program, the 9/11 attacks put Iran in an uncomfortable spot. Al-Qaeda's brand of Islamist terrorism renewed attention to the revolutionary terror espoused by the Islamic Republic and there were allegations that some of Osama bin Laden's lieutenants fleeing from Afghanistan were sheltered by the Revolutionary Guards. Old questions about Iran's participation in the Khobar Towers attack in Dhahran, Saudi Arabia in 1996 that killed and wounded a large number of US

servicemen were raised by Louis Freeh, the retired head of the Federal Bureau of Intelligence (FBI). Freeh all but accused President Clinton of a cover-up of the affair so as not to jeopardize his outreach to Khatami (Seliktar, 2012).

In any event, President George W. Bush who arrived in the White House in January 2001 was certainly less inclined to follow his predecessor's policy. Indeed, Kenneth Pollack, one of the architects of the Clinton-Iran initiative, would subsequently write that “initially I felt that we had come very close to making a major breakthrough with Iran that if only we had done a few things differently... over the years, however, I have come to the conclusion that I was wrong in this assessment” (Pollack, 2004, pp. 341-342). According to Pollack, Iran was a country ruled by a regime in which “the lion’s share of power,” and important issues were controlled by those who were not interested in improving relations with the United States (Pollack, 2004).

Most alarming to Washington was new intelligence about Iran’s nuclear weapons program. A Department of Defense report released on 1st January 2001 concluded that Iran was a country “most active in seeking to acquire NBC weapons and missile related technology” (Wieselthier, Nguyen, & Ephremides, 1 January 2001). Other reports indicated that Iran collaborated with North Korea, prompting President Bush to count Iran as one of the ‘axis of evil’ countries - along with Iraq and North Korea - in his State of the Union address in 2002 (Bush, 29 January 2002).

While the intelligence was quite interesting, it was the National Council of Resistance of Iran (NCRI), the political arm of MEK, which produced the necessary ‘smoking gun.’ During a specially arranged press conference in Washington on 14 August 2002, Alireza Jafarzadeh, Washington representative of the NCRI disclosed that Iran was covertly producing nuclear materials in two secret facilities in Natanz and Arak. The NCRI claimed that Natanz facility included a nuclear fuel enrichment plant and a research

laboratory and that Arak boasted a heavy water reactor, two telltale signs of a nuclear weapons program (Patrikarakos, 2012).

Although some scholars believe that the CIA knew about both Iran's secret sites considerably before the MEK public announcements, (Jervis, 11 March 2015; Sick, 20 March 2015) the revelation about Iran's fissile material program ignited an international fire storm. Since the Committee of Defense and Strategic Studies of the NCRI, the report's author, did not divulgate its sources, it fueled speculations that the Israeli Mossad was involved. Given that the Israeli intelligence was known to have a relationship with MEK dating back to the mid-1990, this was by no means a stretch of imagination (Rouhani, 2012; Ritter, 2007; Dawson, 2011).

Whatever the origin of the information, the discloser was a disaster for Khatami. As noted, the facility was planned for a large number of centrifuges capable of producing significant quantities of uranium enriched to weapon grade level. Observers were quick to point out that the combined Natanz and Arak facilities would have allowed Iran to manufacture weapon grade uranium (Ehsani & Toensing, Winter 2004). Worse, Natanz was nearly completed by 2003 under an elaborate camouflage that eluded both the American and British intelligence monitoring operations, not to mention the IAEA.

In order to stay in the NPT, Iran had to formally disclose the illicit activity, inviting a round of stringent IAEA's inspections. Withdrawing from the Treaty would have given Tehran liberty to pursue the program unhindered but, as in the case of North Korea, sanctions and slide into a pariah status would have followed. Though a few minor officials and some hard-liners, including Mahmoud Ahmadinejad, the then mayor of Tehran, urged Iran to leave the Treaty, senior leaders decided to fine-tune their tactics. According to Hassan Rouhani, Iran had two goals; to prevent referring Iran's nuclear dossier to UN Security Council and buying enough time to master the enrichment cycle and perhaps

weaponization. As Rouhani put it “we wanted to provide enough time for our nuclear scientists to finish the program in a calm atmosphere” (Rouhani, 2012, pp. 132, 149, 150).

With the West mobilizing against the prospect of a nuclear Iran, achieving the requisite calm required some adroit political maneuvering. Attacking the credibility of the MEK and its alleged Israeli patron, the Mossad, was the first line of defense. This was made easier because MEK was on the State Department’s list of terror organizations. President Khatami was quick to use the State Department designation to denounce the ‘terror group’ as a handmaid of the malicious propaganda proffered by the ‘Zionist enemy.’ A Foreign Ministry spokesman explained that “MEK’s propaganda” contradicted the IAEA which repeatedly found Iran’s program to be in compliance with the NPT (Seliktar, 2012).

The Iranian tactic actually worked for a while. The initial official American response seemed to have been leaning in the Iranian direction. A State Department spokesman refused to comment on the veracity of the information while noting that MEK was a terrorist organization. Colin Powell, Bush’s Secretary of State, expressed “shock” that the intelligence community could not provide a confirmation on Natanz and Arak, but stopped short of accepting the MEK revelation (DLA Piper, 2006). Less diplomatically-oriented critics lambasted both the CIA and the IAEA for appearing ‘clueless.’ As the scandal reverberated, the Congress and the White House expressed alarm, setting a new dynamic into motion. Mohammed ElBaradei travelled to Washington to assure Bush that Iran would keep the nuclear program peaceful. The IAEA chief also promised to send his inspectors to the two suspect sites (CNN, 10 January 2003).

Much as ElBaradei tried to attempt an exercise in damage control, he failed to enlist the cooperation of the Iranian government who barred the inspectors from visiting the sites. David Albright, the head of the Institute of Science and International Security (ISIS), a think tank in Washington, stepped into the gap. Albright purchased a

commercially made satellite imagery of Natanz and Arak and collaborated with the CNN on a documentary that aired on 13 December 2002. The images clearly showed the considerable efforts to sanitize the sites after the disclosure (Albright & Hinderstei, 12 December 2002). On 14 December 2002 Foreign Minister Kharrazi rejected the allegations that Iran was hiding an illicit program. He argued that Iran's nuclear activities were completely transparent and peaceful. Kharrazi stated that “there is no covert program. In fact on the whole it is impossible to cover up such facilities” (IRNA, 14 December 2002).

Whether acting on his own or at the behest of the country, on 17 December 2002, ElBaradei rejected the American accusation. On 9 February 2003, in anticipation of the IAEA inspection scheduled for later in the month, Khatami announced that Iran was determined to master the entire fuel cycle, albeit for peaceful purposes. This official acknowledgment prompted the State Department's spokesperson to note that Iran's “plans for a complete fuel cycle” revealed its intent to obtain nuclear weapons (Melman & Javedanfar, 2008; Ritter, 2007; State, 11 February 2003).

Technically, Iran was obligated to declare the Natanz facility to the IAEA six months in advance of injecting uranium hexafluoride gas into the centrifuges. But the secretive way in which the program was managed, increased the pressure on the country. Even the leniently inclined ElBaradei had to show that the Agency was seriously pursuing the matter. He scheduled a visit for October 2002, but Tehran, in a bid to craft a new strategy, postponed his trip to February 2003 (Reuters, 4 february 2003; Albright & Hinderstein, 12 December 2002).

Little information of the internal deliberation surfaced, but in a move that surprised many, Iran decided to make virtue out of necessity. On 9 February 2003, President Khatami officially revealed the existence of Natanz and Arak on Iran's national television and welcomed the IAEA inspectors. Khatami stated that Iran was constructing a large

number of nuclear facilities in an effort to master the nuclear fuel cycle. Khatami announced that Iran had plans to produce 6,000 MW of electricity and stressed that the program was designed for peaceful uses only (ISNA, 9 February 2003; Peterson, 19 September 2003).

Khatami's 'straight talk' appearances, however, contravened Iran's effort to evade the IAEA inspections that came to resemble what one analysts called a 'cat and mouse' game (Seliktar, 2012). The pattern was always the same- an initial request to visit a specific facility or parts of a facility was denied, only to be permitted later. The Kalaye Electric complex was a case in point. Since the Iranians did not declare the facility in their safeguards agreements, the IAEA was not authorized to visit Kalaye complex. But even after Khatami promised a more liberal policy, the Agency's inspectors were denied access to parts of the complex during a visit in March 2003. Iran assured the inspectors that only 'simulation studies' had taken place there and that no nuclear material had been used in these simulations. When the Agency continued to insist on getting soil samples from the site, the authorities had to do some fast adjustments (ElBaradei, 2011). According to Rouhani, shortly after, the equipment was dismantled and moved to Pars Trash - another AEOI facility located in Tehran. Kalaye Electric was renovated to prevent detection of nuclear material and an incomplete declaration to the IAEA was submitted (Rouhani, 2012).

In May and June, Iran gave the IAEA inspectors access to the Kalaye complex, but their request for sampling was denied. After more pressure from the Agency, the Iranians relented and the inspectors were allowed to take samples in August using 'swipes'—small squares of cloth wiped over selected surfaces. The swipes were analyzed in the IAEA's member states laboratories (using double-blind samples to mask the origin), revealing traces of both LEU and HEU. The evidence forced the hands of Iran to belatedly admit that the Kalaye facility was used for experiments with centrifuges. More embarrassing,

the IAEA inspectors reportedly found the centrifuge factory secreted behind a false wall at the facility (ElBaradei, 2011; Rouhani, 2012).

Though the full extent of the illicit program was not yet known, the Bush administration was becoming increasingly frustrated with Iran's deceptive tactics. On 28 April 2003, John Wolf, Assistant Secretary for the non-proliferation bureau in the State Department, accused Iran of cheating under the NPT's obligation. According to the Wolf, Iran had a clandestine program to acquire nuclear know-how and technology as part of an illicit weapons effort. His tone was unmistakably harsh: "Despite saying it wants nuclear energy only to generate electricity, Iran is going down the same path of denial and deception that handicapped international inspections in North Korea and Iraq" (Reuters, 28 April 2003).

To stop this 'cat and mouse' games, the United States demanded that Iran sign the Additional Protocol to the NPT, the IAEA effort to more effectively constrain member states from pursuing illicit programs. Began in 1993, the initiative produced a voluntary Additional Protocol designed to strengthen the original safeguards for verifying peaceful usages on their nuclear facilities. Unwilling to reveal its reluctance to sign the document, the Khatami government deployed delays and obfuscation tactics. Aghazadeh's interview with the *Le Monde* on 12 March 2003 was characteristic; the AEOI chief told the paper that Iran was willing to sign the Additional Protocol if Western countries dropped their economic sanctions against Tehran. In his words: "We are waiting for the sanctions to be lifted before we sign" (Tehrantimes, 2 July 2003; Associatedpress, 12 March 2003).

To increase pressure, the State Department urged Russia to condition the continuation of its work on Bushehr upon Iran's joining the Additional Protocol. But Alexander Rumyantsev, Putin's new Atomic Energy Minister, was hostile to the idea. Dispensing with diplomatic niceties, Rumyantsev announced that in spite of Washington's pressure, Russia and Iran were determined to continue their nuclear

cooperation (IRNA, 12 March 2003). The Europeans, engaged in their “critical dialogue” with Iran and eager to expand commercial ties, were equally reluctant to comply with the American request. Matters became more complicated when Russia, defending its dealings with Tehran, accused Western companies of selling Iran illicit technology, only to be sharply rebuked by European governments. While the turmoil was not orchestrated by Tehran, it clearly helped Iran to drag out the Additional Protocol affair. Indeed, when Washington accused Tehran of cheating on the NPT, Iran accused the United States of fabricating charges in order to undermine Iran’s good standing with the IAEA (Reuters, 28 April 2003).

Much as before, the NCRI upended Tehran’s game. On 15 May 2003 the group revealed the existence of a new secret site in Lavizian-Shian Technical Research Center associated with Malek-Ashtar University of Technology in North Tehran. In August, Albright’s ISIS satellite imagery by Digital Globe confirmed the existence of a well-developed complex at the site. Faced with new evidence of Iran’s cheating, ElBaradei was finally forced to abandon his quiet diplomacy of discretely persuading the country to comply with the Agency’s request. Still, in a 6 June report, issued ahead of the meeting of the Board of Governments on 19 June, the IAEA chief chose somewhat ambiguous language to describe Iran’s violation of the NPT. The report indicated that Iran has failed to meet its obligations under its Safeguards Agreement with respect to the reporting of nuclear material, the subsequent processing and use of that material and the declaration of facilities where the material was stored and processed (IAEA Report, 6 June 2003).

According to the report, these failures can be summarized as follows: First, failure to declare the import of natural uranium in 1991, and its subsequent transfer for further processing. Second, failure to declare the activities involving the subsequent processing and use of the imported natural uranium, including the production and loss of nuclear material, where appropriate, and the production and transfer of waste resulting therefrom.

Third, failure to declare the facilities where such material (including the waste) was received, stored and processed. Fourth, failure to provide in a timely manner updated design information for the MIX Facility and for TRR. Fifth, failure to provide in a timely manner information on the waste storage at Esfahan and at Anarak (IAEA Report, 6 June 2003).

ElBaradei's efforts were hardly welcomed by John Bolton, President Bush's hardline Undersecretary of State for Arms Control and Proliferation, who tried to persuade the European members of the Board to adopt language declaring Iran noncompliance, a prerequisite for referring the dossier to the U.N. Security Council. Another NCRI discloser, on 9 July, of the Kolehdoz complex operated under the Revolutionary Guard's control, did not change the Board's position (Knowlton, 9 July 2003). As a matter of fact, on 26 August, ElBaradei send another positive report to the Board, prompting the Americans to characterize it as a 'whitewash' (IAEA Report, 26 August 2003).

But Bolton, known for his aggressive style, did not give up. Bolstered by a raft of intelligence findings, he pressured the European Union members on the Board to take a more assertive stand. Overcoming ElBaradei's reluctance, the IAEA gave Iran a deadline of 31 October to suspend enriching uranium and to comply with the NPT and sign the Additional Protocol. Great Britain, Germany, and France, which became known as the EU-3, were deputized to negotiate with Tehran (Sokolski, 22 January 2004).

Bolton's foray into the politics of the Vienna-based IAEA did not surprise Iran. Coming atop the American invasion of Iraq in March 2003, it raised alarm bells in Teheran. From its very inception, Iran was acutely aware of its geopolitical vulnerability and anxious that the United States may try and execute a "regime change," a fear that turned to near panic after Operation Iraqi Freedom. As noted, the nuclear arsenal was designed to serve as a protection; the prospect of being prevented from realizing this goal

created a huge dilemma for Tehran. The attendant debate had become so heated that it pierced the famously secretive deliberations on the nuclear program. For the first time in its history, the discourse extended beyond the small nuclear sanctum.

Predictably, only a handful questioned the rationality of the project or expressed concerns for the international price it could exact. One of them, Ahmad Shirzad, a professor of physics in Isfahan, who represented Khatami's reformist faction in the Majlis, delivered a strong critique. He accused the country's officials of promoting ambitious and unnecessary projects and added that, contrary to claims, the government was engaged in producing weapons of mass destruction hoping it would not be caught. Referring to the problems with the IAEA, Shirzad charged the government with fomenting tension and undermining Iran's position in the international community (ILNA, 25 November 2003). Shirzad's statement elicited extremely sharp comments from other members. Speaker of the Majlis, Hojjatolislam Mahdi Karroubi noted that: "My conclusion from your words was that the Islamic system tells lies, Israel and America tell the truth." Other parliamentarians also accused Shirzad of parroting accusations of America and Israel which, they found abhorrent (ILNA, 25 November 2003). By questioning Shirzad's veracity, the Speakers and his colleagues bolstered the Khatami administration line that there were no illicit intentions.

Coming as more of a surprise, a number of calls were made to openly acknowledge the non-conventional project. On 16 June 1998, Mustafa Zarei, a Majlis member, suggested that Iran must produce nuclear weapons to counter Israel and the United States (Kar-va-Kargar, 16 June 1998). One week earlier the conservative newspaper *Karvakargar* which was linked to the Guards, published an editorial stating that Iran required a nuclear capability in order to protect its national security. The editorial argued that because of the nuclear capability of Kazakhstan, Pakistan, India, and Israel, Iran's geopolitical situation demanded a revision in its nuclear policy (Kar-va-Kargar, 8 June

1998). There was little doubt that *Karvakargar* echoed comments that Yahya Rahim-Safavi, the Guard's chief, made in a closed meeting with his senior commanders. As reported by the press in May 1998, Safavi said that "can we withstand U.S. threats and protect the Islamic Republic from international Zionism with a detente policy or by signing conventions to prevent the spread of chemical and nuclear weapons?" (Takeyh, Winter 2004-05).

Clearly, these positions represented the extreme ends of the spectrum. Since the debate was underpinned by a subtle but powerful realignment of the negotiated political order, it was particularly confusing to outside observers (Farhi, 2001). Jolted by Khatami's reformist movement, hardline veterans of the Iran-Iraq war with deep roots in the Revolutionary Guards and the Guard-affiliated Basij, a semi-vigilante group, formed the Isargaran alliance. In 2003, it was expanded to create the *Etela'f-e Abadgaran-e Iran-e Islami*, (Islamic Iran Developers Coalition), or Abadgaran, co-led by Mahmoud Ahmadinejad, the mayor of Tehran, and Gholam Ali Hadad-Adel.

Abadgaran had the backing of the top ranking Revolutionary Guards commanders and Ayatollah Ahmad Jannati, the co-founder of the Haqqani School, a highly influential religious institution, and Ayatollah Mohammad Taqi Mesbah Yazdi, an arch-conservative cleric who mentored Ahmadinejad and Abadgaran. The isolationist Jannati wanted as few links with the Western world as possible and Mesbah Yazdi considered democracy to be a harmful Western invention. Both vehemently opposed Khatami's Dialogue among Civilizations, having defined it as a Trojan Horse out to destroy the Islamic Republic' (Mehrnews, 26 November 1999).

The Abadgaran leaders argued that Iran had a sovereign right to develop a nuclear program without the hindrance of the NPT. This so-called nuclear Principalist doctrine considered the NPT and its enforcement organ, the IAEA, a "cabal" of imperialist powers bent on denying developing countries nuclear power (Patrikarakos, 2012). Jannati and

Ahmadinejad, the most vocal voices among the nuclear Principalists, favored an immediate withdrawal from the NPT in order to pursue the ‘unfettered’ model of North Korea (Ahmadinejad, 23 December 2006; Ahmadinejad, 1 August 2006; Ahmadinejad, 9 September 2007; IRNA, 26 June 2005).

Yahya Rahim-Safavi, head of the Guards and Brigadier General Hossein Salami, strongly backed the Principalists in their quest to quit the NPT. *Karvakargar* was one of a slew of conservative and Guards –linked newspapers to published editorials to that effect. The Principalists argued that Iran should follow the path of North Korea and predicted that the West would quickly fold and even try to ‘bribe’ Iran into staying in the NPT. Calling themselves the true disciples of Ayatollah Khomeini, the Principalists declared that Khomeini was right to call the international system - its law, institutions, and diplomatic conventions - a reflection of an unjust world. To them the only sensible security policy was based on self-reliance in all matters nuclear (Rouhani, 2012; Patrikarakos, 2012).

But the sanction regime imposed on North Korea was an option that few outside the Abadgaran circles wanted to consider. The majority of the conservative and reformist elites wanted to continue with weaponization under the cover of the NPT. Hassan Rouhani, by then chair of the Supreme National Security Council (SNSC) and a close adviser of the Supreme Leader, was strongly convinced that in spite of the NCIR disclosures, Iran could evade serious penalties. Rouhani emerged as the leader of the so-called ‘nuclear pragmatists’ that included, among others, the editor of the *Entekhab* newspaper, a conservative daily close to the Ayatollah Rafsanjani, by then a member of the Assembly of Experts. Helped by the still influential Rafsanjani, the architect of the ‘hiding in plain sight’ strategy, nuclear pragmatists persuaded the Supreme Leader that staying within the NPT was absolutely essential (Hashemi, 30 September 2003). Rouhani,

in particular, was confident that, even with a more onerous IAEA inspection protocol, the extensive clandestine program could be reasonably managed.

With the blessing of Khamenei, Rouhani signaled to the European Union Iran's willingness to negotiate, having been delegated by the EU, Great Britain, France, and Germany, send their foreign ministers to Tehran. The so-called EU-3 delegation was received by Rouhani whose adroit management of the crisis won the day on 21 October 2003, the EU-3 announced an agreement known as *The Saadabad Agreement* committing Iran to the Additional Protocol. The Protocol was formulated in 1997 to give the IAEA enhanced inspection authority in both declared and possible undeclared sites. Rouhani followed up with a statement that in principle Iran had no objection to transparency and explained that it was forced to hide parts of its legal nuclear activities due to past "illegal sanctions and embargoes." He emphasized that his country had "always taken initiatives in signing disarmaments treaties because WMD were weakening the stability in the region and the world" (IRNA, 21 October 2003; Report, 21 October 2003; Rouhani, 2012).

The nuclear Principalists responded by bitterly condemning Rouhani and asserting that Iran's move to permit tougher inspections on its nuclear sites was a humiliating submission to Western pressure. To squash dissent, Ayatollah Khamenei took the unusual step of publicizing his approval for the Additional Protocol. Even so, on 24 October, 1,500 Iranian hardline protestors, mostly from the Abadgaran, gathered in Tehran to denounce the decision and demand to leave the NPT (Muir, 22 October 2003; IRNA, 22 October 2003, 19 November 2003; Dareini, 25 October 2003).

More than a week later, on 31 October 2003, Ayatollah Jannati warned that even though Iran committed itself to signing the additional protocol, "red lines" were still available. Jannati warned that if the Europeans failed to honor their pledges, Iran's commitments should reciprocally be regarded as canceled. The hardline *Jomhuri-ye Eslami Newspaper* wrote that the ultimatum of the IAEA had given Iran a historical

opportunity to make its relations clear with the “global bullies and oppressors.” According to the editorial, this “bitter truth” was proof that the only way to become a powerful state and protect its survival was through self-reliance and independence (IRNA, 31 October 2003; *Jomhuri-ye Eslami Newspaper*, 14 September 2003; Peterson, 2003; BBC, 14 September 2003).

But the official good will expressed by Khatami and his chief nuclear negotiator, was enough for the EU foreign ministers gathered in Brussels to announced on 17 November 2003 that “EU welcomes Iran’s commitment per its Tehran agreement and is now looking forward to its immediate and full implementation” (IRNA, 19 November 2003b). Initially, the hope for a ‘prompt and full implementation’ seemed to be fully justified. On 7 December 2003, the Foreign Ministry announced that Iran was suspending all its enrichment activity and, on 18 December 2003, Ali Akbar Salehi, Iran’s representative to the IAEA, made a pledge of sustained transparency by volunteering to sign the Additional Protocol to the NPT in a special ceremony in Vienna, granting a greater authority to the agency inspectors in verifying the Iran’s nuclear programme. The Additional Protocol required states to provide an expanded declaration of their nuclear activities and granted the agency broader rights of access to nuclear sites in Iran. Javier Solana, the foreign policy chief of the EU, lavished praise on the agreement, adding that it would prevent referring Iran to the U.N. Security Council (IAEA Report, 18 December 2003). John Bolton, however, was much more skeptical, especially as a month earlier the CIA had released an analysis detailing Iran’s vigorous pursuit of elements for weaponization. But Washington, desperate to secure the EU’s backing for its Provisional Government in Iraq, was not in a position to pressure its allies. Though keen to bring Iran to the Security Council, Bolton was forced to defer to the more urgent problem of gaining legitimacy of the post-invasion Iraq.

A round of a new tactic, the bait and switch game, however, quickly undermined the optimism of the EU officials. Iran denied the IAEA's inspectors access to the Lavizian-Shian site fingered by the NCRI- MEK; satellite images provided by ISIS on 10 March 2004 indicated that the complex, including roads and walkways vanished (ISIS Reports, 17 June 2004). When the inspectors were finally able to access the facility, they found no traces of nuclear activity. The NCRI contended that, in anticipation of the inspection, the Iranians destroyed the facility, removed six inches of top soil and relocated the equipment to another site, Lavizian 2 (Coughlin, 6 March 2006).

In any event, the announcement in June 2004 that Iran resumed uranium enrichment created a sense of despair among the EU negotiators. Sensing an opportunity, Bolton urged the IAEA Board to refer Iran to the Security Council, but, once again, self-interest trumped anxiety over proliferations. Mindful of their countries' profitable trade relations with Tehran, the EU-3 ministers resisted American pressure. Russia, which as noted, had emerged as a major trading partner of Iran, including important nuclear technology, was even more resistant. Though still not fully recognized in Washington, President Putin saw Iran not just as a source of profitable business but a ploy to bolster his increasingly independent foreign policy (Smith, 17 September 2004; NTI, 29 September 2004; Weisman, 24 January 2006).

The Agency's report of 1 September 2004 to the Board was relatively mild and contained no reference to the Security Council. To preempt further American pressure, the EU-3 initiated another round of negotiations with a view of offering a 'larger carrot', a reference to positive incentives that, according to conflict resolution theorists, would bring Iran around. The carrot in this instance was an invitation to Iran to join the World Trade Organization in return for dropping enrichment. The faith in the carrots seemed to have been vindicated when Iran signed an agreement on 14 of November 2004 in Paris (IAEA Report, 1 September 2004; Efron, 12 March 2005). Tehran committed itself to

suspending enrichment. This specifically meant suspending the manufacture of gas centrifuges, or operation of centrifuges as well as separation of plutonium and construction of a plutonium facility for the duration of the negotiations. The document recognized Iran's rights under the NPT and called the suspension voluntary. On 29 November Mohammed ElBaradei notified the Board that Iran had implemented the agreement (Sinha, 4 January 2005).

Though the Paris agreement was considered a triumph of European diplomacy, it was however, short lived. The bait and switch maneuvers started a few days later when Seyed Hossein Mousavian, one of the negotiators, clarified that the suspension of enrichment would be brief (Foxnews, 15 November 2004). A combination of political objections and bureaucratic foot dragging in Iran all but eviscerated the accord. For starter, the 2004 Majlis dominated by Abadgaran –affiliated members refused to ratify the agreement. Adding to the crisis, on 1 March 2005 Pierre Goldschmidt, ElBaradei's deputy, announced that satellite imagery taken during the preceding year indicated a robust progress on the Arak facility. Around the same time a fuller picture of the Natanz facility had emerged. As noted, Natanz, partially constructed underground, was planned as the premier enrichment center with a potential for fabricating enough weapon grade uranium to build a number of bombs (ISNA, 28 September 2005; ISIS, 4 March 2005).

The Parchin facility outside Tehran was another sore point. Throughout 2004, both the NCRI and Albright's ISIS had warned about illegal activities in the sprawling complex run by the Ministry of Defense, but the IAEA had been denied access. Parchin was already on the CIA's list because it housed a missile production facility, including a modified Shahab-3 that could potentially deliver a nuclear payload. But on March 24, the NCRI revealed the existence of a secret tunnel dug under the facility where work on a weapon program was conducted under the direction of Mohsen Fakhrizadeh Mahabadi, a Brigadier General in the Revolutionary Guards and a professor of physics at the Imam

Hussein University in Tehran. Fakhrizadeh was also the director of the nuclear program at the Ministry of Defense's Center for Readiness and New Advanced Technology in addition to chairing the Field of Expansion of Deployment of Advanced Technology (FEDAT), the organization that ran the nuclear program. In fact, American intelligence had already identified Fakhrizadeh as head of Project 1-11 (Green Salt) aimed at fabricating a nuclear warhead (Philp, 14 December 2009; Jafarzadeh, 2007; Gunny, 26 August 2010).

In spite of all this new evidence and the old infractions, the EU-3, anxious to save the Paris Accord, was willing to give Iran another chance. In August 2005, the EU-3 offered to supply Iran's LEU needs in exchange for a promise not to pursue fuel-cycle technologies. To replace Arak, the Europeans suggested supplying Iran with a number of smaller light water reactors that were 'proliferation-resistant' but Tehran rebuffed the offer by claiming the need for a heavy water facility dedicated to medical and agricultural experiments. With the "carrot" of the WTO added, Vienna hoped for a positive response especially as President Khatami was still travelling extensively abroad promote his Dialogue among Civilizations (Gold, 2009; Armscontrol.org, January 2014). He still seemed to be popular and determined to push for a liberal policy vision. What few outsiders realized, however, was that the president had little real political power left at his disposal.

5.4 Khatami: Out of the Loop or Part of the Program?

Since Khatami was elected twice in popular elections, the Revolutionary Guards, the Basij, and the Abadgaran had to find alternative ways to undermine his power. Over time, using the complexities of the negotiated political order, the Supreme Leader had transferred many of the state's roles to his own office known as the *Rahbar* Office (*Beyte*

Rahbari) or to the parastatal Guards. In fact, the SNSC headed by Rouhani, who reported directly to Khamenei, was arguably the most important step in the reshuffle. By the time Khatami was reelected in 2000, the presidency was stripped of much of its power, prompting some observers to suggest that the president was “out of the loop,” notably on nuclear matters (Seliktar, 15 January 2013).

However, Rouhani’s book (*Amniat-e Meli va Diplomacy Hastei*), as well as a careful reading of some of the Farsi sources, indicates that Khatami, while not involved in day-to-day nuclear decisions, was a loyal supporter of the clandestine program (Baeidinejad, 2005; FardaNews, 14 June 2008; Fars-News-Agency, 14 June 2008; Rouhani, 2012). In other words, while touting the Dialogue among Civilizations, he was firmly engaged in the deception program. Khatami first acquired an appreciation of nuclear weapons by reading the work of his favorite philosopher, Morteza Motahhari.¹⁵ A leading supporter of Ayatollah Khomeini and a ranking revolutionary leader, Motahhari was part of the Beheshti-Rafsanjani circle of early nuclear enthusiasts. He was assassinated by the shadowy Furqan group on 1st May 1979, but his writing provided a technological rationale for a bomb. As elaborated in chapter three, in one of his book, *Islam va Muqtaziyat-e Zaman*, (Islam and the Exigencies of the Age) Motahhari explained that the principle of using force against an enemy had not changed. What had changed was the sophistication of modern weapons and thus the arsenal that was needed to preserve deterrence (Motahhari, 1991, pp. 81-82).

Though for obvious reasons Khatami did not mention Motahhari, the message that defensive nuclear deterrence was compatible with Islamic principles was shared by many of his political appointees. Both defense Minister Akbar Torjan and leading reformist Ata’ollah Mohajerani, whom Khatami appointed Minister of Culture and Islamic

¹⁵ For more info about connection between Khatami and Motahhari see: FarsNewsAgency. (23 January 2012). *Zendegi va Karnameye Seyed Mohamad Khatami* [Life and Memoir of Seyed Mohammad Khatami]. *Fars News Agency*. Retrieved from <http://www.farsnews.com/newstext.php?nn=13901103000143>

Guidance, called for Iran to produce nuclear bombs (Coll, 17 November 1992). Others in Khatami's inner circle of leading reformists --Mohajerani's wife, Jamileh Kadivar, Ali-Reza Nouri, the younger brother of Abdullah Nouri, and Hadi Khamenei, the estranged brother of the Supreme Leader-- also welcomed the quest for the bomb within the context of deterrence (Sobhani, 2004).

Khatami and his reformist supporters emphasized Iran's right to nuclear technology, particularly uranium enrichment. That the president was more of a nationalist than his cosmopolitan Dialogue implied was evident in his Farsi language speeches. Shortly after his much lauded CNN interview, Khatami delivered an address in front of Ayatollah Khomeini's tomb where he attacked the United States in no uncertain terms (Star, 29 August 2004; Khatami, 2009). Other Farsi language appeals made him sound like a nuclear pragmatist. For example, following the test of the Shahab-3 missile capable of targeting Turkey, Israel, and India, Khatami pointed out that "Iran will not seek permission from anyone for strengthening its defense capability" (Faruqi, 2 August 1998). American invasion of Iraq in March 2003 drove the point of study self-defense to the hard-liners and reformists alike. On 6 May, in a hard-hitting statement, a member the Second Khordad collation (Khatami's movement) asserted that "the United States was previously far away. But now, sadly, it is Iran's neighbor in all directions. America's invasion of Iraq and its strategic objectives make it essential for Iran to reassess its policies" (Ehteshami, Spring 2004, p. 181).

As the pressure from the international community increased, Khatami's role as the apologist-in-chief for the country accelerated. He renewed calls to make the Middle East a nuclear free zone, a theme that nuclear pragmatists had embraced with varied degrees of enthusiasm. For instance, as early as 17 November 2003, Rouhani echoed the president when he urged the Europeans to help turn the Middle East into a WMD-free zone, pointing particularly to the danger posed by Israel's nuclear weapons arsenal. Appeals for

a nuclear-free zone exhilarated advocates of nuclear disarmament in the West but to those attuned to the nuances of diplomatic language, the plea sounded like a bargaining ploy involving the undeclared Israeli arsenal. Mohammad Ismail Kosari, a Majlis member, put it more bluntly when he stated that: “Our diplomacy was to destroy U.S. and Israeli nuclear warheads and only in such circumstances we can use enriched uranium for peaceful purposes” (Fardanews, 19 February 2012; IRNA, 17 November 2003).

Hamid Baeedinejad, the head of arms control in the Ministry of Foreign Affairs, argued that Khatami had known that the West lacked trust in Iran and used his Dialogue to build up confidence. In Baeedinejad’s view, the president hoped that his international travels would give Iran a chance to continue its clandestine program in a calm and secure atmosphere (Baeidinejad, 2005). Similarly, Mousavian argued that during Khatami’s nuclear talks, Iran demonstrated far-reaching overtures to resolve the nuclear dispute. Iran implemented the maximum level of transparency to which a member-state of the NPT can commit by accepting the Additional Protocol and Subsidiary Arrangement. Iran also demonstrated readiness to commit to all confidence-building measures, assuring the peaceful nature of the nuclear program—forever. Regrettably, Iran and its European counterparts failed to reach a final agreement because the U.S. continued to deny the legitimate rights of Iran under the NPT (Mousavian, September 18, 2013).

Khatami confirmed Baeedinejad’s claim in a subsequent interview with the *Nasim-e Bidari* magazine. Claiming that the critical part of the nuclear program was accomplished during his tenure, he added: “We chose the path that if it would continue, not only we had a better and more extensive nuclear technology but our nuclear portfolio did not go to the UN Security Council” (IRDC, 7 February 2010; Baeidinejad, 2005).

Some years later, on 14 June 2008, the semi-official Fars News Agency published a lengthy excerpt from a panel discussion between Mahdi Fazaeli, secretary general of the Association of Muslim Journalists (AMJ) and Abdullah Ramezanzadeh, spokesman

for the Khatami administration. The debate offered a critique of the aggressive foreign policy style of the then President Mahmoud Ahmadinejad. Ramezanzadeh lambasted Ahmadinejad's nuclear policy style that, in his view, was causing great damage to Iran. He called for a return to a Khatami-style diplomacy that made it possible for Iran to have a policy of confidence-building measures based on negotiations, and a covert policy of nuclear activities (Fars News Agency, 14 June 2008).

Khatami's high-profile dissimulation was greatly appreciated by the nuclear sanctum since it provided much needed credibility for the country. As one commentator put it "with his gentle face, soft rhetoric, and numerous trips abroad, Khatami has succeeded in softening the image of the Islamic Republic" (Bostom, 5 July 2004). Other observers believed that Khatami's foreign policy changed the international community's attitude toward Iran, reduced tension, and brought détente with the West. According to this viewpoint, in the shadow of his detente policy, the international consensus for war against Iran changed into the high gear cooperation (Fallahi, 21 April 2007; Bostom, 5 July 2004).

Khatami's legitimacy was crucial for Hassan Rouhani who, as noted above, worked frantically to avoid a referral to the U.N. Security Council. In his subsequent recollections, Rouhani wrote that the leadership had viewed the suspension of uranium enrichment in the Paris Agreement as a short tactical move. Iran was highly motivated to defy the international consensus forming against it and the alleged suspension was the tool of choice. But Rouhani admitted that, contrary to its pledge by Paris agreement, Iran did not stop producing the centrifuge machines, writing "we wanted a greater number of centrifuges" (Rouhani, 2012, p. 670). It was easy in his opinion, to use deceptive tactics because the Europeans wanted to preserve their leverage with the "moderates" as epitomized by Khatami.

Unlike the EU that wished themselves to believe in Iran's pledge, ElBaradei, with a close eye on the program, should have been more aware of Tehran's dissimulation. In his memoir, the IAEA chief admitted to having doubts about the veracity of his Iranian interlocutors. He recalled that Khatami once told him: "You shouldn't worry at all about our program. We only used inert gas in running our centrifuge cascade. The detail in the statement struck me as odd." ElBaradei added, "President Khatami, a cleric by training, had just referred to a means of cold testing a centrifuge without using nuclear material. His point was that Iran had not violated any nuclear material reporting requirements. But why would Khatami know about testing with inert gas?" (ElBaradei, 2011, p. 120).

After some hesitation, ElBaradei came to accept the regime's version, writing that "each of the senior Iranian leaders I had met - President Khatami, Aghazadeh, Mahdi Karroubi, [and] Rafsanjani had insisted that Iran's nuclear program was exclusively intended for peaceful purposes." ElBaradei was apparently taken by the leaders' appearance, bearing and knowledge and style: "They had spoken with eloquence and conviction, their impeccably starched white shirts and well-tailored robes lending their delivery an air of sophistication and piety. Each had come across as well briefed and knowledgeable about the details of the enrichment program." Described as the savviest politician among others whom ElBaradei met, Rafsanjani told the IAEA chief passionately: "I have seen so many of our people killed with chemical weapons during the Iran-Iraq War. I cannot be the one advocating dialogue among civilizations and at the same time developing nuclear weapons" (ElBaradei, 2011, pp. 123-124).

By his own admission, ElBaradei was guilty of failing to exercising more skepticism toward Iran. The Egyptian-born IAEA chief recalled that a number of people, including President Mubarak of Egypt, told him that Shiite theology permitted *taqiyya* (dissimulation) for the right cause, notably when it was used to protect oneself or those in one's care. ElBaradei even admitted chastising his Iranian interlocutors over *taqiyya*,

writing, “I made it clear to our Iranian counterparts that regardless of the origins of this behavior, their denials and ongoing cover-ups had deeply hurt their credibility with the international community. From the outset, they had dug a hole that would undermine their own diplomatic endeavors, what I referred to as starting out with a confidence deficit” (ElBaradei, 2011, p. 123).

But ElBaradei’s awareness of the regime’s cheating did not prevent him from torpedoing every American effort to send the Iranian case to the Security Council. The blunt-spoken John Bolton, who went on to serve on as the acting US ambassador to the United Nation, openly accused the IAEA chief of protecting the regime by underplaying its weaponization efforts. Bolton was equally unhappy with the EU-3 and Russia for buying into what he described as dissimulation and prevarication of Tehran (Frick, 11 November 2007; Goldenberg & Traynor, 13 December 2004). In spite of vigorous lobbying, however, Bolton failed to prevent the IAEA’s Board of Governors from reappointing ElBaradei for a third term in 2005 and more consequentially, he did not manage to bring Iran’s case to the Security Council. What outraged the Americans the most was the EU’s unwillingness to acknowledge that the bait and switch tactics gave Tehran cover to pursue illicit programs under the IAEA seal of approval (Steele, 14 June 2005).

In retrospect, the American assessment was quite correct. As Rouhani confessed, Iran’s nuclear activities continued secretly without attracting much international clamor. He explained that enrichment suspension was a sop to the EU-3, even as Iran moved ahead on other fronts. Accordingly, while Iran negotiated with the West, it was installing equipment in parts of the Isfahan Uranium Conversion Facility. By creating a calm international atmosphere, Iran could accomplish the work in Isfahan and beyond. He proudly described the deception as a time buying measure; “while Iran kept the West at the negotiation table, it was able to import advanced materials to further develop the

program.” So much so that the regime could secretly complete installing equipment for the conversion of yellowcake and simultaneously could convince the Europeans that there was no illicit activity as defined by the Paris Agreement (Rouhani, 30 September 2005; Rouhani, May 2013; Rouhani, 2012).

Rouhani was equally proud of the Iran’s efforts to split the American-European nonproliferation coalition. He recalled that “from the beginning the Americans repeatedly told the Europeans that the Iranians are insincere and misleading you, but the Europeans used to reply, ‘we trust them’” (Rouhani, 2012, p. 236). The disagreement between the Americans and the Europeans during the 2003 IAEA Board meeting was, in his view, a case in point. While sharing the same goal of preventing Iran’s proliferation, they differed on virtually everything else: referring the dossier to the UN, sanctions, and use of military options.

ElBaradei echoed Rouhani’s observations that there was an extraordinary rift among western powers. While the United States, Canada and Australia insisted to strong condemnation of Iran, the Great Britain, France and Germany tried to soften the resolution’s tone (ElBaradei, 2011). The quarrels among the allies provided Iran more breathing space than in the past and enabled it to advance its nuclear program. All in all, Iran leaders felt that the strategy of slow-plying the international community through ongoing negotiations and simultaneously developing the nuclear program has perfectly served the country well (Rouhani, 2012).

5.5 Slow-Playing the West While Developing the Nuclear Program

Though both Khatami and Rouhani might have overstated their achievements for political reasons, subsequent revelations indicated that President Khatami’s tenure was, by far, the most prolific in the history of the nuclear program. As noted, the Supreme Council of

Technology streamlined planning and set timelines for attaining specific tasks. According to Hamid Baeedinejad, the entire enrichment cycle was completed by 2005 (Baeidinejad, 2005).

Insiders confirmed that the program had accelerated under Khatami administration, and went into high gear after 2002. Writing in 2008, Mohsen Aminzadeh, Khatami's deputy foreign minister, asserted that during the Rafsanjani period 25 percent of the work needed for the enrichment cycle was accomplished, compared to 65 percent in the Khatami era. Mahmoud Ahmadinejad added only 10 percent because sanctions had progressively slowed the work, according to Aminzadeh. Even if this statistic was self-serving, Aminzadeh's general point that, by averting sanction, the Khatami administration made good progress was credible. He noted that: "our efforts were to avoid sanctions and we were successful" (Fararu, 26 July 2008). The auspicious international atmosphere and a flourishing economy due to the rising oil prices made it possible for Iran to master the enrichment cycle and experiment with military applications.

Support for Aminzadeh's argument came from the documentation that Iran turned over to the IAEA as part of the Additional Protocol negotiations and subsequent interviews by the Agency's inspectors. During the Khatami tenure Rafsanjani's procurement techniques were modified and expanded. Iran acquired the necessary equipment by exploiting the so-called "gray zones" of weak borders, front companies, middlemen, and inadequate or nonexistent enforcement of the NPT protocols. Iran provided details of how it attained sensitive material and technologies from Asian, European and North American firms. According to authorities familiar with Iran's disclosures, most of the materials were routed through a transshipment hub in Dubai that masked the real destination (Warrick, 21 December 2003).

Pakistan was not mentioned, but there were references to its signature technologies. A Western diplomat with access to the documents commented that: "There is a Pakistani

link certainly, but we don't know the details (Sanger & William, 4 January 2004). The blueprints and components that Iran had obtained during several installments from the late 1980s to the mid-1990s, allowed it to overcome major technological obstacles to proceed toward uranium enrichment. It was, however, a testament to the adroit maneuvering in the Khatami period that enabled the nuclear program to make good use of the Pakistani technology. David Albright who tracked Iran's nuclear activities and procurement for more than a decade noted that: "Acquiring the drawings and a few components was a tremendous boost to Iran's centrifuge efforts. The possession of detailed blueprints could allow Iran to skip many difficult research steps" (Sanger & William, 4 January 2004).

That such advances were scored in spite of intense scrutiny by the CIA and other intelligence services was another triumph for the regime. As noted in the previous chapter, the critical Pakistani connection was the greatest surprise in this context. Gary Samore, a former nonproliferation aide in the Clinton administration's National Security Council held that the U.S. intelligence had some successes in obtaining information about Iran enrichment efforts, but it failed to find out about the Pakistan connection. According to Samore, "the extent of Pakistan's ties was, in retrospect, the surprise of the 1990's" (Sanger & William, 4 January 2004). Robert Einhorn, former special advisor for nonproliferation and arms control at the State Department noted that the reason of failure was that Washington was too concentrated on Russia. Jon Wolfsthal, former special advisor to Vice President Joseph R. Biden for nuclear security and nonproliferation made the same point: "We saw Russia as Iran's main source of technology, and if shut off, the flow to Iran's program would freeze in its tracks. That was shortsighted" (Warrick, 21 December 2003).

Though overcrossing on Russia could be defined as shortsightedness, it is quite clear that its roots were paradigmatic in the sense that the NPT state-to-state parameters

of proliferation could not account for a case where a rogue scientist with apparent support from government elements would sell technology to a rogue actor.

It is less clear, however, why, MEK furnished the smoking gun” evidence in 2002, the United States and the EU did not stop Iran’s proliferation. One possible explanation is that Khatami’s international credibility protected the regime. Helped by the skills of the chief nuclear negotiator, Hassan Rouhani who was adept at slow playing the West, the regime managed to scuttle American efforts to refer Iran to the Security Council. It is highly likely that another nuclear pragmatist at the helm of the regime would have evaded sanctions as well. But the election of the Principalist Mahmoud Ahmadinejad in 2005 triggered a direct confrontation between the regime and the guardians of the NPT system.

5.6 Conclusion

Khatami’s domestic liberalism and his diplomatic offensive raised hopes that Iran would rollback its nuclear program. Expectation of a voluntary rollback was heightened because of the widely promoted ‘Dialogue among Civilization.’ But, the international rhetoric notwithstanding, the regime actually revved up its nuclear effort. Indeed, it was the protective cover of the ‘Dialogue’ that deflected attention from the nuclear praxis - ranging from the construction of secret enrichment facilities to experimentation with weapon designs.

Interesting enough, Khatami’s international credibility protected Iran from what was potentially a catastrophic disclose of its secret sites. Helped by the skills of the chief nuclear negotiator, Hassan Rouhani, Iran managed to avoid sanctions that would have raised the cost of the nuclear program.

CHAPTER 6: AHMADINEJAD: THE RISE OF THE NUCLEAR

PRINCIPALISM DOCTRINE

The aim of this chapter is to discuss the political change in Tehran that dramatically increased the cost of running the nuclear program. After years of hiding in ‘plain sight’, after the MEK expose, and after using creative diplomacy to avert sanctions, the Principalists, an alliance of ultranationalist secularist and ultraconservative clergy under the leadership of President Mahmoud Ahmadinejad, asserted Iran’s unabashed nuclear sovereignty.

Section 6.1 presents an analysis of Ahmadinejad’s vision of international relations, a combination of the non-alignment platform popular in the 1960’s and a semi Islamic-socialist creed. Section 6.2 elaborates on Ahmadinejad’s intentional philosophy of ‘nuclear sovereignty for all’ and a matching critique of ‘nuclear apartheid’ perpetuated by the West against developing countries. Section 6.3 analyzes the leadership debate in Tehran on whether to stay in the NPT or follow Ahmadinejad’s call to withdraw from the organization. Section 6.4 covers the emerging debate, promoted by sanctions, whether the costs of the nuclear program outweigh its benefits.

6.1 Ahmadinejad's Foreign Policy Doctrine: Iran's Place in the New International Order

The election of President Mahmoud Ahmadinejad in June 2005 jolted Western pundits and the Iranian political establishment alike. The forty nine year old Ahmadinejad, was a Revolutionary Guards veteran and a minor revolutionary apparatchik whose rather slim resume included a term as an appointed governor of Ardebil province and as mayor of Tehran picked by the conservatives of the City Council. He was the least experienced, least known, and least personally and professionally attractive of all the other candidates authorized by the hardliner Council of the Custodians of the Constitution to run in the presidential campaign (Amuzegar, Winter 2006). At the time of his election little was known about his foreign policy position, a situation that was to change dramatically in a matter of months.

Ahmadinejad understood that in order to break the long standing monopoly of the clerical class, Abadgaran needed to appeal to the electorate suffering from a deteriorating economic situation exacerbated by serious corruption and the growing gap between the rich and poor. Rank and file Iranians considered the clergy, which had been at the helm since 1979, and their children, who profited handsomely from their privileged positions, as corrupt and craving an extravagant life styles. The former president Akbar Hashemi Rafsanjani and his family became emblematic of the moral decay of the revolutionary leaders. By the early 2000s, Rafsanjani was considered to be one of the wealthier men in Iran and his sons had been embroiled in a series of corruption and embezzlement scandals. The situation gave Ahmadinejad and the Abadgaran purists, known as Principalists, a golden opportunity to speak out on social justice and economic issues (Ehteshami & Zweiri, 2007).

For the few who bothered to follow his campaign, Ahmadinejad was primarily a domestically oriented candidate, a populist extolling the ideals of Islamist equality,

seeking social justice, and fighting oppression. His rhetoric was replete with frequent attacks on the mullahs and their children, the so-called 'Aghazadeh,' a term denoting pretense, greed, and moral corruption. While whipping up resentment against the rich clergy, Ahmadinejad promised a more equitable sharing of the nation's oil revenues summed up by the slogan 'oil money on every Iranian dinner table' (Fardanews, 18 May 2008; Taheri, 2006).

Compared to the domestic agenda, his foreign policy platform was limited, consisting of lofty slogans about national dignity and the need to protect the national interest against foreigners. Based on reports from Iran, Western media expected Ahmadinejad to be concerned with economic problems and thus soften Iran's stand on the nuclear program. The *Washington Post* quoted Ahmadinejad's aide, who described the president-elect as a 'moderate man' offering hope for 'durable stable relations' with the United States (Vick, 27 June 2005). But once in office, the new president soon disabused all those who hoped for moderation in Tehran. He unfolded an extremely radical foreign policy program of peculiar and even contradictory mix of elements grounded in his life experience as a minor actor in the 1979 Islamist revolution. As one observer put it, "based on his rhetoric, past performance, and the company he keeps, Ahmadinejad appears a throwback to the early, more radical days of the Islamic revolution" (The Daily Star, 5 August 2005).

For Ahmadinejad Principalism stood for total devotion to Ayatollah Khomeini and dedication to restoring the foundational principles of the Islamist Republic. Ahmadinejad chastised the clerical class for growing reach on power and privileges and causing it abandon any pretense of furthering revolutionary export and helping with the liberation of the *mostazafin*, the dispossessed, as mandated by the Supreme Leader. By reviving the Trotskyite spirit, he put his country on notice that the 1979 revolution was not a national but a global event with objectives and ramifications well beyond the borders of Iran.

According to Professor Hamid Molana, Ahmadinejad's foreign policy advisor, the president wanted to change the alleged injustice pervading the international system to one of "esteem and glory" dictated by Islamic values and norms. To this end, he described his presidency as a "second revolution," where the "blood of the martyrs" would "cut off the origins of injustice in the world" (Molana, 2009, p. 145; IRNA, 29 June 2005).

The religious mandate notwithstanding, Ahmadinejad was also given to the glorification of the ancient Persian Empire, an anathema to Khomeini who considered the Persian past to be morally suspect if not subversive of the true Islamist identity. But to the president, the power that the Persians had exercised in the ancient world was a good yardstick to measure Iran's progress towards reclaiming its place in the global order. It was also in the alleged scientific prowess of the Persian Empire that Ahmadinejad found a template for Iran's future. Unlike the rather "rustic" Khomeini who had little interest in science, Ahmadinejad, a professor of transportation engineering at the University of Science and Technology, was convinced that scientific and technological progress were the ticket to Iran climb to the top. Not coincidentally, Ahmadinejad's political career blossomed following his election to the Central Council of the Islamic Society of Engineers, one of the precursors of Abadgaran (Chenar, 24 September 2010; Cyrus, 25 September 2010).

For all the idealistic undertones, the president's observations on international relations were firmly grounded in realpolitik. Though Ahmadinejad was only a minor player in the revolution and his ties to the top tier of the Revolutionary Guards were peripheral at best, the war, a defining experience of his generation, left him with a healthy appreciation for state power in its most realistic form. Ahmadinejad was quick to remind his audiences that a weak Iran had suffered mightily at the hands of its Iraqi enemy while the international community stood aside. In a controversial address at the United Nations General Assembly in September 2005, Ahmadinejad strongly censured the assembled

officials for letting “Saddam's regime” to use “the most monstrous WMD including chemical ones.” He emphasized that it was the international community that had equipped Saddam with those weapons. Worse, Iran was faced with a breathtaking hypocrisy begging the question “what was the reaction of those countries which declared war against weapons of mass destructions, when Saddam used chemical weapons then?” (IRNA, 17 September 2005).

This core belief system informed all aspects of Ahmadinejad's foreign policy. First, he planned to help Muslim countries to break the yoke of Western imperialism, colonialism, and capitalism. Having declared that the “reform in foreign policy is [his] government's top priority,” the president predicted that this policy would challenge the global power structure and its rules¹⁶(Ahmadinejad, 2006). He felt confident about this task because Iran was grounded in “today's human needs and the capacity of Islamic Revolution for answering those needs.” The depth of these alleged needs was only matched by the geographical breath. In his world, “the world requires the Islamic Revolution. From the southern point of South America to the Far East, they need us and we should answer them.”¹⁷

For all intent and purpose, Ahmadinejad seemed to have declared dramatically alter the status quo in the international order. He asserted that “for the realization of the Islamic Revolution's objectives, alteration of the current international order is required.”¹⁸ While criticizing his predecessors for pursuing a policy of détente with the West, Ahmadinejad boasted that, from the very beginning, he had considerable attention to the perils of the status quo and had written a number of article on the subject (Ahmadinejad, 16 September 2007; Ahmadinejad, 23 January 2008). In the following months and years he would

¹⁶ Mahmoud Ahmadinejad, in meeting with IRGC Commanders, August 28, 2007.

¹⁷ Mahmoud Ahmadinejad, in meeting with clergies of Mazandaran, December 4, 2006. Ahmadinejad, in meeting with IRGC Commanders, September 11, 2007.

¹⁸ Mahmoud Ahmadinejad, in meeting with Supreme council of Islamic propagation Organization at Qom Seminary (29 August 2008). Molana, *Syosat Khareji Jomhory-e Islami-e Iran Dar Dawlat-e Ahmadinejad*, p. 138.

expand on his foreign policy vision.

He defined his new policy as follows: “the active foreign policy is not that one [in which] we accept great powers' roles. Iranian nation never accepted such shame in the past and will never accept in the future.”¹⁹ Activist foreign policy required an active diplomacy described as “embarking on an offensive approach towards superpowers based on the Shia culture. We should have an offensive mood in politics, economy, and in culture.” Directing to his audience, Ahmadinejad said “My dears! Shiite culture means invasion to the main centers of global corruption.”²⁰ Because of his Persian and Shite background, he could fashion a policy of ‘glory, wisdom and expediency.’²¹ He was also convened that Iran must lead a “united front in order to oppose the expansionist spirit of unjust global system (Fars-News-Agency, 22 December 2008).

Ahmadinejad provided a few elements of his new international order. His point of departure was Ali Shariati's critique adjusted for the twenty first century of globalization and the spread of the liberal economy. Accordingly, the new and “unjust global system” had left Muslim and non-Muslim developing countries and on the sidelines, depriving them of a chance to live in “stability and prosperity.” The first step in this direction was to clean house in the Middle East. As he pointed out during a state visit to Pakistan, “global imperialist and oppressive powers ... are fomenting insecurity in our region. But they will fail for sure in their actions and during this break; the cooperation of regional countries for reducing the damage is very important” (Fars-News-Agency, 28 April 2008).

If cooperation with the ‘oppressed powers’ was one prong of Ahmadinejad’s foreign policy, confronting the United States, the leader of the “imperialist pack,” was another. Internationally, it meant adopting a confrontational tone in relations with the West,

¹⁹Ahmadinejad. M. (11 September 2007). In Meeting with IRGC Commanders.

²⁰Ahmadinejad. M. (29 August 2008). In meeting with Supreme council of Islamic propagation Organization at Qom Seminary.

²¹Ahmadinejad. M. (February 2, 2008) In meeting with the head of three branches, government cabinet and Parliament members.

especially the United States, courting socialist governments, especially in Latin America, and a more robust help for militant groups such as the Hamas and Hezbollah. With the latter firmly in the regime's corner, Ahmadinejad hoped to head the global jihad against the 'infidel' camp led by the United States (Hunter, 2010; Taheri, 2010). Exporting the revolution and destabilizing the region was, in his view, as vital as ever, a proven technique to shake up the international order and challenge American power. As he put it in 2008, "we are standing up to the American Great Satan and we are not alone." Though Ahmadinejad did not spell it out, he implied that breaking international law should not be ruled out fighting the "Great Satan" (Arjomand, 2010; Delpech, 2009; Taheri, 2010; Dehghani, 2007).

Taking on the "Great Satan" went hand in hand with fighting the "Little Satan" Israel, which, according to the president, was an American imperialist creation planted in the Middle East for Washington's benefit. Theologically, the situation posed an even greater challenge as it entailed Jewish control over Muslim shrines, a state of affairs that brought Ahmadinejad to launch an unprecedented attack on Israel. On 25 October 2005, the regime unveiled a conference "The World without Zionism" attended by many of the most savage critics of Israel from around the world (Reuters, 3 June 2008).

Two months later, in a speech to commemorate the nineteenth anniversary of Khomeini's death, Ahmadinejad held the United States responsible for "the ills of mankind," including the creation of the Zionist regime, and predicted the imminent downfall of both. He told the crowd that "you should know that the criminal Zionist regime will soon disappear off the geographical scene." Directing his remarks to the United States, Ahmadinejad noted that "as for the satanic power [the United States], the countdown to the destruction of its empire of power and wealth has begun" (Reuters, 3 June 2008).

Grabbing more world headlines, the president described Israel as "a cancerous

tumor” that had to be wiped off the map; in another version he referred to Israel as a “stain on the map.” In interviews with the media, including American television networks, Ahmadinejad refused to deny his desire to see Israel’s destruction or that he had called for an Islamic crusade against the Jewish state (IRNA, 26 October 2005; Bronner, 11 June 2006; MacAskill & McGreal, 27 October 2005; Fathi, 27 October 2005).

Having articulated his preferred future for Israel, Ahmadinejad set out to comment on its genesis. On 14 December 2005, during a tour of the Zahedan province, he articulated the view that the Holocaust was a myth created to justify the formation of Israel – described as “a move by the oppressor of the world [the United States] against the Muslim world” (Vick, 15 December 2005; Theguardian, 14 December 2005). Holocaust denial, a long standing tradition among fringe scholars and anti-Semitic group and politicians in the West, became Ahmadinejad’s tool of choice. On 11 December 2006 the Institute of International Studies attached to the Ministry of Foreign Affairs launched a Holocaust denial conference attended by white supremacists, several Holocaust deniers and David Duke, among others (Hunter, 2010).

Manouchehr Mottaki, Ahmadinejad’s Foreign Minister, stated that the aim of the gathering was not to deny or confirm the Holocaust, but to provide an opportunity for intellectuals who are “unable to freely express their views in Europe about the Holocaust” (Irsanews, 26 October 2005). On the opening day Ahmadinejad proudly declared that the world could look forward to a time when Israel would be erased from the pages of history: “You should know that this slogan, this goal, can certainly be achieved” (Fars-News-Agency, 27 October 2005; Taheri, 23 September 2007). Sounding apocalyptic, Ahmadinejad expressed the belief that the fate of Israel would be determined in the broader war that Islam was destined to wage against the infidels, a theme unveiled in many of his addresses (IRNA, 22 October 2005; IRDC, 23 July 2014; Jomhori-Eslami, 10 January 2009).

After years of polite discourse on the Dialogue of Civilizations, the belligerent speeches, often delivered with a clenched fist, raised questions about the intellectual and mental state of Ahmadinejad. A number of theories were offered to explain Ahmadinejad's particularly undiplomatic behavior and his occasional lapses into *folie de grandeur* or even delusion. Some observers felt that Ahmadinejad lacked political experience and was not truly aware the true impact of his belligerent rhetoric, highly confrontational foreign policy style, and erratic behavior (Ramezani, 7 August 2013; Maghen, 30 September 2012).

His staffing decisions, in this view, compounded the problem; the novice president appointed to his cabinet a team of military and security officials who lacked executive savvy and diplomatic sophistication. Like the president, they felt that the Iranian society failed to realize the revolutionary potential and wanted to return to the fervor of the 1979 period. Others, like Ruhi Ramezani, an Iran scholar at the University of Virginia, suggested that Ahmadinejad's shrillness against U.S. and Israel was a reaction to decades of U.S. sanctions, the American covert operations, repeated American and Israeli threats of bombing Iranian nuclear facilities (Alfoneh, September 2008; Safshekan & Sabet, 2010;Alfoneh, 1 August 2008; Ramezani, 7 August 2013).

Still others pointed out that much of Ahmadinejad thinking was influenced by his patrons in the Revolutionary Guards. Like Khatami, the high command of the Guards took a keen in Samuel Huntington's "The Clash of Civilizations." Unlike the former president, however, Major General Yahya Rahim Safavi and his fellow Guardsmen concluded that the clash of civilizations, fought between the United States and Islamic Republic, would lead to the defeat of the former. Safavi held that despite its 'raving,' the United States was a downward power, whereas the Islamic Republic was a rising one. An official strategic analysis of the Guards asserted that the American pillar in this clash of civilizations was "doomed to fail since it derides divine rule, encourages lust, promotes

endless material needs, and delivers human beings to Devil” (Radiozamaneh, 6 January 2014; Taheri, 2006, p. 101).

Iran, representing the Islamic pole, was in the eyes of Ahmadinejad and Safavi, the rightful leader of the Islamic world because of the ‘indisputable right of the Iranian nation.’ They contended that Iran was one of the only two Muslim nations that had not been colonized by the West and had played a leading role in the Islamic history. Most importantly, Iran was located in the center of the Islamic arch and boasted the strongest military and the largest economy amongst the Muslim world countries. Turkey, the only state capable of challenging Iran’s position, had decided to leave the Muslim world in order to join the community of European nations (Taheri, 2006).

But others were genuinely puzzled by Ahmadinejad’s behavior. Ali Ansari, director of the St. Andrews University’s Institute of Iranian Studies, pointed out that the “Ahmadinejad spectacle” was hurting Iran. He wondered what type of a leader would be so oblivious to the consequences of his behavior, “and [have] little if any will to extricate the country from the diplomatic mess it was in” (Ansari, 2007, p. 57). Haggai Ram, an Israeli scholar who made his name by castigating Israel for setting up Iran as a bogeyman, lamented that Ahmadinejad’s performance actually played into the hands of the Israelis who portrayed the regime as threat number one to the world (Ram, 30 October 2012).

According to Patrick Clawson, Ahmadinejad has been much more direct and blunt in his public comments. That creates a different environment. In some ways, that is useful: it has been helpful for European public opinion to realize that Iran’s leaders do not believe there was a Holocaust. In other ways, that has been harmful: it is hard to conduct behind-the-scenes diplomacy when Iran’s leader so much likes getting publicity. Even smaller benefits for Israel in reminding Europeans and others that Israel has some very unpleasant enemies, a fact which Israel uses to justify some of the aggressive moves it takes such as bombing Syria’s nuclear reactor under construction. (Clawson, 30 October

2012).

Raymond Tanter a professor of political science at Georgetown University noted that other Iranian leaders were as hostile toward the West in general and Israel in particular, but did not show their hostility with such fervor. Tanter did not elaborate on the sources of Ahmadinejad's zeal, leaving an opening for the speculation that the president was driven by true religious convictions (Tanter, 1 October 2012).

In fact, those acquainted with Ahmadinejad's religious beliefs disagreed that the provocative rhetoric should be written off as gaffes by an inexperienced politician or a rendition of position papers prepared by the Guards. According to this view, Ahmadinejad believed himself to be a "soldier" of Mahdi, the Twelfth Imam who went into a grand occultation in 941, but still directs the affairs of the world (Taheri, 2006). Ahmadinejad did not originate the idea that the Islamic Republic was ruled by the Hidden Imam and was destined to rule the world. This claim was the cornerstone of Ayatollah Khomeini's belief and one frequently found in his speeches. In a meeting with the Guards commanders at Jamaran, a neighborhood in Tehran, in March 1981, the Ayatollah stated: "The awaited Mahdi, is personally your Commander. He looks after you personally, and the reports of your activities are sent to him on a daily basis" (Taheri, 2010, p. 190). Though Khomeini did not make a theological claim to being the Mahdi he was widely referred to as the Imam, along with his official title of Supreme Leader.

Those who contended that Ahmadinejad beliefs were sincere, pointed out that, according to Shia theology, the Hidden Imam has chosen thirty six men in every generation whose occurrence prevents the mankind's existence from "falling off." In keeping with this argument, many of the ardent supporters of the president insisted he was one of the chosen men, a claim that Ahmadinejad did not try to dispel. To the contrary, he alluded to it in many of his speeches. Such musings may sound strange, especially when coming from a secular politician with a background in engineering. Still, many

Iranian leaders, including Shah Mohammad Reza, have shown mystical leanings (Taheri, 16 April 2006; Ansari, 2007).

However, in Ahmadinejad this tendency had reached startling proportions. So much so that one of the spiritual leaders of the Haqqani School, the ultraconservative network of clergy and laity, Ayatollah Ahmad Jannati, chairman of the Council of the Custodians of the Constitution, credited Ahmadinejad with “being inspired by God.” It was hardly a coincidence that Ahmadinejad’s spiritual guides in the Haqqani network had serious proclivities (*Emrooz Newspaper*, September 17, 2006).

Shortly after taking office, in September 2005, Ahmadinejad sponsored the first annual International Conference on the Doctrine of Mahdi in Tehran. Its purpose was to present Mahdism as an ideology and a set of principle that could shape world unity and promote peace across religions. Speaking to the gathering, a mixture of Western scholars of Islam, local academics, and Haqqani School followers, Ahmadinejad asserted that the “mission of the Islamic Republic and the *velayat-e faqih* is to prepare for the establishment of a world government as Mahdi, the Lord of the Age, rules and manages the world.” As for the role of Iran, it must “become the platform for the emergence of the Mahdi as a great event leading to the salvation of mankind” (BFNA, 14 September 2005; *Sharghnewspaper*, 12 November 12, 2005).

Proclaiming the conference a huge success, the president was all too happy to promote his personal links to the Mahdi. After his contentious speech at the 2005 U.N. General Assembly, Ahmadinejad recalled that the “Hidden Imam had drenched the place in a sweet light” (*Farda News* 19 February 2008; Ansari, 2007, p. 697). On some occasions the president disclosed having a tête-à-tête with the Hidden Imam and, in one of the first acts after taking office, he donated some US\$ 15 million for the Jamkaran Mosque housing a holy well where pilgrim dropped messages to the Hidden Imam. According to persistent rumors, the Ahmadinejad cabinet signed a “contract” to work for

expediting the coming of the Mahdi and dropped it into the well (Mardomak, 4 October 2008; Guardia, 14 Jan 2006; The Washington Post, 16 December 2005).

Still more astounding, Ahmadinejad took to arguing that his presidency was linked with the mission of liberating the Palestinians in preparation for the return of the Hidden Imam. He announced that “clashes in the occupied land are part of a war of destiny. The outcome of hundreds of years of war will be defined in Palestinian land” (Aljazeera, 26 October 2005). On a more apocalyptic note, Ahmadinejad declared that the Hidden Imam granted him the presidency “to provoke a clash of civilizations in which the Iran ruled Muslim world takes on the infidel West” (Taheri, 16 April 2006).

In other words, Iran had to present the idea of pure Islam as the only path for the salvation of mankind to all nations and destroy the current models in the world. Amir Taheri, the veteran Iranian journalist and a consummate observer of the regime, commented that “when Khatami spoke of a ‘dialogue among civilizations,’ perhaps without meaning it, Ahmadinejad talked of a ‘clash of civilizations’ and appears to mean it” (Entekhab, 8 May 2008; Taheri, 2009, p. 292).

Though Ahmadinejad’s beliefs were ostensibly otherworldly, they were peppered with realpolitik observations on international reality, a mixture identified in the above discussion of his core beliefs. According to Hassan Abbasi, Ahmadinejad’s strategic adviser known as the “Iranian Kissinger,” the president was careful to emphasize that the coming clash between Iran and the US-led “Crusader Zionist camp” would not take the form of sudden apolitical battle between forces of righteous and the forces of evil ushering the Mahdi. Rather it would be a slow war of attrition, a low intensity asymmetrical conflict where Iran and the Islamic nations had a huge advantage. Additionally, the Islamic world controlled the “lifeblood of the infidel, having four fifths of the world’s oil reserves” (Taheri, 29 March 2006; Taheri, 2010, p. 188).

While presenting the encounter as a contest of will between the ancient and

enduring Persian civilizations and the powerful but lacking in resolve Western hegemon, Ahmadinejad stressed that nuclear advantage enjoyed by the United States would make it impossible to win the future battle. To the president, it was truly a “divine coincidence” that he had been called to serve at the time that Iran needed to develop its nuclear arsenal, to match the only advantage that the infidels enjoyed.

What sounded seemingly logical to Ahmadinejad put Western observers on edge as indicated the worst case scenario of proliferation - seeking a nuclear arsenal to further an ideological foreign policy goal. In the words of one commentator, under normal circumstances “world leaders would not be too anxious if a Middle Eastern religious zealot started badmouthing Israel or sounded off about international conspiracies against Islam. But as soon as the word ‘nuclear’ was mentioned the stakes were raised” (Naji, 2008, p. 132). The British *Telegraph* stated that “the prospects of such a man obtaining nuclear weapons is worrying.” Dispensing with journalist niceties, *The Washington Post* proclaimed Ahmadinejad to be a “certified lunatic” (Guardia, 14 Jan 2006; *The Washington Post*, 16 December 2005). With the stakes so high, it was hardly surprising that the international community took a more intense look at Iran’s nuclear politics.

6.2 The Nuclear Program in Ahmadinejad’s World View: Nuclear Equality for All

Devastating as Ahmadinejad’s critique of the international system was, it was his complaints against Western hegemony in nuclear matters that carried special rancor. As noted in the theoretical chapter, the “nuclear club” and its role as a gatekeeper of the nonproliferation order ranked high among the grievances of developing countries. A book entitled *Nuclear Apartheid* captured a taste of this acrimony by describing the NPT as “treaty to castrate the impotent” (Maddock, 2010, p. 251).

From his earliest days in Isargaran, the precursor of Abadgaran, Ahmadinejad asserted that the NPT, like the United Nations, was a creation of the privileged Western powers. He went on to develop a trenchant critique of the NPT by framing the debate in terms of national sovereignty, inalienable rights, international justice, equality, and resistance to foreign pressure. Ahmadinejad was convinced that to achieve its rightful status in the Middle East, Iran needed to challenge the nonproliferation order. Adopting a historical-heroic posture, Ahmadinejad compared himself to Prime Minister Mohammed Mossadegh who fought to nationalize Iran's oil against British and American wishes in the 1950s. In both cases, control over energy resources encapsulated the large themes of sovereignty, modernity, self-sufficiency, and non-submission to the control of the West. In a metaphor understood by most Iranians, the president equated giving up enrichment to lose independence (Green & Wehrey, 2009).

Ahmadinejad hammered constantly this theme in his public statements. On 26 June 2005 he told a crowd that "it is the Iranian nation's fundamental right to move forward in all fields and obtain new technologies including nuclear one" (IRNA, 26 June 2005). Clearly, to Ahmadinejad, developing nuclear technology was not only a tool to produce electricity, or even nuclear weapons, but also a way to advance Iran's scientific, industrial, and economic development. In his vision, nuclear technology was a symbol of progress, modernity, and national independence. Conversely, failure to develop a nuclear base was equated with underdevelopment and backwardness (Adebahr, 20 January 2014; Rezaei, 2015).

In the eyes of the president, the nuclear program was as important to Iran as was the landing of a man on the moon to the Americans. More to the point, Ahmadinejad nursed an ambition of becoming a leader in nuclear technology for the benefit of the Muslim *Ummah*. In a speech on 15 September 2005 he declared his willingness to provide nuclear technology to all Muslim countries: "Iran is ready to transfer nuclear technology

to the Muslim states due to their need” (Ahmadinejad, 9 September 2007).

To broaden popular support, the Ahmadinejad government embarked on a public relations campaign to turn the nuclear program into a civil religion replete with elaborate rituals and mass festivals. On April 2006 the president celebrated the enrichment of a small amount of uranium to a level of 3.5 percent with a nuclear holiday and a lavish ceremony transmitted by national television. In an auditorium in Mashhad packed with officials, Guard commanders, and clergymen flown specially for the occasion, a triumphant Ahmadinejad proclaimed that Iran had joined the ‘nuclear club.’ Two containers said to contain Iran’s first independently enriched uranium were displayed as ‘exotically clad dancers whirled around them’ and ‘choirs thundered Allah Akbar.’ Many in the audience stood up and thrust their fists into the air (Dareini, 11 April 2006; Seliktar, 2012).

The term “nuclear club” – reserved for the five nuclear powers – was puzzling in this context. Two vials of LEU most definitely did not amount to an entry ticket to the club, but Ahmadinejad, eager to create the pretense of a nuclear power, was willing to engage in high stakes make belief. Even more astounding was the fact that such rhetoric flew in the face of claims that Iran did not intend to develop the bomb. Throwing the cautiousness of his predecessors to the wind, Ahmadinejad repeated the performance one year later – in what became known as ‘National Nuclear Day’. Before a sizable group of diplomats and journalists assembled in a large hall at the Natanz facility, the president announced that Iran acquired the capability to enrich uranium on an industrial scale. Ahmadinejad, who was caught on camera shedding a tear moments earlier, told the audience that “with the great honor and grace of God, I announce that as of today Iran has joined the nuclear club and is able to produce nuclear fuel on an industrial scale” (Naji, 2008; Fars-News-Agency, 4 September 2007).

In March 2007 a campaign to glorify all things nuclear resulted in the issue of a

new 50,000-Rial note. The note featured a picture of nuclear isotopes and a *hadith* on the back that read “even if knowledge is in the Pleiades, men from Persia will find it” and the face of Ayatollah Khomeini in front which implied his support for nuclear development. Post stamps commemorating the nuclear project were issued and nuclear-themed memorabilia was sold in many venues (Arjomand, 2010). The populist Ahmadinejad was given to spinning tall tales of nuclear prowess that could allegedly transform regular people into a scientific royalty. In a speech delivered at a mosque, he told the story of a 16-year-old schoolgirl who had managed to produce nuclear energy at home by buying a few simple implements from the bazaar: “That girl is now one of the top scientists of Sazman Enerji Atomi Iran (Iran’s Atomic Energy Organization). This is belief in one’s self” (Etemad Newspaper, 6 March 2007).

Though many observers questioned the president’s grip on reality, turning the nuclear issue into a civil religion proved to be shrewd political move. While Ahmadinejad was not the only, or even the most important nuclear player, he had made the nuclear program his own winning legitimacy for himself and the regime. Playing to the sense of people’s pride in their history and culture proved surprisingly popular (Arjomand, 2010). His provincial tours were masterpiece of mass mobilizing, with ecstatic crowds chanting “nuclear energy is our legitimate right!” Kayhan Barzegar, professor of International Relations and the director of the Institute for Middle East Strategic Studies (IMESS) in Tehran, commented on the phenomenon: “This is now seen throughout society as a matter of technological advancement, national pride, and solidarity, a goal that will surely bolster Iran’s image at home and abroad” (Barzegar, Fall 2009, p. 24). A 2007 survey sponsored by Terror Free Tomorrow, a Washington-based polling organization, found that almost 94 percent of all Iranians strongly supported the country’s right of developing nuclear energy (Tomorrow, 5-18 June 2007).

There were additional domestic advantages of opening up the nuclear discourse, a

former preserve of tight-lipped politicians and elusive nuclear scientists, to the public. Using the unprecedented public support, Ahmadinejad lashed out against President Khatami and the reformist circles, demonizing them as political weaklings subservient to Western nuclear hegemony. In what was arguably a masterful piece of political theater, the president took to proclaiming that it was his duty to protect Iran's nuclear rights, not only from condescending Westerners, but also from the weak-willed among his countrymen who were ready to negotiate Iran's national interest away. Flipping the equation, Ahmadinejad proclaimed the agreement to suspend uranium enrichment and implement the Additional Protocol, intended as an olive branch to the international community, to be a source of national shame bordering on the treasonous (Farhi, 2009). The intended message was clear; Khatami and the reforms brought disgrace to Iran, but Ahmadinejad restored its dignity.

If taking a hardline on the nuclear issue made good sense domestically, it however, posed a serious conundrum in the international arena. Analysts were virtually unanimous in concluding that Ahmadinejad introduced extreme volatility into Iran's foreign relations. Not since the days of Ayatollah Khomeini was there so much defiance against the United States and the West emanating from Tehran. At its core was a fully-fledged rebellion against the nonproliferation regimen. Ahmadinejad made it clear that Iran's program was irreversible and unstoppable. This was best captured in his often-used metaphor of 'a train without brakes' (Afarinesh, 25 February 2007). In what was a rather typical rendition during rallies Ahmadinejad declared that: "Those who want to talk with this nation must know what kind of people they are having a conversing with. If they think that they can talk to the Iranian nation in the language of aggressiveness and threats, they must know that they are making a bitter mistake" (IRINN, 1 August 2006; Bar, Machtiger, & Bachar, 2008).

This and other declarations indicated Ahmadinejad's willingness to pay the

consequences of leaving the NPT in the name of nuclear Principalism. But in the negotiated political order the president was one among several nuclear players. He faced powerful enemies who decried his foreign policy style in general and his nuclear diplomacy in particular. Unlike the past, however, the intense debate about the prospective merits of defying the NPT took a very public turn.

6.3 The NPT Dilemma in Tehran: To Stay or Exit?

As mentioned in the discussion of the introductory chapter, the Islamic Republic evolved as a negotiated political order where state and parastatal elites jostled for power and resources. These sectoral battles resulted in ever changing coalitions, often among strange political bedfellows. In theory, the Supreme Leader was tasked with resolving the disputes among the various elite, but even Ayatollah Khomeini, who commanded widespread loyalty, occasionally struggled to impose a consensus on diverging interests. Things became much more difficult for his successor, Ayatollah Khamenei, whose mediocre theological standing created questions of legitimacy. To bolster his power, Khamenei struck a deal with the Revolutionary Guards which, in exchange for getting a larger share of state power, supported him. Khamenei's dependence on the Guards had increased during their common effort to roll back the Khatami reforms.

But the election of Ahmadinejad, a de facto Guards candidate, led to another reconfiguration of the negotiated political order. Since Abadgaran's was a virtual "political party" of the Guards, the parastatal organization acquired a huge leverage in the state domain. Though the Supreme Leader was still a reliable ally, the Ahmadinejad-Guards coalition could exercise considerable muscle when required. The new configuration would be tested when the new president made a forceful argument for standing up to NPT and paying the cost.

Tellingly, Ahmadinejad used the nuclear issue to help him get over the hurdle during the run-off election on 21 July 2005, required because he did not exceed the 50 percent needed for an outright win. Ahmadinejad declared that his government would not succumb to international pressure to give up Iran's nuclear program (IRIN, 21 July 2005; Tribune, 22 July 2005). He argued that Khatami had given too many concessions to the IAEA and the major Western powers, and promised to stand firmly for Iran's nuclear rights. True to his word, on 3 August 2005, technicians removed the seals placed on the centrifuges in Natanz in accordance with the Paris 2004 agreement, thus setting the stage for a major confrontation with the international community (*The New York Times*, 2 August 2005).

Ahmadinejad's defiant gesture was met with enthusiasm by the Abadgaran movement, the Revolutionary Guards, and the Haqqani School clerics. They concluded that the EU, acting on Washington's behest, and the IAEA were 'bullies' determined to prevent Iran's program from going forward. As the president put it, "if our nation develops nuclear technology, Iran will be among the advanced states in the world" (*Hayat-e No Ejtema'i*, 22 February 2007).

Concessions and conciliatory gestures, in this view, only encouraged the West to insist that Iran gives up more. The Principalist coalition believed that in addition to the defensive and deterrent function of the nuclear weapons, the bomb was bound to enhance Iran's international status. Hossein Shariatmadari, the Supreme Leader's representative and chief editor of the *Kayhan newspaper* wrote that: "The Islamic Republic's becoming a nuclear power sends a powerful and wide-ranging message. If our nation wants to achieve glory in the world, it has no choice except laying out a strategy in this direction, and to prepare the suitable means for this strategy" (*Kayhan Newspaper*, 12 June 2004 translated by Savyon, 17 June 2004).

Ayatollah Mohammad-Taqi Mesbah-Yazdi, arguably the most radical of the

Haqqani School circle, took the unusual step of using Shiite jurisprudence to announce his support for employing nuclear weapons. In a book devoted to Iran's foreign policy from a theological perspective, *The Islamic Revolution, a Surge in Political Changes in History* he wrote; "The most advanced weapons must be produced in our country. There is no reason that they have the right to have a special type of weapons, while others are deprived of it" (Mesbah-Yazdi, 2005). More often than not Ahmadinejad's rhetoric carried the same message. His confrontational statements regarding Iran's security, Israel, and the United States were full of brinkmanship and most likely tailored to his core constituency. As one analyst noted, "Ahmadinejad was in effect saying to his followers, 'Look what we're doing to these foreigners who are trying to control us. We are asserting ourselves'" (Connell, 19 April 2006).

Rather than working on creating international legitimacy, a tactic favored by Rafsanjani, Khatami and Rouhani, Ahmadinejad and his supporters shifted to a policy based on confrontation and deterrence. It is not entirely clear whether Ahmadinejad hoped to provoke a crisis that would have forced the regime to withdraw from the NPT, a move strongly favored by the Guards and Mesbah-Yazdi. At the very least, the nuclear Principalists were ready to signal their anti-NPT resolve. On 9 August 2005 the influential Defense Minister Ali Shamkhani announced that Iran would be ready to suffer sanctions rather than abandon enrichment. However, Ayatollah Khamenei, who sided with those who counseled dissimulation, overruled the Principalists (Reuters, 9 August 2005; *The Associated Press*, 9 August 2005).

On 19 August 2005 the Supreme Leader, sounding quite conciliatory, sought to reassure the international community that Iran was not interested in the bomb. To those attuned to the discourse in Teheran, Khamenei's declaration signaled an effort to return Iran to the posture of nuclear rationality carefully nurtured by Khatami and Rouhani (IRNA, 19 August 2005; MEO, 19 August 2005; Khamidov, 19 August 2005).

Until 2005, the regime understood that in addition to preserving the pretense of a peaceful nuclear program, it was of the utmost important to project an image of a mature, rational player. Rouhani in particular was fond of using the term ‘rational’ in nuclear-related speeches. Rafsanjani, another savvy politician, learned the hard way the cost of an occasional lapse. During Friday Prayer meeting at Tehran University on 14 December 2001 he told the crowd: “If the Islamic world is also equipped with nuclear weapons, then the imperialists’ strategy will reach a standstill because the use of even one nuclear bomb inside Israel will destroy everything.” The international backlash was so enormous that the regime was forced to announce that Ayatollah Khamenei had imposed a *fatwa* on nuclear weapons (Rafsanjani, 14 December 2001; IRNA, 22 March 2005; (Khamenei, 21 October 2005). Whatever little international faith there was in the alleged *fatwa*, was constantly undermined by the Ahmadinejad-Guards alliance, much to the displeasure of the Supreme Leader.

The mixed signals emanating from Tehran were particularly confusing to the Europeans who had tried so hard to reach a binding agreement. As noted, EU hoped that a diplomatic agreement would stop Iran from developing a bomb, forestalling the need for sanctions or the use of the military option. But, as the Europeans had already discovered, negotiations with Tehran were difficult, even when the regime was united around the Rouhani tactic of ‘slow playing the West’ (Rouhani, 2012). The political tug of war between the Principalists and the pragmatists in Tehran made things immeasurably more difficult.

To undermine the power of Ayatollah Khamenei who was in charge of nuclear decision-making through the Supreme National Security Council (SNSC), Ahmadinejad took a number of unilateral steps. On 5 August the Foreign Ministry spokesman Hamid Reza Asefi rejected the economic package proposed by the EU-3 because it did not allow Iran to pursue enrichment activities. On a more substantive note, the president replaced

Hassan Rouhani, the chief negotiators with Ali Larijani. On 15 August 2005 it was announced that Rouhani resigned, but observers were quick to point out a marked hardening of Iran's style of negotiations, not to mention its content (Hughes, 13 July 2005; New York Times, 1 August 2005; IRNA, 5 August 2005; Hughes, 13 July 2005).

Ahmadinejad's brinkmanship diplomacy was predicated on the assumption that America's deepening crisis in Iraq, the reluctance of the Europeans, and resistance from Russia and China would continue to immobilize the international community. Indeed, keeping with its past position, China announced it would object sending Iran's case to the United Nations Security Council (UNSC). But Ahmadinejad miscalculated as the United States and, to a lesser degree, the EU countries pressured the Board to submit the dossier to the Security Council (Maleki, 30 October 2013).

Mohammed ElBaradei, once happy to vouch for the regime, was less helpful this time around. On 2nd September 2005 the IAEA issued a report stating that Iran was neither transparent nor cooperative with the Agency's inspectors. The document called on the regime to provide access to "individuals, documentations related to procurement, certain military-owned workshops, and research and development locations" (Coughlin, 11 Sep 2005). Eight days later, Deputy Director of IAEA Pierre Goldschmidt, who assumed responsibility for the Iran portfolio, called on the regime to come clean on whether it was building a bomb. He added that "it is reaching the point where it is beyond critical ... and there may be serious omissions by the Iranians. As to why they are doing this, you may draw your own conclusions" (Coughlin, 11 Sep 2005).

Faced with the newly-found resolve, the regime responded with a range of rather confusing messages reflecting the divergent views on the NPT in Tehran. The Defense Minister Mostafa Mohammad-Najjar declared that military and non-peaceful use of nuclear technology was *haram*, forbidden; the former ex-chief negotiator Rouhani rushed to reiterate that Iran's program was peaceful. But the Majlis, dominated by the Abadgaran

faction, warned that the NPT was essentially not binding on Iran (WSJ, 20 September 2005).

The IAEA Board of Governors meeting in London lost patience with what was seen as more obfuscation and foot dragging. On 24 September, the agency Board of Governors passed a resolution urging that Iran be referred to the UN Security Council. No deadline for submitting the dossier was chosen since there was some hope that Tehran would accept a last minute proposal to participate in a multilateral enrichment consortium based in Russia. Ahmadinejad's government reacted furiously to the London decision and rejected the Russian proposal on the grounds that it compromised Iran's sovereign right to have a nuclear program. Ali Larijani warned that "reporting Iran's dossier to the UN Security Council would be unconstructive and the end of diplomacy" (IAEA Report, 24 December 2005; Nicoll, April 2007; Pikaev, 2008; Dareini, 27 September 2005; MacAskill & Traynor, 1 February 2006).

Still Ayatollah Rafsanjani, on behalf of the nuclear pragmatists, pleaded with the Europeans to reconsider. Stating that "if you are truly sincere and concerned that Iran may achieve the atomic bomb, there are better ways to gain confidence," Rafsanjani let it be known through back door channels that there was still room for a compromise (IRNA, 3 February 2006). The pragmatists even managed to persuade the *Rahbar's* office that negotiations were better than sanctions. Following Khamenei's intervention, on 3 November 2005, Iran agreed to let IAEA visit the complex in Parchin, although the inspectors were restricted to the civil facilities (BBC, 3 November 2005). Unhappy with Khamenei's intervention, Ahmadinejad and the Guards worked through the Abadgaran parliamentary faction to squelch all compromise. On 20 of November, the Majlis passed a bill ordering the government to block all IAEA inspections of its nuclear facilities (The Sunday Times, 20 November 2005).

For his part, Ahmadinejad, was optimistic about Iran's prospects to avoid a UN

referral. So much so that on 16 December 2005, the Ministry of Culture and Islamic Guidance asked the noted composer Behzad Abdi to compose an opera celebrating Iran's nuclear achievements. On a more practical note, on 10 January 2006, technicians began removing the IAEA seals in three nuclear production sites while the president affirmed freedom from 'Western nuclear colonialism.' Nuclear pragmatists were quick to show their frustration. Rafsanjani chastised Ahmadinejad, suggesting that "the best strategy is that we should resume negotiations with the west, and stay patient in order to build a kind of confidence which enables us to resume enrichment" (IRNA, 11 May 2005). He and others warned that the Security Council referral will bring ruinous sanctions on Iran.

Though Ahmadinejad's optimism looked like baseless bravado to the pragmatists, it was not entirely misplaced. By involving the Security Council, the Iran dossier was put in the hands of a different group of players who shared little of the Western animosity toward the regime and were reluctant to use coercive measures. They included not only Russia and China, the traditional proponents of a soft line towards Tehran, but also some influential developing countries like the South Africa and Indonesia. There were even differences within the European Union as some members held the EU-3 responsible for the collapse of the negotiations and urged continuation of the dialogue with Tehran. Those familiar with the working of the Security Council felt that for the foreseeable future, the referral was more of a bargaining ploy against Teheran than a serious threat of sanctions (Pikaev, 2008).

The latter might have had a point considering the outcome of Iran's referral to the Security Council on March 8, 2006. After a short of deliberation, the Council issued a resolution calling on Iran to suspend enrichment within 30 days but did not mentioned sanctions should Iran default on the deadline (U.N.S.C., 29 March 2006). True to form, on 11 April 2006 Ahmadinejad declared that Iran has developed a nuclear fuel cycle and could enrich uranium to the 3.5 percent. He characterized this accomplished as "a sign of

development of nuclear science in the country.” Seen in this context, the lavish nuclear holiday ceremony described above was as much as an effort to boost support for the government as a cudgel to bash the pragmatists in increasingly tense battle between the two camps (Aftab, 11 April 2006; Aganji, 28 November 2013; Seliktar, 2012).

Reluctant to join the debate, the Supreme Leader kept characteristically quiet. But the referral to the Security Council forced him to make a public declaration. One day later, on 9 March 2006, Khamenei stated that the “Islamic Republic will resist and resume the progress path. If we give up this time, after that the west will come up with new pretexts to deprive us from scientific achievements” This was the ‘slippery slope’ argument that the Principalists had adopted as their moto. On a different occasion Khamenei warned that: “The United States must know that it will suffer twice if it dares to impose any damage on Iran’s interests” (Khamenei.ir, 9 March 2006; IRNA, 26 April 2006).

Ahmadinejad's controversial policy and the Supreme Leader’s warning, however, backfired as it gave Washington new leverage in pressuring the Security Council to punish Iran. The tool of choice was Article 40 of Chapter VII of the Charter of the United Nations whereby a country identified as a threat to peace, or one that committed an act of aggression would be subject to economic sanctions or a military action. The resulting Resolution 1696 unanimously adopted on 31 July 2006 ordered Iran to stop enrichment by 31 August - an effective 30 days deadline (U.N. Charter, Chapter Vii; U.N.S.C. Resolution 1696, 2006).

The measure imposed a ban on transfer of nuclear, missile, and dual-use technologies, limited travel of many Iranian officials, and ordered freezing the assets of forty entities and individuals, among them Bank Sepah and a range of front companies linked to the nuclear project. It urged countries to avoid doing business with Iran and mandated the inspection of cargo carried by Iranian shippers. The resolution warned that more diplomatic and economic sanctions would be imposed under Article 41 of Chapter

VII in case of noncompliance (U.N.S.C. Resolution 1696, 2006).

Seeking to put a positive spin on the event, ElBaradei declared that the action of Security Council could “serve as a forum to find ways and means to bring back all the parties to the negotiating table” (Davenport, 4 December 2013). But Ahmadinejad did not seize the olive branch. To the contrary, upping the ante; he picked the date of the deadline to describe the resolution as ‘a useless scrap of paper’ (Fars-News-Agency, 24 December 2006). The president denounced the United Nations as a tool of Washington and declared that Iran had the right to nuclear progress. He went on to add that “justice demands that those who want to hold talks with us shut down their nuclear fuel cycle program too. Then, we can hold dialogue under a fair atmosphere” (Dareini, 20 February 2007). On another occasion he told a cheering crowd in Ahwaz that that the Security Council resolution was politically motivated: “The resolution is a political resolution adopted under pressure from the US and Britain” (Al-Awsat, 3 January 2007).

Unsurprisingly, the president also rejected a set of incentives, including a light-water nuclear reactor to replace the Arak heavy water reactor. Whipping up nationalist feelings, the president promised to respond to “arrogants” by installing 3,000 centrifuges, adding that for the sake for obtaining nuclear technology, it is worth stopping progress on other activities for ten years (Hafezi, 24 December 2006; Dareini, 18 May 2006; BBC, 21 February 2007).

Ahmadinejad vowed that the sanctions would not dissuade Iran from pushing on. Indeed he was highly contemptuous of the economic threat, stating that “More sanctions would simply help Iran learn self-reliance” (*Mehrnews*, 9 June 2010; *Fars-News-Agency*, 24 December 2006). The emphasis on self-reliance was not just a rhetorical flourish aimed at domestic audiences. Ahmadinejad apparently believed that home-grown nuclear technology would push the country forward by 50 years (*Mehrnews*, 9 June 2010). To recall his core belief, the president was convinced that the Iranians could reproduce the

glory of the Persian Empire using modern science and nuclear technology.

The EU's decision to forgo the use of military force against Iran, a code for regime change, bolstered Ahmadinejad's public bravado. As long as the Islamic Republic did not face an overt danger to its existence, the nuclear Principalists were not greatly concerned with sanctions. As a matter of fact, the president argued that sanctions would help his policy of 'self-sufficiency,' which, in the long term, would make Iran strong (*Fars-News-Agency*, 24 December 2006). Behind closed door, however, the government was apprehensive about a popular backlash, especially if more sanctions were in the offing. Acting on the orders of the president, the Ministry of Guidance and Culture applied intense pressure on the media and political forums to show defiance toward the Security Council (Roozonline, 5 March 2008). Taking a page from the public relations playbook of the Communist regimes, the government organized mass rallies and an array of smaller events to celebrate the nuclear civil religion. Television and radio outlets gave extended coverage of the events and print media carried flattering reports. Intimated by all this nationalist fervor, some nuclear pragmatists felt compelled to join the nuclear 'flag waving.'

Others, however, saw the Security Council censure as an opportunity to start a debate about the cost of a nuclear program, a debate that sanction theory had anticipated. By increasing the economic pain of sanctions, this so-called "cost of doing business" was expected to dissuade the regime from pursuing a clandestine nuclear project. At the very least, the sanctions had hoped to split the elites. Indeed, Hassan Rouhani who, together with Ayatollah Rafsanjani, pioneered the "no sanction, no cost" strategy of avoiding the referral to United Nations, was quick to blame Ahmadinejad's defiance. He cautioned that Iran should avoid further confrontations, adding that: "I think we must not be in a big dash to deal with this matter. We should move very carefully, in a very calculated manner" (Rouhani, 30 September 2005, pp. 27-28).

After Ahmadinejad's declaration that Iran had joined the nuclear club, Rouhani called for "more balance, more rationality, and less emotion." He added that, "unfortunately, due to the government's changing nuclear policy, we have to pay a heavy price." To recall, it was around this time that Rouhani's secret address justifying the freeze of enrichment was leaked to the press. Considering the timing, there was little doubt that the leak was a clever way to remind the public of the cost of Ahmadinejad's policy (IRNA, 20 April 2006, Sadeghi-Boroujerdi, 20 April 2006).

Khatami, eager to rehabilitate his Dialogue diplomacy, seized upon the Security Council involvement to criticize Ahmadinejad's aggressive approach and called for a return to confidence building measures and reconciliation with the West. He warned that confronting the West could eventually affect not only the country's economy but also its right to nuclear energy. Rafsanjani called on the government to show "patience and wisdom," an apparent reference to his own stealth diplomacy. In a not so veiled allusion to the president, the former president asserted that finding a solution for the crisis "is about diplomacy rather than slogans." Without a proper strategy, warned the former president, Iran would have to pay a steep economic price (Herzog, 2006).

Even the Abadgaran - dominated Majlis mustered some criticism. The deputy Speaker of the Majlis Muhammad Reza Bahonar demanded that Ahmadinejad's administration to revise its nuclear policy. Khatami's brother, Mohammed Reza Khatami, the head of the largest reformist party, *Jebheye Mosharekat* (Participation Front) and an allied group, *Tahkim-e Vahdat* (the Consolidation of Unity), Iran's largest student organization, urged the administration to suspend the enrichment of uranium and to cooperate with the West (Lake, 20 April 2006; *Free Republic*, 19 March 2006). Reformist deputies were deeply concerned that Ahmadinejad's conduct would result in sanctions and the crippling of the economy. An anonymous senior Iranian official offered what was arguably the most succinct criticism: "For 27 years after the revolution, America wanted

to get Iran to the Security Council but failed. In less than six months, Ahmadinejad did that” (Slackman, 15 March 2006).

Outraged by the criticism, the nuclear Principalists responded with a scathing attack of their own. They accused the president’s detractors of undermining the much needed national unity in face of external pressure. One hardline cleric, Ahmad Khatami (no relation to Mohammed Khatami) charged such critics with virtual treason because they “joined the enemy and helped it at the most sensitive time” (Samii, 18 March 2006). In turn, the nuclear pragmatists accused the government of stifling public opinion. They pointed out that national solidarity did not equate with following the government in lockstep; rather, it required a broader base of decision-making and a space to raise questions and scrutinize the cost and benefits of the program. As Abdul-Vahed Moussavi-Lari who served as the Interior Minister in Khatami’s government suggested, “Many people speak of national solidarity, however, in practice they take a pair of scissors and eliminate the forces loyal to the system.” (*Etemad Newspaper*, 11 March 2006).

With little hope of turning the debate into a referendum on Ahmadinejad’s nuclear policy, the critics had to settle for watching their warnings come true. After Iran failed to respond to the July call to suspend enrichment, on 23 December 2006, the Security Council passed Resolution 1737. The document stated that Iran had failed to meet the requirements of the IAEA Board of Governors and to comply with the resolution 1696 passed by the Security Council. It called upon Iran to cooperate with the agency and suspend all of its enrichment-related and reprocessing activities. The Resolution implemented sanctions banning the supply of nuclear-related technology and materials and froze the assets of key entities and individuals linked with the nuclear and ballistic missile programs (U.N.S.C. Resolution 1737, 2006).

In addition, the assets of those entities, and of twelve prominent figures mentioned in the resolution were frozen for being involved in ‘proliferation sensitive activity.’

Further, the resolution banned technical cooperation related to Iran's nuclear program, and called on states to deny transit to individuals linked with the Iran's nuclear or ballistic programs. It urged countries to avoid doing business with Iran and mandated the inspection of cargo carried by Iranian shippers. The resolution warned that more diplomatic and economic sanctions would be imposed under Article 41 of Chapter VII in case of noncompliance (U.N.S.C. Resolution 1737, 2006). (Appendix II)

But Resolution 1737 did not change Ahmadinejad's mind, at least in the public. He dismissed it as of "no consequence" to Iran and urged his allies to ignore it: "You have to be aware that your actions do not have any impact on our determination" (President.ir, 8 December 2010; *Fars-News-Agency*, 29 October 2009; *Kayhan Newspaper*, 25 December 2006). But, uncharacteristically, he followed up with assurances that Iran will find new economic partners to compensate for business lost due to sanctions. Though somewhat casual and lacking in specific, however, it was an indication that Ahmadinejad was trying to respond to the cost-benefit discourse forced by his opponents. More oblique hints followed. Commenting on the UN resolution, for instance, he said it was adopted to start propaganda and psychological war against Iran and also to give "some people" who are willing to succumb and compromise, an opportunity to frighten the people in the country (Iranian T.V Channel 2, 23 January 2007; *Afarinesh*, 25 February 2007).

Those familiar with the nuances of the nuclear discourse had no problem identifying the reference to 'some' as a jab at Rafsanjani. The former had already described the Resolution 1737 as "dangerous" and indicative of the world powers' plan to ruin Iran economically. Denouncing Rafsanjani as a "panic monger," was Ahmadinejad's way of soothing the increasing national anxiety over the cost associated with nuclear program (Naji, 2008; *Ledeem*, 13 February 2007). At the same time, however, the president wanted to make clear that the program was irreversible, using the analogy of a "train without brakes." In what became a new mantra, he kept repeating that "a while ago, we had thrown

away the braking and rear gear of the nuclear train.” He elaborated that Iran had already obtained all the necessary technology for producing nuclear fuel and was “moving ahead on a one-way-track with no real brakes” (Akhbar-eRooz, 23 January 2007; Ahmadinejad, 23 January 2007.; Afarinesh, 25 February 2007).

But his critics were not impressed with the brakeless train metaphor. To the contrary, they came up with their analogy based on the game of chicken model where two cars drive on a collision course toward each other and one has to swerve to avoid a crash. They claimed that Ahmadinejad put his train on a collision course with the international community and refused to swerve to avoid an economic wreck. The president vehemently denied that his nuclear strategy was reckless and thus costly to the country. But as Ahmadinejad would soon discover, the new round of sanctions threatened to take the steam out of his train’s locomotive.

6.4 Security Council Resolutions: Raising the Cost of the Nuclear Program

As indicated in the preceding sections, the United Nations began to impose sanctions shortly after Ahmadinejad had come to power. By 2006, the severity of the censures increased substantially. On 31 July 2006 the Security Council passed Resolution 1696, calling on Iran to suspend its uranium enrichment program as a gesture of good faith, and undertake some confidence-building measures outlined in an IAEA Board of Governors resolution (U.N.S.C Resolution 1696, 2006). With no response from Tehran, on 23 December 2006 the Security Council adopted Resolution 1737 under Article 41 of the UN Charter. The resolution imposed additional economic sanctions and prohibited other states from providing Iran with a technology or materials that might contribute to weaponization. The Resolution further called on UN member states to freeze the assets of companies and individuals linked to Iran's nuclear program (U.N.S.C, 23 December 2006).

But the Ahmadinejad administration was belligerent and hardliners were spreading rumors about leaving the NPT. Hossein Shariatmadari, Ayatollah Khamenei's representative in *Kayhan*, tried to create such an impression, declaring that "Iran's proper response will be to quit NPT, because if it shows any flexibility, it could be interpreted as sign of weakness and it makes the west more serious" (*Kayhan Newspaper*, 25 December 2006, p. 2). The administration went even further in its disregard for the Security Council. In January 2007, Iran announced plans to start feeding UF6 into the cascades at the Pilot Fuel Enrichment Plant (PFEP) at Natanz by the end of February 2007. It was also announced that 18 additional cascades would be installed in the 3000-centrifuge hall with a view of making them operational by May 2007 (IAEA Report, 9 February 2007).

Much as Ahmadinejad strived to put a brave face on Resolution 1737, the growing criticism of the Principalists turned into a torrent in the early months of 2007. In addition to the economic price, critics also focused on the alleged cost to national security. This was an adroit maneuver bound to hurt president who portrayed himself as the steward of the country's national security. Rafsanjani, the first to initiate this line of attack, was joined by technocrats and officials in the Khatami administration who were arguing that a return to the negotiating table would safeguard both the economy and the security of Iran. On 3 January 2007 Hossein Mousavian, a former Iranian nuclear negotiator close to Rafsanjani, called for renewing negotiations in order to solve the standoff with the West (Entessar, 2009; Smyth, 18 June 2009).

Expressing similar concerns, the Islamic Iran Participation Front (*Mosharekat*), appealed for return to less confrontational nuclear policies. Ali Shamkhani, the then chief of SNSC, pointed out that the president raised the nuclear cost because of a penchant for "diversionary tactics" a reference to Ahmadinejad's habit of Holocaust denial and other provocation against Israel and the West (Mehrnews, 3 March 2007). Grand Ayatollah Montazeri, still a formidable figure in spite of his isolation in Qom, made the same point.

In a speech on 19 January 2007, Montazeri called Ahmadinejad's defiance of the international community "provocative" and cost accruing. In his view, "one has to deal with the enemy with wisdom. We should get our right in a way that it does not create problems for us or excuses for others" (Fathi, 23 January 2007).

Reformist politicians and liberal publications were emboldened by what looked like an opportune moment to question the hitherto unassailable assertion that there was no down side to the quest for nuclear technology. The strongest criticism came from the Mujahidin of the Islamic Revolution Organization (*Sazman-e Mojahedin-e Enghelab-e Eslami*) a reformist group of liberal intellectuals and technocrats. Using the dispassionate language of economists and technocrats the group stated: "it is important for our country to make a cost-benefit analysis of our decisions that does not expose us to harm and destruction" (Haghighatjoo, January-March 2006, pp. 1-2). Ahmad Shirzad and Mohammad Atrianfar, a reformist theoretician and a Rafsanjani ally, expressed similar sentiments in a public debate with Amir Mohebbian, a prominent commentator from the conservative camp. Many reformists argued that due to the current international atmosphere, it may be in country's national interest to suspend the nuclear program temporarily (Entessar, 2009; Fathi & Slackman, 18 January 2007).

While most of the debate of the cost-benefit was of general nature, some critics pointed to the concrete damages from the president's handling of the nuclear program. A group of one hundred and fifty lawmakers blamed Ahmadinejad's nuclear posture for triggering inflation, and excoriated him for failing to submit his forthcoming annual budget in a timely manner. Some fifty parliamentarians signed a letter calling on the president to appear before Majlis to answer questions regarding his nuclear policy and its economic impact (Fathi & Slackman, 18 January 2007).

Others took issue with the prediction that the 'nuclear program would accelerate Iran's economic growth by half a century.' As one journalist reminded his readers,

Pakistan's nuclear achievement had not propelled it fifty years forward, nor had the Indian tests helped eradicate poverty in India. Some critics in the scientific community pointed out that achieving a nuclear balance with Israel, the only other nuclear power in the region, was cost prohibitive because of the technological deficiencies in Iran. Still others argued that in the long run Iran's proliferation would be counterproductive; either it would trigger a nuclear race among its neighbors or prompt them to seek Washington's official protection²² (Farda, 27 May 1999).

If the reformist critique was predictable, the conservative press, normally in Ahmadinejad's quarter, made a surprising switch. The leading conservative newspaper, the daily *Jomhuri-E-Islami*, once owned by Ayatollah Khamenei and reflecting his views, editorially criticized Ahmadinejad's rhetoric of pushing Iran's nuclear goals too aggressively that engendered a negative cycle of UN resolutions. The editorial questioned the president's performance as well: "Once you declare that we are installing three thousand centrifuges and the next day you speak of sixty thousand centrifuges. The emerging notion is that you don't seriously think through what you are announcing." It chastised the president for calling the UNSC resolution "a piece of torn paper," a statement that was deemed harmful for the country. In a further snub, the paper advised Ahmadinejad not to comment on nuclear issues, especially during his provincial trips where exuberance trumped facts and reality. As a matter of fact, the president was told to leave all nuclear comments to experts who were familiar with the subject (*Jomhuri-e-Islami*, 10 January 2007).

The conservative *Hamshahri*, run by Ahmadinejad during his tenure as mayor of Tehran, was even more scathing. The editorial stated that "at the time when the nuclear issue could have disappeared from the agenda of UNSC, the roaring statements of the

²² The reformist journal Farda observed, "Deploying such weapons cannot solve any problems for Iran; it will only add to our problems."

president appeared and as a result resolutions passed against us” (Hamshahri Newspaper, 10 January 2007). More calls for Ahmadinejad to distance himself from all things nuclear followed. Among them was *Khabar*; a newspaper published by an aide to Ali Larijani, Iran’s chief nuclear negotiator. Conveying Larijani’s position, the paper asked the president to terminate further involvement with nuclear issues (Fathi & Slackman, 18 January 2007).

In the negotiated political order such a public rebuke was significant as it indicated that lines had been drawn between competing factions. Fueled by Ahmadinejad’s passionate advocacy, the nuclear Principalists strived to prevail, while the pragmatists, sensing an opening, were equally determined to carry the day. To preserve the delicate equilibrium, the Supreme Leader had to play a careful balancing act while appearing to be above factional politics. But Khamenei was no doubt aware that the West was watching for signs of the regime's fragmentation, an outcome that the sanctions literature expected. He rebuked Ahmadinejad through proxies in a manner that only hinted at his own position thus preserving the appearance of unity required to stand up to the United Nations (Majd, 1 September 2010).

Behind the scene, however, the Supreme Leader, by siding with the president’s detractors, was clearly trying to marginalize the Ahmadinejad’s administration. But, as noted, the parastatal Revolutionary Guards joined forces with the executive, snubbing the Supreme Leader instead. To recall, Guards took a leading role in the nuclear program and were behind many of Ahmadinejad’s foreign policy ideas. They considered Iran to be the leading military power in the region and wanted it to play a commensurate role, a code phrase for undermining American influence in the Middle East. On 22 February 2007, Major General Yahya Rahim-Safavi, the Guards chief, noted that the Islamic Republic is engaged in a “historic rivalry” with the United States over greater regional hegemony (*Resalat Newspaper*, 22 February 2007).

Iran Newspaper quoted Rahim-Safavi as saying that “the powerful Islamic Republic of Iran has the biggest say in the regional security, and America is not able to make any changes to the security architecture of the region without taking Iran’s national interests into account” (Iran Newspaper, 22 February 2007). A few days later Rahim-Safavi went further, asserting that the Islamic Republic’s military and intelligence forces are not only able to provide Iran’s security and protection of the nation, but they determine the regional security as well (*Hamshahri Newspaper*, 1 March 2007).

Resalat, a radical newspaper serving as a mouthpiece of the Guards, echoed Rahim-Safavi’s views. The editorial noted that the Revolutionary Guards’ ground forces were now the regional leading military power because of unrivaled regional superiority of their armaments, size, technology, battlefield experience and more importantly because of their personnel’s martyrdom-seeking spirit (*Resalat Newspaper*, 22 February 2007). Though Rahim-Safavi or *Resalat*, did not mention nuclear weapons, the strategic doctrine discussed in Chapter 3, clearly considered such an arsenal indispensable in fighting regional enemies and their Western patrons.

According to Mohsen Aminzadeh, deputy foreign minister in the Khatami administration, Iranian hardliners wanted to actively engage the United States, a goal first articulated by Ayatollah Khomeini. In their blueprint, the Middle East was already a “clash of hegemonies” between the Iranian regime and the United States acting on behalf of its allies in the Persian Gulf and beyond. Aminzadeh’s analysis made sense when the political calculus of the Revolutionary Guards and Ahmadinejad was considered. Defying the international community in order to obtain nuclear weapons at the cost of economic and political sanctions was a price not too high to pay in this view (Bar et al., 2008).

Whatever the misgivings of the Supreme Leader, it was clear that he could not or would not overrule Ahmadinejad and the powerful Guards. Iran once again defied the sixty day deadline provided by the December 2006 Resolution. Retaliation came swiftly

and, on 24 March 2007, Resolution 1747 was adopted. The document called on Iran to take the steps outlined in Resolution 1737 and required the Board of Governors of the IAEA to verify that its nuclear program was for the peaceful purposes only. Additionally, the Resolution urged Iran to consider the June 2006 proposals to achieve a permanent and comprehensive deal with the P5+1 including the five permanent members of the UNSC, the United States, Russia, United Kingdom, China, and France, plus Germany (U.N.S.C Resolution 1747, 2007).

The Resolution broadened the previous sanctions package, expanding the freeze on assets of individual and entities engaged in the nuclear program. Twenty eight individuals and the state-run Bank Sepah affiliated with the Guards, Iran's fourth largest bank, were subject to severe financial restrictions. It banned arms sales to the Islamic Republic and prohibited Tehran's from exporting conventional weapons. The document called on all countries to exercise "vigilance and restraint" in transferring military and nuclear related equipment to Iran, and not to enter into "new commitments for grants, concessional loans and financial assistance," About one month later, the European Union published an extended list of Iranian entities and individuals considered "*persona non grata*" by the bloc (U.N.S.C Resolution 1747, 2007; Haidar, July 2014, p. 6).

Much as the Security Council tried to send a signal of its newly acquired resolve to punish Iran, the move only stiffened Ahmadinejad's resolve; a day after the Resolution was passed, the president promised not to suspend the uranium enrichment operation (President.ir, 25 March 2007). Still, the Security Council scored much better with the opposition that redoubled its attacks on the government. Aminzadeh, who emerged as something of a spokesperson for the nuclear pragmatists, mounted a scathing attack. He called the Resolution a "grade sheet of one-year of Ahmadinejad's nuclear diplomacy," adding that the referral of Iran's dossier to the UNSC was the biggest foreign policy failure since the revolution. Aminzadeh warned that Iran would be trapped and swallowed

in a vortex prepared by the United States and UNSC. Aminzadeh went on to argue that the economic cost was especially high given that the president grossly exaggerated his achievement: “what has been introduced as huge nuclear development is nothing except the continuation of the activities of centrifuges’ production line that has been active during the previous government” (Aminzadeh, 14 March 2008; Fararu, 10 March 2008).

In the opaque negotiated order, it was not easy to discern the contours of the coalition that Aminzadeh represented. Still, by some accounts, by the early 2007 it included the Rafsanjani- Rouhani - Khatami camp as well as elements in the Guards, the Foreign Ministry, the SNSC, and the Supreme Leader’s Office. That much became clear when, in May 2007, one of Rafsanjani’s proxies, Hossein Mousavian, was arrested on charges of espionage. The Intelligence Minister Gholam Hossein Mohseni Ejeie told the Fars News Agency that Mousavian had given classified information to the British embassy, among others (*Fars-News-Agency*, 2 May 2007).

Three different judges acquitted Mousavian of the charges, but Ahmadinejad was not persuaded. He increased the attacks on critics whom he referred to as “traitors,” and argued that one judge was “pressured” to acquit Mousavian. The latter, who fled to the United States, wrote in his memoir that his arrest reflected the “extreme” differences in the approaches to the nuclear issue between the two groups. Commentators readily agreed that Mousavian was a pawn in the power struggle between the president and the Rafsanjani - Rouhani circles (Mousavian, 2012; BBC, 14 November 2007).

In retrospect, the arrest of Mousavian was a prelude to a more serious “house cleaning” by Ahmadinejad and his Guards allies. By late summer, the scope of the president’s action against critics became clear. Yahya Rahim Safavi, the once-hardline Guards commander who had come to believe that the president was dangerously “nutty” was fired on 1 September 2007 (Mousavian, 2012). He was replaced with the extreme hardline Major General Mohammed Ali Jafari, an early patron of Ahmadinejad. Ali

Larijani was the next to be targeted. On a number of occasions Ahmadinejad sharply contradicted Larijani's promises to the AEAI while complaining about "clandestine negotiations," reference to the alleged collusion of Larijani with unspecified European countries. Occasionally, Ahmadinejad's trusted aide Mojtaba Samareh Hashemi was sent to hold parallel talks, a move that created confusion among the EU-3 officials. In spite of support from Ayatollah Khamenei, Larijani announced his resignation on 20 October 2007. Since Larijani was an ally of Rahim Safavi, the entire affair smacked of a 'mini-coup' against the Supreme Leader (Guardian, 21 October 2007).

While dismissing Rahim Safavi and Larijani was relatively easy, Ahmadinejad had no ready answers to the cost-benefit debate imposed on him by the pragmatists. What is more, having created a linkage between sanctions, economic wellbeing, and the normative order of the international community, the pragmatists could argue that, by tarnishing its international legitimacy, the regime was in danger of losing its domestic grip as well. For them, the only path for generating economic wellbeing and internal legitimacy was breaking out of the international isolation (Mehrnews, 3 March 2007; Entessar, 2009).

But to the hardliners like Ahmadinejad, internal legitimacy was all about fealty to revolutionary ideals of battling an unjust international system- primarily though the great equalizer, the bomb. To hammer this theme *Baztab*, a web site known for hardline positions, claimed that Iran reached more technological breakthroughs in the eighteen months since Ahmadinejad's election than throughout the entire Khatami tenure (Chubin, 2010; Baztab, 2012).

In the secretive world of Iran's nuclear program, this account was as difficult to prove as the competing version furnished by President Khatami's loyalists. But with the United Nations getting ready to inflict another round of crippling sanctions, the alleged achievements under Ahmadinejad became front and center of the cost-benefit discourse.

6.5 Conclusion

The Principalist nuclear doctrine ended a long and successful effort of the inner sanctum leaders to keep Iran's illicit program under the radar. President Ahmadinejad's behavior, ranging from alleged meetings with the Imam Mahdi to threaten to wipe Israel from the face of the earth raised the alarm of the international community. Unsure whether Ahmadinejad spoke for himself or for the regime, the community became alarmed as Iran crossed the threshold from nuclear rationality to irrationality, a page out of the doomsday scenarios of the Second Nuclear Age experts. The Security Council reacted by imposing a series of increasingly punitive sanctions on Iran, triggering a novel and quite open debate along the lines of cost-benefit rationality embedded in the sanctions model.

CHAPTER 7: INTERNATIONAL SANCTIONS: UNDERMINING THE NUCLEAR CONSENSUS

The objective of this chapter is to analyze the growing debate in Tehran about the nuclear program. As predicted by the sanction theory, when the ‘cost of doing business’ is high enough, the targeted regime will reassess the utility of the program along a straightforward cost–benefit analysis. In other words, the economic pain fragmented the elites and prompted some to raise the formerly ‘heretical’ view of a nuclear rollback in exchange for sanction relief.

Section 7.1 discusses Ahmadinejad’s defiance nuclear policy that led the United Nations Security Council (UNSC) to escalate the severity of sanctions. Section 7.2 relates how the plummeting economy turned the 2009 presidential election into a referendum on the nuclear program. Section 7.3 covers the international backlash against the regime, with a special emphasis on smart sanctions that targeted the supply of petrol to Iran and punished foreign groups investing in the Iranian oil sector. Section 7.4 measures the real achievements in the nuclear program behind the Ahmadinejad narrative of success.

7.1 Above the Radar: Making Nuclear Progress under a Sanction Regime?

By staking his presidency on nuclear sovereignty, Ahmadinejad found a winning formula to increase his popularity. The claim that he was advancing Iran to the top tier of scientifically developed countries resonated particularly well with those who believed that Iran should have a leading international role. But even Ahmadinejad's supporters were worried about the new round of sanctions. This should have come as no surprise to sanction theorists who concede that some countries are more likely to tolerate higher levels of economic distress than others. But how to calibrate the economic pain to change objectionable behavior has been something of a guessing game. It was left to the UN Security Council and the United States to experiment with a protocol best suited for inflicting an appropriate dose of economic punishment.

As it turned out, formula for assessing Iran's threshold of pain was quite simple; each resolution was progressively more devastating than the preceding one. On 3 March 2008 the Security Council passed Resolution 1803 calling on Iran to halt all uranium enrichment and related experiments and close down its heavy water facility in Arak. The provision targeted the Iranian banks, in particular Bank Saderat and Bank Melli Iran (BMI), and their foreign branches and subsidiaries that were found to play a key role in financing sensitive nuclear activities, or helping to develop ballistics. The Resolution further extended a freeze of the financial assets of individuals and companies associated with the nuclear program and the development of delivery systems, while imposing travel restriction on the individuals involved. In what promised to be another painful step, the Resolution banned the supply of dual use items (civil and military) to Iran. In way of extending a carrot, the Security Council offered to engage in a new round of negotiations provided Iran suspended its enrichment (U.N.S.C Resolution 1803, 2008).

With no response from Teheran, the Security Council voted to impose yet another round of sanctions. Passed on 27 September 2008, Resolution 1835 ordered Iran to halt uranium enrichment, but due to opposition from China and Russia, no new sanctions were imposed. Instead, the document expanded a partial ban on trade in all dual use materials and added twelve companies and thirteen individuals to the list of those suspect of working in the nuclear and missile programs. The motion called on Iran to immediately comply with the previous decrees of the Security Council resolutions and fulfill the requirement issued by the IAEA Board of Governors (U.N.S.C Resolution 1835, 2008).

Acting on its own, Washington introduced further financial restrictions by prohibiting U.S. banks from mediating in any capacity the transit of funds from and to Iran. Several foreign banks stopped dealing with Iran and, under pressure from the Washington, other banks - HSBC, Standard Chartered and Citibank - urged their Iranian customers either to withdraw their deposits or convert them to a currency other than the U.S. dollar (Alarabiya, 8 November 2013; PBS, 18 September 2009).

Business, which was already reeling from mismanagement, faced increasingly serious obstacles. Iran's financial relations with the outside world became progressively more difficult as more and more banks refused to handle money transfers. Psychologically, the effect was significant because it generated fear and uncertainty. Reminiscent of the last years of the Shah's rule, there were rumors charged that merchants in the bazaars in Tehran and provincial cities were hoarding, prompting the price of basic foodstuffs to rocket. Stories about allegedly imminent American strikes on nuclear and military targets and speculations about an Iraqi-style invasion fed domestic anxiety. Many felt that the country was sliding back into a pariah state, a situation that President Khatami had worked hard to reverse (Slavin, 2 October 2014; Reuters, 1 August 2014; Lipin, 4 April 2012; Osborne, 6 November 2014; Defence, 20 July 2010; Cummins & Solomon, 6 October 2010; Meshkat, 2013; Najj, 2008).

Exploiting the gloomy atmosphere, the nuclear pragmatists pointed out that one of the provisions of Resolution 1835, the so-called ‘freeze-for-freeze’ option offered a way out. Pushed by Russia and China, it promised Iran a freeze on future sanctions in return for a freeze on the number of centrifuges it used (Zagorin, 1 July 2008). But true to form, Ahmadinejad declared that enriching uranium was Iran’s non-negotiable right, adding that “passing such a valueless resolution leaves no reputation behind UNSC” (*Fars-News-Agency*, 5 May 2014; *Jamejam Online*, 4 March 2008; *Mehrnews*, 27 September 2007). Answering a journalist’s question as to how would Iran respond to the latest resolution, the president sarcastically noted that “we will do whatever we did with the previous resolutions” (*Etemad Newspaper*, 6 March 2008, p. 2). For good measure, he reminded the public that Ayatollah Khamenei was fully in line with his position.

Much as the president was eager to latch on to the mantle of the Supreme Leader, there were strong indications that the *Rahbar’s* Office was not happy with the situation. Ali Akbar Velayati, a former foreign minister and the top foreign policy advisor to the Supreme Leader, indicated that it would be in the interest of the country to accept the Security Council offer: “Those who are agitating against our interests want us to reject the latest offer... it is in our interests to accept it” He warned that “we should avoid illogical and provocative sloganeering... a certain declaration could cause us problems... we need to be careful not to make these declarations” (Zagorin, 1 July 2008). Velayati’s very public rebuke raised expectations that Ayatollah Khamenei was behind it, but Ahmadinejad dismissed the comments as “personal” and stressed that, in any event, he was in charge of the nuclear portfolio (AFP, 24 July 2008; Hayes, 23 July 2008; *Rajanews*, 18 December 2008).

The White House responded with its own warning that Iran would face more international sanctions if it failed to halt its uranium enrichment. Gordon Johndroe, the National Security Council spokesman hoped that Iran positively responds to an incentives

package offered by Washington and other world powers in return for halting its nuclear enrichment, and to avoid more sanctions, stating that “we hope that Iran will positively answer to an incentives package in return for Iran to halt its nuclear work. If not, the global community is united and more sanctions are coming” (AFP, 24 July 2008).

To counter the growing chorus of critics who seized upon Washington’s warning to ramp up their attacks, Ahmadinejad turned to his true and tried strategy of nuclear populism. He asserted that the sanctions were a Western ploy that Iran had already learned to ignore. Minimizing the need of imports, he asked: “What have you given us except a bunch of consumption goods, toys and other junk stuff? Which advanced system we have been given that enables us to grow an industrial business?” (Ahmadinejad, 25 July 2010). Referring to the Resolution, the president asked “do you think if you gather and pass a torn paper by which you aim to scare Iranians, you will be able to prevent Iranian people from development? You have to be aware that your actions do not have any impact on Iran’s determination” (*Fars-News-Agency*, 24 December 2006; *Kayhan Newspaper*, 25 December 2006).

Expanding on his promise to find new trading partners, Ahmadinejad expressed full confidence in Iran’s ability to turn to the East. Ironically, the pivot to the East was borrowed from an initiative called “looking to the East” that Ali Larijani had proposed before his forced resignation from the SNSC. The Shanghai Cooperation Organization (SCO), a military-economic pact comprising China, Russia, Kazakhstan, Kirgizstan, Tajikistan, and Uzbekistan where Iran held an observer status since 2005, was a promising prospect. On his own initiative, the president had assiduously cultivated trade relations with South American countries as another way to get around the sanctions (Iranian T.V Channel-2, 23 January 2007; Mousavian, 2012). By adopting such a proactive economic posture, Ahmadinejad tried to preempt the cost-benefit argument of his opponents while

not giving in to the growing demand for a negotiated solution. His favorite rhetoric was “no Iranian official has the right to step back an iota” (MacAskill & Tait, 11 April 2006).

But he scored few points with the pragmatists who, as noted, preferred the Rafsanjani-Rouhani “slow playing” strategy to Ahmadinejad’s “cost-be-damned” approach. Put on the defensive by the tumbling economy, the president opted for a classic dictatorial ploy of equating nuclear compromise with treason. In less than subtle references to the Rafsanjani-Rouhani circles, he accused his critics of cowardice, lack of resolve, and willingness to succumb to compromise (Afarinesh, 25 February 2007).

He also urged the press to remind the readers that the Security Council resolutions amounted to interference in Iran’s internal affairs, but had no impact on the people’s support of the nuclear project. *Newspapers* were ordered to highlight a number of themes favored by Ahmadinejad - the alleged raising hatred towards the U.S. amongst Western and Islamic countries, the differences between the Europeans and the United States on their look toward Iran’s nuclear issue, and the disagreements between Washington and China and Russia on the nuclear issue. Papers and television were even banned from discussing the US military maneuvers in the region, - an exercise which Ahmadinejad described as psychological warfare (Rooz Online, 5 March 2008).

Despite threats to the media, the sanction debate did not abate. To the contrary, in line with sanction theory, faced with the prospect of a hefty cost, the nuclear project went from consensual to controversial even on the pages of newspapers associated with the Supreme Leader. More to the point, the results of the municipal council elections held on 15 December 2006 reflected how unpopular the president had become in just two years. Moderate conservatives opposed to Ahmadinejad won a majority of seats in the elections, followed by reformist candidates. Ahmadinejad’s Abadgaran allies won less than 20 per cent of local council seats nationwide (*The Associated Press*, 21 December 2006; Jazeera, 21 December 2006). In Tehran, candidates supporting Mohammed-Bagher Ghalibaf, the

city's centrist mayor, garnered seven out of the 15 council seats. Reformists won four seats, Ahmadinejad's allies secured three seats with one seat going to an independent. In some provincial cities the results resembled that of Tehran, but in Bandar Abbas, Shiraz, Zanjan, Sari, Rasht, Sanandaj, Ilam, and Kerman none of the pro-Ahmadinejad candidates won (*The Associated Press*, 21 December 2006).

The centrist daily *Etemad-e-Melli* observed that the people repudiated the hardline policies of Ahmadinejad, writing that "the result of the elections, if there is any ear to listen or any eye to see, demands reconsideration in policies" (*Etemad-e-Melli* Newspaper, 21 December 2006). Emad Afroogh, a conservative lawmaker, called on the president to learn from the vote. Afroogh told *The Associated Press* that "the peoples' vote means they don't like Ahmadinejad's populist methods." Leading reformist Saeed Shariati from the *Islamic Iran Participation Front* suggested that the election results were a "big no" to the president and his allies whom he blamed for harming the country's national and security interests with their hard line policies (*The Associated Press*, 21 December 2006).

If the local elections represented the popular verdict on Ahmadinejad, the ballot for the Assembly of Experts, the conservative body of 86 senior clerics charged with choosing and monitoring Iran's Supreme Leader, reflected his lack of popularity in elite circles. Ayatollah Rafsanjani, who lost the 2005 presidential election run-off to Ahmadinejad, was reelected by a large number of votes, boosting the standing of the pragmatists. Likewise re-elected was Hassan Rouhani, Iran's former top nuclear negotiator whom Ahmadinejad frequently accused of making too many concessions to the West (*Al-Jazeera*, 21 December 2006).

Facing the May 2008 Majlis election, Ahmadinejad and his allies took nothing for granted. As early as 31 January 2008, Major General Ali Jafari urged assembled Guards and Basij commanders to work to elect Principals in the forthcoming election. Soon

after, Major General Hassan Firoozabadi, the *Artesh* Chief-of-Staff, and Colonel Massoud Jazaeri, an unofficial spokesman, assailed the reformists as “less than loyal citizens who are intimidated by the enemy.” The Council of the Custodians of the Constitution backed up such claims by disqualifying reformist candidates across the board, giving the conservative forces two third of the seats (Nafisi, 11 April 2008).

But the president had little to rejoice over since the Abadgaran movement fractured into two rival factions. Ali Larijani, who was fired for challenging the nuclear dogma, and other likeminded politicians renamed themselves *E'telaf-e Faragir-e Osulgarayan* (Broad Principalist Coalition) to signal a more flexible and inclusive approach (Nafisi, 11 April 2008). Ahmadinejad's loyalists coalesced around the *Jebhe-ye Mottahed-e Osulgarayan* (United Principalist Front) led by Gholam-Ali Haddad 'Adel, a long-time associate of the president and the Speaker in the outgoing Majlis. Larijani, who replaced Adel with the support of reformists, used his new position to launch a more sustained critique of Ahmadinejad's nuclear policy.

Much as the Broad Principalist Coalition disliked Ahmadinejad, it did not reject the nuclear program. Rather, there was a desire to return to the stealth strategy of his predecessors. As one journalist put it, the Iranians were eager to find a way to obtain nuclear weapons without infuriating the world (Melman, 16 January 2007). Ayatollah Khamenei, never a flashy politician, seemed to believe that Iran would have gotten away with the illicit program if it was not for the president's antics. It thus came as a considerable surprise that the Supreme Leader decided to support Ahmadinejad in the 2009 presidential election.

7.2 The 2009 Election As a Referendum on Sanctions: Why Did the Supreme Leader Side With Ahmadinejad?

Against the background of an economic free-fall, the presidential campaign quickly became an unofficial referendum on the nuclear program. All three opposition candidates – Mir-Hossein Mousavi, Mohsen Rezaei and Mahdi Karroubi – criticized Ahmadinejad's confrontational foreign policy style, describing it as unnecessary provocative and costly. Mousavi, the leading contender and a former prime minister, ran as an independent, having become close to the reformist camp of Khatami. Mousavi took issue with Ahmadinejad's provocative rhetoric towards Israel and the Holocaust, asking: "If a crime has taken place, why deny it?" (Klein & Siamdoust, 12 June 2009).

But it was the nuclear program that formed the heart of Mousavi's critique. Mindful of Ahmadinejad's tactic of equating nuclear criticism with treasonous behavior, Mousavi was careful to stress that Iran's right to a peaceful nuclear program was "nonnegotiable." Yet he did not rule out "adopting different ways of doing things" to resolve the diplomatic impasse (Taheri, 2009). Mousavi's message to the international community was even more explicit. He reiterated that: "there are two issues: a peaceful use of nuclear program and possible weaponization. I personally consider the latter negotiable. We have to work actively to earn the trust of the international community" (Kalameh, 5 October 2010; Klein & Siamdoust, 12 June 2009). For those adept at reading between the lines, Mousavi's emphasis on trust was illuminating as it was the first time that a high ranking politician admitted to nuclear deception.

A candid admission of Iran's lack of international credibility was just the opening salvo in the anti-Ahmadinejad campaign. Both Mousavi and his Reformist supporters defended their position with a classic cost-benefit calculus. Abdullah Ramezanzadeh, a former spokesman for the Khatami administration, questioned whether continuing the

nuclear program was a sound decision given the increasing costs of sanctions (Fardanews, 14 June 2008,) Since, in their view, the common people were most affected, it was only fair that they should be allowed to vote on the continuation of the nuclear program. As Mousavi put it: “Decision must be based on general consent” - a procedure available in the Constitution (Mousavi, 28 October 2009; Kalameh, 5 October 2010).

Opposition politicians warned that another five year of Ahmadinejad will bring more international isolation and put the regime’s survival at risk. In the words of Mousavi, “it’s clear that the sanctions will negatively impact on the country’s security and put the economy in jeopardy” (Mousavi, 7 July 2010). Ayatollah Rafsanjani, the founding father of the nuclear program, weighed in an interview in the *Arman* newspaper. He argued that “irrational decisions” regarding nuclear program increased the possibility of a new rounds of sanctions or a military strike against nuclear sites. Rafsanjani urged to restore rationality and avoid provocative policies for the sake of preserving Iran’s national interest (Irani, 14 October 2012).

Rafsanjani’s use of the term ‘national interest’ was highly significant; it reflected the view that national interests are more than the sum of Iran’s security capabilities, important as they were. Addressing the deteriorating economy was an equally pressing need, since under Ahmadinejad the economic wellbeing became trapped in Iran’s nuclear ‘dead-end policies’ (Renani, 2013).

Mohsen Rezaei, a former Guards commander running on a conservative platform, was harshly critical of Ahmadinejad nuclear style and substance. According to Rezaei, Ahmadinejad’s language jeopardizes Iran’s national interest in the international arena. At time Rezaei’s sounded positivity apocalyptic: “Continuing such policy will destroy all of our achievements” and warned that “if the current adventurous path continues, we are heading towards a precipice” (Fararu, 4 May 2009). Not incidentally, virtually all opposition politicians stressed the need for rationality. Hassan Rouhani reminded the

president that states were in the habit of forming alliances and Iran should not be an exception in this regards. Significantly, he urged to pursue a rational foreign policy to rejoin the community of nations (IRNA, 1 March 2008; Tabnak, 29 May 2013).

A few days later, addressing the Friday prayer meeting, Rafsanjani stated that “we should follow an active and rational diplomacy and have to answer their [international community] questions” (Kashmiripour, 27 September 2008). Khatami demanded Ahmadinejad’s apology for calling the 2003 deal “disgraceful” and for accusing him of playing into “colonial policies” of Iran’s opponents ‘determined to finish the Iranian nation.’ Virtually unprecedented in history of the Islamic Republic, these heated exchanges reached a pitch in the final months before the June 2009 ballot (Fox News, 5 June 2009).

Watching the pressure on Ahmadinejad mount and his policies widely ridiculed as ruinous for the country, the Revolution Guards decided to step in. Since his appointment as the Guards commander, Mohammad Ali Jafari made his hardline position on the nuclear issue known, either personally or through a network of proxies. For the Guards, who oversaw large parts of the program, however, the discourse was far from an exercise in political philosophy. Anecdotal evidence offered glimpses of Guards’ controlling position of the program. For instance, leaked information from speeches delivered by Guards commanders showed their key role in the construction of the Fordow and Natanz facilities (Atlantic, 10 June 2009; *Fars-News-Agency*, 9 November 2014; Skynews, 9 November 2014).

Gharghahe Sazandegie *Khatam-al Anbiya* (*Khatam-al Anbiya* Construction Headquarters), the official construction company of the Guards, was also involved in ballistic missiles and an array of related tasks. The Annex to Resolution 1929 listed it as an entity of the Guards, with a leading role in Iran’s nuclear proliferation activities and

the development of ballistic missiles and nuclear weapon delivery systems (Watch, 1 June 2012).

With so much at stake, the Guards pulled no punches. Senior commanders described Mousavi and his reformist colleagues as traitors who abandoned the sacred trust of the revolution. Brigadier General Yadollah Javani, head of the political directorate of the Revolutionary Guards, warned that there was no room for reform. In his view, there were two currents; those who support the revolution and those who were trying to bring it down. Javani *made it clear that a return of the Reformists, under the guise of Mousavi's coalition newly named the Green Movement, was not acceptable*. A few days before the vote, Javani accused the Greens of trying to start a color revolution, a reference to the popular revolutions that topped communism in Eastern Europe. He warned that the Guards “will suffocate [the movement] before it is even born” (SSWEEKLY, 9 August 2009).

Undoubtedly, it was Mousavi's promise to hold a referendum on the nuclear issue that was most alarming to the Guards. Convincing Ayatollah Khamenei to back Ahmadinejad was the next step, but one that was made easier because the memory of President Khatami was still fresh in conservative circles. Clearly, in spite of his erratic performance and an ailing economy, Ahmadinejad was seen as the lesser of two evils. Tellingly, on 27 February 2008, one day after Rouhani called Ahmadinejad's policies “ridiculous,” Ayatollah Khamenei responded by praising the role of Ahmadinejad in developing Iran's nuclear program: “besides of the people's resistance in the development of nuclear program, the president's resistance was really admirable” (Fox News, 5 June 2009; Khamenei.ir, 26 February 2008).

Less than three hours after the presidential polls closed on 12 June 2009, the Interior Ministry announced that the president was reelected by capturing 63.29 percent of the vote with Mousavi, his top challenger, taking just under 34 percent (Fararu, 13 June

2009). Following the Ministry's announcement, on 13 June Ayatollah Khamenei issued a statement on state television congratulating Ahmadinejad. The Supreme Leader noted that the "miraculous hand of God was evident in the great epic of the election," and urged the other candidates to support the president. Most observers interpreted the speech as an affirmation of the election results (Asriran, 12 June 2009; Fars-News-Agency, June 13, 2009).

Khamenei's call to accept the result, however, was widely ignored. Public demonstrations of a magnitude not seen since the Iranian Revolution of 1979 erupted in several cities. Widespread allegations of vote rigging fueled public outrage and prompted Mousavi's supporters to demand a recount. The regime was caught off guard by the Green Movement's show of strength and the security forces were paralyzed by estimated 2 to 4 million of people who flooded the streets in Tehran and provincial cities (Kurzman, 2004).

But Khamenei, in tandem with the Guards and the Basij, was willing to quell the unrest despite the damage to the regime's legitimacy. On 18 June the Supreme Leader delivered a speech signaling a strong arms response. Without acknowledging any of the grievances of the Greens, he demanded an end to the protests, dismissed the protesters' complaints, reiterated his support for Ahmadinejad, and accused foreign "enemies" of interfering in Iran's domestic affairs (Khabarfarsi, 27 December 2012; Asriran, 8 February 2015).

Two days later, on 20 June, the regime unleashed the special Revolutionary Guards units, the paramilitary Basij, and the plain-clothed paramilitary forces, *Lebas Shakhsi*. Reports of arrests, injuries, and deaths were difficult to substantiate; government sources reported 36 dead, but opposition figures quoted three times this number in the first three months of the unrest. In addition, the government arrested several thousand protesters and key Green Movement leaders, including Mousavi and Karroubi, one of the presidential

candidates, who were confined to house arrest (Khabarfarsi, 27 December 2012; Asriran, 8 February 2015; Aftab, 12 June 2009).

Reports of torture and mass rapes in some prisons were widely circulated. In a letter addressed to Rafsanjani in his capacity as head of the Assembly of Experts, Mehdi Karroubi demanded an immediate investigation into the reports that a number of detainees had been raped during the illegal incarceration. Karroubi wrote that “some of those arrested claim that detained girls and young men have been sexually assaulted with brutality that their genitals were damaged” (IHRDC, 2013; ICHRI, May 29, 2010).

Two documents leaked to the public revealed the Guards’ role in rigging the election. In the summer of 2010 Brigadier General Abdullah Zeyghami known as General Moshfegh, deputy commander of the Sarallah Station in Tehran, was heard on an audio recording describing the Guards’ strategy before the ballot. Moshfegh started by noting that if the reformists come to power again they would pose a “real threat to the system.” He ended by emphasized that “we must prevent them from doing so” (Jaras, 15 August 2010).

A video posted by the dissident filmmaker Mohammad Nourizad on Facebook featured Jafari discussing the Guards political preferences and strategy during the 2009 election and the mass protest that followed. Jafari made it clear that a return of Reformists was anathema and a red line to the guards and revolutionary forces. Jafari admitted that the Guards intervened in the ballot: “The election was going to go to the second round, and then it’s not clear what would happen” (Nurizad.info, 2014). In other words, it was the Guard’s duty to prevent a second round by declaring Ahmadinejad as the immediate winner.

Once he had been reelected, Ahmadinejad handsomely rewarded his benefactors. More than half of the cabinet members were either Guards veterans or those who had ongoing ties to the parastatal body. The Guards were awarded hundreds of no-bid

government contracts and billions of dollars for construction and energy programs. It was during the second Ahmadinejad administration that the Guards extended its influence into diverse areas ranging from higher education to control of the important business sectors, including oil and telecommunications (*Donya-e-Eghtesad*, 16 March 2010; Abrar, 19 April 2010; *Fars-News-Agency*, 13 May 2010; Alfoneh, June 2010). Even if the Guards prospered under the Ahmadinejad the Iranian economy came under a new round of crippling sanctions.

7.3 Cutting to the Bone: The Smart Sanctions in Action

To recall the theoretical chapter, the checkered history of sanctions inspired little consensus among experts. Armed with case studies of failed sanction attempts, pessimists argued that determined or resourceful regimes would not succumb to international pressure. Using different case studies, optimists were confident that, when applied correctly, sanctions should force a defiant government to cease a targeted activity.

While the Security Council's sanctions increased the cost of running the nuclear program in Iran, they were evidently not enough to persuade its main backers, Ahmadinejad and the Guards, to contemplate a rollback. But things were bound to get more painful for the Iranians after a secret site dug into a mountain near Qom was revealed in September 2009. Unlike the NCRI- MEK 2002 disclosure offered during a modest press conference in Washington, the existence of the facility known as Fordow was made in a joint appearance of President Barak Obama, the British Prime Minister Gordon Brown, and the French Prime Minister Nicolas Sarkozy during a Pittsburg G-20 summit on 24 September 2009. Standing shoulder to shoulder, the Western leaders used the occasion to call on Iran to dismantle its illicit nuclear program.

Caught off guard by the announcement, the Ahmadinejad administration scrambled to respond in ways that would inflict the least amount of damage. Uncharacteristically,

there was little defiance and bluster coming from the presidential office. The AEOI immediately reported the facility to the IAEA and the government indicated that it would be ready to negotiate with the international community. The IAEA responded by proposing a frequently bandied plan to transfer some three quarters of Iran's LEU to Russia for further enrichment and then to France for processing into fuel rods to power the Tehran Research Reactor (Crail, 5 November 2009).

The proposal was a win-win situation; it would have calmed the fears of the international community while enabling the Iranians to fabricate their medical isotopes in the Teheran facility. On 29 September 2009, shortly before the meeting of the IAEA in Geneva, Ahmadinejad announced that Iran is prepared to hand over 3.5 percent enriched uranium, have them enrich it up to 19.75 or 20 percent and deliver it back to the country (Borger, 1 October 2009; Patrick Goodenough, 26 January 2010).

But in a growing signs of how hopelessly politicized the nuclear program had become, it was now the turn of the pragmatists to denounce Ahmadinejad as being soft on the nuclear issue. An unidentified member of the negotiating team told one media outlet that no agreement regarding the LEU had been reached and that "the P5+1 were solely informed of Iran's decision to participate in the 18 October 2009 meeting with the IAEA" (*Mehr News*, 1 October 2009).

Speaking on 24 October 2009, immediately after the Vienna draft was sent to Tehran for approval, Majlis Speaker Larijani blasted it as ploy by Western countries to interfere in Iran's affairs. Using dramatic rhetoric he asked "why should Iran get the 20 percent enriched uranium from France and Russia only if it hands over its 4.5 percent enriched uranium." He went on to insist that "there is no connection between these two, and there is no guarantee that the West honored its commitment" (Alborz, 5 November 2009).

In what was clearly payback time season, Larijani borrowed a page from Ahmadinejad's conspiracy theories, declaring: "My assumption is that, behind the scene, there is some collusion with Americans and they want to take our LEU offering nothing in exchange." Hassan Rouhani joined the chorus of critics. He told an interviewer that "sixteen years ago, we wanted fuel for our reactor in Tehran and the IAEA mediated. Argentina gave it to us. Today, before they give us fuel for the reactor, which is their legal obligation, they impose conditions upon us.... And anyone who wants to buy fuel can go and buy it on the market" (Alborz, 5 November 2009; *Aftab*, 4 November 2009).

Even Mousavi was compelled to call the Geneva agreement 'astounding.' Sounding more like Ahmadinejad than a nuclear pragmatist, he stated that Iran would have to either surrender the hard-earned fruits of its scientists' labors or face additional sanctions. Most striking, Akbar Etemad, head of the AEOI during the Shah's era, opposed the deal in an appearance on the *BBC Persian program* (Mousavi, 28 October 2009; *Persian*, 1 November 2009). More to the point, publications of the Guards, *Sobh-e Sadeq* and *Basirat*, and the conservative *Kayhan* linked to the Supreme Leader voiced reservations about the tentative deal (*Sobh-e Sadeq* and *Basirat*, 1 November 2009; *Fars-News-Agency*, 29 October 2009).

Caught in a nasty domestic fight, Ahmadinejad had little space to maneuver. Speaking in Mashhad on 29 October, he mocked his detractors for accusing him jeopardizing Iran's interests. The president pointed out that no previous nuclear negotiator had been able to persuade the international community to acknowledge Iran's right to enrichment. In an interview on national television on 1 December, Ahmadinejad acknowledged being caught between international and domestic pressure. According to the president, the West wanted to remove 1.18 tons of Iran's low enriched uranium, to make it impossible to produce a nuclear weapon. He noted that "unfortunately some people fell for the line that the agreement is a conspiracy and a deception. These are the

same people who were asking us to back down at the height of the pressures on us. Now they have become super-revolutionaries” (Goodenough, 26 January 2010).

Still, Ahmadinejad understood that, for once, the opposition had beaten him at his own game of high-flowing nationalistic rhetoric. Roundly repudiated, the Ahmadinejad administration was forced to reject the IAEA’s proposal, dismiss the end of December deadline for the deal, and offer what it called a counter-proposal. Accordingly, it urged the international community to either sell uranium for its Teheran Research Reactor or exchange higher enriched nuclear fuel for Iran’s LEU in small batches rather than all at once. Tehran also announced a one-month deadline of its own (Epatko, 23 October 2009; Slackman, 2 January 2010).

The P5+1 were told to accept the counter-proposal by the end of January or face a new Iranian initiative to increase the uranium stockpile. Speaking on behalf of other negotiators, Paris rejected Iran's move. France’s Foreign Minister Bernard Kouchner stated that “we are not the ones who have to decide whether to accept what they want to impose on us...no, this is not the way it is done” (RFI, 04 January 2010).

For its part, the Security Council responded with Resolution 1929 passed on 9 June 2010. It chastised Iran for its failure to meet the IAEA requirements and comply with the requirements of previous resolutions. The new resolution, a mix of old and new sanctions, required Iran to suspend all of its uranium enrichment and reprocessing activities and to fully cooperate with the IAEA. The penalties for failing to do so piled up; a further squeeze was imposed on Guards-owned businesses, Iran’s commercial and financial service sector, and the country's shipping industry (U.N.S.C Resolution 1929 2010).

In addition to banning Iran from engaging in any activity related to ballistic missiles, the Resolution also imposed travel bans on individuals involved in the nuclear program, tightened the arms embargo, and froze the assets and funds of Iran’s shipping lines and the Revolutionary Guards. Under the new provisions, Iranian banks were

prevented from creating new joint ventures, opening new branches, taking an ownership interest in or maintaining or establishing correspondent relations with banks in their jurisdiction (U.N.S.C Resolution 1929, 2010).

Moreover, the resolution called upon all member states to closely watch Iranian entities and individuals whom they had dealt with, prevent financial institutions and banks in their territory from opening offices in Iran, prohibit the opening of branches of Iranian banks in their territory, and prevent their banks from entering into any relationship with Iranian banks if it might contribute to the Iran's nuclear and ballistic missile program. Additionally, the Resolution targeted Iran's oil supply and punished foreign groups engaged in financing the Iranian oil sector (U.N.S.C Resolution 1929, 2010).

The Resolution 1929 followed up with calling on Iran to ratify the Comprehensive Nuclear Test Ban Treaty. It also urged Tehran to reaffirm its full cooperation with the IAEA and respond to a number of outstanding issues – mostly concerning its past experiments with weaponization known as Possible Military Dimensions (PMD) (U.N.S.C Resolution 1929, 2010). To recall, IAEA report on 8 November 2011 concluded that the information provided by Iran itself indicates that Iran has carried out activities that are relevant to the development of a nuclear explosive device including efforts, some successful, to procure nuclear related and dual use equipment and materials by military related individuals and entities; efforts to develop undeclared pathways for the production of nuclear material; the acquisition of nuclear weapons development information and documentation from a clandestine nuclear supply network; and work on the development of an indigenous design of a nuclear weapon including the testing of components (IAEA Report, 8 November 2011).

Unilateral American sanctions added to the pressure. In July 2010 President Barak Obama signed into the law “the Comprehensive Iran Sanctions, Accountability, and Divestment Act” (CISADA). The law restricted the already limited amount of U.S. trade

with Iran and limited some high technology trade with countries that allow WMD-useful technology to reach Iran. Acting in conjunction with the UN sanctions, CISADA curtailed Iran's ability to develop its oil and gas fields (Treasury, 1 July 2010).

The CISADA's secondary and tertiary effects were particularly damaging. Unwilling to get snared in the net cast by the Americans, countries and individual companies stirred clear from business with Iran. A stream of major international corporations announced a departure from the Iranian market. For instance, Munich Re and Allianz, two major insurance companies declared that they will stop insuring cargo in and out of the Islamic Republic (Reuters, 18 February 2010; Foxnews, 19 February 2010; Blackler, 8 March 2010).

Vitol and Trafigura, two key global oil brokers, made it known that they would stop deliveries of refined gasoline to Iran. Total, Shell and British Petroleum similarly declared that they would stop supplying gasoline to Iran. The blow to the Iranian energy sector was further compounded when the European Union embargoed imports of crude oil from Iran. In a further move to align itself with the US, the EU curtailed its own involvement in Iran's energy sector and restricted banking relationships and trade financing with Iran (Chazan & Swartz, 11 March 2010; BBC, 28 June 2010; Pomfret, 1 October 2010; Walt, 17 March 2010; Reuters, 8 March 2010).

All in all, the CISADA made it hard to sell refined petroleum, gasoline and gasoline production-related services, sell advanced equipment that would have enabled Iran to expand its own ability to produce refined petroleum. The Act expanded sanctionable activity to included sales of equipment with which Iran could import gasoline (such as tankers), and of equipment that Iran could use to construct an energy pipeline (Katzman, 2011).

Clearly, the new round of sanctions had a dual purpose. It made it harder on Iran to obtain technology for its nuclear program and prevented Ahmadinejad from delivering

on his election promise to improve the economy. Since, as already discussed, the government used oil rents to ameliorate its legitimacy deficit, the financial shortfall was especially hurtful. Combined with the stolen election and the brutal suppression of protest the sanctions made the situation untenable. Shahram Chubin, an Iran expert at the Carnegie Endowment for Peace, was one of a number of analysts who concluded that Iran reached a point of significant vulnerability to sanctions: “Iran is more vulnerable to sanctions as protests and street clashes since disputed presidential elections in June 2009... A ‘significant’ portion of Iranians are likely to blame the regime for sanctions” (Peterson, 4 January 2010). Kenneth Katzman, a researcher with the Congressional Research Service with extensive knowledge of Iran, noted that the sanctions triggered a debate whether it was rational to continue with the program. He added: “We do see signs of a strategic reassessment in Iran” (Quoted by Peterson, 4 January 2010).

By mid-2010 it became quite obvious that the stolen election deepened the polarization over the nuclear program. Clearly on the defensive, Ahmadinejad and the Principlists redoubled their efforts to rally the base amongst the poor which, ironically, were the most affected by the economic downturn. Using his trademark rhetoric, the president dismissed the June Resolution by stating that “such a resolution is worth nothing for the Iranian nation [and] looks like a used toilet paper that has to be thrown away to the dustbin” (Mehrnews, 9 June 2010).

But given the devastating effects of the new round of sanctions, the “toilet paper” analogy sounded particularly hollow. The hardship at home and the country’s international isolation emboldened the opposition. In September 2010, Rafsanjani, who supported the Green Movement from the sidelines, criticized Ahmadinejad for dismissing the impact of the sanctions on country’s economy. The president retaliated by moving against Green Movement sympathizers still in power. On 13 December 2010, Ahmadinejad fired the Foreign Minister Manouchehr Mottaki, ostensibly for failing to

prevent the UN sanctions (Katzman, 2011). On 8 March 2011, Ahmadinejad and his supporters managed to oust Rafsanjani from the chairmanship of the Assembly of Experts.

Getting rid of his opponents at home might have been gratifying, but it did little to avert problems abroad. Indeed, the belligerence of the president and the brutal suppression of the opposition helped the United States to expand its unilateral sanctions and rally support for a new round of collective sanctions. In May 2011 Washington blacklisted Iran's *Bank-e Sanaat va Maadan* (Bank of Industry and Mines) for transactions with previously banned institutions (U.S.D.T., 17 May 2011).

The Security Council followed up with Resolution 1984 on 9 June 2011 on extension of the mandate of the Panel of Experts Established pursuant to Resolution 1929 (2009) until 9 June 2012. The Resolution extended the mandate of the Iran Sanctions Committee (ISC) – a panel of experts on sanctions established on 23 December 2006 to supervise and monitor the UN sanctions (UNSC Resolution 1984, 9 June 2011). In addition, Washington unilaterally beefed-up sanctions against those individuals and entities investing or supporting the development of Iran's oil sector. As a consequence, in December 2011 the assets of financial institutions that traded with the *Central Bank of Iran* (CBI) in the oil sector were frozen (McGreal & Borger, 21 November 2011; Landler, 21 November 2011; Dailynews, 22 November 2011).

As before, Ahmadinejad presented a brave face. He declared that “sanctions are unable to stop the development of Iran's nuclear program even with 100,000 resolutions” (IRNA, 18 June 2011). Technically, the president was right. Sanctions did not alter course of the program or compelled it to return to the negotiation table. But the economic devastation was very real. Since the EU embargo on Iranian crude oil, there was a dramatic decline in oil revenues- from 2.5 million barrels a day in 2011 to 1.25 million barrels in 2012. Given that oil receipts funded nearly 60 percent of the government's

expenditures, the shortage was traumatic (Katzman, 2010; Esfandiary & Fitzpatrick, 2011).

Equally significant, the sanctions hampered the progress of the nuclear program, a fact that Ahmadinejad did not disclose to the public. But opposition politicians were only too happy to make it into a political issue. Using the president's favorite train metaphor, Mousavi pointed out that during the sixteen years of Rafsanjani and Khatami, "Iran's nuclear train was running along, but since 2005 it turned 180 degrees back" (Mousavi, 28 October 2009). While the train analogy was an effective rhetoric for scoring political points, proving how much the nuclear program was set back by the sanctions was much more difficult.

7.4 The Nuclear Program During Ahmadinejad's Tenure: Measuring Achievements Behind the Rhetoric

Given that no single authoritative accounting of the program existed when Ahmadinejad took office, the piecemeal information from a variety of sources, including IAEA data, Iranian statistics, a lengthy 2006 interview with the nuclear chief Gholam Reza Aghazadeh, and the pronouncements of Ahmadinejad and his ministers need to be considered. None of the information is free of problems, especially that the president and, to some extent, other nuclear officials had a record of exaggeration.

Upon assuming office many of the projects mentioned in the preceding chapters were at least partially on line. On 8 August 2005, the government announced that the Isfahan conversion facility began producing uranium hexafluoride. Shortly after, on 29 August, Iranian nuclear scientists declared the discovery of a new way of separating uranium from uranium ore and producing yellowcake by using biotechnology methods. An AEOI project manager explained that "the new technique for the production of yellowcake

increases the efficiency a hundred fold while reduce the associated costs” (IRIB Television, 31 August 2005).

Mohammed ElBaradei and his safeguard experts could not confirm this claim beyond a general finding contained in a 2 September 2005 report. Accordingly, Iran approximately produced seven tons of gas to be used in uranium enrichment since the beginning of August 2005. But the IAEA cautioned that the lack of details could be only addressed with “Iran's full transparency which is indispensable and overdue.” The report listed perceived Iran’s failings and called for access to individuals, documentation related to procurement, dual use equipment, certain military owned workshops and research and development locations (IAEA Report, 2 September 2005). While trying to hide behind an expert façade, ElBaradei was forced to admit to the continuing lack of knowledge about the true scope of the enrichment program.

Iranian pronouncements were not much help either. On 25 October 2005 at a public rally at Narmak Jame' Mosque in Tehran, Ahmadinejad made a dramatic claim that “we shall produce nuclear fuel and sell it to other countries with a 30 percent discount.” On 27 November 2005 Behrouz Samani, the manager of the Isfahan facility, declared that his factory “made 87 percent physical progress.” Samani explained that the aim was to produce enough fuel for the nuclear power plant at Bushehr and “approximately more than 15,000 processor machines are being carried out in 60 units of the UCF at Isfahan.” Earlier in the year, specially invited journalists were told that the facility was designed to produce four types of fuel (IRNA, 25 January 2006; Fars-News-Agency, 27 November 2005; Jam-e-Jam Newspaper, 26 December 2004).

Natanz, the flagship of the enrichment program, figured prominently in the nuclear program. When the facility was launched in 2006, it was announced that it will hold 48,000 IR-1 centrifuges and produce 2,500 kilogram LEU monthly. On 2 May 2006, Aghazadeh declared that Iran could enrich uranium to 4.8 percent. On 19 January 2007 a

government's spokesman Gholam-Hossein Elham announced that Tehran is moving towards the production of nuclear fuel in some 3,000 centrifuges. The administration suggested that Natanz would be fully equipped before the end of the Persian year on 20 March 2007 (Alef.ir, 9 April 2009; The Associated Press, 19 January 2007).

It was this alleged progress in Natanz that enabled Ahmadinejad to declare that Iran "had joined the nuclear club" during the Mashhad celebration in April. Following his boss, Aghazadeh disclosed that the breakthrough occurred in Natanz on 9 April and, going forward, Iran would engage in industrial scale production in the complex. Aghazadeh promised that 3,000 centrifuges would to be installed and running by mid-March 2007. On 3 September 2007 the president announced with great fanfare that this mission was accomplished: "with great honor, I declare that as of today we launched more than 3,000 centrifuges and every week we are installing a new cascade, and we are able to produce nuclear fuel on an industrial scale" (Tait & MacAskill, 12 April 2006; Hamshahrionline, 11 April 2009; Aftab, 4 September 2007).

By 2008, such "centrifuge bulletins" became de rigueur. On 8 April 2008 the president visited Natanz to unveil a significant expansion of the facility. With the press in attendance, he affirmed that engineers had started installing 6,000 IR-2 centrifuges in addition to the existing 3,000. Three days later, IRNA reported that three sets of 164-machine cascades from a second series of 3,000 were spinning at Natanz (Fathi & Broad, 9 April 2008; IRNA, 11 April 2008).

Prior reports suggested that 18 sets of 164-machine cascades were already in motion enriching uranium. On 26 July 2008, it was announced that Natanz had 6,000 operating centrifuges, double the number in previous statements. In a talk with university professors in the northeastern city of Mashhad on 26 July 2008, Ahmadinejad proclaimed that Iran possessed 6,000 centrifuges, double the previous number. On 30 August 2008, Alireza Sheikh-Attar, the Deputy Foreign Minister claimed that Iran had increased the number of

centrifuges to 4,000 at its uranium enrichment plant and is about to install 3,000 more centrifuges (Ynet, 26 July 2008; Erdbrink, 30 August 2008).

During a 15 November 2008 conference, the president declared that Iran's nuclear program was nearing an important milestone: "I am hopeful to have our celebration of Iran's full nuclearization at the current year." He was apparently referring to the fact that Iran mastered all the phases of the nuclear cycle - from mining uranium ore to enriching it into reactor fuel. The president added that Iran is ready to confront potential sanctions: "Iran has prepared itself for any condition. They [the West] will do their best, and so will we. Eventually, the winner is whoever stands more decisively" (Fars-News-Agency, 15 November 2008).

More official announcement had followed. On 19 November 2008, Iran produced 630 kg of LEU and was installing considerably more centrifuge cascades. In addition, Iran was testing a small number of more advanced IR-2 and IR-3 centrifuges at the Natanz Pilot Fuel Enrichment Plant (PFEP) and feeding them with UF₆. On 26 November 2008 Aghazadeh announced the Natanz facility was operating 5,000 centrifuges, an increase of 1,000 from the number announced in August 2008. The AEOI chief placed the centrifuge count at 7,000 on 9 April 2009; he also claimed that country developed advanced technology to fabricate more accurate centrifuges. A day later Ahmadinejad announced the unveiling of a nuclear plant capable of producing uranium oxide pellets. The facility, located in Isfahan, was said to be an auxiliary for the Arak 40-megawatt heavy-water research reactor (Blitz, 19 November 2008; Ebtekar, 2 September 2008; Fars-News-Agency, 9 April 2009; Fathi, 10 April 2009).

Following the revelation by President Obama Iran was forced to declare the details of the almost completed Fordow Fuel Enrichment Plant (FFEP). In a letter to the IAEA on 21 September 2009, Iran revealed that when operational, Fordow would contain 16 cascades with 3000 centrifuges, a number that would bolster its overall enrichment

capacity (Sanger, 25 September 2009; IAEA Report, 16 November 2009). Ali Akbar Salehi, who replaced Aghazadeh at the helm of the AEOI in July 2009, tried to make the best of the forced revelation. On 6 October 2009, in an interview with the *Kayhan* newspaper, he discussed plans to launch a new generation of centrifuges at Fordow. He noted that “in the past two-three months, we have put much effort on research and development of new generation of centrifuges, so that we would be able to manufacture high efficient centrifuges” (*Kayhan Newspaper*, 6 October 2009). Indeed, on 2 December Ahmadinejad announced Iran would produce a higher grade of nuclear fuel. Striking a victorious tone, the president declared that Iran was preparing to produce 20 percent enriched uranium on its own and produce fuel for the Tehran Research Reactor (ISNA, 3 December 2009).

Hyping the nuclear program was very much in line with Ahmadinejad’s triumphalist style discussed in the previous chapter. But many observers questioned the data. As early as 2007 the IAEA disputed some of the Iranian claims. While the Agency stopped short of calling the Ahmadinejad-Aghazadeh figures an exaggeration, it estimated that the numbers were much lower. For instance, the Agency put the number of spinning centrifuges in 2007 closer to 2000. Even without the Agency’s accounting, it was evident that the plan to install 48,000 centrifuges by the end of 2009 - the infrastructure for ‘industrial scale’ production fell short. Approximately 8,692 centrifuges were installed, but only 3,936 were operational; they produced less than 100 kg of LEU a month, half of the output of a well-functioning system (IAEA Report, 30 August 2007; Walrond, 18 October 2011; Shire, 2007).

Indeed, the efficiency of the centrifuges, rather than their number, preoccupied nuclear experts in the West. To measure and compare the output of different grade centrifuges, Separative Work Unit (SWU) is used. Based on an equation developed by P. M. A. Dirac, SWU expresses the efficiency of a given centrifuge defined by the length

of the cylinder and its peripheral speed, among others parameters. Calculated per year, higher SWU values indicate higher centrifuge efficiency (Dirac, 1 February 1928).

The nuclear physicist Jeromy Bernstein used the 2006 Aghazadeh interview to provide some estimates of the efficiency of the Iranian centrifuges. Bernstein calculated that around 2006, the centrifuges, mostly IR-1, were quite inefficient, standing at 1SWU/yr (per machine). Bernstein claimed that the Iranians had problems with working on the more advanced P2 blueprint of A. Q Khan because they either could not obtain the maraging steel needed for the rotor or could not fabricate the “bellows,” made of flexible metal parts for joining the machines in a cascade. Instead, they used carbon fiber rotors whose peripheral speed was high enough that bellows were not required (Bernstein, 2010).

In due course, the Iranians developed more advanced models. The IR-2 was said to have a capacity of 4SWU/year the IR-2M and IR-4 had a 5SWU/yr capacity and the more advanced model, IR-8 was said to be at 6SWU/yr, capable of producing 16 kg of uranium annually. But the number of advanced machines was small and it was not clear whether the president understood or was informed about the poor performance of the bulk of inventory, the IR-1 centrifuges. David Albright from the Institute for Science and International Security (ISIS) described the IR-1 centrifuges as “too crude and temperamental to spin properly.” So much so that by some estimates the Natanz facility had to keep as much as half of its centrifuges as a reserve (Albright, 23 September 2014; Walrond, 18 October 2011; William J. Broad, 15 January 2011; Tabnak, 1 May 2008).

The public bulletins, however, were as upbeat as ever. On 12 February 2010, the thirty first anniversary of the Islamic Revolution, Ahmadinejad declared that Iran had enriched uranium to 20 percent and had the ability to enrich it further if it would choose to do so. On 10 April, in a speech marking the National Day for Nuclear Technology, the president announced the development of a “third generation” centrifuge. He claimed that

the new centrifuges spin faster and had a separation power ten times more than the first generation ones (Radiofarda, 12 February 2010; Fararu, 10 April 2010). These references meant to convey the idea that Iranian scientists had developed more advanced models, but no numbers were mentioned and there was no centrifuge that reached the level of 10SWU/yr as he had claimed.

On instruction by the Ministry of Culture and Islamic Guidance, along with the “centrifuge bulletins,” the media gave prominent attention to uranium production. On 24 June 2010, the AEOI declared that Iran had produced 17 kg of uranium enriched to 20 percent and that the country could produce 5 kg of the higher level uranium every month. In July 2010, Salehi announced a stockpile of 20 kg of 20 percent enriched uranium. On 20 October he declared the Iran stockpiled 30 kg of uranium enriched to 20 percent nearly double the amount in June. The authorities claimed that the stockpile was needed to feed the Tehran Research Reactor (TRR) for fabricating medical isotopes (Dareini, 20 October 2010).

On 5 December 2010 Salehi suggested that Iran reached self-sufficiency in producing yellow cake but did not provide specifics. The IAEA verified these claims, confirming on 6 September that Iran had been enriching uranium up to 20 percent in 18 cascades. In a further communique on 23 November the Agency stated that out of the total of 3,183 kg of enriched uranium produced since February 2007, 33 kg were further enriched to 20 percent. In other words, instead of the monthly 5 kg claimed by Salehi, Iran produced only 3 kg (Tehran Times, 6 December 2010; IAEA Report, 6 September 2010; IAEA Report 23 November 2010).

Some attributed such discrepancies to Ahmadinejad’s eagerness to project Iran’s mastery of the fuel cycle. During heated exchanges on Farsi-language sites, critics accused the president of cheating to boost the profile of the nuclear program. One of them, Saeed Laylaz, an economics professor at the Shahid Beheshti University, argued that the

president had achieved less than Khatami and was compensating by making up unrealistic numbers. Referring to Ahmadinejad he noted that compared to “previous government... [His administration] not only lagged in the nuclear program but destroyed Iran’s economic power and nuclear achievements. Ahmadinejad only fabricated numbers and reality” (Namehnews, 8 January 2014). While Ahmadinejad was clearly given to exaggerations, he could have also been misled by elements in the nuclear establishment as part of what two observers called the “culture of lies” in Iran. Accordingly, the reluctance to disclose the truth meant that “leaders...were not informed about the real scientific and technological developments,” especially the failures (Melman & Javedanfar, 2008).

Though Ahmadinejad took liberties with the numbers, he did not live in a total fantasy world, as some of his detractors suggested. As a former professor of engineering, he was capable of following the general contours of the program and, more to the point, recruited qualified officials to head it. With a Ph.D. in nuclear engineering from Massachusetts Institute of Technology (MIT) and a string of high-ranking appointments in the nuclear bureaucracy and the academy, Salehi was a highly accomplished individual determined to push the project ahead. When Salehi was made Foreign Minister, Fereydoon Abbasi-Davani, took over the AEOI on 13 February 2011. Abbasi-Davani, is a prominent nuclear scientist, a ranking commander in the Revolutionary Guards, chair of the physics department at Tehran’s Imam Hossein University. Known as a hardliners even within the tight community of nuclear scientists, he survived an assassination attack that killed a number of his colleagues. Abbas-Davani was part of *Sazman-e Pazhohesh va Noavarihayeh Defaee* (SPND) the Organization of Defensive Innovation and Research, a research institute under the Ministry of Defense Armed Forces Logistics (MODAFL) founded in February 2011 by Mohsen Fakhrizadeh-Mahabadi.

According to the IAEA, Fakhrizadeh-Mahabadi the highly secretive SPND was responsible for elements of Iran's nuclear-arms research that had been previously carried out by Iran's Physics Research Center, the AMAD Plan at Malek Ashtar University and Section for Advanced Development Applications and Technologies (SADAT). To recall, AMAD was created in 1989 to procure dual use technologies, developing nuclear detonators, and conducting high-explosive experiments associated with compressing fissile material. Western intelligence determined that AMAD was shelved in 2003, an assessment that the CIA had used in its 2007 estimate (IAEA Report, 8 November 2011).

Whether Iran abandoned its weaponization effort or not, the SPND, located in the Tehran suburb of Mojdeh, was a formidable successor to AMAD. It boasted six directorates such as research labs for metallurgy, chemistry and explosives testing, according to Western officials who have seen the intelligence on the site. Though based in the Department of Defense, the organization has reported directly to the Revolutionary Guard (Russia Today, 14 March 2011; Stratfor, 13 March, 2011; WSJ, 27 May 2014; Dahl, 11 November 2011).

In one of his first moves, Abbasi-Davani announced that Iran will enter the export markets in nuclear services and materials - a view that reflected Ahmadinejad's wish to become a global nuclear player. But the facts on the ground did not support the new IAEO chief's plans. In May 2012 the Natanz plant was reported to contain some 9,000 centrifuges installed and 4,000 operating - indicating a virtual plateau from the previous year (Russia Today, 14 March 2011; Stratfor, 13 March, 2011; IAEA Report, 25 May 2012). Even the much touted Fordow plant was only a partial answer to modernization. In June 2011 it was announced that the production of 20 percent enriched uranium will be moved to Fordow and its production capacity will be tripled. In May 2012, 1,064 centrifuges were reported to have been installed in Fordow, a number that was doubled to 2,140 by August, although the number of operating centrifuges did not increase. The

IAEA confirmed that Fordow began enriching uranium up to 20 percent, but noted that the facility had not utilized its full capacity of 3000-4000 centrifuges (Khabarfarsi, 27 December 2012; Asriran, 8 February 2015; Aftab, 12 June 2009; Jamejamonline, 8 June 2011; IAEA Report, 25 May 2012, IAEA Report 30 August 2012; BBC, 10 January 2012).

An alleged Mossad report of 22 October 2012 sent to the South African intelligence service dated 22 October 2012, provided its own assessment. The analysis, part of a cache of documents leaked to *Al Jazeera* stated that Iran had 5,500 kg uranium enriched to five percent (after 1,500 were converted to 20 percent) and about 100 kg uranium enriched to 20 percent (after 75-100 kg were converted into nuclear fuel for the TRR). The Israeli document noted an improvement in Iran's enrichment capacity, but could not provide the number of advanced centrifuges operating in Natanz and Fordow. Ollie Heinonen, a safeguard official at IAEA, was not clear how many of the old stock was replaced with the more efficient IR-2m model either. He noted the Agency was not given access to the centrifuge manufacturing facility *Towlid Abzar Boreshi Iran – TABA* (Iran Cutting Tools Company) (Aljazeera, 23 February 2015; The Sunday Times, 9 November 2014).

A number of factors combined to undermine Ahmadinejad's ambition to turn Iran into global nuclear player. As far back as 7 March 2007 Aminzadeh disputed the argument that Iran was self-sufficient in uranium production, let alone fit to become an international exporter. The former mining engineer with a degree from Amirkabir University of Technology, wrote that Iran had a limited capacity for mining uranium. As a result, despite "all the innovations of the Iranian experts," cooperation with other countries was essential. He added that "Iran needs to import uranium for its reactor; and even if one day it can enrich uranium, Iran's discovered uranium resources were limited" (Aminzadeh, 7 March 2006).

Routine technical problems played a substantial role. The first generation P1 Pakistani centrifuges reconfigured as IR-1 were not reliable and often crashed. In his interview Aghazadeh disclosed that it took the scientists a long time to figure out the causes because “they had scientific sources or books to refer to.” For example, the technicians working on assembling the centrifuges neglected to wear fabric gloves, an omission that introduced impurities and caused the machines to disintegrate (Bernstein, 2010).

The so-called chokehold sanctions on critical materials for fabricating centrifuges made it hard for Iran to update their inventory. Robert Einhorn, a Clinton administration official, claimed the replacing all the first generation inventory with IR-4 centrifuges which would have brought up the program up to par with industrial standards. But in addition to the technical difficulties, the embargo on maraging steel and fiber carbon, and other components put such a goal out of reach (Einhorn, 17 February 2014). Einhorn credited the embargo for preventing Iran’s breakout, defined as the time needed to produce enough weapon grade uranium to produce one nuclear weapon. Einhorn surmised that, as long as Iran had to rely on first generation enrichment technology, it was unlikely to leave the NPT, expel the inspectors, and produce a nuclear warhead (Crail, April 2011; Einhorn, 17 February 2014).

Tampering had caused additional damage and delay. As will be recalled, the CIA used the Tanner business to sell Iran substandard technology. In 2000, in Operation Merlin, the CIA tried to sell defective blueprint for a nuclear warhead to Iran (Risen, 2006). From 2008 through 2010 inferior aluminum tubing was sent as part of a cover business deal, but the Iranians had detected the problem prior to installation. In 2014 Asghar Zare’an, a senior official at the IAEO, curated an exhibit of equipment that was allegedly tampered with. Ian J. Stewart, a nuclear expert from King’s College in London, asserted that tampering was an effective way to sabotage the nuclear project. Steven

Hadley, a former head of the National Security Council implied that sanctions were used along with “things directed at their program, which we can’t talk about” to hamper the nuclear project (Sanger & Broad, 21 March 2015; Stewart & Gillard, 2104).

But the improvements in computer technology took tampering into an entire new level known as “cyber war.” At the time a closely guarded secret, between November 2009 and January 2010 the Natanz facility was subject to a *Stuxnet* malware attack attributed to the United States and Israel. The software affected the Programmable Logic Control (PLC) of the Supervisory Control and Data Acquisition (SCADA) on Siemens’ controller computers. Known as the Process Control System 7 (PCS-7), the complex software, Step 7, has been used to run assemblies of industrial instruments, sensors and machines (William J. Broad, 15 January 2011).

The Institute for Science and International Security (ISIS) estimated that the malware destroyed up to 1,000 centrifuges. The penetration was all the more remarkable because the system program controlling the centrifuges was air-gapped, that is not connected to the Internet and thus required a USB flash drive (David Albright, 22 December 2010). According to a detailed account by the cyber journalist Kim Zetter, the highly sophisticated program was a joint American-Israeli venture, code-named Olympic Games. Subsequent accounts, including comments made by James Cartwright, vice chairman of the Joint Chief of Staff, indicated that a secret replica of Iran’s facility was constructed in the United States to map its cyber vulnerability. In November 2010, Ahmadinejad admitted to a “minor problem” that had been taken care of by the engineers (Zetter, 2011; Sanger, 28 March 2015; Stephens, 18 January 2011).

In addition to Stuxnet, two other forms of malware were used. *Duqu* infiltrated networks to steal corporate and government data and other assets from entities, such as industrial control system manufacturers, that could be used in a future attack against another third party (Foxnews, 14 November 2011). Flame described as “the most

sophisticated cyberattack” was directed toward Natanz. It sniffed network traffic, had the ability to take screenshots of instant message exchanges, record conversations by microphones plugged or embedded in the PC, and keylog input data. Because the malware could steal a lot of data in so many different ways, it allowed a complete overview in “eyes and ears” of the vicinity of the infected machine. According to information leaked by Edward Snowden, an elite cyber-warfare unit, Tailored Access Operations in the National Security Agency possessed the type of capabilities to create the super-smart malware (Whittaker, 28 May 2012; Perez, 18 February 2015).

If the use of malware represented the most sophisticated form of action, fire and explosion periodically reported in Natanz and other facilities were the low end of the sabotage scale. According to WikiLeaks source, in 2009 there were a series of accidents in Natanz which apparently prompted the resignation of Aghazadeh. In November 2011, a satellite image captured the virtual destruction of an apparent missile-development site west of Tehran. The explosion killed 17 people, among them General Hassan Tehrani-Moqaddam, the architect and leading force behind Iran’s advanced ballistic missile program. At least six buildings appear damaged or destroyed, but other parts of the vast base appeared untouched. On another occasion an Iranian newspaper reported that the authorities had thwarted the sabotage attempt of water tanks used for transporting heavy water at Arak. A spectacular explosion on 5 October 2014 took place deep inside the Parchin military research, development and production facility, where Iran fabricated crucial elements of its missiles and munitions (Borger & Dehghan, 14 November 2011; Worth & Afkhami, 14 November 2011; Asriran, 3 September 2014; Sanger, 9 October 2014).

In addition to sabotage, Israel allegedly employed targeted killings. Between 2007 and 2011, a number of nuclear scientists were assassinated, among them Ardeshir Hosseinpour, Masood Alimohammadi, Majid Shahriari, Darioush Rezaei-Nejad, Mostafa

Ahmadi Roshan and Abbasi- Davani, as noted, was seriously injured but survived (Mills, 4 June 2012; Symantec, 23 November 2011).

The head of MI6, the British intelligence service, suggested in 2012 that the various sabotage actions had set Iran's program back by six years. Meir Dagan, the chief of the Mossad widely credited with creating some of these obstacles, was even more outspoken. In his retirement addressing to the Israeli Knesset in 2012, Dagan predicted that Iran would not be ready to weaponize before 2015. Daniel Salisbury, an expert on open source intelligence, noted that, compared to the ease with which Iran was able to launch and nourish its program, these attacks put Iran on note that things may be even more ominous in the future (Blair, 26 February 2013; Melman, 7 January 2011; Salisbury, 2014).

By the end of his second term, Ahmadinejad presided over a badly damaged economy and his grandiose ambition to become a major player in the international nuclear market fell quite short. Though the president still preached the virtues of a nuclear Iran, for those competing to succeed him revving the moribund economy moved to the top of the political agenda.

7.5 Conclusion

By the middle of Ahmadinejad's second term, the Principalist doctrine of nuclear sovereignty was in tatters, challenged by the international community mobilized by the United States and its allies. Despite the fact that Ahmadinejad and Ayatollah Khamenei took a publicly defiant stand, two factors aggravated matters. As a rentier state, Iran was overtly depended on oil riches and as neopatrimonial state, the regime drew legitimacy from payoff to select segments of the population. The parastatal Revolutionary Guards that profited from sanctions were reluctant to abandon the Principalist doctrine of sovereign nuclear rights. But with oil rents drastically down and the inability of the regime

to pay off its clientele population, not to mention shortages of imported goods including medical supplies, there was a growing recognition that the cost of the nuclear program became too high. Equally important, in what turned to be a case of unexpected consequences, Ahmadinejad's high profile Principalism, slowed the rate nuclear development from its peak under President Khatami.

CHAPTER 8: THE ROUHANI PRESIDENCY: THE ROAD TO ROLLBACK

The goal of this chapter is to demonstrate how smart sanctions in general and super smart sanctions in particular brought President Hassan Rouhani victory in 2013. Elected with the a mandate to obtain relief from sanctions in exchange of an unspecified rollback, Rouhani administration's obtained something of a mandate from the Supreme Leader, but run afoul of the Principalists who resisted any compromise. The ensuing discourse between the elites, ostensibly focused on the nuclear issue, turned into an existential debate on the future of the Islamic Republic. The Rouhani camp, known as the Normalizers, considered the rollback to be a step towards normalization reintegration into the community of nations. The Principalists warned that a nuclear compromise and a possible reintegration would betray the goals of the revolution.

Section 8.1 discusses the forging of super- smart sanctions, which are rightly considered a new phase in sanctions and economic warfare. Having put Iran's economic survival at stake, the super smart sanctions forced a shift in the view of the nuclear program from a source of power and national pride to one that was now viewed as a source of threat. Section 8.2 explains the mechanism through which this perception had changed. As a reaction to economic distress, the population had develop social instability, namely antisocial behavior deemed acutely delegitimizing to the Islamic norms and, ultimately, threatening the power of the regime. Section 8.3 discusses the election of Rouhani within the context of the debate on the sanctions- social instability connection. By emphasizing social instability, the Normalizers managed to focus attention on the zero sum game quality of the nuclear program which in their view, left only two options- either reintegrate and make Iran a normal country or lose power. Section 8. 4 gives a detailed overview of Iran's nuclear program as it prepared to join the historical talks in Geneva in

2013 to negotiate a permanent agreement and rejoin the international community. Section 8.5 details the terms of the 2015 agreement and discusses its future prospects.

8.1 From Smart Sanctions to Super-Smart Sanctions: Putting the Squeeze on the Iranian Economy

As Iran struggled with the economic down spiral, another round of the noisy exchange between sanction advocates²³ and sanction skeptics²⁴ was under way in Washington. Not surprisingly, the advocates were eager to claim that the sanctions worked as intended. But sanction pessimists, including Republicans in the Congress, were not ready to give up.²⁵ They contended that Iran could withstand the economic pressure quite handily and that the regime was highly determined to produce the bomb no matter the cost. While pushing for more arduous sanctions, skeptics urged the president to consider military action before Iran reached the “zone of immunity” - a reference to the possession of an actual weapon. Since they believed that Iran was on the verge of weaponization, the horizon for a military attack was, in this view, closing rapidly (Jpost, 19 March 2012).

Two prominent pro-Iran advocates, Flynt and Hillary Leverett, former officials in the Clinton administration, agreed with the skeptics that sanctions would make the Iranians more resistant. More important, they repeated Ahmadinejad’s frequent assertions that the sanctions had encouraged greater self-sufficiency and predicted that Iran would emerge from the ordeal a much stronger country (Leverett, 2012). The Leveretts urged for the lifting of all sanctions followed by an agreement that would accept Iran as a member of the nuclear club. Not incidentally, this so-called “managed acquiescence” policy was pushed by the National Iranian American Council (NIAC), a mouthpiece of

²³ Among them: Daniel Drazner, Mark Dubowitz, John Cassidy, Laicie Heelay, Usha Sahay, Bijan Khajepour, Alireza Nader, Michael Adler, Alireza Hajhosseini.

²⁴ Among them: Emanuele Ottolenghi, Ivan Eland, Dina Esfandiary, Simon Jenkins, Carla Anne Robbins, Ali Alfoneh.

²⁵ Among them Senators; Bob Corker, Robert Menendez, Ted Cruz, Mark Kirk, Marco Rubio, Mark Warner, Chuck Grassley, Susan M. Collins, Richard C. Shelby, John McCain, Lindsey Graham, Mitch McConnell, Thom Tillis, Ben Sasse, Mike Rounds, Joni Ernst, David Perdue and *John Robert Bolton*, U.S. permanent representative to the United Nations 2001-2005.

the regime. Trita Parsi, the founder and first president of the NIAC, called sanctions “blind” and “indiscriminate” and asserted that coexistence with Iran was essential for the United States (Parsi, 8 August 2012; Leverett, 2012).

The in-between position offered a more complex scenario. Mohammed ElBaradei, the outgoing chief of the International Atomic Energy Agency (IAEA) and other like-minded observers warned that, in a desperate bid to break out of the economic squeeze, hardline elements in the regime would stage provocations leading to a contentious escalation between Iran and the West (ElBaradei, 2011; Parsi, 8 August 2012; Simon, 2010a).

But none of the above argument seemed to make an impact on the Obama administration. While the president occasionally stated that “all options are on the table,” his programmatic speech in Prague in April 5, 2009 implied a commitment to work against proliferation in a peaceful way, by which he meant rollback through sanctions (President Barack Obama, 5 April 2009). Meghan O’Sullivan, a knowledgeable insiders, noted that the United States and its allies staked their political capital on sanctions as the default preference. A former sanction expert in the Clinton administration, she wrote that in the case of Iran sanctions “have a distinctively different feel,” a new and highly aggressive effort to address Iran’s “problematic behavior” (O’Sullivan, 2012, p. 13). Adding to the urgency in Washington were speculations that the right-wing Israeli government of Prime Minister Benjamin Netanyahu was contemplating a preemptive strike of its own. A sanction-driven rollback of Tehran’s nuclear program would have gone a long way of dissuading Israel from its alleged plan (Ezrahi, 5 March 2015; Telegraph, 02 November 2011).

Washington was well positioned to wage financial warfare against Iran. The Obama administration could use an array of sophisticated tools developed by the office of terrorism and financial intelligence (TFI) in the Treasury Department under Stewart

Levey and his successor David S. Cohen, both of whom were considered master architects of a new generation of smart sanctions. Juan C. Zarate, a Treasury official, stressed that some in Tehran understood that “they were under a financial attack of a new kind,” and apparently had closely monitored Cohen during his many appearances abroad. Zarate suggested that Ayatollah Akbar Hashemi Rafsanjani was among the first in Tehran to understand the seriousness of the situation and quoted him to this effect (Zarate, 2013).

But, as noted, President Ahmadinejad failed to understand the importance of financial warfare and his increasingly bizarre behavior did little to help Iran in the global arena. With virtually no support for the Iran left in the international community, on 23 January 2012, the EU imposed new sanctions, including a full ban on Iranian oil exports and freezing the assets of *Bank Melli Iran* (BMI) and Central Bank of Iran (CBI). Two weeks later, on 6 February 2012, Washington Executive Order (EO) 13599 imposed a set of sanctions on CBI and other financial institutions and seized the assets of CBI in the United States. On 7 June 2012 the Security Council passed Resolution 2049 that was followed by an array of unilateral sanctions implemented by the United States and the European Union (U.N.S.C. Report, 1 December 2014; Executive Order 13599, 2012; UNSC Resolution 2049, 7 June 2012).

Most consequentially, on 15 March the Belgian-based Society for Worldwide Interbank Financial Telecommunication (SWIFT) declared it would bar Iranian banks from its network. The involvement of SWIFT, the world’s largest electronic payment system, represented a new phase of sanction statecraft – turning smart sanctions into super smart ones (Castle, 15 March 2012). Mark Dubowitz, the executive director of the right-leaning Foundation for the Defense of Democracies (FDD) welcomed the initiative. Dubowitz who frequently testified in Congress in support of harsh sanctions, stated that: “This could deny Iran’s banks the ability to move billions of dollars, and ratchet up the economic pressure on leaders who have so far refused to reach a negotiated settlement on

their illegal nuclear weapons program.” According to a *Wall Street Journal* article, Dubowitz contributed ideas and research to the design of super smart sanctions (WSJ, 1 February 2012).

The SWIFT declaration coincides with reports that major currency exchangers in the United Arab Emirates (UAE) had stopped handling the Rial, a development that further reduced Iran’s ability to trade and acquire hard currency (BBC, 15 March 2012). The financial disruption proved devastating to Iran’s economy. BMI and other major Iranian banks - Bank *Mellat*, *Tejarat* Bank, Future Bank, Bank *Refah*, Post Bank, Persia International Bank and *Europäisch-Iranische Handelsbank* could not conduct international transactions. Virtually overnight Iran became financially isolated as money could not flow in and out of the country through official banking channels (Castle, 15 March 2012; Taylor, 2009). Financial sanctions made receiving payment for oil, a vital component of Iran’s economy and a key source of government income and foreign currency, substantially more difficult. For instance, according to reports by global financial organizations, many foreign banks and financial institutions were reluctant to process transactions for Iranian citizens and businesses even when it was not clear that these transactions would trigger sanctions (GAO, February 2013).

Unable to arrange financing for trade abroad, company officials were forced to transfer suitcases of cash to shady foreign banks using the services of street-level money changers. With brokers exacting fees every step of the way, this practice was not only costly but also risky, as cash was a tempting target for thieves. Commenting on the success of the scheme, Dubowitz noted that: “They can’t repatriate the money back to Iran and this is the dilemma Iran finds itself in.” One Iranian businessman put it succinctly: “SWIFT’s move made it impossible to conduct business with Iran.” (Erdbrink, 30 September 2013; Lakshmanan, 25 February 2012).

The SWIFT blow was followed by American pressure to persuade Iran's top oil customers - Japan, South Korea and India - to cut their imports. In case of noncompliance, Asian companies involved in oil trade faced an array of penalties - being barred from receiving US Export-Import Bank financing, US export licenses, and loans over US\$ 10 million from the United States financial institutions, among others. As a matter of fact, Washington forced these countries to choose between doing business with the United States or Iran (Heydarian, 11 June 2012). Additional American sanctions in the form of an Executive Order tightened the economic noose. A 22 April 2012 EO 13606 froze the assets of individuals facilitating Iran's ability to violate human rights. A 1 May 2012 EO 13608 targeted persons engaged in misleading practices to withhold or obscure information about Iranian links to financial transactions (Executive Order 13606, 22 April 2012; UNSC Resolution, 7 June 2012).

On 7 June 2012 the Security Council passed Resolution 2049 that was followed by an array of unilateral sanctions implemented by the United States and the European Union. On 12 July 2012, the US imposed another round of sanctions on Iranians and foreign individuals and entities that contributed to the development of Iran's weapons program. Pentane Chemistry Industries (PCI) and Center for Innovation and Technology Cooperation (CITC), among others, were targeted for facilitating procurement and transferring technology from the science community to the military services (Ighani, 2014; Executive Order 13619, 11 July 2012). The administration also sanctioned the National Iranian Tanker Co. (NITC) including 58 tankers, 27 of its entities and 11 front companies in UAE, South East Asia, and Europe.

On 30 July 2012 EO 13622 imposed new sanctions on Iran's oil sector and petrochemical products, applied virtually all of the same sanctions as Iran Sanctions Act (ISA) and banned foreign banks and financial institutions from transactions facilitating purchase of Iran's oil, petrochemicals and petroleum products. Additionally, the EO

declared that foreign banks and financial institutions will be sanctioned if they knowingly conduct or facilitate any financial transaction with Iran's Nafiran Inter Trade Company (NICO), the National Iranian Oil Company (NIOC), and/or any entities controlled or owned by, or operating for or on behalf of these two Iranian companies. According to the EO, such banks and financial institutions could be punished for conducting financial transactions for the purchase of Iran's oil, petroleum or petrochemical products through channel other than NICO and NIOC (Administration of Barack Obama, 30 July 2012). It was under this order that several companies were sanctioned on 31 May 2013 for selling petrochemical products to Iran, including two Iraqi and Chinese banks for conducting transactions with banned Iranian banks (Katzman, 19 August 2014; Belfer Center, 2013).

The year 2013 brought another round of American sanctions. The National Defense Authorization Act for fiscal year (FY) 2013 signed on 2 January 2013 included Section D titled "The Iran Freedom and Counter-Proliferation Act" (IFCA). It reinforced the provisions included in a previous bill, the Iran Sanctions Act (ISA), originally passed as the Iran-Libya Sanctions Act (ILSA) during the Clinton administration. Among other provisions, secondary sanctions were imposed on all entities deemed to provide services and goods to Iran's energy, shipping and shipbuilding sectors, as well as Iran's port operations. Insurance providers for a wide range of transactions with Iran, including those related to oil and gasoline shipment, or goods for the Iran's energy, shipbuilding or shipping sectors were targeted as well. Sanctions against foreign firms transferring gold and other precious metals in exchange for oil and other products were extremely effective. Combined with SWIFT, the new provision chocked off virtually all avenues of trade (Katzman, 19 August 2014; U.S.D.S., 2012).

Iran Threat Reduction Act (ITRA) that went into effect on 6 February 2013 further impeded Iran's ability to acquire hard currency. Section 504 specified that Iran's receipts from bilateral trade and exempted transactions "be credited to an account in the country

with primary jurisdiction over the foreign bank making the transaction” (GPO, 10 August 2012). The net effect was to prevent the Islamic Republic from repatriating its hard currency back and forcing it to purchase products directly from its oil customers. The Treasury Department also punished banks helping Iran violate American financial restrictions. In June 2012, the Dutch ING bank was forced to pay 619 million dollars for transferring billions of dollars through the United States financial system and using false records on behalf of its Iranian clients (WSJ, 12 June 2012; Justice, 12 June 2012).

In August 2012 Standard Chartered was required to pay \$340 million for processing transactions with Iran in violation of the U.S. regulations. In January 2014, the Luxembourg-based Clearstream Banking agreed to pay 152 million dollars for permitting the Islamic Republic to evade restrictions on trade with U.S. banks and financial institutions. The same month, the Bank of Moscow agreed to remit \$9,492,525 to settle alleged U.S. sanctions violations and for illicitly transferring money through the U.S. financial system on behalf of BMI. On 30 June 2014, French bank BNP Paribas was compelled to pay an unprecedented \$9 billion in fines for assisting Iran, Cuba and Sudan violate U.S. sanctions (WSJ, 15 August 2015, 23 January 2014; News, 28 January 2014; Katzman, 19 August 2014; Reuters, 1 July 2014).

Executive Order 13645 of 30 June 2013, (effective 1 July 2013) imposed ISA sanctions on organizations providing services and goods to Iranian automotive sector, which covered cars, buses, trucks, and motorcycles. The provision also blocked foreign financial institutions and banks from participating in the American market should they perform any transactions with Iran’s automotive sector. Moreover, the provision banned U.S. bank accounts held by banks and financial institutions that conducted transactions in Iranian currency, the Rial, or held Rial accounts. The EO blocked the use of American-based property of these banks and froze the U.S.-based property of individuals that

conducts transactions with the Iranian entities on the list of ‘Blocked Persons’ or ‘Specially Designated Nationals’ (SDNs) (Katzman, 19 August 2014).

On 1 July 2012 EU imposed an embargo on Iranian oil, froze the assets of Iran’s CBI, halted the vast majority of Iranian imports, ended exemptions for contracts signed before 2012 and barred companies from insuring Iranian oil shipments. The EU further prevented Iranian banks from having any dealing in Europe with the exception of humanitarian-related transaction. Additionally, European shipyards were banned from building oil tankers destined for the Islamic Republic. Oil companies, including the French Total SA and Royal Dutch Shell Plc, terminated their dealings with Tehran (Center, 2013; RT, 27 January 2013; Dicolo, 1 July 2012).

The EU compounded the economic damage by outlawing any transactions with Iranian financial institutions and slapping an embargo on its natural gas (*Kayhan Newspaper*, 2 July 2012). Additional measures pertained to exploration of crude oil and natural gas, production of crude oil and natural gas, refining of crude oil, liquefaction of natural gas, petrochemical industry. Specifically, Council Regulation (EU) No 267/2012 prohibited the sale, transfer, supply or export of technology and key equipment for the gas and oil industry as detailed in Annex VI of the Regulation. Also banned were the Regulation were brokering services and financial and technical support related to these technology and goods, investment (including the creation of a joint venture, the acquisition or extension of a participation and granting of any loan or credit facility) in any entity or individual engaged in the production or exploration of natural gas and crude oil, the liquefaction of natural gas and petrochemicals or the refining of fuels (EEAS, 24 January 2014).

Collectively, the super smart sanctions affected dramatically Iran’s economy. Oil sales, which account for 60 percent of the government’s revenue, were cut in half. In a rare admission, the Oil Minister Rostam Qasemi conceded that Iran’s crude oil export

revenues took a big hit. According to the ISNA news agency, he told the Majlis budget committee that “there had been a 40 percent decrease in oil sales and a 45 percent decrease in repatriating oil money” (Gladstone, 7 January 2013). The minister warned that the final figures for the Iranian calendar year ending in March 2013 would see “a significant decrease” in crude export revenues but did not provide numbers. By late 2013 sanctions reduced Iran’s oil exports to about 1 million barrels per day - far below the 2.5 million barrels per day Iran had exported during 2011. The decline in oil sales revenue was thus very substantial; it plummeted from US\$ 100 billion in 2011 to about US\$ 35 billion in 2013 (Alef.ir, 13 January 2013).

Altogether, the combination of UN sanctions and American and EU were devastating. According to one economic journal in Tehran “the [UN] resolutions not only affect people’s live, but it has had a psychological effect too. It does not make sense for investors not to consider political events when they want to invest their money” (Econews, 9 September 2012). International pressure had blighted the once blooming foreign investments in Iran’s energy sector, and hindered its efforts to expand oil production. Fear of getting on the wrong side of American sanction and severe penalties for non-compliance did the rest (Yeganehshakib, November 2013).

The range and severity of the sanctions caught the regime by surprise. The highly secretive SWIFT maneuver became known in Tehran only three days before the official announcement. Though Ahmadinejad tried to apply his usual positive spin, his numbers did not add up. He claimed, for example, that Iran had US\$ 100 billion in foreign exchange reserves - a sum that, in his view, provided a healthy margin of safety for the country. But he failed to mention that most of the money was in foreign accounts that could not be repatriated since as of February 2013 Iran was effectively barred from repatriating assets accumulated from oil exports and held overseas (Irandiplomacy.ir, 20 February 2012; Nasser, 31 October 2010; IIF, 4 December 2014).

More than half of the official reserves (estimated at US\$ 92 billion) were not readily accessible to the authorities. All in all, foreign reserves had shrunk to US\$ 80 billion by mid-2013, and three-quarters of the sum was tied up in escrow accounts in banks of Iran's oil customers. The money could be spent locally, forcing Iran to import food stuffs, pharmaceuticals and health care products from countries like China or India. But, as noted above, the sanctions restricted the kind of goods that Iran could import (Erdbrink, 30 September 2013; Mukherji, 6 February 2013).

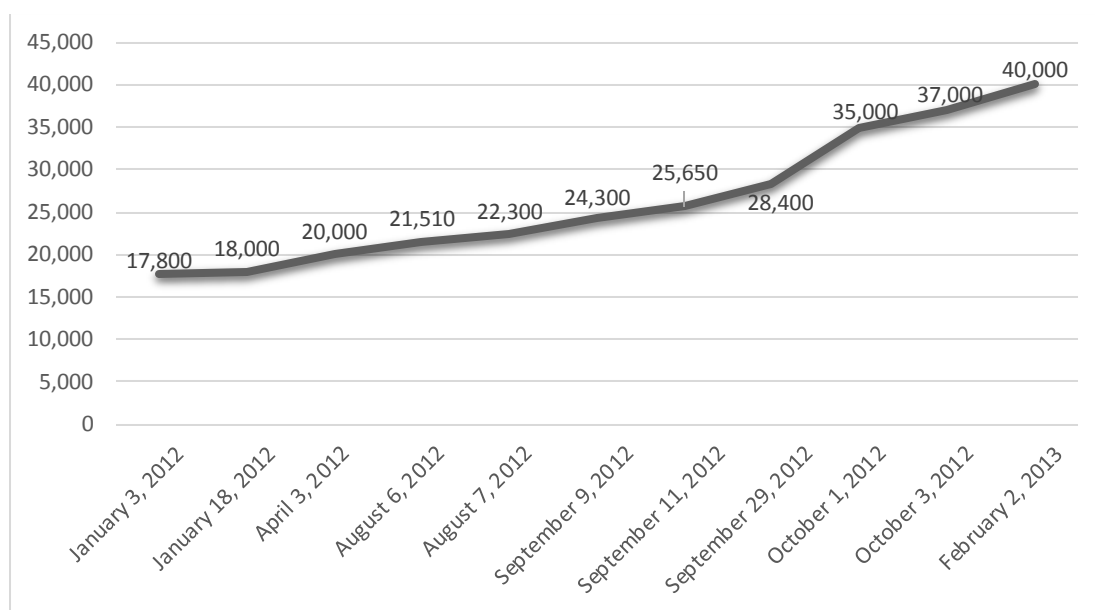
Iranian shoppers were able to see the consequences of the sanctions in their nearest store. Shelves were stocked with low-quality Chinese products, most of it bought for a premium price debited to accounts trapped in Chinese banks. As the economist Mohammad-Sadegh Jahanséfát put it, the government had been taken hostage by countries benefiting from the sanctions - particularly China, which he called the worst business partner Iran had ever had: "We don't have an oil-for-food program like Iraq, but we have an oil-for-junk program" (Erdbrink, 30 September 2013).

While basic needs were met, advanced Western medications were scarce, a shortage that added to the general misery. The plight of cancer patients was well documented, causing one journalist to comment that killing Iranians with air strikes would be more humane: "If limited airstrikes on Iran may actually be the more morally sound course of actions because a couple of thousand deaths might be worth it to avoid the livelihoods of 75 million people destroyed" (Harress, 8 October 2013; Namazi, February 2013; Hounshell, 4 October 2012; Hounshell, 4 October 2012).

In a rentier state the disruption of oil exports was bound to cascade through the economy. A drop in the value of the currency, the Rial, was indicative of things to come. In October 2012 the Rial fell to a new record low against the U.S. dollar, having lost about 80 percent of its value since 2011. The unofficial value of the U.S. dollar went up from 10,352 Rial in January 2011 to 37,000 Rial in October 2012. Also in October the

government tried to manage the currency market by introducing a new rate via a currency exchange mechanism. But the exchange mechanism failed to arrest the depreciation of the Rial in unofficial markets which, in turn, affected the various economic sectors that needed hard currency for transactions (BBC, 1 October 2012; Gladstone, 22 January 2013; Bozorgmehr, 10 November 2011; Khajehpour, Parsi, & Marashi, March 2013; Plaut, 21 February 2013).

Graph 1: Iranian Exchange Rates, Rial to USD, January 2011 to February 2013)



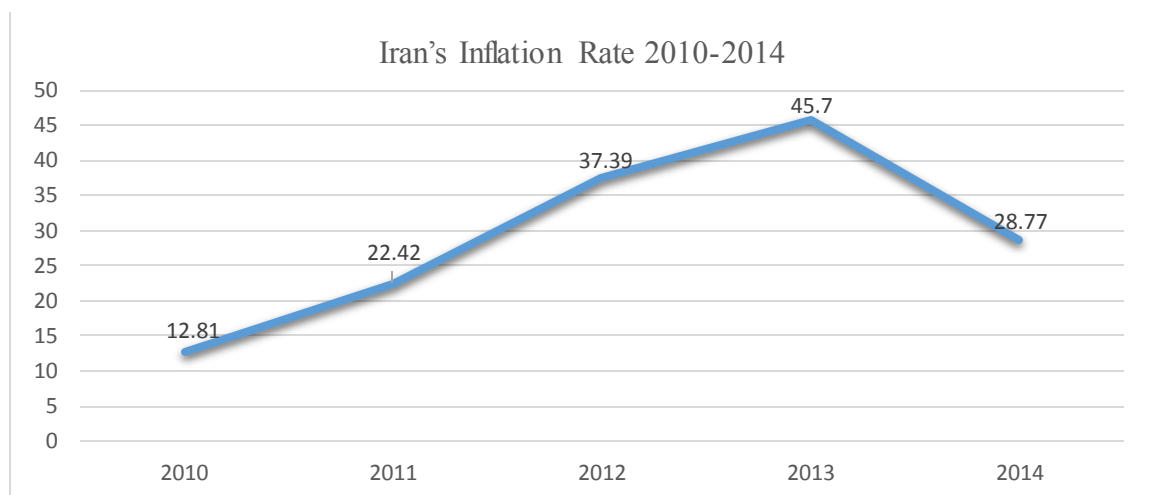
Data source: Central Bank of Iran (CBI)

Financial information disclosed both by the Statistical Center of Iran (SCI) and global organizations at the end of 2013 painted a grim picture of the economy. Iran's Gross Domestic Product (GDP) had declined from a peak of US\$ 514 billion in FY2011/12 to US\$ 342 billion in FY2013/14, a number which amounted to an average 8.6 percent shrinkage. The drop was particularly dramatic between 2011 and 2013 when the GDP growth rate went from 8.9 percent to -9 percent. In terms of "forgone income" - measured as "the average annual difference between the nominal GDP in dollars in the absence of sanctions and depreciation of the official and black market exchange rates as compared with outcome of the past three years" - the figure was large, standing at \$57

billion, almost \$750 annually per every Iranian (Iradian, Abed, & Preston, 4 December 2014).²⁶

The drop in value of the currency had accelerated inflation. The International Monetary Fund (IMF) global inflation index had Iran at the top with a rate of 42.3 percent during the first three months of 2013. According to CBI, inflation rate reached 45 percent in July 2013 and increased to 56 percent during the last three months 2013. Many economists, among them Steve H. Hanke, however, asserted that the actual inflation rate was in the vicinity of 71 percent (Trend, 19 November 2013, Trend, 12 November 2013; ISNA, 25 April 2014; Hamshahrionline, 6 September 2013; Hanke, October 2012).

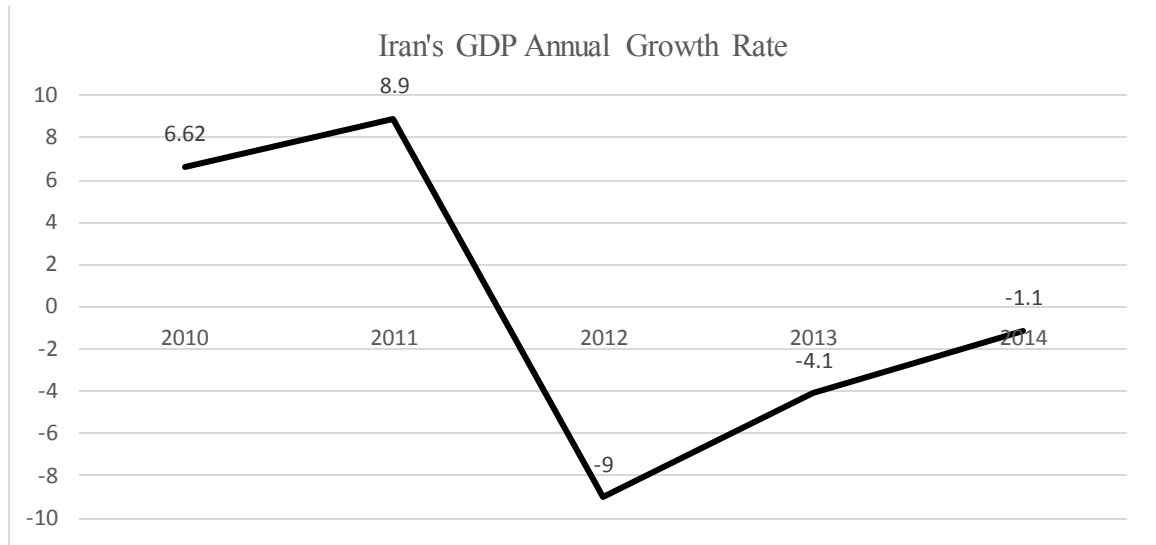
Graph 2: Iran's Inflation Rate 2010-2014



Source: Reported by IMF, World Bank and CBI

²⁶see also Iran Overview, <http://www.worldbank.org/en/country/iran/overview> and Iran: Real gross domestic product (GDP) growth from 2004 to 2014 (compared to previous year) <http://www.statista.com/statistics/294301/iran-gross-domestic-product-gdp-growth/>

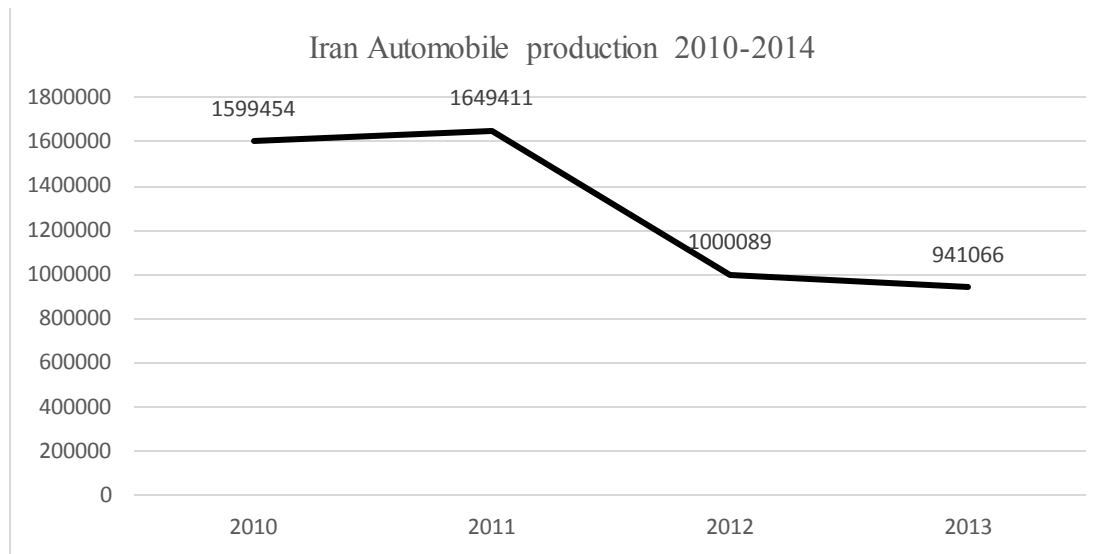
Graph 3: Iran's GDP Annual Growth Rate



Source: CBI, World Bank.org, tradingeconomics.com

In yet another manifestation of sanctions, many Iranian firms' operations reduced and default on loans became endemic; Non-performing loans (NPLs) rose from 13.7 in FY 2012/2013 to 14.4 percent in FY 2013/2014. In turn, the limited liquidity in banks and other financial intuitions forced highly cautious lending practice, making it difficult for businesses to operate as credit conditions had deteriorated (IMF, 3 April 2014, April 2014a, April 2014b; Katzman, 19 August 2014; IIF, 4 December 2014). Iran's manufacturing sector which relied on imported parts, suffered from a double whammy. Many Iranian manufacturers were unable to obtain credit and had to pre-pay, often using circuitous and time consuming mechanisms, to obtain parts from abroad. This difficulty was particularly acute in the automotive sector; Iran's production of automobiles fell by about 40 percent from 2011 to 2013 as a consequence of U.S. EO 13645 of 30 June 2013 (Katzman, 18 March 2014). In 2011 Iran produced 1.65 million cars per year, with exports to Syria, Iraq and Venezuela topping the list, but in 2013, car production declined to 941,066 vehicles. Ranked as the 13th larger car producer in the world in 2011, Iran fell to the 21 place in 2013. And in the first half of 2013, the country shipped only 1,456 cars abroad - a trickle compared with 2012 (IAIIC, June 2013; OICA, 2013).

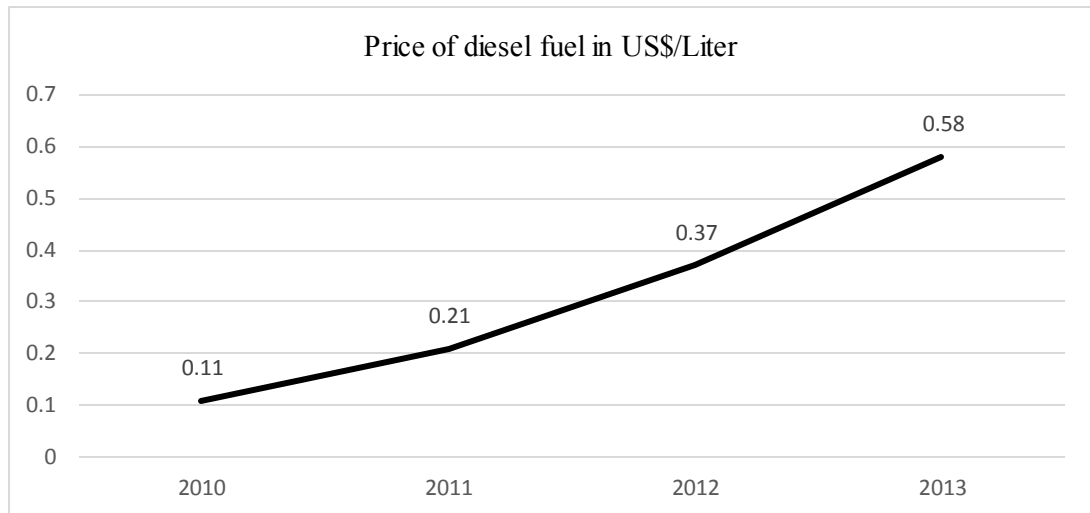
Graph 4: Iran Automobile production 2010-2014



Source: Business Monitor International, International Organization of Motor Vehicle Manufacturers (OICA)

Small and medium-sized industrial plants were especially hard hit because the price of imported diesel fuel increased some eighteen-fold from US\$ 0.02 in 2011 to US\$ 0.37 in 2012, and 0.58 in 2013. Large numbers of companies went bankrupt and laid off their workers. Others were either operating at a fraction of their capacity, teetering on the edge of bankruptcy, or unable to pay their workers' salaries in a timely manner. As stated by the Council of Islamic Workers, an officially-sanctioned entity representing Iran's contract workers, many of Iranian factories ranging from steel to dairy had shut down and more than 100,000 workers had been laid off in 2011 even before sanctions tightened dramatically (The World Bank, 2014b, 2014a; Fassihi, 22 May 2012).

Graph 5: Price of diesel fuel in US\$/Liter



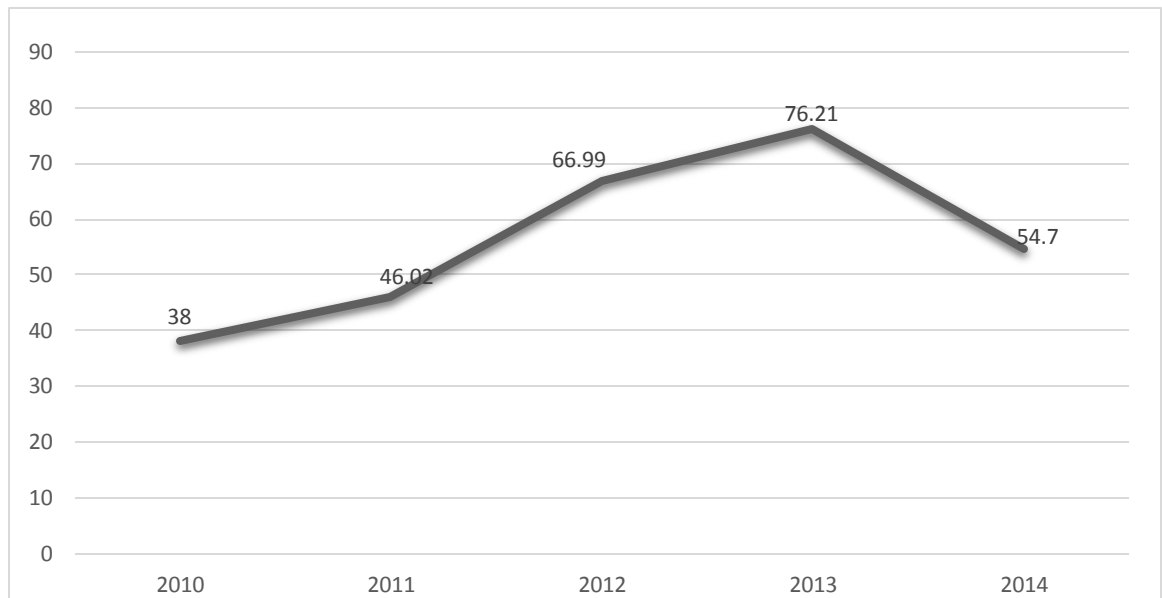
Source: worldbank.org

To complicate matters, Iran's ambitious plan to develop an export industry was caught in the downturn. Having debated for more than a decade the need to lessen its dependency on oil, the regime was taking its first steps in building a strong manufacturing sector that would also cut on an array of the imports. In this sense the sanctions came at worst possible time because Iran precisely at a time when the country's dependency on the petro-dollars and imports was as great as ever. Though Ahmadinejad was not entirely responsible for Iran's decades-long addiction to oil receipts, many critics blamed him for failing to diversify the economy thus exacerbating Iran's build-in vulnerabilities to sanctions (ICHRI, 2013).

Economic data released both by the Iranian government and international organizations at the end the Iranian calendar year of March 2013, demonstrated the dire employment situation. Adel Azar, the head of Statistical Center of Iran estimated that 12 million people were out of work, which announced for almost 50 percent of active population.

At the collective level the distress suffered by the population manifested itself in the so-called misery index,²⁷ a reference to rates of unemployment, inflation, and bank lending rates minus the percentage change in real GDP per capita. As Graphs 6 and 7 indicate, the Iranian misery index escalated from 38 percent in 2010 to 76.21 in 2013. Iran's misery index skyrocketed during 2010 to 2013, reached to the top of the global misery index after Venezuela in 2013 (Venezuela was the world's most miserable country with 79.4 percent), displacing some notoriously disadvantaged societies (Hanke, May 2014).

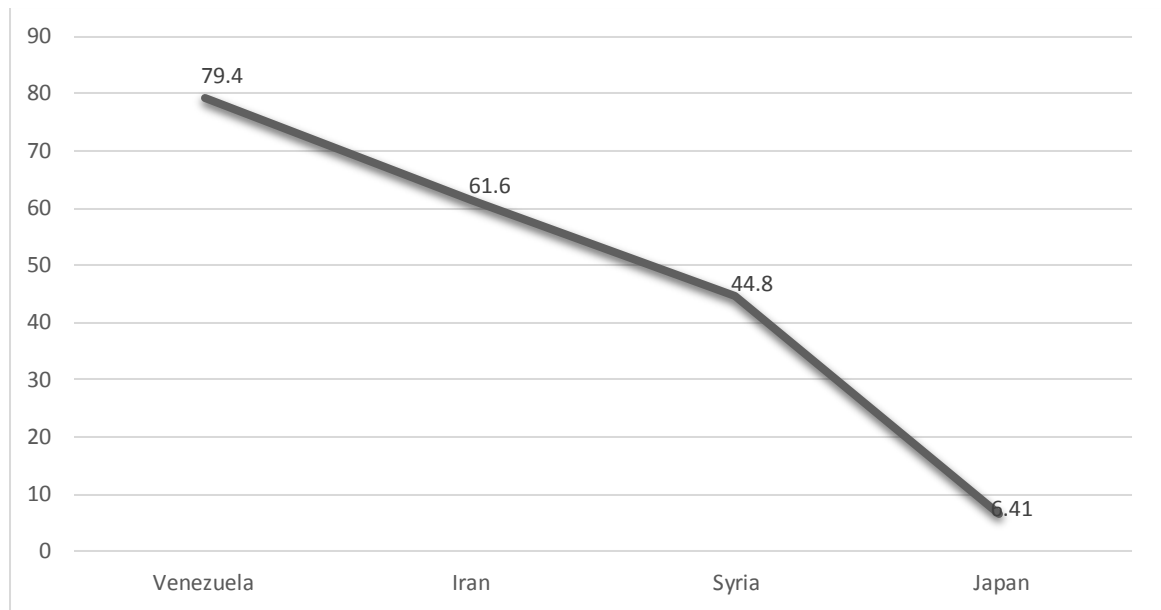
Graph 6: Iran's Misery Index



Source: CATO Institute, Index Mundi, Trading Economics.

²⁷ To obtain a clear picture of the economic conditions experienced by the majority of Iranians, we can construct a misery index. The Misery Index value I use expands on Okun's (and Harvard economist Robert Barro's Misery Index) by adding inflation, unemployment, and interest rates and then subtracting the year-over-year percent change in GDP per capita.

Graph 7: Global Misery Index Scores 2013 (%)



Source: IMF, CATO Institute

To placate the population, President Ahmadinejad announced a number of “quick turnaround” ventures to curb unemployment, but Ahmad Tavakoli, the head of the Majlis Research Center and a Principalist himself, admitted that nearly half of the schemes were not in the planning stage yet (Ettela'at, 25 October 2013; Entekhab, 19 October 2013).

Failing to produce domestic relief, the Ahmadinejad administration tried to intimidate the international community by issuing dramatic threats. Several officials openly threatened to close the Strait of Hormuz, a vital trade route for transporting about one-fifth of the global oil market which is used by 40 percent of the world's oil tankers. As early as 28 December 2011 Iran's first Vice President Mohammad Reza Rahimi delivered a sharp warning, promising that Iran would retaliate by blocking all oil shipments through the Strait of Hormuz. Rahimi announced that “if they impose sanctions on Iran's oil exports, then even one drop of oil cannot flow from the Strait of Hormuz” (Fars-News-Agency, 28 December 2011; IRNA, 27 December 2012).

Iranian naval commanders repeated the warning as well. Admiral Habibollah Sayyari, chief of the Iranian navy, told the state-run Press TV on 31 December 2011 that “closing the Strait of Hormuz for Iran's armed forces will be easier than drinking a glass

of water.” To ratchet up the intimidation another notch, on 2 July 2012 an editorial in *Kayhan* entitled ‘Do Not Plant the Wind, You’ll Reap the Storm’ warned of dire consequences. It asserted that “the Islamic Republic will not hesitate to close the Strait of Hormuz if it would be prevented from its very fundamental right” (Presstv.ir, 28 December 2011; Blair, 23 January 2012; Kayhan Newspaper, 2 July 2012).

Recalling Operation Praying Mantis – where the United States shelled Iran’s oil offshore facilities to punish it for mining the Straits of Hormuz during the Iran-Iraq war - these new threats were not taken seriously. Still, it reflected the growing desperation of the regime. But the government’s extensive propaganda machine worked overtime to cover up the extent of the economic calamity. The president himself continued to paint a rosy picture of Iran’s economy and promised to fight the sanctions, a stand strongly supported by Ayatollah Khamenei. With so much dissimulation emanating from Tehran, even serious analysts were not sure whether the sanctions were making an impact. O’Sullivan expressed a common frustration when writing that “with a regime as opaque as Iran’s, it is difficult to assess how sanctions may be affecting of the government.” She surmised that “sanctions would need to constitute some threat to the survival of the regime before they could induce the sort of concessions needed for Iran to be in compliance” with the international bodies (O’Sullivan, 2012, pp. 16, 19).

But neither O’Sullivan nor her peers could agree on what constituted a threat to the survival of the regime - a confusion attested to by the sanctions literature. To recall sanction theory, well-entrenched authoritarian regimes could muster enough coercion to deflect popular challenges. The leaders in Tehran understood only too well this proposition since they had manufactured the legitimacy crisis which toppled the Shah. It was now their turn to be on the receiving end of a wave of delegitimization.

8.2 Sanctions and Social Instability: A Threshold Condition for Delegitimization?

Under the best of circumstances, analyzing political legitimacy is difficult. As the renowned political scientists Samuel Huntington once put it, “legitimacy is a mushy concept” but one that can hardly be avoided in the analysis of political change (Huntington, 1991, p. 46). Authoritarian regimes are especially hard to decipher as they work tirelessly to create an edifice of legitimacy through constant and often lavish public displays of support and suppression of dissent. Timur Kuran, a leading rational choice theorist, explained that the opaqueness of the Soviet political system made it hard for outside analysts and even insiders to understand the depth of the legitimacy deficit that had plagued Moscow (Kuran, May 1995; Kuran, October 1991). Ironically, it was Mikhail Gorbachev, a quintessential insider who tried to remedy the problem, a decision that triggered the collapse of the Communist empire.

Still, sociologists and anthropologists specializing in studying political change offer a few insights into how a crisis of legitimacy may develop. Authoritarian regimes are particularly susceptible as their popular support is modest at best and nonexistent at worst.

To recall, Ayatollah Khomeini’s velayat al faqih principle was broadened with limited democratic provisions, but the Islamist life style imposed on the society has been deeply resented by the secularized middle classes and the younger cohorts (Elling, 2012; Khomeini, 2001). Equally disliked have been the stringent regulations on public discourse designed to protect Islamic identity and the serious human rights violations. By secretly monitoring public opinion, the Revolutionary Guards were fully aware of these delegitimizing trends and occasionally used violence to prop up the clerical authority. The harsh treatment of the protest movement in the wake of the tainted 2009 election was one of the many instances where brute force carried the day. As long as the neopatrimonial regime was able to use economic payoffs to buy support, the legitimacy deficit was

managed by a complex set of incentives and coercion. But the economic sanctions upset this balance, a change that led to a deeper delegitimizing shift.

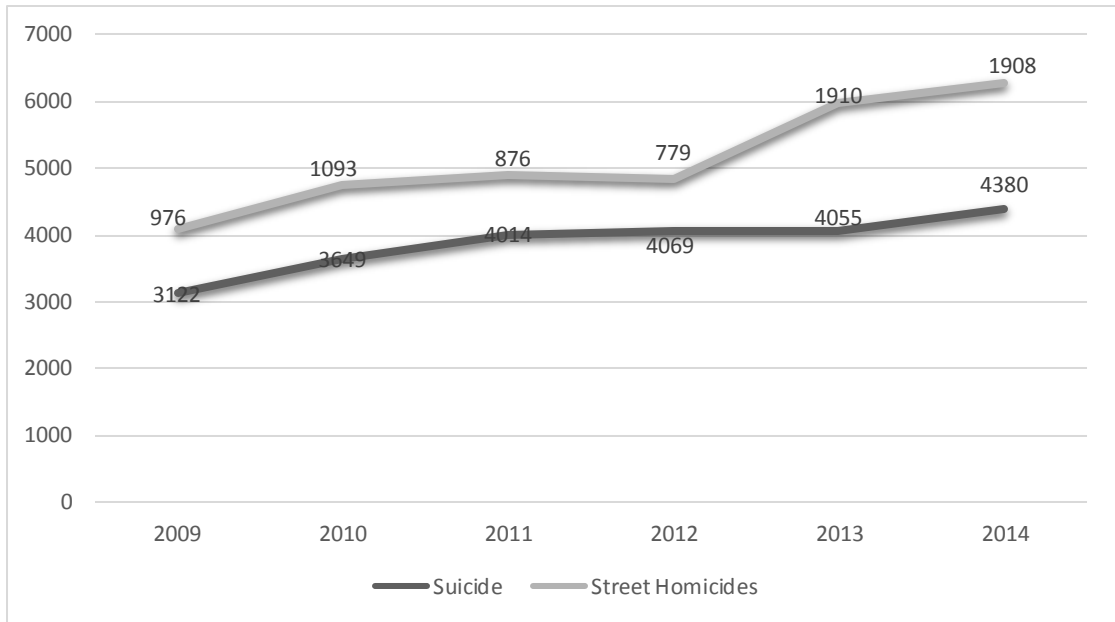
To understand the dynamics of this shift, a better understanding of the mediating role of eudaimonia, a Greek term commonly translated as a state of wellbeing, is necessary. Eudaimonia is a complex perceptual process that guides individuals in assessing their level of wellbeing. Three different estimates are involved; an individual's sense of his or her economic standing, a sense of the economic standing of a reference group or groups, and the normative sense of economic entitlement as spelled out by the political system. The noted nineteenth century social theorist Emil Durkheim postulated that when negative eudaimonia sets in a relatively large number of individuals would develop social instability, which he defined as behavior at odds with the normative parameters of the collective belief system. Durkheim used suicide rates to prove his theory, but other out-of-norm behaviors such as murder, theft, drug use, alcoholism, divorce, and domestic violence have been subsequently adopted (Durkheim, 2005).

The number of street homicides increased from 976 in 2009 to 1910 cases in 2013, robberies almost doubled from 2009 to 2014 up to 475,341 cases, suicides 30 percent increased from 3,122 cases in 2009 to 4,055 cases in 2013, street fighting reached to 700,000 cases in 2013, divorce cases steadily increasing from 2006 to 2013 by 6% yearly and reached its highest point 155,369 cases in 2013, and number of addicts increased from about 2 percent (approximately 1.325 million individuals) of population in 2006, to 8 percent, (up to 6.0 million users) in 2014.²⁸ As Graphs 8 and 9 confirm, the level of social instability rose sharply during the Ahmadinejad's years, with record levels registered in virtually every category. Only the rate of abuse of drug-related death had declined due to a broad campaign by the authorities. As Graphs 8 and 9 confirm, the level

²⁸Khabaronline, "Which one commit more suicide: men or women?," *Khabaronline.ir*, September 12, 2014 <[http://khabaronline.ir/\(X\(1\)S\(1fipa3gaiqejqeds2DCoflknc33\)\)/print/374943/society/social-damage?model=WebUI.Models.Details.DetailsPageViewModel](http://khabaronline.ir/(X(1)S(1fipa3gaiqejqeds2DCoflknc33))/print/374943/society/social-damage?model=WebUI.Models.Details.DetailsPageViewModel)>, (accessed January 2015).

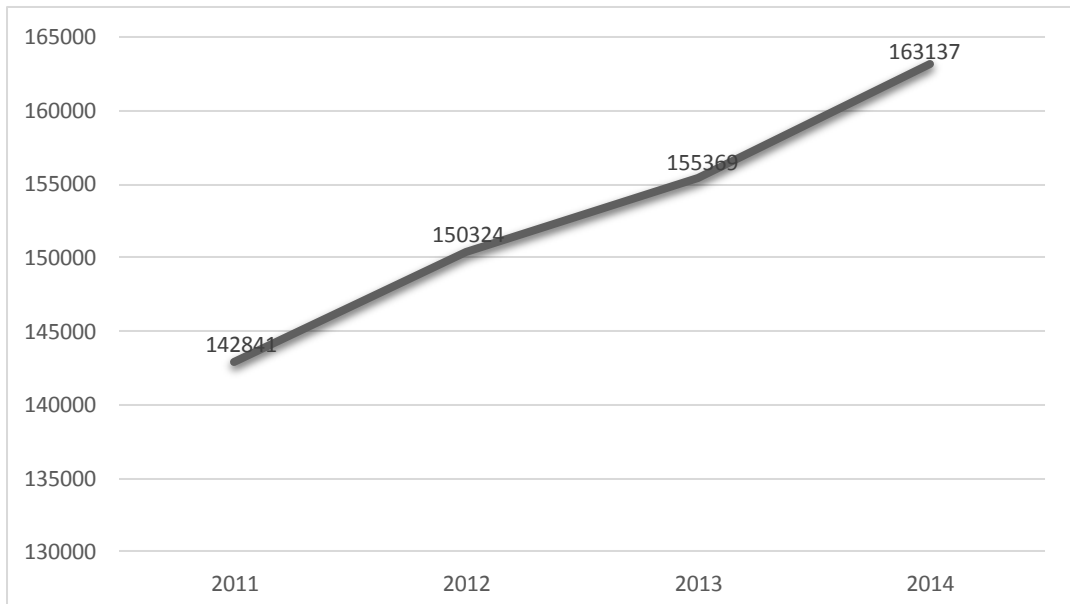
of social instability rose sharply during the Ahmadinejad's years, with record levels registered in virtually every category. Only the rate of abuse of drug-related death had declined due to a broad campaign by the authorities.

Graph 8: Rate of Homicide and Suicide in Iran 2009-2014



Source: Iranian Legal Medicine Organization, www.ilna.ir

Graph 9: Divorce Rate 2011-2014



Source: Ministry of Interior; National Organization for Civil Registration.

A less known but highly significant statistic pertains to rates of sexually transmitted disease (STD) and their impact on fertility rates. During Ahmadinejad's era, statistics on

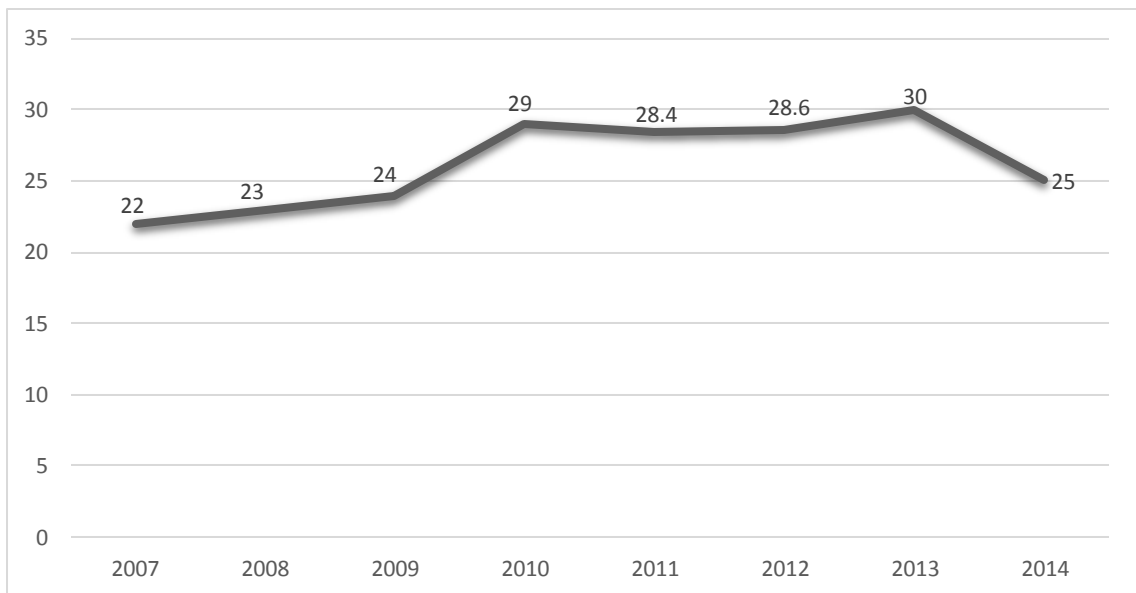
HIV and AIDS infections were closely guarded. Two medical pioneers of HIV- AIDS research, Arash and Kamiar Alaei spent close to three years in prison for publicizing data on the subject (S. K. Dehghan, 2 December 2013; S. K. Dehghan, 10 March 2015). Under President Rouhani, who appointed the medical doctor Hassan Hashemi to the Ministry of Health, the issue went public, revealing an unsettling reality. Iranian epidemiological studies indicate very high levels of STDs, notably HIV and chlamydia. Rates of HIV and AIDS have increased nine fold during the past eleven years, an 80 percent increase each year, according to Hashemi (S. K. Dehghan, 2 December 2013). Casual sex has been on the upsurge in the past decade, fueled by the institutions of *sigha*, a form of temporary marriage that parties can contract for as little as few hours. Evidence suggests that the frequency of *sigha*, as well as the number of prostitutes have increased dramatically in the past few years, causing the chlamydia epidemic and the resultant high infertility rates (Telegraph, 18 June 2011; Aftab, 12 June 2011).

Official statistics indicated that chlamydia was chiefly behind the dramatic decline in birth rates - from seven children per woman in 1979 to just 1.6 in 2012. As one commentator put it, “never before in recorded history has the birth rate of a big country dropped so far and so fast.” President Ahmadinejad went so far as to accuse women who declined to bear children were guilty of “genocide against the country.” In a more discreet way, the authorities offered free HIV services for the approximately 25 percent of couples that suffered from infertility (Goldman, 30 January 2015; S. K. Dehghan, 2 December 2013; Goldman, 30 January 2015).

Media coverage reinforced the sense of growing social gloom. Dr. Saeed Mo’ayedfar, head of Iran’s Sociological Association, argued that “due to the worsening economic situation, our society facing anomie to the extent that nowadays having 10,000 Toman (\$3) in pocket cause the risk of extortion. This should raise the alarm and we should be ready for social crisis and ready to face more and more crimes” (Alef.ir, 7

February 2013). In an interview with the *Arman* newspaper, Mustafa Eqlima, president of Iran’s Social Workers Association, added that “predicting of anomie and social crisis which may happen in the new year is not a difficult task and it can be said that we will be faced with increasing of anomie like high number of divorce, decreasing of marriage rate, growing rate of addiction, robbery and other social abnormalities and crises. The source of all these crises is the country’s worsening economic situation.” He and other observers were particularly rattled by the anomic behavior of the younger cohorts (15 to 35 years) whose unemployment level stood at some 30 percent. As indicated by Graph 10, unemployment level increased considerably from 22 percent in 2007 to 30 in 2013 in general (Newspaper, 4 April 2014; Ghoreishi, 22 June 2012; Mehrnews, 10 March 2013; Economics, 2015; Quandl, 19 February 2015).

Graph 10: Iran’s Youth Unemployment Rate 2012-2014 (Percentage of Total Labor Force Ages 15-24)



Source: World Bank Cross Country Data, tradingeconomics.com

Younger people were also more likely to find themselves in the ranks of drug addicts, a category of behavior that expanded from 2 percent before 2010 to 8 percent up to 2014 (Shahrvand Newspaper, 26 July 2015).

For a regime that reveled in lambasting the ‘decadent culture’ of the West, these statistics were particularly distressing. Even more alarming to the elites was the sense that

anomic behavior caused by sanctions was a real threat to the survival of the regime. As long as Ahmadinejad was in power, the Ministry of Culture and Islamic Guidance was careful to censor any linkage of social instability to a crisis of legitimacy that many of the administration's critics were trying to make. Not surprisingly, the nuclear program, the sanctions, and their socio-economic consequences dominated the 2013 presidential elections.

8.3 The Election of Hassan Rouhani: A Victory for The Rollback Lobby

The election lineup was indicative of the prevailing attitudes toward the nuclear program. Ahmadinejad's preferred candidate Esfandiar Rahim Mashaei was disqualified by the Council of the Custodians of the Constitution, but Saeed Jalili, an ardent Principalist and a favorite of the Supreme Leader, emerged as the new torchbearer.

The outgoing president set the Principalist tone in a speech delivered on 1 February 2013. He stated that "despite the fact that enemies are doing their best to stop the advancement, Islamic Republic is committed to continue its approach to the highest levels" (IRNA, 1 February 2013). Assorted spokespersons in his administration sought either to minimize the impact of sanctions or, conversely, play up their allegedly positive impact. Abdolhossein Bayat, the head of the Iran's National Petrochemical Company, stressed that "relying on their capability and knowledge, Iranian experts have been able to nullify the impact of sanctions" (Fars-News-Agency, 5 March 2013). Mehdi Ghazanfari, the Minister of Industry, Mines and Trade noted that "sanctions have caused an economic advantage to the production sector" (Fars-News-Agency, 3 June 2013). Gholam Hossein Elham, the government spokesman, went so far as to assure the public that despite the sanctions, Iran's economic had actually experienced economic growth in the past few years (Fars-News-Agency, 5 March 2013).

Saeed Jalili, the Principalist candidate, echoed these themes. Turning necessity into virtue, he asserted that the “giant strides” of Iranian technology and industry could not have been made without the sanctions. He described the sanctions as a net blessing and pointed out that it propelled the country onto the path of reclaiming its glorious national past. Jalili adopted Ahmadinejad’s hardline foreign policy stand, which he decried as “no to negotiations, no to compromise and no to imperialist’s subjugation.” He was backed by the Revolutionary Guards anxious to preserve what one analyst called their “vested institutional interest” in the nuclear program. To show their resolve in fighting sanctions, a number of Guard commanders threatened again to interfere with traffic in the Strait of Hormuz (IRNA, 27 December 2012; Fars-News-Agency, 7 July 2012; Nader, 2012).

The anti-Principalists - Mohsen Rezaei, Hassan Rouhani, and Mohammed-Bagher Ghalibaf - repeated the mantra of Iran’s right to a peaceful nuclear program. But they found much fault with Ahmadinejad’s diplomacy and the subsequent sanctions. Rezaei, the former commander of the Guards, was most outspoken about the human cost involved. He decried the hardship that ordinary people were subjected to and was especially incensed about the social decay. Rezaei, whose previous position gave him access to the secret opinion polls, was familiar with the corrosive impact of social instability on the legitimacy of the regime. Rouhani was equally adamant that the nuclear program brought a calamity upon the Iranian people. He lamented that only once since the revolution, “during the eight year-war with Iraq we had negative growth rate for two consecutive years.” In a clear dig at Ahmadinejad, Rouhani noted that “bragging in front of an enemy is not a solution, we should act wisely” (Alef.ir, 9 June 2009; Rouhani, 15 July 2013). Acting wisely would have prevented, in this view, the social pathologies that had threatened the Islamic identity project of Ayatollah Khomeini.

Attributing the moral decay to the sanctions was a political masterstroke for Jalili's opponents. Indeed, they could claim that the aggressive pursuit of the nuclear issue was undermining not just the economy but also the cherished goals of the revolution. More to the point, Rouhani and his followers asserted that the only remedy to this conundrum was normalization, a coded reference to rolling back the nuclear project in order to rejoin the community of nations. Directing his remarks to the Principalists, Rouhani pointed out that "those who were saying that the Security Council cannot do anything and there will be no sanctions, those who were celebrating everyday while saying that the nuclear issue has been solved and finalized, they should know that they were not able to anticipate international issues correctly" (IRIB Television, June 2013). According to Rouhani it was good to keep the centrifuges operating, but only if people could make a living and factories could remain open. In a reference to his past experience as a top nuclear diplomat, Rouhani stated: "I believe we are in a very sensitive situation at the moment and those who have experience can solve the nuclear issue through negotiation and logic" (YJC, June 2013). The frequent emphasis on normalizing relations with the world earned Rouhani and his followers the unofficial name of Normalizers.

But the Principalists saw normalization as treason, as Jalili made clear when he called Rouhani and his followers "traitors." More ominously, Major General Ali Jafari, speaking on behalf of the Guards, hinted darkly that such nuclear treason could not be tolerated by the defenders of the revolution. The Normalizers responded by portraying themselves as the true heirs of Ayatollah Khomeini working to carry his vision of creating a better life for the Iranian people. With both sides proclaiming fealty to the revolutionary ideal and accusing each other of treason, the nuclear debate turned into something of a "purity war." As one website put it, the "nuclear issue provokes strong reaction in the presidential debate" (IranElectionWatch, 7 June 2013; IRIBTelevision, 6 June 2013).

Barred by the Council of the Custodians of the Constitution from running, Ayatollah Rafsanjani used his considerable political skills to help the Normalizers. Cashing on his record as the architect of the nuclear program, Rafsanjani advocated a pragmatic approach along the lines adopted by Rouhani. As a consummate insider, however, Rafsanjani understood that the Supreme Leader was overwhelmed by the unprecedented power struggle among the factions. A number of outside observers managed to capture this chaotic dynamic. Writing from his exile in the United States, Seyyed Hossein Mousavian noted that when it came to articulating nuclear policy, Tehran was a place of “exhausting struggle that spoke with many voices.” He recalled that on numerous occasions positions that had been agreed upon by his team in Vienna were upended in Tehran with lightning speed (Mousavian, 2012). Mohammed ElBaradei expressed his irritation with the balkanization of Tehran’s nuclear policy making: “What stood out was the bewildering display of Iran’s political factions and power centers. Each official brought his own view of how to deal with the nuclear situation. Officials analyzed the nuclear issue from the perspective of their personal career and prestige” (ElBaradei, 2011, p. 271).

Ray Takeyh, a senior fellow at the Council for Foreign Relations, commented that “there was a breakdown in the country’s foreign policy machine... it has domestic politics, and its foreign policies are a sporadic expression of that” (L. A. Times, 1 November 2009). Alireza Nader, an analyst at the RAND Corporation, contended that “the nuclear program has arguably become one of the most pressing issues shaping Iranian factional politics.” He noted that “institutional duplications, factional disputes,” and resulting statements prevented coherent policy making” (Nader, 2010, p. 92; Nader, 2010, p. 113). These and other scholars used terms like “convoluted,” “dysfunctional,” “incompetent,” and “pathological” to describe the nuclear decision-making process. Takeyh stressed that the chaos “is not sinister, it’s not duplicitous, it it’s just

incompetent.” Still, regardless of that the nature of the internal problems, to the outside world the regime looked really bad. In the words of one analyst, “Iran stood out, and stands out today, as the loadstar of bloody minded rejection” (L. A. Times, 1 November 2009; Simon, 2010b, p. 34).

Rafsanjani realized that to overcome this dysfunction system required a serious effort to “peel off” Ayatollah Khamenei from Jalili and Jafari. Together with Rouhani, Rezaei and Khatami, he created a lobby to influence the Supreme Leader and his entourage. While publicly proclaiming the mantra of Iran’s inalienable rights to a peaceful nuclear program, this so-called rollback lobby privately apprised Khamenei of the legitimacy crisis stemming from the sanctions. Internal polls indicted Jalili’s support to be in the low double digits, making his “unaided” election extremely unlikely. Even the Guards commanders and their Basij cadres realized that another contested ballot will create a massive public upheaval spelling the end to the regime (Aftab News, 3 June 2013).

With Jalili out of the equation, the Supreme Leader reluctantly settled on Rouhani whose skillful performance as the nuclear negotiator under Khatami gave him the edge over Ghalibaf. In an amazing change of fortune brought by the sanctions, Rouhani, once reviled by Ahmadinejad as a traitor, was now considered a savior of the fast sinking economic ship of state. When the ballots were counted on 14 June 2013, the eleven percent received by Jalili, compared to the more than fifty percent by Rouhani, indicated a resounding defeat of nuclear Principalism (Rafizadeh, 15 June 2013; 24 June 2013; Rezaian, 15 June 2013).

Still, given the intricacies of the negotiated political order, President Rouhani did not get a *carte blanche* for a deal. As the new administration took office, the old tensions over a possible rollback resurfaced with a vengeance. Especially confounding, the new government faced a secretive nuclear community reluctant to divulge all the details of

program. As before, obfuscation, delays, and outright misinformation were its weapon of choice. According to accounts of former officials, Iranian nuclear negotiators were not privy to part of the clandestine program, a circumstance that led to embarrassing situations and caused mistrust in the ranks of the P5+1. Recalling one such incident, Mousavian wrote that “none of the members of the team were informed about these technical problems by the relevant officials of the Atomic Energy Organization of Iran (AEOI) before the meeting.” He added that “it was a surprise to us” and caused “increased suspicion among the P5+1” (Mousavian, 2012, p. 123).

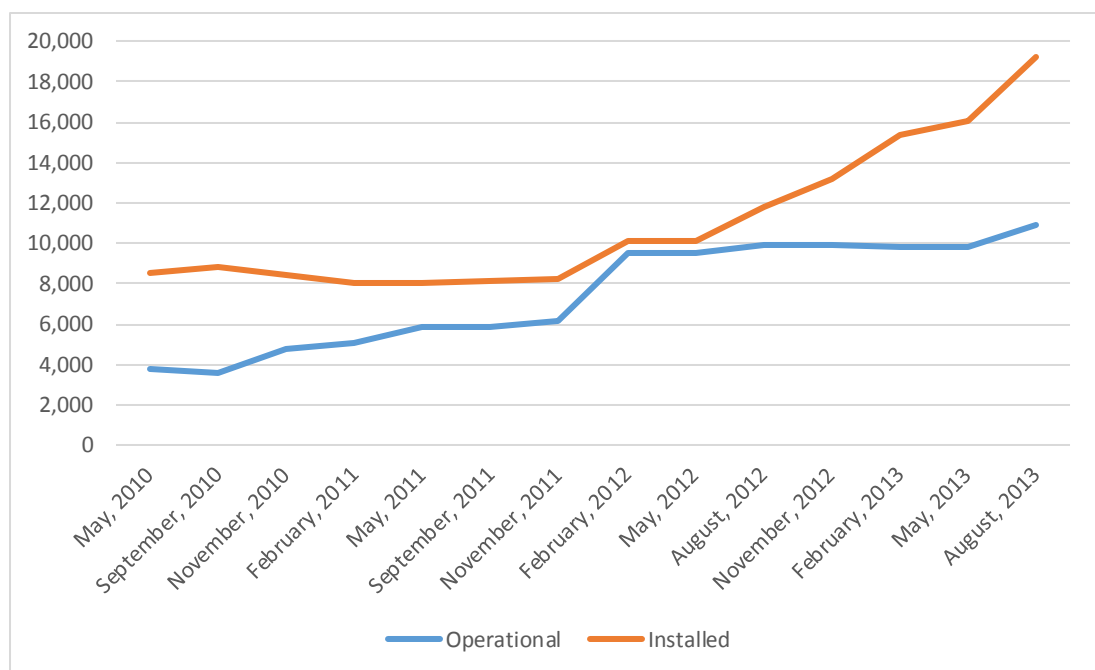
These tensions skyrocketed during the tenure of Fereydoon Abbasi-Davani, Ahmadinejad’s hardline head of the AEOI who was suspicious of normalization. Rouhani fired Abbasi-Davani and brought back Ali Akbar Salehi. He picked the urbane and Western-oriented Mohammed Javad Zarif as his foreign minister and key nuclear diplomat. Even though partially shrouded in secrecy, the known part of the burgeoning program posed a real challenge to negotiate.

8.4 The Nuclear Program Assessed: The View of the International Atomic Energy Agency

The 28 August 2013 Safeguard Report of the IAEA (SR) was a good starting point for the Rouhani team. Based on information collected since the release of the previous SR in May 2013, the IAEA inspectors listed a number of issues. Foremost was the progress in Natanz and Fordow. The Agency stated that in the Fuel Enrichment Plant (FFEP) in Fordow and the Pilot Fuel Enrichment Plant in Natanz (PFEP) 9,494 IR-1 centrifuges enriched uranium to 3.5 percent and up to 20 percent respectively. In the Fordow Fuel Enrichment Plant (FFEP) 696 IR-1 centrifuges produced uranium enriched to 20 percent. In total, the Agency counted 10,190 IR-1 active centrifuges as of August 10, 2013 (IAEA Report, 28 August 2013).

To recall, Fordow was designed to hold 2976 centrifuges in 16 cascades, but only 696 IR-1 were operational, producing uranium enriched to 20 percent. In addition, as of 10 August 2013 there were 6,250 installed (but not operational) centrifuges in Natanz and 2,710 in Fordow (2014 centrifuges were not operating), for a total of 18, 454 IR-1 centrifuges in some 110 cascades. Iran also reported installing 1,008 IR-2m centrifuges, with an additional 2,088 planned to install. As Graph 11 indicates, the total installed capacity exceeded 19,000, but fell short of 50,000 number of centrifuges touted by President Ahmadinejad (IAEA Report, 22 May 2013; Albright., 24 October 2013).

Graph 11: Number of Centrifuges



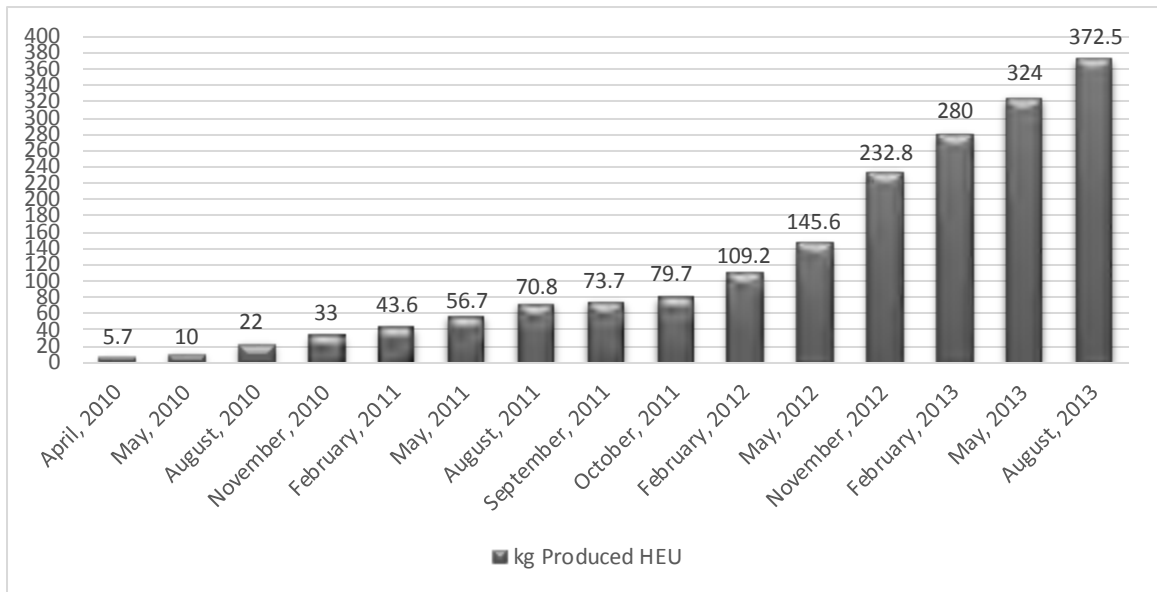
Source: IAEA

Quantity aside, the SR found only a modest progress in developing advanced models. In its previous document of May 2013, a handful of models were mentioned: 19 IR-4 centrifuges, 14 IR-6 centrifuges, 3 IR-6s centrifuges and a single IR-5 centrifuge - installed in a number of cascades. The report stated that Iran was “intermittently feeding” UF6 into the IR-4 and IR-6 centrifuges - sometimes as single machines and sometimes as cascades - but that the single IR-5 centrifuge “has yet to be fed UF6 (IAEA Report, 22 May 2013).

The report indicated that R&D in Natanz was only moderately successful in developing more advanced centrifuges so critical to the success of the program; as already discussed, the IR-1 machines had a low performance rate measured by feed to product ratio. According to its self-proclaimed goal, Iran expected to achieve a ratio of approximately one kilogram of 3.5 percent LEU for every 10 kilograms of natural uranium hexafluoride that was fed into the cascades. In practice, however, it has not been able to exceed a ratio of one to nine. As shown by the data, initially the enriching cascades had a low feed to product ratio. Based on data collected by the IAEA, during 2011, the product of FEP to feed ratio has decreased to about one kilogram of 3.5 percent low enriched uranium to 13 kg of natural uranium hexafluoride. Put differently, Iran needed to feed three kilograms more natural uranium to produce one kilogram of 3.5 percent LEU (Walrond, 18 October 2011).

The total output reflected the subpar performance of the program. As of August 2013 Iran had a net stockpile of 6,774 kilograms of 5 percent of LEU and 372.5 kilograms of near 20 percent enriched HEU. In line with a preliminary agreement with the P5+1, Iran began neutralizing its 20 percent stockpile by diluting 187 kg to 5 percent enriched uranium and 185.8 kg remain in the form of UF₆ enriched up to 20% U-235. Graph 12 indicated that after a very slow start, in August 2013 Iran had an estimated 372.5 kg of uranium enriched to 20 percent. According to the agreement, all of the 20 percent uranium was to be diluted or oxidized by 20 July 2013 (IAEA Report, 28 August 2013).

Graph 12: 20 Percent Enriched Uranium Hexafluoride HEU (Kg)



Source: IAEA reports

While the activities in Natanz and Fordow were deemed to be compatible with peaceful use under the NPT, the Arak complex had military implications, according to the report. The Nuclear Research Reactor IR-40, a 40 megawatt heavy water reactor, was under the Agency’s safeguards, but the production of heavy water at the Heavy Water Production Plant (HWPP), which was not under Agency safeguards raised some proliferation concerns (IAEA Report, 22 May 2013). Iran claimed that the reactor would replace the antiquated Tehran Research Reactor used to produce medical and industrial isotopes. The Heavy Water Production Plant (HWPP) in Arak was designed to produce 16 tons of heavy water of nuclear grade annually (IAEA Report, 10 November 2003).

Iran refused access to the plant and denied the Agency request to sample the heavy water stored in the Uranium Conversion Facility in Esfahan. An entreaty to obtain a Design Information Questionnaire (DIQ) of the HWPP had been repeatedly rejected, a step that prompted some observers to describe the plant as a “plutonium bomb” factory. The Agency noted that, when fully operational, the facility will be able to produce some 9-10 kg plutonium a year, enough material for two bombs (Einhorn, 9 November 2006).

Most alarming, the Safeguard Report found information indicating Iran's past efforts to weaponize, known as Possible Military Dimension (PMD). The SR noted that "since 2002, the Agency had become increasingly concerned about the possible existence in Iran of undisclosed nuclear related activities involving military related organizations, including activities related to Development of a nuclear payload for a missile" (IAEA Report, 28 August 2013). A longer version of the allegation was published in the Annex of the November 2011 Report. The Annex detailed a number of activities that could have brought Iran closer to building a weapon head and a missile delivery system. Among the experiments listed were nuclear components for an explosive device, detonator development, hydrodynamic experiments, modeling and calculations, neutron initiator, and preparatory planning for conducting a nuclear test (IAEA Report, 28 August 2013).

Some of the information came from a laptop computer allegedly smuggled out of Iran and given to the CIA in 2002. The Iranians claimed that the data was fabricated and refused repeated inquiries, a stand that did little to dispel the cloud of suspicion hanging over the regime (Porter, Winter 2010, p. 33). As the August 2013 SR put it, "the information provided to the Agency by Member States indicates that Iran constructed a large explosives containment vessel in which to conduct hydrodynamic experiments; such experiments would be strong indicators of possible nuclear weapon development (IAEA Report, 28 August 2013). The information also showed that a containment vessel was installed at the Parchin site in 2000, a location that was only publicly identified in March 2011 (IAEA Report, 28 August 2013). The Agency suggested that the experiments were part of Project 1-11 (Green Salt) which, as indicated in Chapter 5, was directed by Mohsen Fakhrizadeh-Mahabadi.

Under the more assertive Yukiya Amano who replaced Mohamed ElBaradei on 2 July 2009, the IAEA signaled it would demand answers to the entire array of issues that Iran's illicit program posed. As a former nuclear negotiator Rouhani was clearly aware

that in launching the historical round of negotiations with the P5+1 Iran would have to answer not only to the new developments but account for the old ones as well. Still, the new president felt that it was his mission to overcome extreme odds in order to change Iran's foreign policy path.

8.5 Rouhani's Gamble: Banking on a Rollback and Normalization

If Rouhani had any illusions that Ayatollah Khamenei's backing will give him much leeway, he must have been taken aback by the vicious attacks launched by the Principalists. As a matter of fact, even before the negotiations between Iran and the P5+1 were announced, General Ali Jafari and other Guards commanders warned sharply against any "cave in" on the nuclear front (Lucas, 20 May 2014). To make matter worse, the nuclear issue was a proxy for a deeper power struggle between the executive branch and the Revolutionary Guards. The president was convinced that the parastatal organization became so powerful that it interfered with the proper functioning of the state. Though cautious not to antagonize the Guards in public, Rouhani signaled his displeasure by appointing only four Guards-connected officials to his cabinet, a record low in a system long beholden to Guards personnel (Alfoneh, 7 August 2013; Khalaji, 8 January 2014).

To combat the Guards, Rouhani needed to change the entrenched perception that Iranians should sacrifice for the nuclear program to keep national pride afloat, a theme that his predecessor had obsessively dwelt on. In a programmatic speech delivered on Students Day in August 2013, the president stated that "energy is our absolute right, but the right to progress, development, improving people's livelihood and welfare is also our right" (Rezaian, 7 December 2013). Remarkably, Rouhani managed to convey the zero-sum game nature of the nuclear project by constantly reminding the public of its high

socio-economic cost. On one such occasion he stated that “it is impossible for the country to sustain economic growth when isolated” (Paivar, 6 January 2015). The president held a number of highly publicized “summits” on social instability and his office published guidelines on fighting drug addiction, crime, and other forms of anti-social behavior. The crafty politician even sent a senior aide to Qom to enlist the support of high-ranking clerics alarmed by the social disintegration (President.ir, 8 October 2014).

All this paid off when it was announced at September 2013 that Iran and the P5+1 would meet in Geneva to reach a nuclear agreement, an event that the Normalizers touted as a historical opportunity to improve individual and collective economic wellbeing. The first major breakthrough occurred when Iran and the P5+1 signed the Joint Plan of Action (JPA), also known as the Interim Agreement, on 24 November 2013. The deal addressed some of the concerns raised in the Safeguard Reports, including the stipulation that all uranium enriched beyond the 5 percent level will be either diluted or converted to uranium oxide. Additionally, it was agreed that 50 percent of the centrifuges at the Natanz facility and 75 percent in the Fordow plant were to be left inoperable, no new centrifuges were to be installed and no new uranium enrichment or reprocessing facilities were to be built. In addition, the IAEA inspectors were to be allowed unfettered access to all the nuclear sites. As for the PMD, Iran was asked to provide data on the Parchin and other experiments. In exchange, the regime was to receive sanction relief of some US\$7 billion dollars, license to purchase spare parts for its ageing air fleet, and relief from sanctions on its auto industry. The JPA allowed a six month period to reach a permanent agreement (EEAS, 24 November 2013).

As expected, even this relatively modest compromise upset the Principalists who increased their public campaign against Rouhani and his team. Borrowing a page from Ahmadinejad, General Jafari accused Zarif of betraying the Islamic Republic and of being “infected by Western doctrine” (Fars-News-Agency, 10 December 2013). In the

symbolic discourse of the regime a penchant for Western ideas was a most serious offense, first articulated by Jalal Ale- Ahmad, a social critic who famously accused the Shah and the secularists of being *Gharbzadegi* (suffering from Westoxification). His 1962 book by the same title became a rallying cry of the Islamic revolution that vowed to eradicate all Western sentiments (Blanche, March 2014). By trying to pin the label of *Gharbzadegi* on Zarif, Jafari was signaling that Rouhani and the Normalizers will take Iran back to the pro-Western culture of the Pahlavi era.

Dire threats in the media were only part of the Principalists strategy. Privately, the anti-rollback camp exerted intense pressure on the Supreme Leader, either directly or through emissaries. Though little of the secretive discourse became public, it failed to persuade Ayatollah Khamenei who was worried about the social instability triggered by the sanctions. High on his agenda was the precipitous decline in fertility, as noted above. After the failure of voluntary efforts to spur the birth rate, the Supreme Leader turned to state- sponsored coercive measures. On 5 May 2014 Khamenei told a public gathering that Iran needed to double its population; on 11 March 2015 he announced a bill that would forbid all voluntary forms of sterilization such as vasectomies and drastically limit access to contraceptives (Tasnim, 5 May 2014; Khamenei.ir, 20 May 2014; Saeed Khamali Dehghan, 10 March 2015).

Though domestic critics and Amnesty International decried the proposed legislation and warned that it would turn women into “baby making machines,” the Majlis passed the bill on 28 June 2014. Analysts commented that such a drastic reversal of Iran’s decades - long progressive family planning policy was an indication of the panic that gripped the Supreme Leader and his circle. It also undermined the promises of Rouhani to allow women a more equal footing in the society (Dehghan, 10 March 2015).

But even Khamenei understood that legal coercion alone was not enough to heal the various manifestations of anomic behavior, and that an economic restoration was

sorely needed. In spite of Jafari's opposition, he gave his blessing to the extension of the talks, telling a group of Basij officials that: "We are not opposed to the extension of the talks, for the same reason that we weren't opposed to the talks in the first place. Of course we will accept any fair and reasonable agreement...if these nuclear talks do not achieve any results, the Islamic Republic of Iran will not lose anything." He added that the nuclear negotiators were "hard-working and serious... they justly and honestly stood against words of force and bullying of the other side" (Khamenei.ir, 27 November 2014).

Given that the Principalists routinely described the negotiators as "traitors," Khamenei's speech was an important sign of support for Rouhani and the Normalizers. The Supreme Leaders' blessing was enough for the Rouhani team to forge ahead when the negotiations resumed in November 2013 in Geneva. Originally scheduled to end on 20 July 2014, the talks were extended, but the new deadline of 24 November 2014 proved elusive as well. Anxious to prevent the collapse of the historical rapprochement, the P5+1 and Iran agreed on a new deadline for the political deal set for 31 March 2015 and 1 July 2015 date to complete the technical annexes (IRNA, 8 July 2014; Rajanews, 8 July 2014; Tasnim, 17 July 2014; Presstv.ir, 27 February 2015; Reuters, 27 February 2015; BBC, 24 November 2014; Sciutto, Robertson, & Yan, 24 November 2014).

Behind the scenes maneuvers indicated some interesting dynamics. According to the Farsi language press, the Rouhani team was holding out for 9000 centrifuges, a two year period to complete total sanctions relief, and a five year sunset clause for terminating the IAEA monitoring of its nuclear program. In November 2014 Rouhani went on television to announce that his country will not bow to Western pressure (Presstv.ir, 24 November 2014). In holding out for a better deal the regime hoped to capitalize on its improved geopolitical situation in the wake of the offensive of the Islamic State of Iraq and Syria (ISIS), also known as Islamic State (IS) in Syria and Iraq in 2014. At an event hosted by the New America Foundation in New York in the fall of 2014, President

Rouhani all but spelled out that, in exchange for playing a more “active role” in the Middle East, Iran expected to get a break in the ongoing nuclear talks. He stressed that: “If Iran could reach a comprehensive deal on its nuclear program and leave sanctions behind, it would be able to assume a more active position on interregional dialogue in the Islamic world” (Fars-News-Agency, 17 September 2014; Tasnim, 17 September 2014; Lake, 26 September 2014; Parisa Hafezi And Louis Charbonneau, 21 September 2014).

But Iran’s efforts to leverage the ISIS aggression were more than offset by the surprising swift collapse of the oil market. Driven by a complex mixture of factors, the price of a barrel of oil plunged from US\$ 115 in August 2013 to less than US\$ 50 in December 2014. All the while, Saudi Arabia had resisted the request of other OPEC members to cut production, a traditional remedy to stabilize the world oil markets. Some observers suggested that Riyadh crushed the oil market to undermine Iran, an opinion that was readily shared by the regime (Friedman, 14 October 2014, ; IIF, 4 December 2014). President Rouhani denounced the move was a “conspiracy against the interests of the region and the Muslim people as a whole,” adding that “Iran and people of the region will not forget such conspiracies, or in other words, treachery against the interests of the Muslim world (Fars-News-Agency, 10 December 2014). One analyst went so far as to suggest that the Saudis hoped to force Tehran into imposing a full scale austerity program that, in their view, would foment unrest ending in regime change (Cooper, 18 December 2014).

Whatever the truth, the combination of sanctions and the plunge in oil prices hit the Iranian economy especially hard. Publicly, the government remained confident. Vice President Eshag Jahangiri called falling oil prices “unnatural” and added that Iran can manage even if “oil drops to US\$ 40. But analysts pointed out that Rouhani presented a budget based on US\$ 72 per barrel. The conservative media were quick to point this fact,

but offered no solutions on dealing with the deficit beyond repeating the trope that Iran would overcome the adversity (Karami, 10 December 2014).

A 30 percent increase in the cost of bread, a heavily subsidized staple, generated unrest in some major cities. More subtle but equally corrosive, the misery index and the social instability indicators had continued to climb as defiance of regime norms increased in spite of considerable penalties (Saham News, 23 December 2014b). Failure to pay salaries triggered a wave of workers strikes in some of Iranian major companies, affecting some prime industries. Iran Khodro Diesel Company, the country's leading manufacturer of commercial vehicles, the Haft-Tappe sugar factory, Bandar Imam Petrochemicals, Gilana tile factory and the Assaluyeh natural gas company were among the affected (Saham News, 22 December 2014, 23 December 2014a).

Not surprisingly, the economic reversal benefited the Normalizers in their ongoing power struggle with the Principalists. The latter toned down their public opposition to a deal, opening space for a more balanced debate about the cost of the nuclear ambition and the negotiations with P5+1. In a sign of the changing discourse, Tehran University held a conference on the subject on 21 December 2014. The panel featured Ahmad Shirzad, a former Reformist member of the Majlis who equated the nuclear program to a quixotic quest well beyond the means of the country. He noted that "a small group of people sitting behind closed doors who think they have all the wisdom are making decisions for an entire nation. Unlike the oil, gas and petrochemicals industries... Iran does not have the primary resources and technological know-how to run a nuclear program" (Mashregh News, 22 December 2014).

Professor Sadegh Zibakalam, another ardent critic of the nuclear program stated: "During the last 11 years, the people who supported the nuclear program were called revolutionaries and patriots, and the people who had a different point of view, according to [President Mahmoud] Ahmadinejad, were traitors. This is the first time that permission

has been given to speak about the nuclear issue independent from government outlets, and this is one of the achievements of the new administration” (Radiofarda, 17 December 2014; MashreghNews, 22 December 2014). Zibakalam stressed that the nuclear ambition was more costly than the devastating Iran-Iraq war. Professor Davoud Hermidas-Bavand rejected comparisons of the nuclear quest to Iran’s attempt to nationalize oil in the early 1950s under Prime Minister Mohammed Mossadeq. He argued that “ what happened under Mossadegh was a struggle for rights based on international law... on the nuclear issue, the process of resistance against bullying went in a direction that in the long run, reduced other inalienable rights. Every time the negotiations end without a resolution, it results in new sanctions” (Mashregh News, 22 December 2014; Radiofarda, 17 December 2014).

Whether President Rouhani was behind the conference, as some sources alleged, or not, the Normalizers had clearly benefited from the perception that the cost of the nuclear weapons was well beyond what the country could afford. There were even rumors that the government fired nuclear scientists in order to shrink the program. The hardline journal *9 Day* was actually suspended for reporting the case amid vehement public denials by Iran’s atomic chief Salehi (Karimi, 20 March 2014). In a subsequent presentation in December 2014 Rouhani admitted that the plunging oil prices had created a deficit in the budget year ending on 20 March 2015. But he and other supporters expressed hope that an increase in export could make up for the shortfall (Khajehpour, 14 November 2014). Given that any increase in oil exports was subject to sanction relief pending a successful outcome of the final stage of negotiations in Geneva, such hints were well understood to contain an endorsement for a final agreement. For those familiar with the thinking of Rouhani and his Foreign Affairs minister, Mohammed Javad Zarif, the deal needed to preserve the narrative of Iran’s nuclear sovereignty. At the same time, they had few

illusions that the substance of the pending agreement would safeguard the achievements made at such tremendous costs.

8.6 The Joint Comprehensive Plan of Action: The Parameters of the Rollback

The Joint Comprehensive Plan of Action (JCPOA) accord reached on 14 July 2015 bore out these assumptions. The Iranians agreed to cut the number of centrifuges to 6014, with only 5060 of the first generation IR-1 models approved to operate for the next 10 years. The IR-2m and other more advanced models were to be decommissioned and stored in Natanz under the IAEA safeguards. The Fordow facility will cease to enrich uranium and to research uranium enrichment for 15 years. Converted into a nuclear, physics and technology center, Fordow will be allowed to have no more than 1044 IR-1 centrifuges in six cascades in one of this wing. Two of the cascades will be modified to produce radioscopics for medical, agricultural, industrial, and scientific use. The other four cascades will remain idle. In other words, Fordow will not be permitted to house any fissile material for at least 15 years. Iran would allow to keep 300 kg uranium enriched to 3.67 percent and would of its stockpile 10,000 of LEU either by blending it down or selling it abroad (JCPOA, 14 July 2015).

The Arak heavy water research reactor would be converted with the help of "Working Group" E3/EU+3 (the P5+1 and possibly other countries) to support peaceful nuclear research and production needs. The power of the redesigned reactor will not exceed 20 MW and it will not produce weapon grade plutonium. Some of the heavy water from HWPP will be used for modernizing the reactor and the rest will be exported to international markets. Iran would be encouraged to follow current technology that favors light water reactors. In any event, Iran will not be able accumulate heavy water or build heavy water reactors for fifteen years (JCPOA, 14 July 2015).

According to the JCPOA's architects, the set of provisions would lengthen Iran's breakout capacity. Breakout capacity refers to the time it would take to produce highly enriched uranium for one weapon should the regime decide to leave the NPT. Indeed, drastically limiting the number and quality of the centrifuges and the uranium stockpile was said to lengthen the breakout period from 2 months in 2013 to one year for the next ten years. The one year timetable is limited only to uranium production and do not include projection about other parts of fabricating a bomb such as fabricating the metallic core of the weapon from the powdered uranium hexaboride, building the trigger mechanism and, finally, integrating the weapon package into a delivery system, and testing. The time period to produce a working weapon known as "effective breakout time" is estimated to take at least one year (JCPOA, 14 July 2015; Tharoor, 14 July 2015).

To prevent Iran from cheating - a justifiable suspicion given its record, - the JCPOA proposed a strict safeguards protocol. The stringent oversight was also designed to prevent the so-called "sneak out contingency," a term describing clandestine effort to produce a weapon in a parallel, undeclared facility. Observers note that a "sneak out" is a more likely scenario than a breakout and requiring extreme vigilance on the part of the IAEA (Ya'alon, April 8, 2015; Sanger & Broad, 22 November 2014).

To this end IAEA will have multilayered oversight "over Iran's entire nuclear supply chain, from uranium mills to its procurement of nuclear-related technologies." In Fordow and Natanz a "round-the-clock access" will be available, including continuous monitoring via surveillance equipment (Tharoor, 15 July 2015). Using a new generation of monitoring technology such as fiber-optic seals on equipment that electronically send information to the IAEA, infrared satellite imagery to detect covert sites, "environmental sensors that can detect minute signs of nuclear particles," tamper-resistant, radiation-resistant cameras, computerized accounting programs for information gathering and anomalies detection and using big data and the so and big data sets to monitor Iran's dual-

use imports are particularly promising. Human monitoring will also intensify as the number of IAEA inspectors will triple from 50 to a 150 (JCPOA, 14 July 2015; Mak, 6 July 2015).

IAEA concerns that Iran is developing nuclear capabilities in a non-declared site will be addressed by a request for access "to verify the absence of undeclared nuclear materials and activities or activities inconsistent with" the agreement. If Iran bans such a request or otherwise fails to satisfy the IAEA's concerns a special process lasting up to 24 days will be set in motion. Under this process, Iran and the IAEA have 14 days to resolve disagreements among themselves (Heroux, 6 August 2015; Tower, 14 July 2015). If they fail, the Joint Commission, a body composed of the United States, Great Britain, France Germany, Russia, China, EU, and Iran would have one week in which to consider the intelligence which initiated the IAEA request. A majority of the Commission (at least five of the eight members) could then decide to require Iran to take action. The majority rule provision means the United States and its European allies could not be vetoed by Iran, Russia, and China. If Iran did not comply with the decision within three days, sanctions would be automatically imposed under the snapback provision (JCPOA, 14 July 2015).

Two additional steps were mandated by the JCPOA. Iran signed a separate agreement with the IAEA to instigate past PMD efforts, a demand that the Agency has insisted on for a good part of the last decade. Iran will also sign the Additional Protocol agreement which will continue in perpetuity for as long as Iran remains a party to the Nuclear Non-Proliferation Treaty (NPT). The signing of the Additional Protocol represents a continuation of the monitoring and verification provisions "long after the comprehensive agreement between the P5+1 and Iran is implemented" (TCACNP, 14 July 2015).

In return for the restriction Iran would obtain sanction relief. The agreement promises not to impose UN or EU nuclear-related sanctions or restrictive measures and

the UN Security Council, United States and the European Union lift all the previous sanctions. Sanction relief would be conditioned on a number of steps that Iran needs to take as verified by the IAEA. Sanctions on sales of conventional weapons will be lifted in five years and those relating to ballistic missile technologies would remain for eight years. EU sanctions against a number of Iranian companies and individuals will be lifted as well. However, American sanctions against Iran imposed because of human rights abuses, missiles, and support for terrorism will remain in place. U.S. sanctions, many of which have extraterritorial effect and may apply globally are considered more stringent than EU sanctions that apply only in Europe. Sanction relief is conditional; should Iran renege on its commitments, they would be “snapped on,” as already noted (JCPOA, 14 July 2015).

By any measure, the JCPOA wiped out most of the achievements of the decades long nuclear endeavor program. Perhaps nothing was more humiliating than being mandated to use the first generation IR-1 centrifuges which, as noted, Western analysts described as “primitive.” Equally significant, the JCPOA terms have been much more onerous than the Paris agreement of 2004 and the offers to ship the uranium to Russia and France in 2007 (JCPOA, 14 July 2015).

Having staked out all sorts of “red lines” during the protracted negotiations, the Principals and, to a lesser extent, the Supreme Leader were presented with a deal that saw virtually all of them breached. As of this writing, the agreement has not been ratified but a certain trend can be suggested.

8.7 The JCPOA's Prospects in Tehran: Renegotiating the Negotiated Political Order?

Procedurally, the path to legal acceptance is somewhat complicated. The JCPOA is the basis of the UN Security Council Resolution 2231 on which Iran has to decide. For Iran to accept the new resolution, thus giving the JCPOA legal basis, the text had to be approved at a number of bodies: Council of Ministers, the Supreme National Security Council, the Majlis (Parliament), the Council of the Custodians of the Constitution, and, finally the Supreme Leader. Still, Ayatollah Khamenei is not obligated to endorse the agreement and, in fact, could reject it out of hand by invoking a State Order (*Hukm-e Hokumati*) (Farhangnews, 26 July 2015).

Given the importance of the nuclear program in Iranian politics, there is every reason to expect the decision making process to turn bitterly divisive. As the agreement became more of a reality in 2014, both the Normalizers and the Principalists have subdivided over policy and strategy. The Rafsanjani-Rouhani Normalizers coalition boasts a small but eloquent faction of Ideological Normalizers, a group of progressive politicians and intellectuals who believe that Iran does not need a weapon program and advocate democratization and full integration into the community of nations. Unsurprisingly, many in this group are reformists associated with the former president Mohammed Khatami.

The much larger faction of Pragmatic Normalizers headed by Ayatollah Ali Akbar Rafsanjani and Hassan Rouhani advocate a rollback and economic reintegration on practical grounds, but would limit the liberalization of the political system to some human rights reforms. Still, the Rafsanjani-Rouhani alliance has plans to use the nuclear deal to reshuffle the negotiated political order. According to this plan, the expected economic recovery should help the alliance win a majority in Majlis in the 2016 election and the

ballot for the Assembly of Experts which selects the Supreme Leader. It has been known that Rafsanjani's preferred candidate to replace Ayatollah Khamenei is Hassan Khomeini, the grandson of Ayatollah Khomeini, who has expressed reformist sentiments. At the very least, the Rafsanjani and Rouhani hope that the nuclear agreement would help them to limit the excessive power of the parastatal Revolutionary Guards, a point that Rouhani has repeatedly emphasized.

In the Principalists camp, some tensions developed between the Ideological Principalists and the Pragmatic Principalists. The former include the followers of Mahmoud Ahmadinejad, the ultra-conservative clergy of the Haqqani circles, core leaders of the nuclear science community, and hard line elements in the Guards and the Basij. The Basij commander, and Seyyed Morteza Rashidi, who are alleged tied the Basij commander, Mohammed Reza Nahgid, have lead a social media campaign against ratifying the JCPOA. Some of the same individuals are part of the Committee to Protect Iranian Interests (*Komiteye Seyanat az Manafe' Iran*). Its two principal activists, Mohammad Sadeq Shahbazi and Vahid Ashtari, are apparently fronting for Saeed Jalili, the former Principal presidential candidate. But the group has little power since the Guards commanders have, for all intent and purpose, gravitated toward Pragmatic Principalism, a strategy of tacit acceptance of the deal (ALmonitor, 30 July 2015; Eredbink, 23 March 2015).

Because the Guards had such a strong of hardline nuclear nationalism, the tilt toward pragmatism came a surprise, especially as the Guards commanders have shown limited concern for the anomic unraveling of the society. But other considerations apparently have played a role. While the Guards' have profited from smuggling and other sanction busting ventures, this income did not make up for the economic losses of their vast economic empire. Economic worries aside, the Guards have been also most attuned to the security dangers the nuclear program has faced. In a rather well timed June publicity

stunt, the US military provided details on the Massive Ordnance Penetrator (MOP), the largest non-nuclear bomb in the world designed to destroy targets buried deep in the underground. Developed in conjunction with the secretive Defense Intelligence Agency's Underground Facilities Analysis Center (UFAC), the ordinance has the power to destroy the Fordow facility, according to Ashton Carter, the Secretary of Defense. A former Pentagon official familiar with the program, noted that MOP has an importance deterrence value: "Having the option and getting word of it out there reminds the Iranians that their program is at risk... that gives us leverage over them." The official added that "even in aftermath of the deal it creates a strong deterrence so the Iranian abide by the deal" (Crowley, 24 June 2015).

Left unmentioned was the possibility that the United States could launch another and perhaps a more lethal cyberattack. As a matter of fact, a number of analysts in the United States wondered whether an official agreement would stop the sabotage efforts of the type described above.

For his part, Ayatollah Khamenei sent contradictory signals which, according to observers, meant to convey a "balanced" approach. For instance, on 18 July the Supreme Leader stated that, "even after this deal, our policy toward the arrogant US will not change." Reza Alijani, a former editor-in-chief of the opposition publication *Iran-e-Farda* suggested that "by focusing on sanctions relief and expressing intense words against the United States, Khamenei tries to assure his supporters that Iran's policy toward the United States has not changed... he allows his extremist supporters to criticize and even humiliate the agreement." According to George Perkovich, vice president for studies at the Carnegie Endowment for International Peace, the Supreme Leader has to balance competing interests and factions, and he tries to make decisions that keep Iran's options open in multiple directions. He has tended not to make decisions that thoroughly alienate any of the major factions, including the progressives (Perkovich, 23 March 2015).

At the same time, Khamenei's references to the "after this deal" scenario, seems like a way of preparing the Iranians for the deal's approval. A number of Tehran insiders noted that anti -JCPOA hardliners have been quite subdued, not least because they were privately urged to tone down the protest. These and other analysts revealed that, whatever their misgivings, the JCPOA detractors would eventually line up behind the Supreme Leader (ALmonitor, 30 July 2015).

Even with Ayatollah Khamenei on board, the ratification of Council Resolution 2231 cannot be taken for granted. The JCPOA is tangled up in a complex domestic fight between President Obama, the Republicans, and Israel's supporter in Congress which has to approve of the agreement by 17 September 2015. A large sabotage attack on the facilities by either domestic or foreign forces which oppose the deal cannot be ruled out.

According to Trita Parsi, president of the National Iranian American Council (NIAC), there has long been a common view in Washington that hardliners in Iran, particularly Ayatollah Khamenei, are ideologically opposed to cutting a deal with the US. But Khamenei too wants a deal - and how the hardliners are preparing to sell the deal as a win at home is starting to become visible. Ultimately, even though it may be hard to stomach, it benefits the United States that hardliners in Iran have figured out how to present a nuclear deal as a win for themselves. It's certainly preferable to them behaving like Washington's hawks, who have wasted no opportunity to derail this opportunity for peace. (Parsi, 27 March 2015).

Still, there is every indication that the regime is determined to approve the deal ahead of the vote in Congress. On 1 August 2015 Abbas Araghchi met with the officials of the Islamic Republic of Iran Broadcasting (IRIB) to discuss a media campaign to prepare the public. A summary of the meeting emphasizes that the nuclear program has been a huge drain on the economy, damaged Iran's international standing, and invited a possible attack on the nuclear facilities. Araghchi also emphasized that, by approving the

agreement, Iran could paint the Congress and, by extension, the United States as obstructionist and working against the will of other P5+1 countries and the international community. To bolster its case, the regime announced its plan to spend some \$20 billion to purchase aircraft from Boeing and the European Airbus should the sanction be lifted (IRINN, 1 August 2015; ISNA, 3 August 2015).

Ratifying and especially implementing the JCPOA, of course, faces future perils. But Iranian new found willingness to rollback its project testifies to the effectiveness of sanctions as a tool in enforcing nonproliferation.

8.8 Conclusion

Rouhani's presidential victory in 2013 was the clearest indication yet that the regime as represented by the Supreme Leader on the one hand and rank file voters on the other hand could not sustain the harsh sanctions. But the Revolutionary Guards leader and the ultraconservative clergy pushed back against Rouhani, either through harsh public attacks or an unprecedented clamp-down on human rights designed to embarrass the president at home and abroad.

Rouhani's success in negotiating an interim agreement which lifted some sanctions boosted the president's standing. Public support for the Normalizers amid expression of hope that Iran could rejoin the community of nations made his task easier. But it was the rather surprising but decisive support of Ayatollah Khamenei that paved the road for the historical deal.

CHAPTER 9: CONCLUSION

This dissertation set out to analyze Iran's proliferation and rollback within the parameters of proliferation and sanction theories. Iran is an excellent case study for a number of reasons. First, the literature on Iran has been highly controversial, splitting observers into "optimists" and "pessimists" or "skeptics." Second, Iran had evaded the largest nonproliferation effort by the international community to date, giving the country the status of a threshold state. Third, after a series of crippling sanctions, Iran has been on the verge of a rollback spelled in the Joint Comprehensive Plan of Action (JCPOA).

The first research question pertained to the degree of rationality which the regime demonstrated when embarking on the nuclear quest. My data indicates that Iran is a rational proliferator motivated by real security concerns stemming from the war with Iraq. Since Iran lacks the characteristics of a unitary actor, the more complex task was to ascertain the degree to which the initial key elites fit the rational proliferator profile. My data indicates that Iran's key nuclear players fit the rational proliferator profile with the exception of Ahmadinejad. He was rational in the sense that he followed a rational objective, but irrational in the way of seeking it.

The related question aimed at analyzing the response of the regime to the increasing cost of sanctions. My research indicates that Iran responded in a rational way to sanctions. Iran's response to sanctions follows the rational modality expectations embedded in proliferation & sanction theories. Adopted for the non-unitary actor system, the rephrased inquiry sought to determine to what degree the key elites agree on a unified set of parameters of a rollback in exchange of lifting sanctions. My study concluded that forced to engage in a cost-benefit analysis, rational actors in the nuclear sanctum (Pragmatists & Normalizers) realized that the cost of the program exceeded its benefits, agreed on parameters of rollback in exchange of lifting sanctions.

The two related assumptions were used in the study. The first assumption held that Iran was motivated by neorealist rationality when opting for proliferation. The second assumption surmised that rational proliferators, namely key regime elites would respond in a rational way to the increasing cost of sanctions and embrace a rollback. Both assumption have been tested through separate time periods, each addressing critical questions pertaining to specific developments occurring in the specific period. In each time period, the discourse of the key elites have been analyzed with a view of determining their correspondence or deviation from rational choice theory models. The research confirms the assumption that Iran motivation to develop nuclear weapons comported with the neorealist school. Virtually all of the original revolutionary leaders were convinced that Iran lived in a “dangerous neighborhood” and needed nuclear deterrence for protection. The Revolutionary Guards which bore the brunt of the war with Iraq concluded that Saddam Hussein would have abstained from invasion, had Iran possessed WMD. Key lay leaders were enthusiastic advocates of nuclear weapons. They had a low opinion of international treaties which had done nothing to protect Iran from Saddam’s chemical warfare, a point of great bitterness in Tehran.

In yet another instance of neorealist thinking, the leadership concluded that Iran’s ravaged economy and the virtual disintegration of the regular army, *Artesh*, made it virtually impossible to raise a large conventional force. Acquiring its own nuclear arsenal was the type of rational shortcut which ticked off many of Kenneth Waltz’s proliferation factors.

More difficult to square with neorealist tenets was the Iran’s desire to use the “nuclear umbrella” to export the revolution. To recall Chapter Two, by focusing on the international system, Waltz black-boxed domestic factors, but promoting a global revolution was a prominent issue in Iran. Clearly, a nuclear equipped Iran would have been virtually impervious to a military attack or invasion aimed at changing the regime.

Much as Iran made a show of confronting and defying the “Great Satan,” nevertheless a pervasive fear of a forced regime change had pervaded the highest levels of power. Indeed, after American invasion of Iraq in 2003, there was a virtual consensus that only a nuclear umbrella would spare Tehran of fate of Baghdad. In this sense, Sagan’s the second drivers theory fits the case better.

Arguably, the hardest to reconcile with neorealism was the prospect that one day a bomb could be used in the service of the ideology of Mahdism and a crusade against Israel. President Mahmoud Ahmadinejad came closest to articulating such an antithesis to neorealist rationality. Whether Ahmadinejad truly believed that he was ordained to wage a war of civilization or wipe off Israel from the map using nuclear weapons is impossible to determine. While some have considered the inflammatory rhetoric to be a piece of political theater, others have argued that the president tried to pursue irrational goals through rational, nuclear means. Whatever Ahmadinejad’s true intention, the study makes clear that the negotiated political order does not allow any single individual to start a nuclear conflagration.

If the above reasons explained the initial decision to proliferate, the relative ease with which the regime managed to procure the necessary technology and know-how assured the continuation of the project. Reflecting the state of nuclear science in the 1960s and 1970s, the NPT assumed that a high technological threshold and a strong safeguards regimen would be too challenging and exorbitantly costly to Third World nuclear hopefuls. But advances in nuclear technology and the porous nature of the proliferation safeguards combined to lower Iran’s price tag. Indeed, the methodical and deliberative ways in which the Iranian leaders exploited the weaknesses of nonproliferation regime stand out in this context. Arguably, the decision to stay within the NPT in order to hide the illicit part of the program in plain sight was a masterstroke. By operating a legitimate enterprise like the Bushehr plant, Tehran was able to purchase dual technology as well as

illicit materials. A further benefit of this strategy was being able to have its scientists and technicians trained in foreign countries.

The detailed analysis of Iran's proliferation efforts in this study has important theoretical implications. For the NPT to act as a successful barrier, major gaps needed to be addressed. Iran's supply network included many vendors in the Nuclear Supplier Group who acted as sanction-busting "black knights." For instance, Russia and China had skirted, if not outrightly violated, significant non-proliferations protocols. The so-called Rouge states such as North Korea and a rogue scientist Abdul Qadeer Khan working with elements in the Pakistani military, made a tremendous contribution to the Iran's nascent program.

The sheer complexity of the Iranian supply chain overwhelmed the ability of the international agencies to track the flow of nuclear know-how and materials into Iran. The vast volume of dual use technology made monitoring extremely difficult, a fact that Iran managed to put to good use. The international community would need to develop a sophisticated system of tracking dual-use technology movements around the world in order to hamper proliferation efforts. Indeed, the JCPOA provision to create a big data base of dual technology items is a belated recognition of this need.

The role of the IAEA is vital in any successful anti-proliferation drive. The Iranian authorities skillfully manipulated the IAEA - the designated agent of verification and safeguards. Iran's illicit sites were set up within legitimate projects- both civilian and military- and frequently rotated. Inspectors were sent on futile searches or simply denied access to certain locations, only to be allowed in when the site was cleaned up. Mohammed ElBaradei, the IAEA chief who had repeatedly vouched for Iran's compliance, helped Iran with its cat and mouse game. Even after the CIA and an independent nuclear watcher backed up the 2002 revelations about the illicit program in Natanz, there was little appetite among the Board of Government of the Agency to send

Iran's dossier to the Security Council. With the exception of the United States, the Board members were susceptible to Iran's style of delays, obfuscation, and dissimulation, famously described by Rouhani as "slow playing the West." It was only because of the belligerent and bizarre behavior of Mahmoud Ahmadinejad that a momentum for referring Iran's dossier to the UN Security Council had been created. The deferred action, however, gave Iran years of unhindered opportunity to grow its program without facing the cost of proliferation as stipulated in the NPT.

Much as this work sheds light on Iran's exercise in proliferation, it offers an equally compelling examination of the dynamics of rollback. To punish proliferators, the NPT offers a range of sanctions to increase the cost of "doing business." Sanction theory postulates that the cost of running an illicit program would force the regime into a cost-benefit debate. It is further stipulated that rational actors would respond to painful economic consequences by rolling back the program.

After decades of experimenting with sanction protocols, the international community and the United States perfected the super smart sanctions. Unlike sanctions on goods, a virtual clamp down on money flows cannot be easily compensated by traditional sanction-busting measures. Freezing Iran out of the international banking system SWIFT has proved especially devastating on its economy. The resulting economic hardship and the growing social anomie posed a real threat to the legitimacy of the regime and its rulers. These sophisticated sanctions overwhelmed the Iranian rentier-neopatrimonial state, weakening the already thin veneer of legitimacy of the clerics.

The Iranian case demonstrates a close fit to the theory. The cost-benefit calculus in sanction theory postulates that a rational actor will reconsider its policy should the cost of a particular behavior exceed its benefit. The theory also predicts that a split in the ruling elite may occur in the process of performing the cost-benefit analysis. Indeed, the election of President Rouhani signaled the emergence of a fundamental split within the regime.

Represented by Rouhani, the Normalizers wanted to roll back the program in exchange for immediate sanction relief and a gradual reintegration into the community of nations. The nuclear Principalists, a coalition of secular nationalists, Revolutionary Guards commanders and ultraconservative clerics, decried the rollback as an act of treason and a betrayal of the revolutionary ideals. The Supreme Leader, normally considered sympathetic to the Principalists, was in a quandary. Faced with the economic erosion, compounded by a dramatic drop in global oil prices, and deeply concerned by the extent of social anomie, Ayatollah Khamenei switched, albeit reluctantly, into the rollback camp. Should the JCPOA holds, it would be the first case of a rollback of an advanced program.

Though this study is focused on Iran, it offers a more general insight into how proliferation and rollback studies can be improved to help craft effective nonproliferation policies. Both proliferation and rollback are extremely complex processes that require detailed and methodologically-guided inquiry. Only such rigor can replace the extant discourse replete with “faith expressions” of optimism and pessimism.

Significant Outcomes of the Nuclear Agreement with Iran

First, the implications of the Iran’s rollback on NPT is considerable. The nuclear agreement with Iran would increase the credibility of the NPT regime as a whole. If successful, the deal would send a clear and an important message to the international community that the nonproliferation regime may be messy, but it can work. Some in the nonproliferation community have spent the last several years sounding the alarm about the decline of the NPT. The agreement would also raise the profile of the Additional Protocol and other enhanced safeguards measures.

Second, the Iranian government stands to gain from the nuclear deal. After years of crippling sanctions which have left its economy devastated and made the country a pariah state, Iran desperately needs investment in its economy, especially in its struggling oil industry. The agreement may change Iran's course from the path toward war into one of development and economic prosperity for the entire country. The economy is ripe for foreign investment, notably an improvement in the oil and gas infrastructure, making such investments highly attractive. The lifting of sanctions would help Tehran to reintegrate into the international economy, especially in Europe and Asia where Iran has considerable opportunities to do business.

Third, the agreement may have important domestic implications. Ending Iran's international isolation may marginalize the more extreme factions within the ruling elite, and strengthen the Rouhani administration in time for parliamentary elections in early 2016. If economic prosperity follows, the deal may significantly boost the credibility of Normalizers and help them to achieve the vision of rejoining the community of nations.

Fourth, the JCPOA may boost Iran's status as a significant regional and global power without a regime change. For Iran's ruling clerics, the deal would represent crucial recognition by the world of their Islamic theocracy and the legitimacy of its revolutionary ideology. At the same time, the accord will make it difficult for Israel to justify an attack on the Iranian nuclear infrastructure without being accused of breaching and thwarting international agreements.

Recommendations for Future Research

Though this study is focused on Iran, it offers a more general insight into how proliferation and rollback studies can improve the understanding of the complex issues involved and help craft effective policies. Regarding proliferation, more studies of

Second Nuclear Age proliferates are needed in order to analyze their nuclear decision making process. In particular, more research is needed to ascertain to what extent lax enforcement of the NPT and the willingness of NSG members to break the rules encourage proliferation.

Regarding sanctions, more needs to be done to assess the fit between sanctions and the type of regime. Iran, a rentier states with a neopatrimonial economy, was particularly susceptible to super smart sanctions which dramatically cut its oil exports and cut it of the international banking system. Whether other proliferators would be equally pliant is not entirely clear without further study.

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