

The Role of Domestic Factors in Science and Technology Diplomacy: The Case of Iran's Nuclear Program

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Abstract

The paper aims to depict the crucial role of a number of domestic factors facilitating the conclusion of Joint Comprehensive Plan of Action JCPOA in Vienna. For attaining this goal, the paper highlights the dynamics of two under-analyzed factors. These factors include the consensus being built in 2012 among the reference groups of business and security communities over the concept of security; and the emergence of policy broker coalition, which mediated between the rival policy positions over the nuclear issue. A hybrid conceptual model and a mixed of quantitative and qualitative research methods are used to substantiate the paper's argument.

Keywords: concept of security, social consensus, policy broker, nuclear negotiations.

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Introduction

The nearly two-year intensive negotiation process, which led to the conclusion of the JCPOA between the P5+1 and Iran on 14 July 2015, was a sign of Iran's willingness to engage with the world powers and address their security concerns. It is a clear departure from Iran's approach of the preceding 8 years and a change in Iran's nuclear science and technology policy and diplomacy. Many in the West attribute this change to the systemic Western economic pressures and military threats, which they claimed has "dragged the Iranians into the serious negotiation process George, 2013, Marcus, 2013.

While the paper is not blind to the influence of international factors, it attempts to highlight the dynamics of two under-analyzed domestic factors leading to this policy change. These factors include, but not limited to: 1. A consensus built in 2012 among the reference groups of the business and security communities over the concept of security and, 2. The emergence of policy broker coalition, mediating between the conservative and the reformers' positions over the nuclear issues started before Iran's 11th elected president's term starting in August 2012 and continued through the achievement of the JCPOA. The paper contends that along with other domestic factors, these two factors systematically helped in radically changing Iran's nuclear policy which helped in resulting to the JCPOA.

According to my argument, the first phenomenon, i.e., "the consensus between the business and security communities" over the concept of "security" was possible by the latter group leaning towards the former. It also indicates a move from traditional definition to a

wider one, which its referent object is people not the state. The second domestic factor is the change in the political structure by the emergence of a third party. The new force consisting of bureaucrats and technocrats, mediated between two rival coalitions of the nuclear policy. The policy implication of this political change in Iran's discourse of nuclear program was materialized in the articulation of the package of nuclear policies with mixed rationales and instruments satisfactory enough to be agreed upon in Tehran and later in Vienna.

Answering the question on whether these two processes were related or separately unfolded not the paper's concern. Yet, their synchronicity in critical years of 2012-2014 synergizes their individual effects in the Iranian polity and launched a cumulative causation, which partly contributed to the course of events leading to the JCPOA.

To develop the two arguments, the paper begins with conceptual framework and methodology. It proceeds to recount how the two policy coalitions in the nuclear policy space appeared and how, over time, their controversy over the concept of threats and security intensified. It will argue how they designed their strategies to cope with the international pressures eventually. The fourth and fifth parts present empirical and discursive corroboration of the paper's dual arguments. The paper concludes in the sixth part.

Theoretical Framework: The framework from which the paper extracts its two presumptions is a hybrid theoretical model based on Paul Sabatier's Policy Process (Sabatier P. , 1993) and of Barry Buzan's Security Studies (Buzan B., 1998). These presumptions are:

The belief system of policy elites divides them in to at least two advocacy coalitions in the policy space. Each belief system forms a hierarchy comprising different layers with different potentials to change and alter. Deep general beliefs virtually never change at the top; core policies which might change under pressures and traumas in the middle; and finally at the bottom, policy instrument setting and

measures which are normally subjects of routine alteration (Sabatier P. , 1993). In case of Iran's nuclear diplomacy, there are two rival camps of the reformers and the conservatives. The rivalry between the two camps over the nuclear policy stems from their antagonistic worldviews toward international politics and their conception of security. This rivalry is reflected in the contradictory policy guidelines of the nuclear policy settings.

“Security” is normally defined as the pursuit of freedom from threat. The bottom line of security is survival, which considers threats so significant that justifies emergency action and exceptional measures, including use of force. This meaning can also be applied to a substantial range of other concerns about the conditions of existence (Buzan, 1991).

Each social stratum and functional networks of players has an affinity towards a specific interpretation of what “security” means. “Military securitization process has generally some functional actors including defense bureaucracies and military personnel and arm industry” (Buzan B., 1998). In developing countries, the conception of “security” is mostly based on external threats and its referent object associated with “government centered security” or even “regime centered security” (Buzan B., 1998), (Ayoob M. , 1994). Meanwhile, businessmen and techno-entrepreneurs are more concerned about economic security. Changing this conception from the narrow traditional definition, as posited by Ayoob,(Ayoob M. , 1994) is a huge step.

Methodology: The second argument is backed by a descriptive historical-comparative approach with thematic analysis of the discourses of the two policy coalitions' from 1997 to 2015, which is divided in three episodes: khatami's, Ahmadinejad's and Rouhani's terms of nuclear bargaining process.

To corroborate the first argument, the paper uses a descriptive comparative method with statistical analysis. Research questionnaires

see the Annex 1 were distributed among two separate communities. The first group were comprised students of the elite Army Command and General Staff College DAFOOS, graduate school for the military officers, eligible to be promoted as lieutenant general and upwards.⁽¹⁾ The second community consisted of members of entrepreneurs association and faculty members of business school and technology management research institutes.⁽²⁾ Both communities represent the young generations of future leadership in Iran. The survey was conducted from November to December of 2012. It was designed and distributed six months⁽³⁾ before President Rouhani took office.⁽⁴⁾

Limitations of the Study: This research has some limitations: the policy process in Iran is not based on pure competition of policy coalitions. The formation of policy coalitions is not transparent. The actors flip their positions from time to time and according to the political atmosphere. The paper had to use comparative methodology to differentiate the two coalition strategies in two different time frames 2005 and 2012. It could be misleading since neither the international scene nor the domestic affairs of 2005 are similar to 2012. Moreover, the paper categorizations of the actors into two clear-cut advocacy coalitions and the negotiation dynamism in three historical episodes do not match the exact reality. Moreover, the statistical study includes army officers, leaving the Revolutionary Guards Pasdaran out of the survey. Cognizant of these negative points, however, the paper strives to provide a basic examination of an under-analyzed dimension of the nuclear policy process, i.e., the domestic elements.

I- Advocacy Coalitions of Iran's Nuclear Technology Sub-System

After a brief set-back, post-revolutionary Iran resumed the nuclear project inherited from the shah's regime. The project was regarded as the cutting edge of technology development, indispensable for any self-respecting power in the region (Rouhani H. , 2011). The

disapproval of the program by the West escalated tensions between Iran and the West in an already highly ideologically charged atmosphere and invigorated the discourse of independence, self-reliance and international justice deeply rooted in the Iranian political culture (Chubin, 2006), (Chubin, 2010). The anti-imperialist discourse found a golden opportunity to use the nuclear program to show that the west intervened in the Iranian domestic affairs and by avoiding recognition of the legitimacy of the new Islamic State.

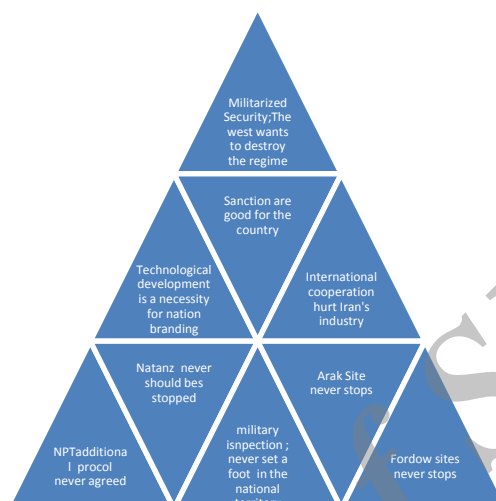
However, employing an ideological discourse to win the public support for a technological project had increased the chances of confusion around its rationale, policy agenda and tools. That is why the initial consensus of the post Iran-Iraq war 1988 within the political elites of Iran could not last long when the time came for choosing the detailed policy settings (Chubin, 2010). The political elite's view on the degree of uranium enrichment and the number of centrifuges, or whether Iran should approve the NPT additional protocol varied according to their definition of the national security. The controversy over these issues ultimately have paved the way for creating two different advocacy policy coalitions under the influence of Iranian political factions; conservatives and reformers, in the nuclear energy subsystem and set out policies which carry zero and maximum flexibility towards the Western demands for confidence building, respectively. In this paper, their belief systems are called hereafter, zero flexible framework or Z.F and maximum flexible framework or M.F.

Once these two frameworks were formed and shaped, a bitter rivalry began between their distinct interpretations of core beliefs with regard to the issues like security, development, independence, etc. At the second level, they were disagreement over the sanction's impact on the economy. Obviously, for the Z.F. framework, which maintained that the west planned to plunder Iran's natural resources and exploit their manpower, the sanctions served their argument to

shy away from the global market and consider it as an opportunity to acquire economic independence and self-reliance. Oppositely, there stood the other coalition, which takes international economic cooperation as a requirement for economic growth and the sanctions a severe barrier blocking economic development. The implications of these two opposing views on economic policies on the third level made two different nuclear policy settings over the following issues: the degree of uranium enrichment, the number of the centrifuges, the amount of plutonium produced in the Arak facilities and the development of the Fordow site. Their beliefs also diverged over Iran's acceptance of the NPT additional protocol and the inspection of the military sites. There was a general dismay towards the asymmetrical levels of rights and responsibilities of Nuclear Weapon States NWS and Non-Nuclear Weapon States NNWS and between the states who have signed the NPT and those who have not signed it. However, given the two different perceptions of security threats, the controversy began on how and with which practical steps Iran could deal with requests to inspect military sites. The M.F framework regarded the permission for visiting the sites helpful measures for confidence building and to re-engage with the world. Accordingly, in January and November 2005, IAEA inspectors were given access to Parchin (Patterson, 2010). The Z.F framework, however, suspicious of leakage of confidential information from the IAEA to Israel, linked the assassinations of the five Iranian nuclear scientists to these inspections (Patterson, 2010) and refused to give access to military site.

Both had the opportunity to form the cabinet and somehow, control the negotiation process, M.F. framework from 1997-2005 and Z.F. framework from 2005-2013 were involved in the negotiation process. Once they were out of power, they criticized the other coalition due to the differences they had in their assessments of the postures taken by their rival government. (Entessar, 2009), (Moshirzadeh, 2007)(Chubin, 2006)(Gerami, 2014).

Figure-1: Zero Flexibility Framework Three Layered Belief System

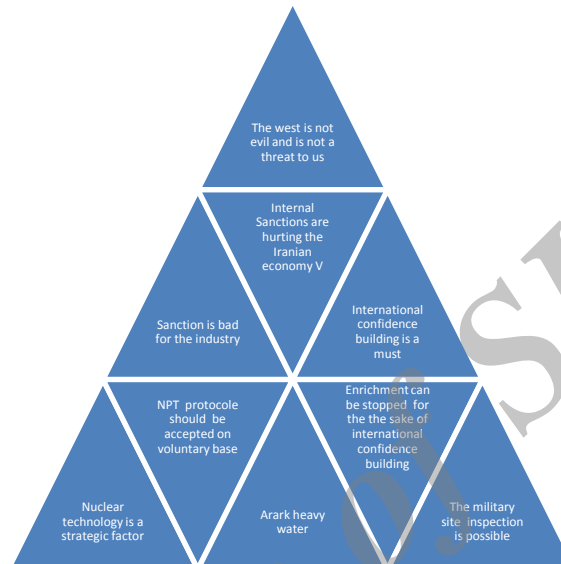


In fact, the approach of the Z.T. coalition toward the nuclear issue is only one aspect of the mentality which is concerned with the hegemony of the west in the international order. Their isolationist approach to economic development was consistent with their political views Figure 1

This camp is said to be represented by the right wing journals like Keyhan, Javan, the State TV, and etc and some sections of the business community that were believed to have benefited from sanctions and the highest army ranks and IRGC.

On the other hand, the M.F coalition has a different understanding of the international politics.

Figure- 2: The Three Layers System Belief of Maximum Flexibility Framework



The M.F. camp encompasses a spectrum pivoting toward economic conception of security. Willing to integrate to the world market and gaining access to technology, they maintain that nuclear technology is an important one, which Iran should master in, while convinced that confidence-building measures is also equally important Figure 2.

Since between these two policy coalitions, there has neither been an equal distribution of power to exercise domestic political power nor could they engage in a meaningful diplomatic relationship with the world, each coalition needed its adversary's resource and capabilities to have an internationally negotiable and domestically approvable deal with the world powers. While each camp was practically in need of the other camp to design and implement a consistent diplomatic effort, their adversarial value system along with institutional political immaturity deterred them from building the needed consensus for policy stability and, as a result, there has been a fluctuation in the nuclear policy and diplomacy stances during the

eight year length on the vital issues like the percentage of uranium enrichment. Iran's official stance in the nuclear negotiations with the West exhibits a pendulum-like movement between the two extreme ends of policy spectrum. At one side exists M.F. framework: It consisted of 1. Voluntarily implementation of the IAEA Additional Protocol. 2. Continuous on-site inspections of the key facilities, 3. Limiting the expansion of enrichment program or declaration of no uranium reprocessing in Iran, 4. Even, suspension of uranium enrichment and finally, 5. Converting all enriched uranium to fuel rods in 2005. These were in exchange with 1. EU declaration recognizing Iran as a major source of energy for Europe, 2. Iran's guaranteed access to advanced nuclear technology along with 3. Contracts for the construction of nuclear plants in Iran by the EU and 4. finally, normalizing Iran's status under G8 export controls⁽⁵⁾ (Davenport, 2014).

On the other side of the spectrum, the zero flexibility towards negotiations accepted only 1. Continuous IAEA monitoring of Iran's enrichment activities and 2. Iranian cooperation with P5+1 to provide enriched fuel needed for Tehran Research Reactor TRR in exchange for P5+1's termination of all the UN sanctions and removal of Iran's nuclear file from UNSC agenda⁽⁶⁾ (Davenport, 2014), leaving the most controversial issues like the fate of the Arak, Natanz and Fordow facilities out of negotiation.

As the time went by and the international pressures intensified, the contrasts between these the two camps sharpened, and their policy disagreement became antagonistic. Nevertheless, the pressures from outside and inside expedited the course of dramatic changes in the relations of the domestic political powers and brought a new balance among them.

II- Economizing the Concept of "Security"

According to Sabatier 2002, the advocacy coalitions tend to remain

relatively stable political entities. That is why there is a state of inertia in the dynamics of the advocacy coalitions and no one normally expects, in the short term, to observe any radical change in their perceptions “unless that state would be changed by an external force”(Sabatier P. , 1993).

The Iranian society, in fact, has been anything but short of external pressures since the Revolution in 1979. As a developing country, dependent on the export of its mineral resources and with a ruling class relentlessly challenging international political order, Iranian society has suffered from political tensions, oil price fluctuations and international sanctions for more than thirty five years. However, these troubles were of chronic nature and could be controlled as long as the government could have access to its oil export revenue. In 2011, the situation became chaotic when the Iran suffered several huge shocks at once including serious systematic military threats from Israeli Regime(Panetta, 2014), (Clinton, 2014), economic sanctions by the US, EU and UN, staggering misery index around 40 percent inflation plus 15 percent unemployment (Interational monetary fund , 2014). Each of these shocks synergized the other unfavorable factors and traumatized the society from different military, political and economic dimensions.

Obviously, the impact of these events was so pressing that the society as a whole could not have mixed responses anymore and each functional group continue as usual with its own functional perception of the threat as Buzan explained (Buzan B., 1998). In this juncture, the society could rally around the militarized conception of “security”. It would provoke a populist ideology, which in turn, would enhance the base of military bound conception of security in the society. The society also could widen its interpretation of the threats and unite around a more nuanced perception of security with economic bearings. A quick look at the political atmosphere of this critical time shows that the power block has adapted the discourse of the latter’s framework.

The most prominent sign was the change of tone in the official media, over the cost and benefit of “international sanctions”, the center piece of belief systems in the graphics 1 and 2. It was altered from a “God sent gift for the economy”)Religious Seminary (Howzeh Elmieh), 2012(to “the full blown war against the nation”(Leader, 2013). Some underlying factors can be enumerated here, like the change in the population-age pyramid, enormous increase in the number of graduates and college students Iran now has more than 5 million college students and 13% of its population is college graduates and the growth of the academic population to cite a few, which added to the pressure for begging relations with the outside.

To measure how this change was rooted in the society and whether it is in accord with the outlook of the different social groups, the paper performed a survey on functional actors in both commercial and security communities annex 1. In Table 1, the relations between the questionnaire items and the rationales of two coalitions are illustrated. For obvious reasons, the survey could not include direct questions on the subject of nuclear negotiations. That is why it limits itself to the first two levels of deep core and policy core of the belief system. However, according to the theoretical presumption, the survey can extract the participants' positions based on the information they provided on their conceptions of security and development strategies.

Table- 1: The Questionnaire Rationale and Its Relations with the System Beliefs Layers

Rank in the questionnaire	The Statements:	Leaning towards Advocacy Coalition	Dichotomies in the world views and their places in the hierarchy of system beliefs
5	Security means freedom of hunger.	Maximum Flexibility Framework	meaning of the security, main component and the main index (First layer)
6	Security means freedom from military threats.	Zero Flexibility Framework	
7	The most important components of national power is military capacity building.	Zero Flexibility Framework	
8	Entrepreneurial eco-system is very important for the maintenance of national power and stability.	Maximum Flexibility Framework	
1	The military stand-off is the pressing challenge now the country is facing.	Zero Flexibility Framework	The Challenge Iran is facing at that moment (First layer)
2	The inflation and unemployment is unbearable	Maximum Flexibility Framework	
3	Our national duty is preserving the territorial integrity of the country.	Zero Flexibility Framework	
4	What the nation needs most is investment and industrial growth.	Maximum Flexibility Framework	
14	Furtherance of National interests means "the projection of national values and cause"	Zero Flexibility Framework	Approach to the world system (First and second layer)
15	National interests means pursuing national economic diplomacy	Maximum Flexibility Framework	
16	The present international order is unjust.	Zero Flexibility Framework	
17	The present international order looks a competitive arena.	Maximum Flexibility Framework	Approach to international law (First and Second layer)
30	Industrial espionage is one of the common strategy for industrial growth.	Zero Flexibility Framework	
31	Membership to the WTO is one of the important steps Iran need to take.	Maximum Flexibility Framework	
18	Iran is looked to as a champion of	Zero Flexibility	Approach to the

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	justice at the international level.	Framework	Foreign and economic policy (Second layer)
19	World knows Iran with its crude oil.	Maximum Flexibility Framework	
20	The international sanctions provide a favorable environment for the local knowledge based firms to grow.	Zero Flexibility Framework	
21	The international sanctions weakens Iran technological infrastructure.	Maximum Flexibility Framework	Approach towards industrial policy (Second layer)
22	Iran should skid the international sanctions.	Zero Flexibility Framework	
23	Iran should make the sanctions lifted	Maximum Flexibility Framework	
24	The resistive economic model of Iran should be founded on indigenous local technology.	Zero Flexibility Framework	
25	The resistive economic model of Iran should be based on foreign technology and high-tech industry.	Maximum Flexibility Framework	
28	Technological growth in Iran requires autocratic strategy and self-reliance.	Zero Flexibility Framework	
29	Technological growth of Iran requires FDI and technology transfer.	Maximum Flexibility Framework	Approach towards economic participation of private sector (second layer)
32	The approach of the private sector is myopic and short term. Not appropriate for playing important role.	Zero Flexibility Framework	
33	The private sector is the dynamic motor for economic growth.	Maximum Flexibility Framework	Dichotomy in the non – political elements of decision making (Second layer)
44	Iran should preserve local life style from the western influence	Zero Flexibility Framework	
45	Economic independence is gained by rationalization of costs and benefits of the economic projects.	Maximum Flexibility Framework	

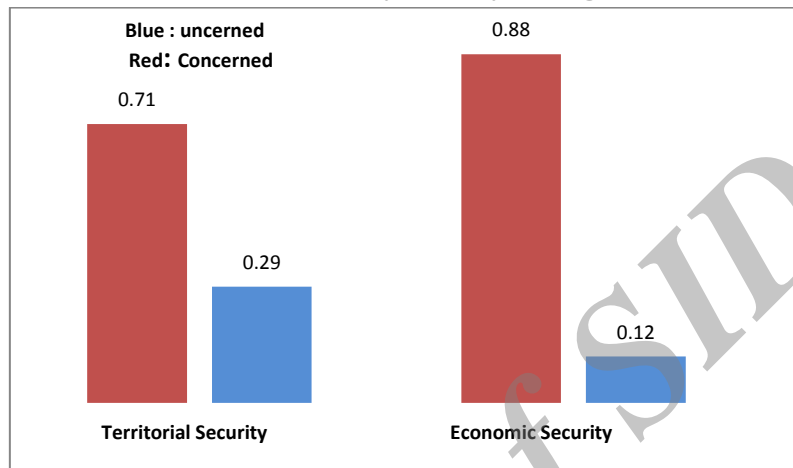
As mentioned before, the statistical population of the survey was divided in two groups: The group A was compromised of 29 high ranking army officers colonel and brigadier general of the statistical population , and group B consisted of 29 entrepreneurs and private firm managers mostly start-ups and college professors in management

and policy researchers. The questionnaires had 45 questions asking the respondents about the degree of urgency they felt toward the different threats to the society. They were, then, arranged into the three layers of belief systems. The rationale and its relations with the two rival belief systems of the policy advocacy coalitions are showed in Table 1.

Logically, group A was anticipated to be more alert toward military threats. The atmosphere was highly charged with militarily rhetoric against the US and Israel attack threats. Several Iranian nuclear scientists were assassinated 2009-2011. The official media covered security measures taken against the activities of “the fifth column”, in support of an eventual external attack.

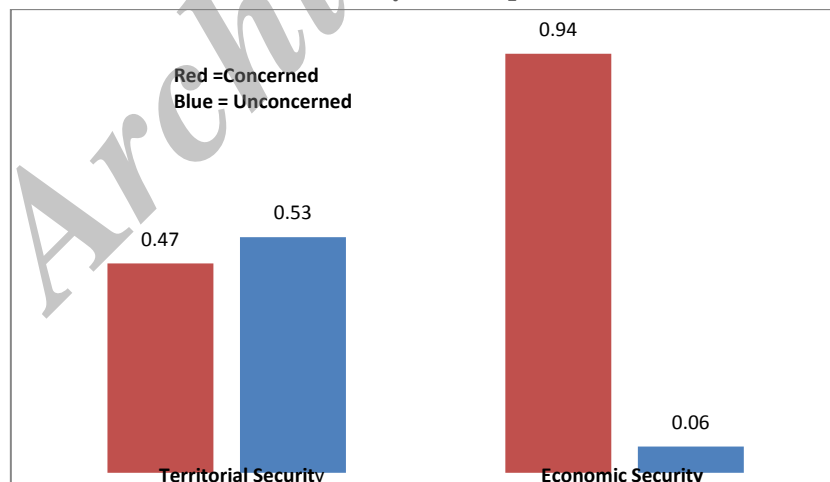
On the other hand, it was reasonable for group B as the owners of private business and academic staff to worry about economic security. The sanctions practically, had severed much of Iranian relations with the world market. Moreover, the ill-designed governmental counter-measures had resulted in high inflation, stagnation and confusion about the future of private sector's economy. Before the survey was conducted it was assumed that either there exist a wide gap between two functional conceptions of the communities over “security”, or a consensus revolving around military security. Neither of them turned to be true. The final result exhibited a non-conventional consensus built in the two elite communities on the urgency of the economic threat. Group A showed concern towards economic security threats. Surprisingly, that this group was not concerned about military threat as much as it might have expected.

Figure- 3: The Degree of Concern and Indifference towards Economic and Military Security among Group A



The comparison between Chart 1 and 2 illustrates an unanticipated general consensus over a conception of security with more nuanced and complicated connotation to build and sustain national independence.⁽⁷⁾

Figure- 4: The Degree of Priority Placed On Economic and Military Security in Group B



The statistical analysis confirms that the change in the official discourse on the international sanctions has paralleled by the referent group's transformative change of security perception.

The security community was normally leaning towards political conservatives and had crucial relationship with the Z.T policy advocacy group. As mentioned before at the heart of belief system of both coalitions, there was the policy core revolving around their strategies for or against serious negotiations. With a radical change in perception of the sanctions in the official discourse and the functional networks, the stance of the policy coalition of zero tolerance frameworks was virtually delegitimized and it was forced to ramble. Soon, majority of moderate conservatives were willing to negotiate and small minority of exuberant extremists were against the nuclear negotiations; these arguments appeared in the I.R.I Parliament.

III- Building Informed Consensus

As depicted earlier, in 2011 when negotiations had reached a stalemate, the military and economic nature of international pressures had maximized to an unprecedented degree. This stalemate exhibited itself simultaneously in the gridlock of the relations between the competing parties at the domestic level as much as between Iran and its counterparts at the international level. It then served as a catalyst to review the cost and benefit of international sanctions, leading to an unanticipated consensus among the reference groups over the priority of economic concerns versus military concerns. At this juncture, a new political force emerged and impacted the political balance of power. This force took shape within the ranks of technocrats and bureaucrats whose traditional function was to broker between the two rival agendas, without aligning themselves with either of them or advocating a new one.

At the heart of this spectrum stood out Hassan Rouhani, a consummate insider and conservative-leaning pragmatist, a cleric with a PhD in law from abroad. Rouhani played the insider-as-outsider

card. Surpassing the red lines of the *sui generis* legitimacy of the nuclear program, he called for the policy linkage between the evaluation of nuclear technology project and its impacts on the economic conditions of ordinary people. The well-received motto of Rouhani's Presidential campaign was "it is good to see centrifuges spin, provided that the wheel of people's livelihood can spin as well."⁽⁸⁾

Rouhani and his current popular Foreign Minister were involved in the previous round of negotiations in 2002-2003 during President Khatami's tenure. Ten years later as the President and by drawing hard lessons from the last ill-fated agreement with the West and despite some policy bent, Rouhani chose not to advocate any of the two coalitions but mediating between them. Rouhani knew that without both groups, the negotiations would fail domestically, due to the lack of enough support by the elite. Given his background as the director of one major Iranian think tanks, he relied on the power of knowledge and expertise instead of ideological bent and accused his opponents in the domestic scene as 'illiterate' and misinformed who lacked, (Khabaronline, 2014) with no analytical skills in negotiations. He was walking the tightrope, balancing between the two processes of interacting international powers and the domestic rivals, backed by the past experiences and his personal ties with both camps pivotal personalities. Rouhani's negotiating team achieved the following:

1. Regarding the Sanctions: on the day of the implementation of JCPOA, the sanctions imposed by the UNSC Council will be lifted and all unilateral economic and financial sanctions by the US and the EU will be immediately suspended and lifted, respectively. This point satisfies both policy coalitions' demand on the termination of the international sanction.

2. Regarding the uranium enrichment: under the JCPOA, more than 5,000 centrifuge machines will continue producing enriched material at the 3.67 percent level at Natanz. This will guarantee the continuation of the enrichment program inside the country, and the

Islamic Republic of Iran will have the ability to continue its industrial production of nuclear fuel for its nuclear reactor (Marcus, 2013). It shows Rouhani's position in the middle of spectrum stretching from one extreme side that supported production of 20 percent enrichment to the voluntary suspension of enriching process agreed by the M.F administration in 2003. Even in the 2013 Geneva Interim Accord, Iran's right to nuclear energy for peaceful purposes was tacitly acknowledged.

3. Regarding the fate of nuclear sites: None of the nuclear facilities or related activities will be stopped, shut down, or suspended, and Iran's nuclear activities in all of its facilities including Natanz, Fordow, Isfahan, and Arak will continue in one way or another. This point also somehow satisfies the demand of the Z.F while at the same time provides the redesigning of the Arak Plant and the changing of the Fordow Plant into an R&D center with no uranium involved, thus corresponding to the position of the M.F camp.

4. Iran will continue its research and development on advanced centrifuge machines in the Natanz facilities and works through the completion phases of the research and development process of IR-4, IP-5, and IR-6 and IR-8. On the other hand, Iran will not use this machinery to produce enriched uranium for at least ten years, that is a mediation between the two coalitions.

5. The Fordow nuclear facility will be converted into an advanced nuclear and physics research center. In addition, in cooperation with some of the countries of the P5+1, half of the Fordow facility will be dedicated to advanced nuclear research and the production of stable isotopes that have important applications in industry, agriculture and medicine.

6. Iran will implement the additional Protocol on a voluntary and temporary basis for the sake of transparency, while its approval process in the Parliament will began at a later time. This is a very sensitive issue, as the Supreme Leader had already set strict rules by

announcing the military sites and officials off limit.. (Khamenei, 2015) speech 4/9. In fact, the inspection of the Parchin military site was already performed in Sep. 2015 by the Iranian personnel under the supervision of the IAEA (NASRALLA, 2015); a middle ground to meet the demands of all sides

Conclusion

When the first steps were taken by the newly inaugurated Iranian government for serious negotiations in September 2013, many questioned the willingness and ability of Iran to change its nuclear policy due to the factionalism within the political system and took that step as mere a tactical gesture of a state challenged by the international sanctions. But after 18 months, on a very speedy and intense track, the stalemate of more than ten years was broken and the deal between Iran and the international powers was accomplished.

Many authors have already investigated the impact of international factors on this process. This paper aimed to examine two important but not exclusive domestic factors at work in the process of nuclear policy/diplomacy change resulting in the joint Comprehensive Plan Action JCPOA between Iran and the six world powers.

Approaching such complex process, the paper employed Advocacy Coalition Framework ACF of Paul Sabatier as well as constructive view of Barry Buzan in Security Studies for explaining this complexity. Relying on this hybrid model, the belief system of the two advocacy coalitions in Iran's nuclear policy was analyzed. The analysis exhibited the underlying controversy over the nuclear policy instruments, showing that there have been two antagonistic world views with opposite approaches to the international politics and Iran's security threats and values embedded in the economic development strategies. As history unfolded, these policy coalitions with the conflicting views have had the opportunity to affect Iran's nuclear

policies, causing it to swing from one extreme to another until it reached the complete stalemate in 2012. The stalemate exhibited the gridlock in the relations between the competing parties at the domestic and international levels, simultaneously. As historical events unfolded, the cascade of the short-term external shocks resurfaced long-term social structural changes and perturbed the old arrangement of political system. The hectic conjuncture gave birth to a third social force that drew lessons from international experiences and 16 years of domestic policy cycles. This time, the new coalition tried not to advocate any policy and just mediated and brokered between the two advocacy coalitions to find a middle ground.

The findings of the present research can be summarized as below:

1. The policy change materialized in the JCPOA is as much a product of the negotiations between Iran and the six powers as the mediation between the demands of the sides in domestic politics and policy rivals.

2. This mediation would not be successful if the political structure could not bear the third coalition brokering between the rivals. The technical and analytical skills and pragmatism of the mediators were indispensable in this process. They stepped on the red lines, traded off their demands, and balanced the loads of the coalitions, to integrate the demands and articulate them in one package, knowing that without them either the agreement would not be reached outside the country or not approved inside. At the end, they offered a portfolio of solutions based on balanced rationales of independence and economic cooperation. It was the second best of both coalitions as this portfolio gained the approval of the Parliament representing mostly the conservative coalition in a very brief session.

The accomplishment of the eleventh president of Iran was timely associated with another change in society at the much deeper level. As our empirical study showed when respondents were asked about the key concept of security, its main component and the major

challenge, the groups representing the military and business communities answered mostly in a similar way, showing a common view on economic security of the society and the related threats it is facing.

The fact that the Iranian polity could work out a consensus between the functional actors of the two important coalitions, leaning towards the economic side of the spectrum might show a cognitive development of some referent groups and elites. This development would not be produced by the international pressures had there not been a conjoint capacity for policy learning within the society. This learning reality and political structure transformation were two domestic factors without which the JCPOA could not have been attained.

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(Annex 1) The Questionnaire Items

Rank	How much do you agree or disagree with the statement	Strongly disagree	disagree	Not sure	agree	Strongly agree
1	The military stand-off is the pressing challenge now the country is facing.					
2	The present economic predicament (inflation and unemployment is unbearable for the country.					
3	Our national duty is preserving the territorial integrity of the country.					
4	What the nation needs most is investment and industrial growth.					
5	Security means freedom of hunger.					
6	Security means freedom from military threats.					
7	The most important components of national power are military capacity building.					
8	Entrepreneurial eco-system is very important for the maintenance of national power and stability.					
9	Increasing the number of national paper in the scientific papers means national power.					
10	The volume of non-oil export of the country means the national power and capability.					
11	The military is the most important factor for a country to impact the regional and international power balance.					
12	The economic growth increases the influence of a country at the international level.					
14	National interests means "the projection of national values and cause"					
15	National interests means pursuing national economic diplomacy					
16	The present international order is unjust.					
17	The present international order looks a competitive arena.					
18	Iran is a champion of justice at the international level.					
19	World knows Iran with its crude oil.					

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20	The international sanctions provide a favorable environment for the local knowledge based firms to grow.					
21	The international sanctions weaken Iran technological infrastructure.					
22	Iran should skid the international sanctions.					
23	Iran should turn the sanctions ineffective.					
24	The resistive economic model of Iran should be founded on indigenous local industry.					
25	The resistive economic model of Iran should be based on foreign technology and high-tech industry.					
27	One of the reasons for economic stagflation in Iran is the economic mismanagement					
28	Technological growth in Iran requires autocratic strategy and self-reliance.					
29	Technological growth of Iran requires FDI and technology transfer.					
30	Industrial espionage is one of the common strategies for industrial growth.					
31	Membership to the WTO is one of the important steps Iran need to take.					
32	The approach of the private sector is myopic and short term. Not appropriate for playing important role.					
33	The private sector is the dynamic motor for economic growth.					
34	Iran should preserve local life style from the western influence					
45	Economic independence is gained by rationalization of costs and benefits of the economic projects.					

Note

1. At the time the survey was conducted, there were 60 students in the graduate school. The sample group was made of male students majored in “strategic management and policy research of the defense sector”, aged between 45 to 55. See <http://chalgai.com/watch/ibws7mhP6z4/iran-dafoos-command-and-staff-college-html2.2>.
2. Male and female in their late 20s to 60.
3. The survey was conducted in Nov.-Dec.2012 during a research commissioned by the I.R.I vice presidency office for Science and Technology. The result of the survey was embargoed until the election of Mr. Rouhani and the reshuffle of the cabinet.
4. This was a descriptive comparative field research. The statistical population consisted of military and civilian sectors personnel N= . The samples were selected through stage sampling using the Morgan chart. Finally, 56 subjects half military and half civilian completely cooperated in the study. The data collection tool was a researcher-made questionnaire, consisted of 45 items, developed based on a 5-point Likert scale. Using Cronbach's alpha coefficient, its reliability was calculated 0.7933. The degree of urgency and priority was set for the territorial and economic security in the perceptions of two reference groups who have the opinion leadership in contemporary Iran. Given that the data were ordinal and not normally distributed; the nonparametric methods were used in the study.
5. It is a compilation of two proposals of Iran in March 23, 2005 and April 29, 2005 in the negotiation with three countries of France, Germany, and the United Kingdom.
6. Iranian 5 Step Proposal in April 2012
7. In analyzing the consistency within the groups Charts 1&2, the interesting point was that there was no significant difference between concernedness and indifference toward military security by Group B 47 versus 53. Nevertheless, there was a significant difference in the degree of concernedness towards economic security versus indifference toward it 94 versus 6 in this group, indicating a high sense of urgency towards the economic instability and downturns at that period by the civilian sector. Group A shows affinity towards territorial and economic security more than indifference toward them. Comparing the groups red bars in the Charts, both Groups A and B shared great concern about economic security 88 and 94, respectively. Of



course, the concern of Group B was expectedly more than that of Group A. While Group B was clearly divided in indifference and interestedness towards military security, Group A tended to show an relatively abnormal pattern of concernedness and vigilance toward both military security and economic security and the significance of this part of our analysis was similar to that of the previous group, the vigilance towards economic security was dramatically more than territorial concerns 88 versus 71 which is not normally expected from a military group.

8. Dr. Rouhani was the head of an influential think tank Center of Strategic Studies which works under the auspices of Ayatullah Rafsanjanim , the moderate head of the expediency Council.

References

- Albert, J. S. 2006. **Iran's NPT Violations – Numerous and Possibly On-Going.** <http://www.isis-online.org/publications/iran/iranntviolations.pdf>: The Institute for Science and International Security ISIS.
- Ayoob. 1995. **The Third World Security Predicament: State Making, Regional Conflict, and the International System.** Boulder: Boulder, CO, Lynne Rienner.
- Ayoob, M. 1997. *Defining Security: A Subaltern Realist Perspective.*, In a. M. Krause K., **Critical Security Studies, Concepts and Cases**, London: UCL Press.
- Ayoob, M. 1986. *Regional Security in the Third World*, in M. Ayoob. In M. Ayoob, **Regional Security in the Third World, Case Studies from Eastern Asia and Middle East.** London: Croom Helm.
- Ayoob, M. 1994. *Security in the third world searching for the core variable .* In Graham N.A., **Seeking Security and Development: The impact of militay spending and Arms Transfers.**, Boulder: lynne Rienner.
- Baca, F. C. 2001. **advocacy coalition framework; a theoretical framework for SAMREMto address policy change and learning cultivating community.** Retrieved 8 3, 2016, from Virginia Tech University: <http://hdl.handle.net/10919/65397>
- Baldwin, D. 1997. *The Concept of Security.* **Review of International Studies**, 5 , 5-26.
- Barzegar, K. 2009. *The Paradox of Iran's Nuclear Consensus.* **World Policy Journal** , volume 26, issue 3, pages 21-30.
- Bennett, C. J. 1992. *The lessons of learning: reconciling theories of policy learning and policy change.* **Policy Sciences** , 253, 275–294.
- Beverwijck, J. M. 2005. **Genesis of A System, Coalition Formation in Mozambique Higher Education.** Utwent, Unitisk.
- Boroujerdi. 2014-05-01. **MP: No committee formed to supervise Iran nuclear negotiating team.** [www. irna. ir/ en/ News/ 80981295/ Politic/ MP__ No_ committee_ formed_ to_ supervise_ Iran_ nuclear_ negotiating_ team](http://www.irna.ir/en/News/80981295/Politic/MP_No_committee_formed_to_supervise_Iran_nuclear_negotiating_team): IRNA.
- Borras, S. 2011. **Policy learning and organizational capacity.** **Science and Public Policy**, 389 November , 725–734.

- Bratt, D. 2012. **Canada, the Province, and the Global Nuclear Revival: Advocacy Coalitions in Action**. Montreal: McGill-Queens's Press.
- Buzan B., O. W. 1998. **Security: A New Framework for Analysis**. London: Lynne Rienner Publishers.
- Buzan, B. 1991. New Patterns of Global Security in the Twenty-first Century. **International Affairs**, 67.3 , 432-433.
- Christopher M. Weible, P. A. 2009. Themes and Variations: Taking Stock of the Advocacy Coalition Framework, **The Policy Studies Journal** 37/1 2009 , 132.
- Chubin, S. 2006. **The Iranian Nuclear Ambitions**. Washington D.C.: Carnegie Endowment for International Peace.
- Chubin, S. 2010. **The Politics of Iran's Nuclear Program**. In R. Wright, Iran Prime Press. Washington: The Iran Prime, the United State Institute for Peace.
- Clinton, H. R. 2014. **Hard Choices, a memoir**. Washington D.C.: Simon & Schuster.
- Davenport, K. 2014. History of Official Proposals on the Iranian Nuclear Issues. **Arms Control Association**.
- Elizabeth A. Shanahan, M. D. 2011. Policy Narratives and Policy Processes, **The Policy Studies Journal**, Vol. 39, No. 3, 535-561.
- Entessar, N. 2009, Summer. Iran Nuclear Decision Making Calculus. **Middle Eastern Policy Council**, Volume XVI, Number 2
- Entessar, N. 2009. Iran's Nuclear Decision-Making Calculus. **Middle East Policy**, Vol XVI, No.2.
- Evans P., H. K. 1993. **Double Edge Diplomacy, International Bargaining and Domestic Politics**. Berkely: university of California Press.
- Evens P., H. J. 1993. **Double Edged Diplomacy , International Bargaining and Domestic Politics**. Berkley ca: University of California Press.
- Fischer F., G. J. 2006. **Handbook of Public Policy, Theory, Politics and Methods**. N.W.: C.P.R, Taylor and Francis.
- Fredrick, V. 2013. What is critical about critical realism, Essays in **Reconstructive Social Theory**. London: Routledge.
- Gerami, N. 2014. **Domestic Politics of Iran's Nuclear Debate, Leadership Divided**. Washington D.C.: The Washington Institute for Near East Policy.
- Gerami, N. 2014. **Leadership Divided, The Domestic Politics of Iran's Nuclear Debate**. Washington D.C.: The Washington Institute for Near East Policy.
- Glunt, N. 2011. Mousavian: Iranian nuclear program is matter of consensus, pride. **The Chatauquan Daily**.
- Gourevitch, P. 1978. Second Image Reversed, The International Source of Domestic Policy. **International Organization** ,32 4 , 881-912.
- Hall, P. 1993. Policy Paradigm, Social Learning and the State. *Comparative Politics*, 273-296.
- International monetary fund . 2014. Islamic Republic of Iran, **IMF Country Report** No. 14/93. Washington D.C.: IMF.
- Khabaronline. 2014. **Who does Rouhani call Illiterate**. [http:// khabaronline. ir/ detail/](http://khabaronline.ir/detail/)

The Role of Domestic Factors in Science and Technology Diplomacy: The Case of Iran's Nuclear Program

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336895/Politics/government: Khabar Online.

- Khamenei, S. I. 2015. Speech. Tehran: **IRNA**.
- Leader, K. S. 2013. Speech for the high school teachers, **Eghtesad on line**.
- Lee, S. M. 2014. Understanding the Yalta Axioms and Riga, Axioms through belief systems of the Advocacy Coalition Framework. **Foreign Policy Analysis**, 0, 1-21.
- Liftin, K. 2000. Advocacy Coalitions Along the Domestic-Foreign Frontier: Globalization and Canadian Climate Change Policy. **Policy Studies Journal**, 281, 236-252.
- Marcus, G. 2013. Interim nuclear agreement between Iran and six powers. **Reuters**, <http://www.reuters.com/article/2013/11/24/us-iran-nuclear-agreement-text-idUSBRE9AN0FS20131124>.
- Melman Y., M. J. 2008. **The Nuclear Sphinx of Tehran**, Basic Books.
- Metcalf, J. 1995. Technology systems and technology policy. **Cambridge Journal of Economics**, 19, 25-46.
- Michael Howlett, M. 2002. The Policy Effects of Internationalization, **Journal of Comparative Policy Analysis: Research and Practice** 4: 31-50, 30-50.
- Miremadi, T. 2013. Suspicion or faith, Understanding the Cultural Roots of Iranian Public Policy towards Science and. **International Journal of Humanities**, Vol. 20,1, 83-107.
- Miremadi, T. 2014. The Role of Discourse of Techno-Nationalism and Social Entrepreneurship in the Process of Development of New Technology: A Case Study of Stem Cell Research and Therapy in Iran. **Iranian Studies**, 47 1, 1-20.
- Moon, A. E. 1988. Legitimacy, integration and Policy Capacity: Software side of Third World National Security. In A. E.E, National Security in **Third World: The Mahanagement of Internal and External Threat**. London: Edward Elgar Publishing Limited.
- Mootien, N. P. 2013. Air Transport Policy for Mauritius – The Way Forward. **Global Journals**.
- Moshirzadeh, H. 2007. Discursive Foundations of Iran's Nuclear Policy. **Security Dialogue**, 38 4, 521-543.
- NASRALLA, F. M. 2015. Samples taken at Iran's Parchin military site: U.N. nuclear watchdog, **Reuters**, <http://www.reuters.com/article/2015/09/21/us-iran-nuclear-iaea-idUSKCN0RL0Z020150921#7KmFZiMvMXzl6Mcc.97>.
- Nikou, S. N/A. **Timeline of Iran's Nuclear Activities**, **United Institute for peace**, http://iranprimer.usip.org/sites/iranprimer.usip.org/files/Timeline%20of%20Iran_s%20Nuclear%20Activities.pdf.
- Norman, L. 2014. Iran Official Signals Progress on Arak Reactor in Nuclear Talks. **Wall Street Journal**.
- Olivier, M. 2006. **Iran and Foreign Enrichment: A Troubled Model**. Washington D.C.: Arms Control Today, https://www.armscontrol.org/act/2006_01-02/JANFEB-IranEnrich, visited 4/15/2014.
- Panetta, L. 2014. "Worthy Fights: A Memoir of Leadership in **War and Peace**.
- Patrikarakos, D. 2012. **Nuclear Iran; The Birth of An Atomic State**. London: I.B.Tauris.
- Patterson, S. 2010. Iran Parchin's Complex: why nuclear inspectors are so focused on it,

- Christian Science Monitors**, <http://www.csmonitor.com/World/Middle-East/2012/0420/Iran-s-Parchin-complex-Why-are-nuclear-inspectors-so-focused-on-it>.
- Petrick, R. 1981. Policy Cycle and Policy learning in China. **Comaprative Political Studies**, 14 101 , 100-122.
- Religious Seminary Howzeh Elmieh. 2012. **The Pproaches of Imam Khomeini and the Supreme Leader to Sanction**. <http://www.hawzah.net/fa/article/view/93312>: Qom Seminary.
- Roe, S. 2007, 28 January. An atomic threat made in America. **Chicago Tribune**.
- Rosenau, J. 1969. Linkage politics: essays on the convergence of national and international systems. **Free Press**.
- Rouhani, H. 2011. **National Security and Nuclear Diplomacy, A memoir**. Tehran: Center for Strategic Studies.
- Rouhani, H. September-19, 2013. Time to engage. **Washington Post**.
- Rozen, L. 2014, 8 jan. Three days in March: New details on how US, Iran opened direct talks. **Al-Monitor**, <http://backchannel.al-monitor.com/index.php/2014/01/7484/three-days-in-march-new-details-on-the-u-s-iran-backchannel/>.
- Sabatier Paul, a. M. 2001. Policy Knowledge: Advocacy Organizations. In e. P. Smelser, **International Encyclopedia of the Social & Behavioral Sciences**. New York: Elsevier Science Ltd.
- Sabatier Paul, H. J. Advocay Coalition Framework, An assesment .
- Sabatier, P. 1993. **Policy Change and learning : An Advocacy Coalition Approach**. Westview: University of Colorado.
- Sabatier, P. 1998. Sabatier, P. A. 1998. The advocacy coalition framework : revisions and relevance for Europe. **Journal of European public policy**, 51 , 98-130.
- Sabatier, P. 1999. **Theories of the policy process**. Boulder, CO : Westview. Westview: Colorado University.
- Sabatier, W. c. 2007. A guide to advocay coalition Framwork . In Fischer, **Handbook of Public Policy Analysis**. London: taylor and Francis.
- Sadeghi, K. 2014. **Friday Religious Speech**, Pooyesh.
- Sich, A. 2012. How **Iran Risks Another Chernobyl**. <http://thediplomat.com/2012/03/how-iran-risks-another-chernobyl/> .
- Stensdal, I. 2012. China's Climate Change Policy 1988-2011: From Zero-to Hero. **Fridtjof Nansens Institute**.
- Tabtabii, A. 2013. Presidential Elections and Nuclear Policy In Iran, **Arms Control Today**, https://www.Armscontrol.org/act/2013_06/Presidential-Elections-and-Nuclear-Policy-In-Iran.
- Varone, K. I. 2012 . Treating Policy Brokers Seriously: Evidence from the Climate Policy,”. **Journal of Public Administration Research and Theory** 22/2 , 319-346.
- Warrick, A. G. 24 November 2013. "World powers reach nuclear deal with Iran to freeze its nuclear program". **The Washington Post**.
- Weible, C. 2006. An Advocacy Coalition Framework Approach to stakeholder Analysis:

The Role of Domestic Factors in Science and Technology Diplomacy: The Case of Iran's Nuclear Program

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Understanding the political context of California Marine Protected area. **JPRT** , 95-117.

Weiss, C. 1999. Research for Policy's Sake: The Enlightenment of Social Science. In T. Miyakawa, **The Science of Public Policy; Essential Readings in Policy**, London: Routledge.

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نقش عوامل داخلی در دیپلماسی علم و فناوری: مورد مطالعاتی برنامه هسته‌ای ایران

طاهره میرعمادی

عضو مرکز پژوهش‌های سیاست‌گذاری و دیپلماسی علم و فناوری (مپسد)، سازمان
پژوهش‌های علمی و صنعتی ایران

این مقاله با این هدف نوشته شده است که تصویری از نقش پراهمیت عوامل داخلی برای تسهیل دیپلماسی علم و فناوری هسته‌ای در ایران و تحقق برنامه اقدام جامع مشترک (برجام) ارائه دهد. برای رسیدن به این هدف، مقاله بر دو عامل داخلی متمرکز شده است که تاکنون به آن کمتر پرداخته شده است: اول تشکیل اجماع در بین نخبگان دو گروه مرجع یعنی جامعه امنیتی و جامعه کسب و کار بر سر مفهوم امنیت جامع در ایران است. دوم ظهور یک ائتلاف تکنوکرات و دیوانسالار که در نقش واسطه‌سیاستی موفق شد مواضع گروه‌های رقیب را در مورد سیاست‌های علم و فناوری در ایران بهم نزدیک کند. اطلاعات پروژه از طریق جمع‌آوری داده به صورت کمی-کیفی بدست آمده و بر اساس یک مدل مفهومی تلفیقی، تجزیه و تحلیل شده است.

کلید واژه‌ها: مفهوم جامع امنیت، اجماع اجتماعی، واسطه‌گری سیاستی، مذاکرات
هسته‌ای