

Proposing a conceptual framework for Iran and U.S. coercive relations

1. Abstract

The purpose of this article is investigating coercive actions' mechanisms in international relations to address the long term conflict of Iran and U.S. International relations has a multidisciplinary nature which makes it complicated and broad. As a result a framework which classifies issues and disciplines to find out main causal relations seems essential. Therefore in the first step by reviewing huge amount of data in the literature and by using thematic analysis method, a vivid and flexible conceptual framework is proposed. In the next step, a generic problem case is defined and studied by using the qualitative approach of system dynamics. Then regarding Iran and U.S. specialties, this case has been extended, investigated and analyzed.

2. Keywords

International relations, coercive actions, sanction, peace, framework, Iran, USA

3. Introduction

3.1. Problem definition

International relations as the collision point of nations with the multiplicity of players has always a complex nature which affects strategically on nations and shapes their environment. (Choucri, 1978) Decision makers have always been in a dilemma and a contradicting space in international relations. In last decades enormous academic efforts have been handled in order to support decision makers but its vast and non-concentrated analyses and solutions in literature makes it unadoptable practically while they are distributed sporadic. As a result developing oriented frameworks in order to cover all issues with firm and extendable structures let us going deep systematically and then summing up to make some possible prescriptions without getting confused.

In this article it is aimed to address one of the most challenging issues in international relations which is long term coercive relations between Iran and U.S. considering its historical trend. (Crist, 2012) And also answering this question that "is it possible to make a sustainable peace between these two countries regarding their harsh orientation? And how is it possible in time?" As a result in this article it has been tried to develop a framework as well as methodology and proposing some solutions related to the long term conflict of Iran and U.S.

3.2. Methodology

The methodology structure of this article consists of three main parts. The first step is thematic analysis where the vast amount of literature is reviewed and a conceptual framework is developed. Then based on prior results, through system dynamics approach

the system structure is developed and main long term system behavior is analyzed. Finally based on basic assumptions, the qualitative result is extended on the Iran and U.S relations. In the following, thematic analysis and system dynamics approach as the main tools of the article are introduced.

Thematic analysis

Thematic analysis is a tool in qualitative research fields which uses data for extracting themes and structures. (Daly & Glikzman, 1997) This method focuses on data richness and frameworks behind data sets. Thematic analysis is more than superficial linguistic structures in texts and more concentrated on identifying implicit and explicit ideas. (Guest and MacQueen, 2012)

The primary process in developing themes concealed in dataset is coding which recognizes important points in data and encodes it before interpreting steps. (Boyatzis, 1998)It is also possible to compare code frequencies and identifying theme co-occurrence and graphically displaying their relationships among different themes. (Guest and MacQueen, 2012)Most of researches find thematic analysis very useful and interesting while it helps in capturing intricacies of means in data sets. (Guest and MacQueen, 2012: 11)

In thematic analysis the concept of assertions support with data come from the grounded theory method. This approach is developed for constructing theories that are grounded in the data themselves.(Charmaz, 2006) This claim is completely reflective in thematic analysis because the process includes reading transcripts, identifying possible themes, comparing and contrasting themes and building theoretical models. (Guest and MacQueen, 2012: 12)

In this article thematic analysis is used to harvest critical points in huge data set in literature and also developing the constructs and frameworks behind data set.

Qualitative approach of system dynamics

System dynamics is an accepted approach to understand behavior of complex systems over time and its interaction with structure parameters. It focuses on internal feedback loops and delays that effect the entire system behavior.(Jan 22, 1997) System dynamics introduces useful tools to analysis system behaviors especially ones with nonlinear outputs.

In the system dynamics methodology, a problem or a system like ecosystem or political system, is initially represented as a causal diagram for qualitative analysis. (Sterman, 2000)A causal loop diagram is a simple map consisting of system components and their interactions. System structure is captured in feedback loops and system components interaction based on causal relation. (Meadows, 2008)

In this article through thematic analysis, system elements are investigated and based on characteristics of loops system behavior is analyzed.

4. Literature review

Over history, human being has constantly encountered disagreements and conflicts with his kind and has thought of different solutions to face these conflicts. Conflicts are an essential part of human beings life whose attributes may change due to the development of societies but its nature and related fundamental solutions are constant. One of the basic solutions is war which is inherently violent and simple but costly to a great extent. On the other hand, negotiation is an attractive tool decreasing the costs but imposing limitations on implementation. Thus, some other ways such as threatening applied. Threatening has been a diplomatic tool over history sometimes inevitable due to the restrictions of negotiation. In another word, coercive diplomacy is intended to compensate for the weaknesses of other tools (Asadi, 2011). In this section two main subjects, coercive diplomacy and economic sanction, are briefly discussed.

4.1. Coercive Diplomacy

Coercive Diplomacy is an approach through which a country forces another country to change its behavior in future by threatening(Art and Cronin, 2003). Coercive diplomacy or coercive persuasion is not a new and esoteric concept since human being has continuously used threats and punishments and on the opposite, incentives and motivations to make others' wills and interests correspond with his desire. Therefore, this approach has been historically used to manage international relations and sometimes was successful. The basic concept of coercive diplomacy is to threaten the opponent with punishments in case of non-compliance. These actions should be potent and credible to the extent that persuades the opponent(George, 1991).

The main tool of this approach is threatening to impose costly actions on the opponent which will be stopped in case of the behavior change of the target country(George and Simons, 1994). Coercive diplomacy is not the only non-military solution to change the behavior of the opponent country; in fact, it is a defensive strategy which is more attractive as a result of reduced costs and balanced risks preventing undesirable crises(George and Simons, 1994).

It should be mentioned that there is a relation between coercive diplomacy and force. In essence, the coercive diplomacy and force are complementary not alternative and should be conducted together to make a holistic approach(Jentleson and Whytock Winter 2005/6).

The restricted and symbolic use of force in combination with coercive diplomacy helps to persuade the target and create compliance condition. In case of using force, policy change supposition could be wrong because coercion can still play a role in prior diplomatic strategy. In addition, the proportional extent and type of force used in coercive diplomacy is of great importance; because it shows the sender's persistence in achieving his goals and also his will to impose more force and coercion. Therefore, the use of threat and force is related to the situation of sender. (George and Simons, 1994)

The type and extent of threats and incentives are determined by the following interdependent parameters(George and Simons, 1994):

1. Sender's will
2. Type and manner of demand to disincline the target to his behavior

The motivation of the target for compliance or non-compliance is dependent on the course of demand and the greater is the value of sender's desire the higher will be the resistance of target and the harder will be to put them under pressure. Therefore, the result of coercive diplomacy is dependent to a great extent on the comparative motivations of both sides. The coercive diplomacy may result in sender's success in condition that their demand is an image of their most important interests leading to a phenomenon called Asymmetry of Interests and Asymmetry of Motivations. If the sender pursues goals other than their vital interests, the Asymmetry of motivations will be in favor of target(George, 1991).

Coercive diplomacy is intended to change the sender's decision, but economic damage or military attack does not necessarily result in political changes(Tanous, 2003). In other words, coercive diplomacy is a transaction with negotiation whose success depends on the cooperation of both sides(Levy, 2008).

According to Thomas Shelling five conditions exist for the success of coercive diplomacy(Schelling, 1966):

1. Achievements through negotiation are more than coercion.
2. Threats are persuasive of high costs of non-compliance.
3. The target should be convinced of the validity of threats and the ability of sender to conduct them.
4. Coercive actions should be reassuring that satisfaction of the sender's demand will not result in more future demands.
5. Enough time exists to satisfy the demands.

4.2. Economic sanction

Economic sanctions can be classified as a type of coercive diplomacy which takes advantages of economic pressures to alter or deter some policies of the target country. In fact, in economic coercion the use of an economic instrument is intended to cause some harm or economic loss with the purpose of coercing the target to cease, reverse, or not adopt some policies including both political and economic issues(Drury, 2005).

There are also some differences between coercive diplomacy and coercive elements of routine diplomacy while economic sanctions are discrete foreign policy actions that involve higher mid-level bureaucrats in policy making process(Drury, 2005). It is possible to introduce a continuum of coercive foreign policy tools based on severity, and sanction is one option along the continuum. The continuum in order of increasing severity is propaganda, diplomacy, economic sanctions, and military sanctions(Baldwin, 1985).

Surely, there are always some logics behind actions and the simple logic of sanction is that if the target does not change its policy, they will face punishment, but they will get some benefits or rewards if they do acquiesce (Drury, 2005). Rewards may include trade agreements, financial aids or loans (Baldwin, 1985; Crumm, 1995 (3, August); Newnham, 2000 (1, March)).

There are a variety of tools through which sanctions may be implemented. These tools are diversified from trade limitations to financial ones. Trade restrictions or cessations can be implemented on both imports and exports (Drury, 2005). Also some methods of financial sanctions include freezing of assets, denial of loan rescheduling or guarantees, the limiting or cutting off military or developmental aids, as well as pressure on banks and international financial organizations to deny loans and debt reliefs (Olson, 1979; Hufbauer et al., 1990).

According to definitions the first obvious goal of economic statecraft is economic warfare to persuade the target country into accepting the opponent's will (Baldwin, 1985; Hufbauer et al., 1990). But the demands of the sender may be different according to the situation including both economic and political issues. By considering economic goals in the economic sanction definition, giving the chance for coercive actions like opening markets for improving trade between two countries should be considered especially if it benefits sender asymmetrically (Knorr, 1977). Sanctions can also illustrate disapproval of target nation's actions (Wallensteen, 1968).

Some sanctions can have a typology of different goals. In a tripartite one, the primary goal is to change the target's policy. The secondary goal can be aimed at sender's domestic behavior and expectation and the tertiary is affecting the international system (Barber, 1979). In another typology, sanctions may have five goals: compliance, subversion, deterrence, international symbolism, and domestic symbolism (Lindsey, 1986).

It is also possible to have unrelated goals to the target because of sanction attraction in comparison with other alternatives (Renwick, 1981). There are also some reasons to change the goal of sanctions. The first one is public demand for the coercive action. The second possible one is sending a message to international actors (Renwick, 1981).

As mentioned before economic sanctions may be aimed at both political and economic goals. However, political demands are much more intense compared to demands associated with trade issues. As a result the possibility of sanction success in foreign economic goals is much greater (Pape, 1997).

Certainly economic sanctions have some costs and consequences affecting both the sender and the target country and being determinant factors of the success of sanctions including economic costs, political costs. Negative sanctions are harder to implement especially in market economy. Incentives are easier to be deployed and transferred while sanctions need monitoring and enforcing. The best choices of incentives are non-replaceable, nondurable goods. As a result, higher implementation costs make incentives more attractive in comparison to sanctions (Crumm, 1995 (3, August)). Incentives impose costs when sender

succeeds but sanctions cost when sender fails. As a result leaders prefer coercion over inducement when there is hope to succeed(Drury, 2005).

The way domestic groups perceive the sanction plays an important role in the success or failure of the coercive action. Distribution of sanction cost affects domestic groups' decisions to support or neglect the coercive policy. Imposing economic sanction does not necessarily lead to expected result while sanction type have significant impact on each groups in the target country and choosing the right type can create pressure on the interest group(Kaempfer, 1992). Accumulation of cost on a powerful group like a particular industry may lead to ending sanctioning effort. If the cost of sanction diffused evenly lower than each group threshold, then sender will maintain the policy and the target may tolerate for longer(Morgan and Schwebach, 1996). Besides, economic sanctions can send the signal of intervention in target domestic affair and may produce political integration(Galtung, 1967). Economic damages caused by sanctions can make a reason for dominant regime in the target country to create more internal support by convincing public and elites. On the whole, political integration can be increased over disintegration in three conditions:

1. When the sanction goal is perceived against the whole population not the ruling part
2. When there is negative memory against sender before implementing sanction, and
3. When people judged that their country is right and there is not better alternative to follow(Galtung, 1967).

The effectiveness of sanctions greatly depends on the way they are implemented. Some scholars believe that economic incentives are more effective than economic coercion(Drury, 2005). In West Germany during cold war, incentives were more useful, especially in getting concessions from East Germany by offering incentives(Newnham, 2000 (1, March)). In fact, incentives are more effective between opponents because of weak economic relations(Davidson and Shambaugh, 2000). In cases where both countries have harmonious relations, sender may prefer using economic or military coercion instead of inducements as a method of extracting concessions, because it is more cost-effective(Drezner, 1999: 190-191).

The success or failure of sanctions is of great importance depending on various factors and complicated to determine. Economic damage effectiveness is basically conditioned by intended goals. Sanctions have several goals and when primary objective is failed to be achieved, it does not necessarily lead to secondary objectives' failure(Barber, 1979). However, scholars tend to evaluate sanctions based on primary goals. This tendency leads to conventional wisdom assumption that sanctions effectiveness in changing target policy is increased by higher pressure level and sanction severity. However, sometimes senders implement sanctions because of domestic political reasons. In these cases, leaders face public pressure to do something against the target. As a result there is no expectation of economic coercion success (Drury, 2005; Doxey, 1980: 77-79).

Sanctions are quite useful in expressing sender's resolve to the target; but mostly tend to fail because they are assumed to change the target's policy and persuade them into compliance, deterrence and subversion but they are intended to send a symbolic message. Thus the sanctions' symbolic nature has an instrumental value (Renwick, 1981; Schwebach, 2000; Wallensteen, 1968: 265; Lindsey, 1986). Approximately, just in 33 percent of times, sanctions are successful in changing the target country's policy(Hufbauer et al., 1990).

5. Conceptual framework

To provide a holistic and integrated view on the issues proposed in the literature of coercive diplomacy and its principal tool, sanction, a conceptual framework has been developed by using thematic analysis. The main advantage of this framework is the classification of all the literature issues and relating them in a way that the important connections are determined and all in all extracting the structure behind the literature.

Therefore, a matrix has been defined whose columns include the classification of players and beneficiaries. In aforementioned literature, the main players include the target, the sender, other countries, and international organizations. The rows are assigned to fields including international market, domestic economy, international relations, society, and security issues. The correspondence between the rows and columns of this matrix represents a space defined in the literature playing a key role in coercive diplomacy and sanctions. The following sections will discuss the mentioned levels and their connections considering the classification of the stakeholders.

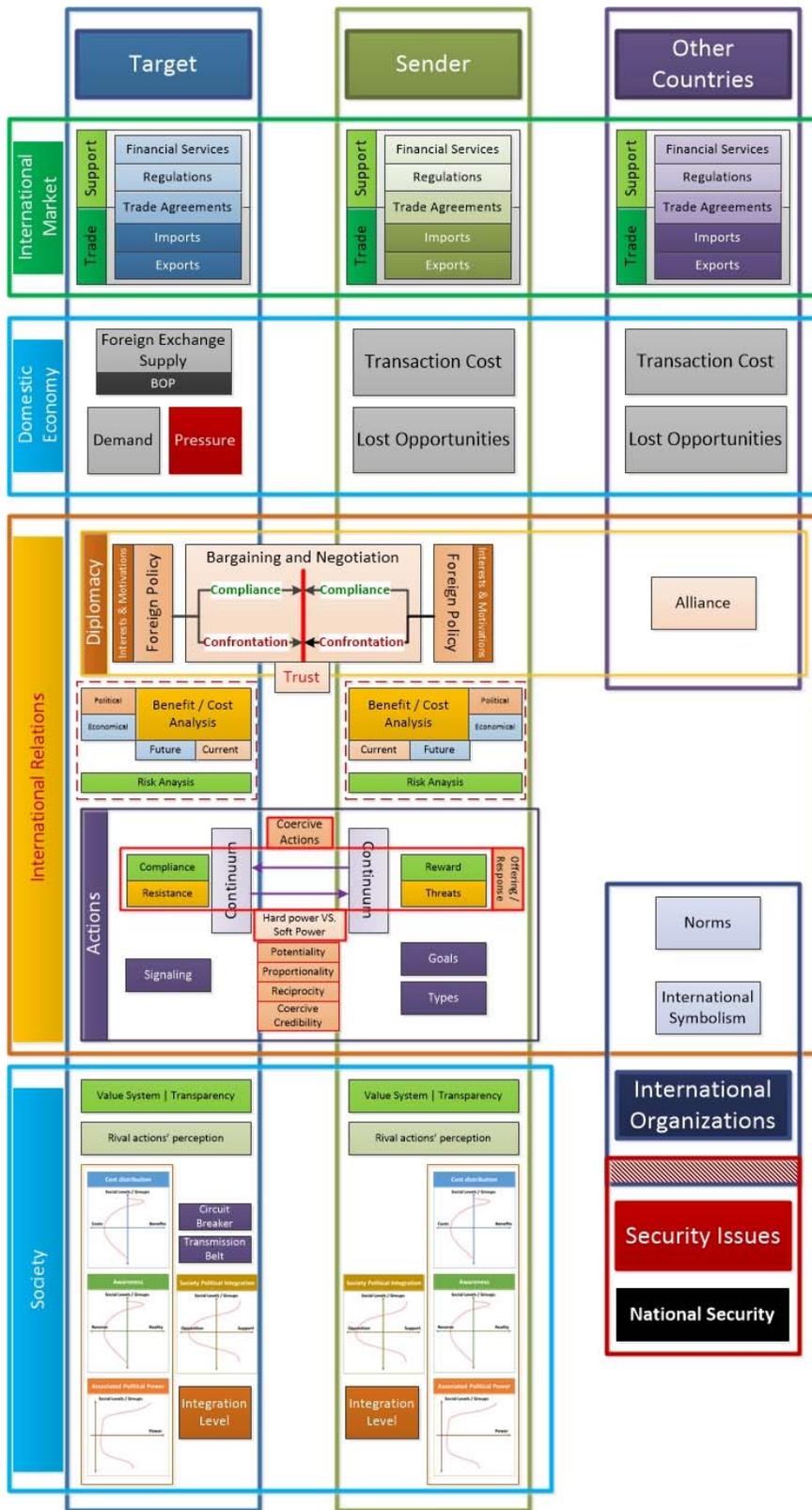


Figure 1, proposed conceptual framework

5.1. International Market Level

At this level, interactions between the subsections of international trade are considered. This level consists of two parts for each stakeholder. The first section (executive subsystems) deals with trade and the second part (supportive subsystems) focuses on regulations, related financial services and also industry. There exist two principal topics in the trade segment, exports and imports which are classified regardless of the nature of the exchanged goods (consumer goods or durables, capital goods and ...). The supportive subsystem considers the financial services and regulations which provide an interactive environment. Trade agreements are placed between the trade and support segments which may be long term (strategic) or short term (daily).

The most noticeable connection is the interaction between the international market and the domestic economies of each stakeholders. The target country's foreign exchange supply depends mostly on exports and imports and their success in meeting the domestic demands is related to imports to the extent that their failure in importing the domestic requirements may result in social economic pressure. Other beneficiaries' domestic economy are related to international market through their transaction cost and opportunity cost. International market subsystems affect the transaction costs or may result in lost opportunities through the agreements and regulations led by coercive activities.

The international market interaction with international relations could be analyzed from two aspects:

- Current and future economic cost/benefit and risk analysis
- Actions at international relations level

Cost and benefit analysis is done in international market environment and is related to the domestic economy but political aspects are considered as well. In the segment of the international relations' actions, international market is an interface through which stakeholders act and respond. Different tools of coercive diplomacy could be defined in this environment.

5.2. Domestic Economy Level

In this level main concepts in domestic economies of stakeholders are considered. On account of the wide range of existing mechanisms and their dependence on the country type, this level is analyzed briefly. However, in addition to the high sensitivity of the topic to each country's specifications, considering the details will not increase the value of the analysis to an important extent. In fact, the principal purpose of this level is investigating the macroeconomic condition of the stakeholders under the influences of international market and respective changes in international relations.

In this regard, the target country's power to meet the importing demands through foreign exchange reserves is of noticeable importance whose failure is considered as the social

economic pressure resulting from coercive relations. For other stakeholders investigating the transaction costs and opportunity costs is of key importance.

This level has close interaction with the international market mentioned before. In addition this level is related to the international relations through the estimation and analysis of current and future economic and political costs, benefits and risks. Furthermore, this level interacts with the each countries' actions since the goals of the coercive actions and their tools are determined in regard to the target country's domestic capabilities. It is also related to the society through the determination of the actions' cost distribution among different classes of the society which could determine the extent of social integration in different classes of both target and sender countries. Finally, this level is related to national security because the economic impression out of threshold may result in security issues.

5.3. International relations Level

This level consist of two segments: decision making and actions. Decision making level includes numbers of considerations discussed in literature review in details. Here, the general mental model of scholars in international relations field will be discussed. Each country's foreign policy is under the influence of a motivation system. Apart from the value system of each country, the economic and political benefit/cost and risk analysis in different time periods is accepted by majority of scholars. In decision making process, the interaction of governments could considerably influence the bargaining process and decisions but it requires an acceptable amount of mutual trust. In fact, the type and quality of politicians' talks as a communication channel will form their decision making process.

In actions segment, the other layer decisions and strategies are put into effect. The area of these actions changes according to the types and goals of the decisions but there exists a wide execution territory. However, these actions could be considered on a spectrum determined by the level of expected conflict, between compliance and confrontation as extremes on either side. On account of this article's boundary, the coercive relations are discussed here in specific. The senders' actions and offerings could be classified as positive (rewards and motivations) or negative (coercion and threats). In return, the target country's response could be compliance or resistance. At this level every action may have some influences on international level and send some signals. Sometimes these signals are the main goal of the mentioned activities. The actions are realized by the international norms and value system and could result in feedbacks in different levels.

As the most important level, international relations interact extensively with other levels. At first, the actions level could influence the international market system. On the other hand, these actions may be considered as red flags on account of their security aspect. This level is affected by all the other levels since the key decision making variables at each level are defined in regard to the its conditions. The conditions of domestic economy, international trade, security issues and local politics are in close interaction with foreign policies.

5.4. Society and Local Politics Level

This level is mainly aimed at investigating the changes in local politics through social mechanisms. In the first step, the target country's conception of the opponent's actions in terms of value system and transparency of information is investigated. This perception is formed by different classes of society. The interaction of this awareness with the cost distribution resulting from coercive actions could cause the agreement or disagreement of different classes of society with these policies. The effects of this phenomenon may result in social integration. On the other hand, the political power distribution system could determine the way local policies affect the foreign policies decision making process through social integration mechanism. The result of this level is the classification of society into circuit breaker and transmission belt.

This level also interacts with others. At first, this level influences the evaluation of political and economic costs, benefits and risks in different time-spans at international relations level. Second, this level is affected by domestic economy's characteristics. The target country is under the economic pressure resulting from the coercive actions and the sender is affected by the costs of conducting coercive actions including mainly lost opportunities.

5.5. Security Issues Level

Security issues play key roles as boundary conditions. In regard to their nature, security issues may result in early coercive actions. Therefore, defining the scope of these issues is of great importance. In extreme cases these issues may change into national security issues.

This level is directly affected by actions and has influence on decision making system. In addition, this level may be in close interaction with international organizations.

6. Defining and analyzing a generic problem set

In this section it has been tried to define and analyze a generic and extendable set of problems. In the first step, basic assumptions and main hypothesis are reported. Then the problem set is studied based on causal approach from system dynamics point of view. The causal model is created based on proposed conceptual framework extracted from thematic analysis. Finally the results are analyzed and reported.

6.1. Hypothesis and basic assumptions

It is possible to extend the proposed conceptual framework outcomes in different cases and define numerous scenarios. In the following, basic and fundamental characteristics of the mentioned problem set are reviewed.

Politically the target country has a small size but it has a competitive advantage in producing a specified product in international market. The product is highly demanded and regarding lower cost production, security demand of target country is guaranteed. Although the target country market share is notable, it has not the pricing power so the only way to defend and achieve its request in international relations' environment is diplomacy. In order to develop

industrial production capacity, this country is dependent on importing high-tech goods. Moreover, the target country meets the domestic demand mainly with imports which is supported by foreign exchange income. The export basket price is determined by free market forces and after subtracting the production costs and importing demanded goods, the rest is saved in national reserves. This reserve is used for industrial development projects. The international demand of exporting basket is dependent on world population. It is also assumed that, the target country's tax income covers most of government and public infrastructures costs.

The sender is larger than the target, so it has political and economic advantage over the target country. However, the sender has not competitive advantage in producing the target's export basket, and like most of other countries, the sender should import its demands from international market. It is also assumed that, other countries act based on their benefits, so they support the sender politically but they try to keep economic relation with the target.

If there is any motivation to conduct any forms of coercive actions, this motivation leads to an action. This action depending on the type of countries can be political or economic but it is perceived as a coercive action and will be responded by the other country. It is a classic case of escalation and will be ended with the target sanction as the final step in the coercive actions' continuum. The sanction aims at increasing the import price and decreasing the export margin of the target. Based on benefit/cost/risk analysis, war is supposed as an unattractive solution and is avoided by both sides.

In case of public minds, it is presumed that actions are precisely perceived by elites of both countries. Propaganda has not any effect on elites while it can change the transparency of truth in several years for publics but finally interaction among different social groups can convey the true ideas of relations over the society. It means that, after several years, an implemented coercive action is interpreted as coercive action and vice versa. Obviously, taking no action and response to a received coercive action is a peaceful action.

By continuing the sanction, the target income dropped to a lower amount in the way that causes suffer in importing necessities. This failure leads to social demand pressure in the target country. This pressure transmitted through the society and causes integration against the sanction and politicians introduces the sender coercive actions as the cause.

In this condition depending on the sanction goals and perception of the target's public minds, the active social groups including elites can play two roles of circuit breaker or transmission belt. The first society response might be resistance, the target country's people can decrease their expectation and accept the situation as a crisis. This leads to adaptation but the economic pressure is tolerable to some extent and if the sanctions continue, a public request for resolving the conflict is formed. As a result, by selecting right tactics for implementing the sanction, circuit breakers can switch to transmission belt and integration can be made in the target country's society. At this stage, willingness to compromise creates

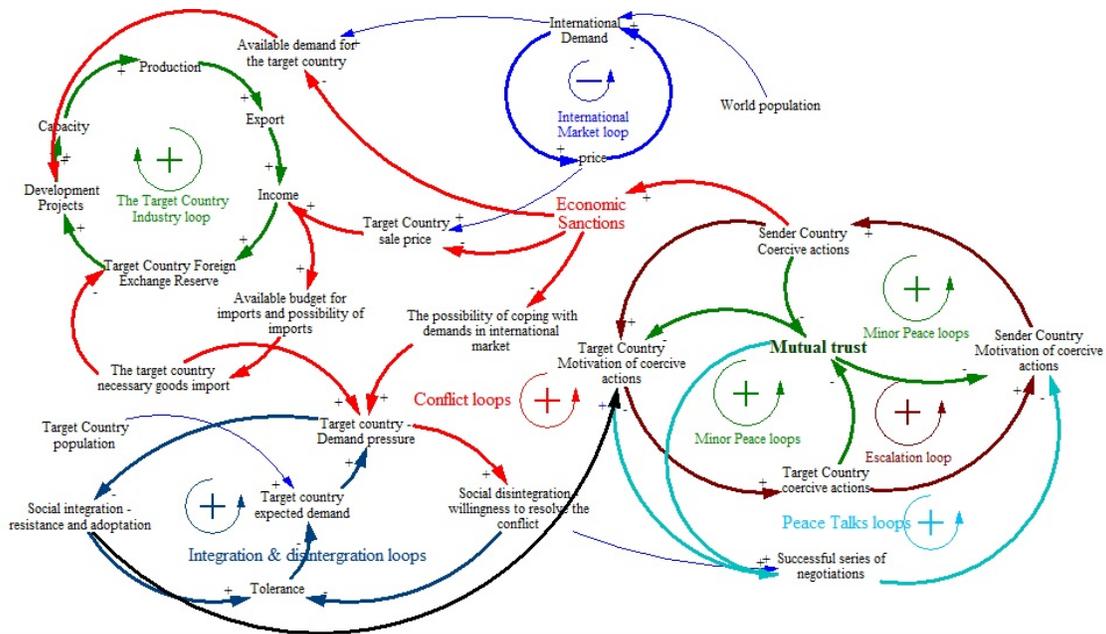


Figure 3, Causal loop diagram with political integration

The aforementioned diagrams include seven main loops explained in the following lines.

1. **International market loop:** this loop concentrates on buy and sell of the export basket of the target country. The demand is predicted by world population as well as consumption intensity. The price is also determined by supply and demand but regarding low cost production of the target country, there is a secured amount of demand for the target country and it has flexibility in pricing of its own products.
2. **The target country industry loop:** the industry is the main source of income for the target country. The income is paid on importing necessity goods and the remained is saved in the foreign exchange reserve which can be invested in the industry in long run for developing the production capacity. Developing industrial infrastructures is dependent on importing technological goods.
3. **Enforcing/ conflict loops:** in this loop, the sender country tries to intervene the international market for implementing sanctions. The result is reducing the selling price of the target country's export basket as well as its demand. Also importing necessities and technological goods are limited and in this way, the sender put the target country under pressure. Considering the sanction type and distribution of pressure over society groups in the target country, integration or disintegration may be the outcome which follows with resistance or compliance.
4. **Mutual trust loops:** the mutual trust is the outcome of both sides' actions and it is necessary for conducting peace talks and negotiations. It decreases by coercive actions and strengthens by positive signals.
5. **Escalation loop:** the target and the sender can intensify their confrontation based on each other's actions. It is a kind of classic case, in the way that a coercive action led to increase the motivation to respond with a coercive action.

6. **Peace talks loops:** these loops begin with the mutual trust and the motivation for finding a resolution. If the talks become successful, the result may alleviate the conflict.
7. **Integration and disintegration loops:** these loops refer back to economic and political structure of the target. It takes effect from the sanctions and aggregate the results in the social pressure phenomenon. It also considers the tolerance threshold of the target's people. Depending on type and implementing of the sanction, these loops can lead to confrontation or willingness to make peace.

6.3. Analysis and results

The problem can begin with a coercive action or even its perception apart from the reality. This initializes the escalation loop and the conflict is developed till the whole continuum of coercive relations is covered. At this point the sender conducts economic sanction. There is also a point, because of the target country dependency on the exporting income firstly and secondly, because the target has not pricing power in the international market, the target prefers to react out of the market in political environment.

After sustaining coercive relations and imposing sanctions by the sender, the selling of the target drops and available demand decreases. It puts the target country under pressure. Economic pressure in low amounts increases confronting motivation and finally keeps escalation loop activated. The target can resist till it has enough budget in its foreign exchange reserves, but by its depletion because of the higher priority of importing the necessary goods, the industrial development projects are halted which is followed by stopping capacity growth. It means that in long run, capacity depreciation causes capacity decline and the target loses its position in the international market and the available demand shrinks. This process makes sanctions more effective and they induce more pressure over the target. The most important factor is time to saturate the target country tolerance. After saturation, the target society requests finding a resolution. The target country economic relations with other nations can let it bypass sanctions and even with other nations supports it can question the legitimacy of sanctions.

In case of transparent media in the target country, public minds will be focused on foreign policies and if their judgment blames sender country, they will resist more and escalation loop remains activated. Supposing possessing democratic political structure, the target decision making system will experience a change in order to conduct peace talks. Successful steps in negotiations will lead to decreasing the strength of escalation loop and intensifies mutual trust loops.

On the other side, by increasing saturation time, production loop works more and the target industry gets more damaged. This process leads to disability to correct economic situation of the target in long run. This problem creates a social crisis in target country and makes a sustainable negative image of the sender, because the target society finds the sender guilty for their poor living standards. This issue raises a cultural divergence and affects internal

political structure of the target country and makes peace talks harder and a long run marathon. (MohammadShirazi, et al., 2013)

In the peace making process the most important prerequisite is target country social acceptance and without social support the target governments will face social confrontation. On the other side the sender after ensuring possibility of achieving requests accepts to involve in peace making process. By both sides acceptance peace talks' loops will be activated. Obviously, after increasing trust, strategic activities with long term positive effects will be executed in market loop which then will be followed by positive effects in production loop. Sustainable peace is created when peace making strategic actions improve social welfare of the target country and if they do not lead to such a result, social negative image of sender in target public mind makes peace harder. However, cultural effects of sanction remain in long time. (MohammadShirazi, et al., 2013)

7. Iran and United States relations

In this section, it has been tried to use previous analysis from thematic and system dynamics approach in a real case. As a result, Iran and U.S. relations is studied. In the first step the relation history is reviewed based on coercion literature. Then framework result is extended on the case and the conclusion has been made.

7.1. Iran and U.S. Relations History

The aftermath of World War II made Iran a US policy focus for the first time. Washington saw the country as a defense against Soviet expansion and a source of stability in the oil-rich Persian Gulf. It started a friendly relationship with Shah Mohammad Reza Pahlavi. This partnership was threatened with the 1951 appointment of Prime Minister Mohamed Mossadegh, who moved to nationalize Iran's oil industry. The CIA backed a coup to overthrow Mossadegh in 1953 and supported the Shah to resume the control. The United States provided the shah hundreds of millions of dollars and helped set up Iran's intelligence agency in 1957. Iran's oil exports expanded and the economy grew significantly. The shah recognized Israel and became a dominant figure in the Middle East. But, Iran refused to help the U.S. in the 1970s by lowering the price of petroleum. However, toward the end of the shah's reign, the US still stood by Pahlavi.

Totally, it is possible to divide Iran and US relations from the CIA-orchestrated oust of prime minister in 1953 to the 2013 phone call between Presidents Obama and Rouhani into three stages:

- US as the third force in Iran: 1851 - 1953
- US as the dominant force in Iran: 1953 - 1979
- US coercive actions: 1979 - Now

Since the 1979 Iranian revolution and subsequent hostage crisis US and Iran relations have been fraught with difficulties. The most important events of these years determining the US-Iran relationships are as follows:

1979: The Iranian Revolution

The US-backed Shah is ousted after massive protests. The religious leader Ayatollah Khomeini returns and following a referendum, the Islamic Republic of Iran is proclaimed.

1979: The US Embassy Hostage Crisis and oil ban

Young Iranian students storm the US embassy and take 52 Americans hostage. The hostage crisis ends US-Iranian relations and sees a botched rescue attempt by US commandos. During the crisis, President Carter bans the import of Iranian oil - a prohibition which continues to this day - and freezes billions of dollars in Iranian assets stored in the US. The hostages are finally freed after 444 days.

1980-1988: US involvement in the Iran-Iraq War

The United States entered the brutal conflict in 1987 in an effort to protect shipping lanes. The US did not fully take sides but eventually extended various forms of aid to Iraq. The US also attacked Iranian oil platforms in the Gulf after one of its ships were destroyed by a mine, as well as shooting down an Iran Air passenger plane in 1988, which it alleges was an accident.

1986: The Iran-Contra Scandal

In the midst of some of the fiercest U.S.-Iranian hostility, the White House covertly sells arms to Iran in order to free their hostages in Lebanon. The profits of those sales were channeled by the US to Nicaraguan rebels known as contras. The revelations were exposed and caused a scandal during the presidency of Ronald Reagan.

1990s: Exporting to U.S. so called terrorism

Through the 1990s, the U.S. accuses Iran of sponsoring acts of terrorism around the world. The U.S. and Israel say Iran provides the critical support for dozens of Hamas attacks.

1997: Dialogue among civilizations

The 1997 election of Iran's reformist President Mohammad Khatami offers hope for a thaw in relations. Khatami promotes a "dialogue among civilizations" and reaches out to Western leaders and the U.S. lifts some penalties against on Iran.

2002: Iranian Nuclear Facilities Discovered

In 2002 it was revealed that Iran is developing nuclear facilities including a uranium enrichment plant at Natanz and a heavy water reactor at Arak. The US accuses Iran of a clandestine nuclear weapons program, which Iran has always denied.

2005: Ahmadinejad's arrival

The election of Mahmoud Ahmadinejad to the Iranian presidency in 2005 and his ignorance nuclear conflict of Iran and U.S. weakens the case for rapprochement in both countries.

2003-present: Nuclear negotiations

Though publicly revealed in 2002, the IAEA did not outline Iran's breaches of nuclear agreements until a 2004 report, which prompted first the European Union and then the US to pursue talks and further sanctions against Iran. The UN ratifies four rounds of sanctions on Iran between 2006 and 2010 over the nuclear issue and the US and EU impose sanctions on Iran, stepping up measures in 2012 to include the financial sector. Several other countries have bilateral sanctions.

Nuclear negotiations with Iran and the western powers have been stalled since the 2012 P5+1 negotiation in Baghdad. The negotiations have started and stopped a number of times with Iran continuing its enrichment of uranium and building new uranium enrichment facilities despite calls for it to halt its work.

2013: Obama-Rouhani phone call

On a trip to the UN forum in New York, on September 27 Iran's new President Hassan Rouhani held a phone call with President Barack Obama, the first conversation between US and Iranian heads of state for 30 years.

7.2. U.S Sanctions against Iran

US sanctions have been a major feature of US-Iran policy since Iran's 1979 Islamic revolution, but U.N. and worldwide bilateral sanctions are related to the recent years (post-2006). After the hostage crisis in 1979, the US government froze Iranian government assets in the US. Additional sanctions were imposed in 1984 when Iran was implicated in the bombing of the US Marine base in Lebanon. Therefore, US added Iran to its list of countries that support terrorism, banning US foreign aid to Iran, and imposing export controls on dual-use items.

The objectives of US sanctions have evolved over time. In the mid-1980s, US sanctions were aimed at forcing Iran to cease supporting acts of terrorism and limiting Iran's strategic power in the Middle East. Since the mid-1990s, US sanctions have focused on persuading Iran to limit the scope of its nuclear program to ensure purely civilian use and since 2006 the international community has joined US sanctions in pursuit of this goal.

The following areas are targeted by significant US sanctions:

- **Weapons development:** sanctioning any person or entity that assists Iran in weapons development or acquisition of chemical, biological, nuclear, or destabilizing types of weapons.
- **Trade and investment:** sanctioning all trade and investment with Iran by US persons. In 2010 these sanctions expanded to Iranian petrochemical companies and

automotive industry for the first time (because some parts have dual uses and may be used in nuclear infrastructure).

- **Nuclear materials:** sanctioning non-US business investment in Iran's energy sector to limit Iran access to materials to further its nuclear program. These sanctions also include visa ban on corporate officers.
- **Financial dealings:** including laws barring financial dealings with Iranian entities and bans on Iranian banks from accessing the US financial system. These sanctions also target Iran's oil revenue by stopping foreign financial institutions from conducting oil transactions with Iran's central bank, resulted in reduced oil trades with Iran and devaluation of the Rial.
- **Assets:** Over the years, Washington has blocked properties of Iranian individuals and institutes including banks, defense contractors, and the Revolutionary Guard Corps.
- **Refined gasoline and other petrochemicals:** including acts and measures aimed at penalizing domestic and foreign companies for selling refined gasoline to Iran or supplying Iran with equipment to increase its refining capacity.

In the summer of 2013, the U.S. House of Representatives passed a bill tightening sanctions across many of the above sections. The Senate Banking Committee was due to take up the measure in the fall of 2013, though agreed to a brief postponement at the request of the State Department in light of revived nuclear talks in Geneva in October 2013.

7.3. Extending proposed frame work results on Iran and US relations

The first question is why and how Iran and U.S. relations can be studied in scope of defined problem set. Iran has small size in economy and in political system in comparison with U.S. and has competitive advantage in producing fossil energy carries mostly oil and gas within the lowest production cost group in the world. Oil and gas are high consuming products and can be classified as commodities. Regarding low production cost of oil and gas caused by Iran oil and gas fields' characteristics, Iran energy export basket has always its customers and demand security is guaranteed. Iran had notable market share since decade before Islamic revolution when its production exceeds 6 million barrels per day for several years. This production capacity has decreased since then regarding Iraq war, sanction effects and economic situations. Considering Iran oil production capacity, it has not the pricing power. For developing and increasing production capacity Iran needs to import technological goods which are mostly offered by western countries. Iran economy has too many short coming in answering local good demands and the only way to satisfy this demand in short run is importing them. As a result supporting this demand takes effect from foreign exchange rate which is kept in balance with oil export. Oil price is determined by free market forces in overall neglecting short run political interventions. The income is saved in national foreign exchange reserve which can be used later for development projects including increasing oil production capacity. Tax income cannot cover most of Iranian government system

expenditures which is satisfied mostly by oil revenues and this subject makes Iran macroeconomic sensitive to oil income and fragile.

US has much larger size in economy so as politically. This country had not competitive advantage in oil and gas production in last decades.

Regarding aforementioned statements, Iran and US relations can be studied in defined extensible problem set and all basic assumptions are matched except Iran macroeconomic sensitivity to oil income caused by government system dependency on oil revenue and negative trade balance. This issue intensifies coercive effect of sanctions on Iran which should be taken into account in further analysis.

Based on Iran and US relations history, the first coercive action happened in 1951 when Prime Minister Mohamed Mossadegh nationalized Iran oil industry which caused significant profit lost to western countries and US intervened local political structure to make him down by 28th of Mordad coup. Considering the historical memory of Iran society which is rooted in their ancient culture, this event could not be forgotten and the US coercive action reflected by response in 1979 after 28 years, by Islamic revolution of Iran and US embassy hostage crisis which was conducted by Iranian students. Initiation of coercive relation is still a quarrel but it has been accepted recently implicitly in president Obama speech.

Iran lower size of economy did not make it possible to response US coercive actions in market and confrontation and feedback has happened out of international market. Gaining market power was the only way to respond proportional to US coercive approach which by destroying oil extraction facilities in Iran and Iraq war and decreasing the production capacity from 6 mb/d to 4 mb/d and also technical barriers to develop fields caused by further US sanctions, Iran lost the chance of powerful confrontation. This scenario is mostly accepted by Iran society which made US the main responsible for macroeconomic failures.

US coercive policy has been escalated regarding Iran nuclear program and pushed Iran to its economic threshold where Iran has lost significant economic power. By decreasing Iran oil income, considering its macroeconomic sensitivity and Iran negative trade balance, foreign exchange reserves depleted and dollar to Rial exchange rate jumped 3 times. This issue caused severe pressure over society. Moreover, most of development projects halted due lack of financial support and barriers to import technological facilities which led Iran oil industry to the worst condition in the history and productivity fell down to the lowest level which only could cover the minimum government expenditure requirements. In this era, lack of government managing power is not considered and excluded from the case.

The induced economic pressure has distributed in Iran society and put great obstacles for most of society levels in the way that the inflation rate overpassed 40 percent and the purchasing power divided by three. This issue made welfare improvement as the first criteria in last presidential election which can be concluded as a society signal for request of change in last foreign policy approach in Mr. Ahmadinejad presidency time. Moreover, introducing objectives of year by Ayatollah Khamenei, Islamic republic of Iran leader,

concentrated on economic development characterized by resilience factors for several continuing years, confirms the importance of the subject. The society signal of change can be interpreted as enough transparency of media in Iran for making judgment by different groups of people.

After Mr. Rouhani elected as president in 2013 which was followed by change in Iran foreign policy, the new blood was pumped in P5+1 negotiation body and this approach gained so much international respect. Iran used European countries in P5+1 to convince US to consider Iran society rights which was successful to make US for new set of negotiations after 34 years. Negotiations let Iran to free some assets and make some channels for bypassing and overcoming the economic crisis which was the least advantage. Considering Iran given points and Iran's nuclear program which is assumed has been never based on military purposes, Iran has not lost any points except creating clarity. Iran could convince international players for questioning sanction's legitimacy.

Iran oil industry is suffering many problems in case of delayed developing projects and investments. This issue can lead to disability to correct Iran economy and put more on US negative image in the Iran society. In this condition Iranian people find US guilty for their poor living standards in last several years. The caused cultural divergence in last decades is intensified and makes peace talks harder and a long run marathon.

The first main issue in the peace talks would be mutual trust and then the points which are offered by both sides. Regarding more than 30 years direct conflict, creating a sustainable trust is impossible in short run while all prior conflicts in history needed to be negotiated and accepted by both societies. Sustainable peace is created when peace making strategic actions improve social welfare of Iran and if they do not lead to such a result, social negative image of US in Iran public minds makes peace harder.

It seems unnecessary to both sides to solve all problems in nuclear talks and when Iran could lift up major sanction pressures and revive oil industry, it will lose motivation for further problems in past while they are impossible to be solved due their ties to social and cultural issues which are deeply rooted in generations. As a result Iran and USA will not make a friendly relation and they can just put themselves out of head to head condition. Creating social relations and ties between two societies and avoiding harsh confrontations can make it possible in long run by changing generations.

8. Conclusion

The main purpose of this article was investigating coercive actions' results in international relations. International relations' problems are complicated and have broad and extensive fields which without using modern modeling methods are not possible to solve. In this way, a conceptual framework has been proposed and then it is simplified for a generic problem set. In the next step, by using extensible results, Iran and U.S. relations have studied over long time period. The results of this study are noted briefly below:

- The only way which Iran can lift up sanctions is proving to international players that sanctions are unnecessary crisis and also questioning sanctions legitimacy. In this way Iran and mentioned players can convince U.S. to consider Iran society rights and start and continue negotiations. Iran could do it so far good by cooperating with P5+1.
- The least gained economic points by starting negotiations can help Iran to avoid internal economic-social crisis in short run. But by getting negotiations long, Iran loses the advantage of public support so as negotiation power. Iran society is in economic pressure threshold.
- The main struggle of Iran in negotiations is given points while it has not so many steps to back because of no wrong steps forward in past. The most valuable and available points are clarity and commitment unless Iran needs to create some new points to deal.
- Iran needs to lift up sanctions to the amount it can revive oil industry and economy, after it Iran will lose its motivation for further negotiations and giving points. As a result it seems unnecessary to both sides to solve all problems in nuclear talks.
- Negative image of US in Iran public minds related to the intervention and poor life standards induced by long run unacceptable sanctions, created cultural divergence which makes the negotiations to achieve sustainable peace impossible. A sustainable peace is created when peace making strategic actions improve social welfare of Iran.
- Iran and U.S. will not make a friendly relation and they can just put themselves out of the head to head condition. Creating social relations and ties between two societies and avoiding harsh confrontation to influence these channels can make it possible in long run for more friendly relations by changing generations.

It has been tried to investigate coercive relations between two politically and economically different countries by developing a conceptual framework. The article added value is anticipating results of the long term interaction of two nations and investigating possibilities in the future.

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11.Figures

Figure 1, proposed conceptual framework	8
Figure 2, Causal loop diagram with political disintegration	13
Figure 3, Causal loop diagram with political integration	14