

## The Legal Framework of the World Trade Organization from the Perspective of Game Theory in International Law

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### Abstract:

Game theory in international law is one of the new and innovative perspectives in the field of philosophy of international law. The difference of this perspective is that instead of mere theorizing, it seeks a logical and practical explanation of international legal rules and structures.

In this perspective, the rules of game theory are used for scientific reasoning and expressing theoretical frameworks. Game theory was first proposed in 1944 by mathematician John von Neumann and accompanied by economist Oscar Morgenstern in the field of economic issues. But since then, it has gradually entered other scientific fields, including international relations, sociology and other scientific disciplines.

In recent years, and for the first time in international law, two great thinkers, Jack Goldsmith and Eric Posner, have used this theory to explain how and why international customs are formed. This has attracted the attention of international law scholars as a new approach. This article seeks to explain the legal structure of the World Trade Organization from the perspective of this theory. The authors believe that their findings will lead to a better understanding of the legal structure of this organization. To this end, first, the rules required by game theory are introduced and briefly explained, and then, from the perspective of the aforementioned materials, cases and agreements from the entire WTO collection are examined and logically proven, which are generally applicable to the entire legal structure of this organization.

**Key words:** Game Theory in International Law, Trade Liberalization, Cheating in The Game of Trade Liberalization, Behavioral Model of Trade Liberalization, Legal Structure of The WTO

### Introduction

Today, the economy and, along with it, international trade, are of utmost importance to governments. It can certainly be said that at present, the position and dignity of governments in international relations are evaluated and determined not based on their military or political power alone, but on their economic power and influence.

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This issue is so real and tangible that we can compare the trade relations of governments to a full-scale war and see the cause of many of the behaviors and actions of governments in their hidden commercial and economic intentions.

Competition for international markets and efforts to gain more profit from international trade are a perfect manifestation of the self-interest of governments in their relations with each other. In the meantime, it is important to note that if this selfish behavior of governments does not find its right path, the global economy will be caught in a dead end that will not benefit any of its players.

This is the starting point for answering the question of why governments seek trade liberalization. But more importantly, how can the conflicting, reciprocal, and competing interests of governments be organized in such a way that any transaction or so-called game becomes a win-win transaction or game? In this regard, the hopeful news is that governments will benefit from a framework within which they can conduct and implement trade negotiations. Some have suggested that “the framework for trade liberalization will be like a language or a set of standards, like the radio waves that facilitate communication.”<sup>1</sup> (In other words, any organization for world trade can be said to be a mechanism for coordinating trade policies and agreeing on codes of conduct for trade.<sup>2</sup>

Although the lengthy documents and numerous procedures of the World Trade Organization make it possible today to refer to complex and intricate laws as WTO law, it should be noted that this organization does not pursue any goal other than what has been mentioned. Therefore, if the perspective is appropriate, the legal structure of this organization will be very simple and understandable.<sup>3</sup>

In international law, it is a tool that provides this perspective. In order to address the background of such a study, it should be noted that game theory theorists in international law have usually also addressed WTO law in their discussions. However, their main focus in such discussions has been limited to the impact of the organization's documents (as treaties or agreements) on the behavior of states.<sup>4</sup>

This article goes beyond these topics and seeks to examine the structure and legal framework of the organization itself from the perspective of this theory. In the authors' opinion, game theory can also explain the legal structure of the WTO with complete clarity and elegance.

Given that the audience of this material is typically those who do not have the necessary skills and familiarity with this theory, the mathematical language and confusing complexities of game theory will be avoided as much as possible in achieving the goal ahead.

The main assumption is that states benefit from trade liberalization and protectionism at the same time. If all states simultaneously act on protectionism, this will be to the detriment of all international trade actors. However, if, in response to a state that acts on liberalization, a state can

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<sup>1</sup> Jack L. Goldsmith and Eric A. Posner, *The Limits of International Law*, Oxford University Press, 2005, p. 144.

<sup>2</sup> . Bernard M. Hoekman and Petros C. Mavroidis, *The World Trade Organization, Law, Economics and Politics*, Routledge, First Published, 2007, p. 15.

<sup>3</sup> Game Theory

<sup>4</sup> See: Hector Correa, “Game Theory as Instrument for the Analysis of International Relation”, *The Ritsumeikan Journal of International Studies*, 14-2, October 2001; Goldsmith and Posner, *op. cit.*

resort to protectionism or restrict access to its markets, the benefits will be much greater. will gain that is the result of the harm of the opposing states. From the point of view of game theory in international law, states are rational actors who seek to maximize their profits in their international behavior by avoiding losses.<sup>1</sup>

This is also true in international trade liberalization. Game theory is able to explain the entire process of trade liberalization in the form of game models, assuming the self-interest of states. The explanation of this theory shows that the entire legal structure of the World Trade Organization is designed solely to frame the game of making profits and preventing fraud by its players.

To this end, game theory will first be introduced and the profitability of trade liberalization will be discussed. Then, the behavioral format of trade liberalization with game models, and the materials referred to the World Trade Organization and its documents and agreements, and a few of its cases, will be explained.

Although, due to the observance of brevity, not all agreements, documents and principles of this organization will be studied, the logic expressed will be applicable to the entire legal framework of this organization. Before entering into the main topics, it is necessary to briefly mention the relationship between international law and the law of the World Trade Organization

## **1.International Law and the World Trade Organization**

Although today we can talk about the law under the title of the law of the World Trade Organization, it should be noted that the legal regime of this organization is in no way self-sufficient, independent and independent of international law.

The founding document, agreements, formation and operation of the dispute settlement body of the World Trade Organization are an inseparable part of international law. It is an undeniable fact that the birth of this organization and its law was in the broad environment of international law and its life continues in this environment.

The law of the World Trade Organization is considered a subset of international law, and it is precisely because public international law fills the gaps and deficiencies in the treaty of this organization that even the treaty establishing this organization and all its agreements must be interpreted in the light of the rules of international law (in particular the 1969 Convention on the Law of Treaties). The Appellate Body in the Japan-Alcoholic Beverages case, when trying to interpret Article 9 of the GATT 1994, beautifully addressed this point: “The WTO Agreement is a treaty, and the international equivalent of a contract.

It is clear that States have entered into a transaction in the exercise of their sovereignty and also in the pursuit of their national interests. In this way, in return for the benefits they expect to gain as members of the organization, they have agreed to exercise their sovereignty in accordance with the obligations entered into in the WTO agreements.

Accordingly, any interpretation of the organization’s instruments must be based on the common intention of the contracting parties, not just those who are parties to the dispute. But the interesting

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<sup>1</sup> Goldsmith and Posner, op. cit., p. 4

point is that the relationship between WTO law and international law is two-way. These two laws mutually enrich each other. Just as international law enriches WTO law, so too does WTO law enrich international law.

Public international law, and in particular its second source, the law of treaties and concepts such as the international responsibility of States, as well as principles such as the principle of the peaceful settlement of international disputes, are the driving force behind WTO law.

On the other hand, some, in an interesting interpretation, consider the law of the World Trade Organization as an accelerator in the service of promoting the goals and expanding the horizons of international law.<sup>1</sup> In this context, before addressing the main discussion, it is sufficient to mention that all experts who have dealt with game theory in international law or have had related discussions have certainly made some minor references to the World Trade Organization in some of their discussions from the perspective of this theory. This in itself shows the continuity and mutual influence of international law and the legal regime of the World Trade Organization on each other.<sup>2</sup>

## **2. Game Theory in International Law**

Game theory was introduced to the scientific community in 1944 with the publication of a book titled *Game Theory and Economic Behavior* by mathematician John von Neumann and economist Oscar Morgenstern.<sup>3</sup>

This theory is a branch of mathematics that is used in economics to analyze situations in which the actors surrounding the situation participate in a so-called strategic game. After the strong shock it caused in economics, this theory spread like wildfire in the years after 1970 and entered other fields of humanities, including law.<sup>4</sup>

A strategic game<sup>5</sup> is a scenario or situation in which every decision, action, or behavior of a person or persons surrounding the game does not necessarily affect others. In such situations, the outcome depends not only on the choices of the actor himself, but also on the choices and behavior of other competitors.<sup>6</sup>

Two companies that have a major share of the market for a particular product and want to decide on the price or volume of production, the leaders of two warring countries leading a war, economic policymakers deciding on the imposition of tariffs on imported goods, the decision to confess or remain silent on the part of a criminal who has committed a crime with the participation of another

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<sup>1</sup> . Lamy, Pascal, "The Place of the WTO and Its Law in The International Legal Order", *EJIL*, vol. 17, No. 5, 2007, p. 984.

<sup>2</sup> Goldsmith and Posner, *op. cit.*, pp. 158-162 & Niels Petersen, *How Rational is International Law*, *EJIL*, vol. 20, 2010, p. 1255 & Correa, 2001, *op. cit.*, p. 198 & Parisi and Ghei, 2003, *op. cit.*, pp. 111-5.

<sup>3</sup> This book is the first scientific work to analyze social interactions in a comprehensive and systematic manner. This book is considered a classic work on which modern game theory is based. The characteristics of this book are as follows: John Von Neumann and Oskar Morgenstern, *Theory of Games and Economic Behavior*, Princeton University Press, ISBN: 069110613, 60th Anniversary Edition 20, 1944.

<sup>4</sup> Drew Fundenberg, *Game Theory*, The MIT Press, Cambridge, Massachusetts, Forth Printing, 1995, p. 1.

<sup>5</sup> Strategic Game

<sup>6</sup> Carmichael, *A Guide to Game Theory*, Pearson Education Limited, First Published, 2005, p. 4.

and is being interrogated at the same time, are examples of individuals participating in a strategic game.

For example, if in the first example, the two companies General Motors and Toyota have a monopoly on the production and sale of cars in a certain market, they will engage in a strategic game in that market; in such a way that a price reduction by one will lead to a decrease in the number of customers for the other, and on the other hand, an increase in production by one will lead to a decrease in the overall price of the products. In general, game theory seeks to analyze the formulated relationships between two or more actors. International relations theorists have found considerable help in explaining the interactions between international actors.

Realists in international relations, using this theory, believe that states are motivated only by their own self-interest and do not consider the needs and interests of other states unless they are threatened or seriously harmed by other states. Therefore, morality or human rights considerations, and even treaties or other formal forms of agreement, cannot limit or determine the behavior of states

In recent years, advocates of realism in international law have also used this theory to claim that these laws lack normative power and that states that observe them participate in a series of games, including the Prisoner's Dilemma, solely for the sake of profit. The experts who make this claim, namely Professor Jack Goldsmith and Eric Posner, have successfully explained the reason for the emergence of the rules of international law, the philosophy of observing them, and the shaping of the behavior of states by resorting to this theory and within the framework of profit-making.

With the help of this theory and the rules of rational choice,<sup>1</sup> they first developed the theory of customary international law and finally, by generalizing their theory to the whole of international law, they have questioned the existence of legal norms in the name of international law alone (as claimed by other philosophical schools).<sup>2</sup>

In recent years, this claim and the work of these two scholars, entitled *The Limitations of International Law*, have created a lot of noise in the academic circles of international law.<sup>3</sup> Some have evaluated this claim of the realists skeptically.<sup>4</sup> Some have tried to prove the effectiveness of

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<sup>1</sup> Rational Choice

<sup>2</sup> The first work of these two thinkers was published in 1999, entitled *Theory of Customary International Law*. Jack L. Goldsmith and Eric A. Posner, "A Theory of Customary International Law", 66 *University of Chicago Law Review*. 1113, 1999. In their second work, these two theorists extended their theory to the whole of international law. Goldsmith and Posner, 2005, op. cit. Also, to consider other cases in which these two thinkers have used game theory for their theorizing. Jack L. Goldsmith and Eric A. Posner, "Further Thoughts on Customary International Law", 23 *MICH. J.INT. L* 7. 191, 2001 And Eric A. Posner, "Do States Have a Moral Obligation to Obey International Law", 55 *Stanford Law Review*, 2003.

<sup>3</sup> As far as the authors searched, no trace of this major scientific challenge has been reflected in international legal circles (including scientific journals) in Iran. - To see criticisms of this view from the perspective of rational choice theory, see: Anne Von Aaken, "To Do Away with International Law? Some Limits to the Limits of International Law", 17 *EJIL*, 289, 2006. - To see criticisms in this regard from the perspective of traditionalists: Detlev F. Vagts, "International Relations Looks at Customary International Law: A Traditionalists Defense", 15 *EJIL*, 1031, 2004.

<sup>4</sup> Jens David Ohlin, "Nash Equilibrium and International Law", *EJIL*, vol. 23, No. 4, 2012, p. 144.

international law and the existence of normative power and its binding nature by resorting to game theory.<sup>1</sup>

Some, while accepting the reasoning and findings of these two scholars, did not consider their efforts to explain and elucidate all the limitations of international law sufficient and believed that stronger arguments should be presented in this field in the future.<sup>2</sup>

Of course, it should be noted that, according to these two scholars, the choice of self-interested behavior by states does not necessarily mean a lack of international cooperation or widespread violations of international law. Evidence for this claim is that they were able to describe the emergence and observance of international custom based on the rules of game theory and rational choice, in four behaviors: interest alignment,<sup>3</sup> coercion,<sup>4</sup> mere cooperation<sup>5</sup> and mutual coordination<sup>6</sup> and explain these four behavioral patterns with the assumption that states are rational and self-interested.<sup>7</sup>

In international law, the rational choice way of thinking, by employing game theory, seeks to answer the question of why and how states observe specific legal norms and how the emergence and durability of specific legal structures can be predicted and evaluated.<sup>8</sup>

The answer to this question will vary depending on the initial assumption in game theory. The assumption of his colleague Pasenro is that states are rational actors who seek to obtain the most benefit in international relations.<sup>9</sup> As a result, states choose the behavior that is most beneficial to them, regardless of international law or any norm.

It is important to recall that in the introduction to this article, this assumption was proposed. In game theory, different situations are used to explain and interpret different behavioral patterns. Situations with pure common interests, games with divergent preferences,<sup>10</sup> the prisoner's dilemma situation, unnecessary games, and one-sided games<sup>11</sup> are among the situations predicted by this theory.

The prisoner's dilemma is a situation whose explanation is necessary to understand the hypothesis of this article regarding the legal structure of the WTO, and therefore it will be discussed briefly. Two criminals who have committed a crime together are interrogated in two separate cells after being arrested. The interrogator offers each of the criminals a deal:

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<sup>1</sup> See: Andrew T. Guzman, *How International Law Works: A Rational Choice Theory*, Oxford University Press, 2008 & Andrew T. Guzman, "A Compliance Based Theory of International Law", *California Law Review*, vol. 90, Issue 6, 2002.

<sup>2</sup> Van Aaken, *op. cit.*

<sup>3</sup> Coincidence of Interest

<sup>4</sup> Coercion

<sup>5</sup> True Cooperation

<sup>6</sup> Bilateral Coordination

<sup>7</sup> Goldsmith and Posner, 1999, *op. cit.*, pp. 2-3.

<sup>8</sup> Petersen, *op. cit.*, p. 1248.

<sup>9</sup> Andrew T. Guzman. *How International Law Works: A Rational Choice Theory*, Oxford University Press, 2008, pp. 25-63.

<sup>10</sup> Divergent Preference Games

<sup>11</sup> Unilateral Games

a) If you expose your friend on the condition that your friend remains silent and does not expose you, you will be released and with your testimony, your friend will be sentenced to fifteen years in prison.

b) If both of you expose each other at the same time, you will be sentenced to three years in prison.

c) If neither of you expose each other and remain silent, you will be sentenced to one year in prison. If the behavior of silence X and the behavior of disclosure Y are considered, the table of benefits of each of these behaviors by criminals A and B will be as follows:

### Prisoner B

Y	X	X
A Fifteen years in prison	B Free One year in prison each	Y
Three years in prison each	A Free B Fifteen years in prison	

### Prisoner A

In this game, if one of the criminals exposes the other criminal in exchange for his silence, he will gain the most, that is, he will be released, but his friend will suffer the most, that is, he will suffer fifteen years in prison.

If the criminals expose each other at the same time, each will be sentenced to three years in prison, and if the two achieve some kind of cooperation and remain silent at the same time, each will suffer only one year in prison.

In game theory, the final behavior that is mutually adopted is known as the optimal equation<sup>1</sup> which means that both players benefit from the simultaneous and possible profit.<sup>2</sup> If the prisoner's dilemma is presented once, it is most likely that both parties will seek to cheat and get caught by exposing each other.

However, if this dilemma is repeated, cooperation between the two parties will appear and ultimately the optimal behavior,<sup>3</sup> which is not exposing to each other, will be adopted between the two parties. This is what is known in game theory as the Prisoner's dilemma.

It should be noted that even with the adoption of a cooperative strategy, there is always the possibility of cheating by either or both parties to the game. Trade liberalization, which is an international behavior, also has actors called states or independent customs territories. Here, the proposed puzzle will also be used to frame this behavior. But before that, since the assumption is entirely based on the belief that trade liberalization is profitable, it seems necessary to first prove the profitability of such behavior based on real data.

<sup>1</sup> Nash Equilibrium

<sup>2</sup> Carmichael, 2005, op. cit., p. 7.

<sup>3</sup> Iterated Prisoner's Dilemma

### **3. The Economic Necessity of Trade Liberalization**

The first question that arises in discussions about the World Trade Organization is what is the fundamental purpose of governments in liberalizing trade? Are governments pursuing moral and just goals through trade liberalization or is trade liberalization a means to gain greater benefits and better economic prosperity for governments. Some see trade in the World Trade Organization as a means through which members seek to achieve the goals mentioned in the preamble to the organization's charter.

But the fact is that all statistical data indicate the relationship between free trade and economic progress. All countries, even poor countries, have capital, including labor, industry, and financial resources, which they can use to produce goods or services for domestic markets or competitive international markets. Economists say that full profit is achieved if these facilities and resources are traded.

A study by the World Bank shows that developing countries that have been more integrated into world trade through trade liberalization have been able to achieve greater economic growth. (Adam Smith, who is now considered the father of economics, was the first to raise the flag of support for trade liberalization in 1776, writing his famous book *The Wealth of Nations*, in response to the slogan of “beggar thy neighbor” by the mercantilists, who were staunch supporters of protectionism. He likened governments to a family and stated that just as the prudent head of a family would never think of making something that would cost more than it cost to buy, so governments should not direct their production and industry in a direction in which they do not have expertise and superiority. For example, the father of a family would not try to make all the shoes or clothes for the family at home.

Years later, another great economist, David Ricardo, introduced the concept of comparative advantage in production, completing Adam Smith's arguments for the need for trade liberalization. Today, it is believed that the emergence of the World Trade Organization has its roots in the theories of these great economists.

Contrary to the mercantilists' view, the current state of international trade in the world and the desire of governments for economic cooperation cannot be explained in terms of a zero-sum game. Some believe that if the necessary conditions are met, including if the national interest demands it, governments may even engage in unilateral economic liberalization.

An example of this behavior is the liberalization that took place in Britain in the early nineteenth century. In the 1920s, the Smoot-Hawley Act of the US government taught a good lesson to advocates of protectionist policies. In these years, repeated protests by opponents of trade liberalization caused the United States government to move away from the trade liberalization approach and increase its average tariffs from 38 percent to 52 percent.



As a result of the implementation of this law and the retaliatory measures of its European partners, the value of US exports decreased from \$1.5 billion in 1930 to \$6.0 billion in 1939, and as a result, the country's manufactured goods trade also declined by about 11 percent.<sup>1</sup>

In the decade of trade protectionism, from 1920, which ultimately led to the Great Depression of 1929, the volume of global production grew by an average of 0.5 percent annually and global trade grew by less than one percent.

This is while during the period of free trade boom from 1948 to 1973, over a period of 25 years, global production growth was 5 percent and global trade more than 7 percent, which in fact represented a six-fold increase.<sup>2</sup>

Researchers who use game theory in connection with trade liberalization or discussions related to the World Trade Organization take it for granted that economists consider trade liberalization to be a well-established and accepted thing and believe that it leads to greater welfare and better efficiency of the economy.<sup>3</sup> Perhaps another reason for the enthusiasm of industrialized states for trade liberalization today is that the maintenance of internal and international peace and security is also closely related to the prosperity of international trade and the improvement of the economic level of states. In support of this claim, it should be noted that Sutherland, the then Secretary-General of GATT, considered one of the reasons for the outbreak of World War II to be the Great Depression of 1920.<sup>4</sup> Despite all of the above, and despite the many benefits of participating in trade liberalization, each country has a consistent strategy of maintaining barriers to access to its markets and protecting its domestic industries.<sup>5</sup>

For this reason, international liberalization is not so simple and requires a more elaborate mechanism. In the following section, this international behavior will be better explained by resorting to game theory.

#### **4 Game Theory and the Behavioral Model of Trade Liberalization**

If we only consider the specialization of production and the resulting profits that accrue to the state in trade liberalization, <sup>6</sup>liberalization can be explained by the positive-sum game model.<sup>7</sup>

Nevertheless, governments are aware that if they can both use the other party's free market and protect their own domestic market, they will achieve greater results and profits.<sup>8</sup> This temptation

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<sup>1</sup> Omidbakhsh, Esfandiar; From the General Agreement on Tariffs and Trade to the World Trade Organization, World Trade Organization, Structure, Rules and Agreements, Representative Office of the Trade Authority of the Republic of Iran, Commercial Printing and Publishing Company, 2010, p. 5.

<sup>2</sup> See: Financial Times, 15 Nov. 1993, p. 15.

<sup>3</sup> Parisi and Ghei, 2003, op. cit., p. 111.

<sup>4</sup> Ibid., p. 19.

<sup>5</sup> Ibid., p. 112.

<sup>6</sup> Positive-Sum Game, In this type of game model, no player gains at the expense of the other; such as students studying simultaneously for a final exam, where the passing of one will not affect the others; unlike an entrance exam, where the passing of one may result in the failure of others.

<sup>7</sup> Ibid., p. 111.

<sup>8</sup> Concession Erosion

facing governments in the game of trade liberalization is called privilege.<sup>1</sup> In addition, another factor that fuels government fraud<sup>2</sup> is the lobbying of domestic industry or product owners who lose their lucrative domestic market as a result of trade liberalization.

This may also lead governments to choose an ambiguous behavior, that is, despite accepting and participating in trade liberalization, they seek to circumvent it and shirk their obligations. In the authors' opinion, despite the fact that trade liberalization has taken on a complex form today, the backbone and basis of this system are still bilateral relations. It can be said that GATT, or the World Trade Organization, is an attempt to use bilateral instruments to solve the multilateral puzzle of liberalization.<sup>3</sup>

A review of the history of trade liberalization supports this claim. In 1860, after the Napoleonic Wars, Richard Cobden,<sup>4</sup> a British industrialist, and Michel Chevalier,<sup>5</sup> a leader of French free trade advocates, prepared the groundwork for the conclusion of a trade and political agreement between these two countries, which is known as the Cobden-Chevalier Treaty after their names.<sup>6</sup>

This treaty led to a series of trade liberalization agreements, all of which were bilateral, with no intention of becoming multilateral. However, given the existence of regulations to grant the government of Kamila El-Wadad treatment,<sup>7</sup> in practice a kind of multilateral trading system was created. Despite the absence of any monitoring mechanism (anti-fraud tools) or institutional foundations (organizational such as the World Trade Organization), this regime led to a general reduction of tariffs.<sup>8</sup>

The reason for this success was that at that time, tariffs were essentially the only protectionist tool of governments and the complexity of the modern trading system did not exist. According to many, during these years the situation developed in such a way that at the beginning of the nineteenth century, Adam Smith's idea of the formation of an international economy based on the free exchange of goods was close to becoming a reality.<sup>9</sup>

In view of the previous material and with the above data (the mutuality of the relationship, the profitability of liberalization and the possibility of fraud), bilateral trade liberalization, like the arms race situation<sup>10</sup> in international relations, takes the form of a prisoner's dilemma.<sup>11</sup> Two states A and B, which are trapped in such a dilemma, can have four behavioral patterns:

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<sup>1</sup> Hoekman and Mavroidis, 2007, op. cit., p. 16.

<sup>2</sup> Cheating

<sup>3</sup> Goldsmith and Posner, 2005, op. cit., p. 135.

<sup>4</sup> Richard Cobden

<sup>5</sup> Richard Cobden

<sup>6</sup> Irwin, DA, *Against the Tide: An Intellectual History of Free Trade*, Princeton University Press, 1996, p. 230.

<sup>7</sup> Most Favored Nation Treatment-MFN

<sup>8</sup> Ibid., pp. 323-328.

<sup>9</sup> Mousavi Zenouz, Musa; *The Evolution of International Trade Law in the World Trade Organization*, Mizan, 2013, p. 36.

<sup>10</sup> One of the topics studied in international relations based on game theory is the arms race between international actors.

<sup>11</sup> Correa, 2001, op. cit., p. 198

- 1- Both simultaneously refuse to liberalize or cheat in its implementation.
- 2- While state A attempts to liberalize, state B cheats or avoids liberalization.
- 3- While state B attempts to liberalize, state A cheats or avoids trade liberalization.
- 4- Both states simultaneously and reciprocally liberalize and do not cheat.

If liberalization behavior X and fraud or avoidance behavior Y are considered, the benefits of the parties if they adopt each of these the strategies will be as follows:

**Government B**

Y	X	X
4.1	2.2	Y
1.1	1.4	

**Government A**

Thus, for each of these four cases, a reciprocal balance will be established. In the first case, both governments liberalize trade and thus each obtains a benefit of 2. In the second case, government A cheats or avoids liberalization in response to government B's liberalization. As a result, A gains profit 1 but B loses and only gains profit 1. The opposite results occur in the third case. In the fourth case, both parties resort to protectionism or trade liberalization is destroyed as a result of cheating and therefore each of the parties only obtains profit 1.

Whatever is referred to as trade liberalization rights in the WTO is nothing but an attempt to preserve the first case and prevent the formation of the second two cases or a fall into the last case. Over time, self-interested governments were expected to move towards multilateral trade liberalization with rational preferences.<sup>1</sup>

According to game theory experts in international law,<sup>2</sup> multilateral trade liberalization relations can be explained by the model of the alignment of interests.<sup>3</sup> Perhaps for this reason, some consider the birth of GATT<sup>4</sup> to be a coincidence.<sup>5</sup>

Although the establishment of the World Trade Organization (WTO) terminated the GATT 1947 and its Interim Implementation Agreement, which had become the most important legal document in international trade relations for many years, despite its apparent complexity, not much has been added to bilateral liberalization agreements, and today the basis of the multilateral trade liberalization system is the same bilateral agreements.<sup>6</sup>

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<sup>1</sup> Andrew T. Guzman, op. cit., pp. 3-14.

<sup>2</sup> Coincidence of Interest, The alignment of interests is the repetition and ultimately the solution of the prisoner's dilemma. In such a model, there is always the possibility of violating (or cheating on) cooperation.

<sup>3</sup> Goldsmith and Posner, 2005, op. cit., p. 139.

<sup>4</sup> General Agreement on Tariffs and Trade (GATT)

<sup>5</sup> Andreas F. Lurfeld; International Economic Law, translated by Mohammad Habibi Majandeh, second edition, Jangal, 2013, p. 25.

<sup>6</sup> Pascal Lamy, the then Secretary-General of GATT, considers the first trade agreement that has left a trace in history to be from the 14th century BC and believes that nothing has fundamentally changed since that date and that

According to the authors, the most important reason that has caused the WTO documents to become more and more lengthy and extensive is the possibility of fraud by trade liberalization actors through resorting to interpretation or other methods of violating obligations.

It should be noted that in international law, “most states honor their obligations and when they fail to fulfill their obligations, rather than admitting that they have violated that obligation, they justify their behavior by reinterpreting the breached obligation.”<sup>1</sup> However, given that the latter component (fraud) plays a fundamental role in the present hypothesis, it needs to be addressed further.

## **5. Cheating in the Trade Liberalization Game**

In practical applications, game theory is a mental framework that can be used to predict the decisions or choices of opposing players.<sup>2</sup> Given the inequality of gains in a multilateral trade liberalization relationship, deliberate violation of agreements or cheating in the process of granting reciprocal concessions is quite predictable.<sup>3</sup>

This fraud can be carried out by resorting to various instruments (such as quantitative restrictions, subsidies, dumping or other similar forms) or under various pretexts such as health or safety considerations. Suppose a newly enacted domestic law has adopted new regulations for the meat production process. If domestic producers have already and habitually complied with the requirements of the newly enacted law, it can be said that this new law has granted more protection to domestic products than previously agreed upon.<sup>4</sup>

In this regard, it is said that the prayer of the European Union countries regarding US genetically modified agricultural products, without having the necessary scientific support, only targets the products of American farmers.<sup>5</sup>

Governments that enter the game of multilateral trade liberalization to gain greater economic benefits, as wise players, always use any means to cheat. Among the ways in which governments cheat is to try to pass discriminatory laws. Such laws have the appearance of having objectives, for example health or security, but in practice, they keep other countries' products away from the domestic market.<sup>6</sup>

In this regard, governments try to close the door to any fraud through supplementary agreements. It should be noted that if there is a possibility of fraud in the documents of this organization, governments will not hesitate to erode the granted privileges and increase their overall profit in using them. To prove this, an example is mentioned in which the same article in the GATT

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at the beginning of the 21st century, all trade liberalization is nothing more than bilateral agreements with minor changes. Pascal Lamy, “The Place of the WTO and Its Law in the International Legal Order”, *EJIL*, vol. 17, No. 5, 2007, p. 969.

<sup>1</sup> Goldsmith, Posner, 2005, op. cit., p. 31.

<sup>2</sup> Carmichael, 2005, op. cit., p. 3.

<sup>3</sup> Goldsmith, Posner, 2005, op. cit., p. 144.

<sup>4</sup> *Ibid.*, p. 148

<sup>5</sup> *Ibid.*

<sup>6</sup> *Ibid.*

agreement has caused fraud by governments and jeopardized the entire process of trade liberalization.

In this regard, it is necessary to point out that, based on the principle of complete states, any privilege that is considered for other states must be extended to all members of the WTO. However, Article 24 of the GATT is a major exception to this principle and, based on it, governments will have the authority to create customs unions or free trade areas.<sup>1</sup>

In free trade areas, members may reduce tariffs to zero among themselves but at the same time have different tariff systems with other member countries of the organization.<sup>2</sup>

Again, governments may be drawn to free trade areas by one of the self-interested motives. Governments may have strategic political motives or other non-economic objectives. Examples of this are the free trade areas between Jordan and the United States,<sup>3</sup> and Australia and the United States.<sup>4</sup>

These areas may lead to a change in the previous status of governments, and subsequently, the state affected by this change may seek to restore the previous status quo. This is known as “domino regionalism”<sup>5</sup> or the “so do I effect”<sup>6</sup>. In this regard, for example, it is worth mentioning that New Zealand and Australia competed side by side in the export of agricultural products to the Thai market in previous years until Australia concluded a customs union agreement with Thailand, and the country's agricultural products entered Thailand at a lower tariff.

Since in such a situation, New Zealand's agricultural products had lost their competitiveness in the Thai market compared to Australian products, this country was eventually forced to enter a customs union with Thailand. But the most important issue is that governments that use Article 24 of GATT and achieve the goal of regionalism achieve a benefit that is added to the benefit of liberalization within the framework of the World Trade Organization.<sup>7</sup>

The provisions of Article 24 of GATT not only violate the principle of the best-in-class nation, but also reflect the strategic preferences of governments in the multilateral game of trade liberalization.<sup>8</sup> Governments that enter into customs unions can obtain binding concessions from their trading partners without waiting for WTO negotiation rounds or having to extend the

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<sup>1</sup> Customs Unions (CUS) or Free Trade Areas

<sup>2</sup> Meredith Kolsky Lewis, “The Prisoners Dilemma Posed by Free Trade Agreement: Can Open Access Provisions Provide an Escape”, *Chicago Journal of International Law*, vol. 11, No. 2, 2011, p. 634.

<sup>3</sup> This agreement was a reward that the United States gave to Jordan for its peace with Israel. Colin B. Picker, “Regional Trade Agreements v. the WTO: A Proposal for Reform of Article XXIV to Counter to this Institutional Threat”, 26 *U Penn J. Intl. Econ. L.* 267 (2005).

<sup>4</sup> This agreement was also a reward that the United States granted for its participation in sending troops to the Iraq War.

<sup>5</sup> Domino Regionalism

<sup>6</sup> Me Too Effect

<sup>7</sup> *Ibid.*, p. 643

<sup>8</sup> See: Mansfield, Edward and Eric Reinhardt, “Multilateral Determinants of Regionalism: the Effect of GATT/WTO on Formation of Preferential Trading Arrangements”, *International Organization*, vol. 57, Issue 4, 2003.

concessions related to the union to all WTO members.<sup>1</sup> Today, it is believed that Article 24 of GATT has jeopardized the entire system of trade liberalization in the WTO.<sup>2</sup>

According to WTO regulations, customs unions must be regulated. For this purpose, an institution has also been envisaged to supervise these unions. However, the fact is that this institution has had no positive effect on the negative results of these unions and has not been able to prevent the formation of such unions.<sup>3</sup>

In summary of all the material mentioned in this section, it can be claimed that “all WTO documents have no more than one purpose, and that is to maintain the commitments made regarding access to each other’s markets.”<sup>4</sup> Before examining some of these documents from the perspective of our hypothesis, it is necessary to review some principles of the WTO from the perspective of game theory.

## **6. Principles of the World Trade Organization and the Liberalization Game**

For the World Trade Organization, various principles have been mentioned, such as transparency,<sup>5</sup> predictability<sup>6</sup> non-discrimination<sup>7</sup> and other matters that have been added or subtracted depending on the opinion of the interpreters of the laws of the World Trade Organization.<sup>8</sup>

It is interesting that these principles are not explicitly mentioned as principles anywhere in the legal articles of this organization, but rather these principles can be extracted from the totality of the articles and spirit of the organization's documents. One of the fundamental principles of the World Trade Organization is the principle of non-discrimination.

This principle itself is created from the two principles of the perfect state<sup>9</sup> and the principle of national treatment<sup>10</sup>, each of which can be said to be a pillar of the World Trade Organization. For the sake of brevity, these two principles will be examined only from the perspective of game theory.

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<sup>1</sup> Jack L. Goldsmith, Erick A. Posner, *The Limits of International Law*, p. 150.

<sup>2</sup> Meredith Kolsky Lewis, “The Prisoners Dilemma Posed by Free Trade Agreement: Can Open Access Provisions Provide an Escape”, *Chicago Journal of International Law*, vol. 11, No. 2, 2011.

<sup>3</sup> Jack L. Goldsmith, Erick A. Posner, *The Limits of International Law*, p. 150.

<sup>4</sup> Boris Rigord, “The Purpose of The WTO Agreement on Application of Sanitary and Phytosanitary Measures”, *EJIL*, vol. 24, No. 2, 2013, p. 503.

<sup>5</sup> Transparency

<sup>6</sup> Predictability

<sup>7</sup> Non-Discrimination

<sup>8</sup> Hoekman and Mavroidis, 2007, op. cit., & van den Bossche, 2007, op. cit., & World Trade Organization, *The WTO Multilateral Trade Agreements*, WTO E-Learning, 2010 & Nicolas F. Diebold, *Non-Discrimination in International Trade in Services, Likeness in WTO/GATS*, Cambridge University Press, First Published, 2010.

<sup>9</sup> The GATT Article 1 states that: “Any privilege, benefit, preference or immunity granted by a contracting party to products originating in or destined for other countries shall be accorded immediately and unconditionally to like products originating in or destined for other contracting parties.” It is important to note that the first treatment that can provide the basis for the treatment of a fully-fledged state is the treatment of any country, whether contracting or non-contracting.

<sup>10</sup> The principle of national treatment is stated in paragraph 2 of Article III of the GATT: The products of each contracting member shall not, after entering the territory of another contracting member, be subject, directly or indirectly, to any internal taxation or other charges in excess of those imposed on like domestic products.

The question that arises in this regard is why the principles of the perfect state and national treatment have been included in the legal framework of the World Trade Organization?

The reality is that, in order to achieve better performance by exploiting comparative advantage and increasing production in the WTO,<sup>1</sup> governments must, in addition to their mercantilist inclinations, also deal with the lobbying and protests of domestic opponents of trade liberalization.<sup>2</sup> Thus, the outcome of liberalization must be such that governments can support it.

Induced<sup>3</sup> reciprocity, is a situation that the principle of national treatment and the principle of the perfect state of Al-Wydad bring about in the WTO system. "All that the induced reciprocity regime does is to prevent the emergence of unreasonable<sup>4</sup> outcomes."<sup>5</sup> A player who participates in a game with unreasonable outcomes (negative profits) is called a naive player.<sup>6</sup>

In a model of trade liberalization that has reached a state of induced reciprocity, the mission of the principles of perfect states and national conduct is to prevent one of the players from becoming a naive player, so that governments are encouraged to liberalize trade and continue to do so.<sup>7</sup>

According to Professors Goldsmith and Posner, the best plausible explanation for the principle of perfect states is that it allows the parties to a liberalization treaty to protect their interests against a new treaty between one of the parties and a third party.

"The principle of perfect states protects the interests of the contracting parties and that is all there is to it."<sup>8</sup> In addition, by applying the principle of perfect states and non-discrimination, importers and consumers are encouraged to buy from suppliers with the lowest purchase price.<sup>9</sup> To understand the logic of applying the principle of perfect states, three states (A), (B), and (C) are considered.

These three states have a trade agreement with each other and have reduced the tariff between them to five percent. Suppose that after a while, country (A) and (B) reduce the tariff between them to zero; by adopting this bilateral strategy and in the absence of a commitment of the state's perfect behavior, country (C) is effectively eliminated from the competition circle because with

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<sup>1</sup> Mousavi Zenouz; Ibid., p. 64

<sup>2</sup> One of the factors influencing the behavior of governments in trade liberalization is the interests of domestic groups that may support or oppose trade liberalization through their lobbies.

To avoid complicating matters, this factor is not included in the hypothesis of this discussion. For further explanation, see: Goldsmith and Posner, 2005, op. cit., pp. 135. 162 & Parisi and Ghei, 2003, op. cit., pp. 111-115

<sup>3</sup> Induced Reciprocity- Induced reciprocal trading is a situation in which each player's strategy is tied together, as it were, by a golden rule.

When reciprocal trading reaches an automatic state, a kind of forced fit appears in the strategies of the parties; whereas in the game of trade liberalization, which has taken on the form of a prisoner's dilemma, in order for the parties' strategy choices to reach a state of induced reciprocal trading, this dilemma must be solved, that is, the parties must cooperate in a sustainable manner.

<sup>4</sup> Sucker's Payoff

<sup>5</sup> Parisi, 2003, op. cit., p. 113.

<sup>6</sup> Sucker Player- - The naive player cooperates when other players cheat or do not cooperate. For example, this player gains -2 from participating in cooperation, while others gain +8.

<sup>7</sup> Ibid.

<sup>8</sup> Jack L. Goldsmith, Erick A. Posner, *The Limits of International Law*, p. 142.

<sup>9</sup> Hoekman and Mavroidis, 2007, op. cit., p. 16.

the tariff between (A) and (B) becoming zero, the importers of these two countries will not go to the market of country (C).

In this way, the principle of perfect government behavior in the World Trade Organization, like a lever, transforms the bilateral liberalization relationship into a multilateral relationship and any concessions obtained or granted in bilateral relations must be immediately granted to all members participating in the liberalization game.

Also, this principle helps maintain cooperation towards trade liberalization by increasing the cost of turning away from cooperation because governments must observe it against all opposing players if they raise their tariff.

On the other hand, this principle also greatly reduces the cost of negotiations. When a government negotiates with another government regarding its treatment of Once an agreement is reached, this agreement is communicated to other states and it is not necessary to negotiate this treatment with other states individually.<sup>1</sup>

We have adopted and applied the principle of national treatment to ensure that liberalization commitments are not eroded by taxation or other domestic measures. This principle applies when foreign goods have gained entry into member countries. The ultimate goal of the principle of national treatment is to ensure that any protection of domestic industries is provided solely through tariffs. What makes the need to focus any tariff protection is compounded by the fact that it is usually difficult to identify non-tariff barriers.<sup>2</sup>

In conclusion, the goal of the principle of national treatment is to ensure that no government, by participating in the liberalization system, finds itself unwittingly disadvantaged due to fraud by other players. The reason for this is that, according to this principle, foreign goods, after being subject to tariffs and entering the domestic market, are placed on an equal footing with domestically produced goods.<sup>3</sup>

## **7. The Game of Trade Liberalization and Market Access**

As mentioned, trade liberalization in the WTO is considered a strategic game<sup>4</sup> in which the choices or behavioral actions of each player are based on the choices or behavioral actions of the opposing player.<sup>5</sup>

Accordingly, Article 28 of the GATT has based tariff negotiations on the basis of reciprocity between governments. This means that any member that requests a concession from other members during the negotiations must be willing to give a concession in return.<sup>6</sup>

In the game of creation, concessions include providing access to each other's markets. It should be noted that without providing access to domestic markets, there will be no possibility of

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<sup>1</sup>Ibid., p. 17.

<sup>2</sup> Jack L. Goldsmith, Erick A. Posner, *The Limits of International Law*, p. 147.

<sup>3</sup> Mousavi Zenouz; Ibid., p. 4

<sup>4</sup> Strategic Game

<sup>5</sup> Carmichael, 2005, op. cit., p. 4.

<sup>6</sup> van den Bossche, 2007, op. cit., p. 393.



international trade. For this reason, market access rules are at the core of WTO law. But the important point in the trade liberalization game is that for the game to have a reliable logic and framework, governments need a tool to measure the concessions granted and the concessions obtained.<sup>1</sup>

It should be noted that access to the market for goods and services can be restricted by resorting to two tools: tariff barriers and non-tariff barriers. Tariff barriers basically include customs duties, and non-tariff barriers<sup>2</sup> include two categories of quantitative restrictions and other non-tariff barriers, such as low transparency of trade rules, unfair or unilateral application of trade rules or customs procedures, and technical barriers to trade.

In the trade liberalization game, governments give up protecting their domestic products in proportion to the concessions they grant. For this reason, transparency in the protection tools of the participating governments in this game is of utmost importance. Tariffs are tools that have the conditions of the principle of transparency. For this reason, tariffs are the only trade tool that the World Trade Organization has deemed valid and acceptable for governments to control the level of access to the market for goods.<sup>3</sup>

This is so important that it is said that the World Trade Organization, before seeking to liberalize and eliminate tariffs, seeks transparency in the trading system of countries.<sup>4</sup> Accordingly, the tariff schedule<sup>5</sup> and the commitment to observe the ceiling of tariff commitments<sup>6</sup> are considered among the inviolable rules of the World Trade Organization. Accordingly, non-tariff barriers, even when they have legitimate objectives, such as protecting humans or the environment, must follow the special rules of the World Trade Organization due to the possibility of fraud and abuse by governments.<sup>7</sup>

“The whole framework of the World Trade Organization, in which tariffs are tolerated rather than eliminated, is a confirmation of the political and economic view that governments benefit from trade barriers regardless of their reciprocal behavior”<sup>8</sup> But “perhaps the prohibition of non-tariff barriers is intended to narrow the bargaining range of governments and to clarify what constitutes cooperation and what constitutes infringement or fraud in a repeat of the Prisoner’s Dilemma.”<sup>9</sup>

Tariff barriers are more easily measured and comparable than non-tariff barriers. But more importantly, tariff barriers make negotiations more likely to proceed than non-tariff barriers, which are less measurable.<sup>10</sup> If all countries agree to prohibit tariff barriers, they can easily determine,

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<sup>1</sup> van den Bossche, 2007, op. cit., p. 376.

<sup>2</sup> Non Tariff Barriers

<sup>3</sup> World Trade Organization, p. 98.

<sup>4</sup> Ibid:47.

<sup>5</sup> Tariff Schedules- A tariff ceiling is a tariff level that governments commit not to increase tariffs above for a specific good.

<sup>6</sup> Bound Tariff

<sup>7</sup> World Trade Organization, p. 118.

<sup>8</sup> Jack L. Goldsmith, Erick A. Posner, *The Limits of International Law*, p. 147.

<sup>9</sup> Ibid.

<sup>10</sup> Ibid., p. 148.

first, Whether the concessions that other countries have given them in return are of equal weight and parity. Secondly, has the other country been faithful to this commitment?<sup>1</sup>

One of the non-tariff barriers that the WTO absolutely prohibits is quantitative restrictions. The logic of such a ban in the WTO is further examined below. Governments use trade instruments to control the domestic economy.<sup>2</sup> But what can quickly limit access to the domestic market is the application of quantitative restrictions.<sup>3</sup>

Although WTO documents do not provide a clear and precise definition of quantitative restrictions, quantitative restrictions can be considered to include measures that limit the import or export of a particular product to a certain amount.<sup>4</sup> The fact is that the case law of the GATT and the WTO has always sought to interpret this concept broadly.<sup>5</sup> The goal of this broad interpretation and similar efforts is to encourage governments to resort to tariffs for protectionist purposes as much as possible.<sup>6</sup>

The prohibition of quantitative restrictions is intended to satisfy the members' demand to maintain a competitive relationship between their products and those of other countries and to prevent fraud. Perhaps for this reason, the GATT panel also considers the prohibition of quantitative restrictions to be necessary to maintain current trade and to provide predictability for future trade plans.<sup>7</sup>

But another value and purpose of quantitative restrictions is to protect the agreed tariff schedules. Otherwise, countries can use quantitative restrictions to undermine these schedules and disrupt the framework of the game.<sup>8</sup> Moreover, governments, given their self-interest, inherently prefer tariffs to quantitative restrictions because quantitative restrictions create absolute restrictions, while restrictions created by tariffs are not absolute. Governments pursuing protectionist goals, even if they have not joined liberalization agreements, find it in their interest to use tariffs exclusively to protect domestic products.

In fact, exporting companies prefer to support countries that the form of support from these governments is limited in quantity because in this case they can avoid additional costs by regulating their export volume, while on the contrary, tariffs impose additional costs on these companies, which ultimately turn these costs into income for governments.

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<sup>1</sup> Ibid., p. 147.

<sup>2</sup> Trade instruments refer to government regulations and trade policies that affect the import and export of goods.

<sup>3</sup> Quantitative Restriction

<sup>4</sup> van den Bossche, 2007, op. cit., p. 441.

<sup>5</sup> In the Türkiye Textiles case, the dispute settlement panel considers the prohibition of quantitative restrictions as one of the pillars of the GATT. - Turkey-Restriction on Import of Textile and Clothing Product, Report of The Panel, WT/DS 34/R, 31 May 1999, paras: 9.63.

<sup>6</sup> Goldsmith and Posner 2005, op. cit., p. 147.

<sup>7</sup> United States-Taxes on Petroleum and Certain Imported Substances, Report of the Panel, L/6175 - 34s/136, Adopted on 17 June 1987, para. 5.2.2

<sup>8</sup> World Trade Organization, op. cit., p. 118

## 8. Subsidies and the game of trade liberalization

Government subsidies paid directly or indirectly to domestic firms create many issues and problems in the game of WTO liberalization. Given that the mutual interests of governments converge in the case of subsidies, it is expected that the legal structure of the WTO will seek to regulate them in order to protect the principle of coordination established in this organization.<sup>1</sup>

It should be noted that there is no way for governments to declare their need and enrichment from a tool called subsidies.<sup>2</sup> Governments need subsidies to achieve social and economic goals<sup>3</sup>, but they may also seek to cheat the game of liberalization through subsidies. Therefore, subsidies may have detrimental effects on the interests of trading partners.<sup>4</sup>

Cheating through subsidies would be when governments use subsidies to their domestic producers to change the outcome of competition in international markets.<sup>5</sup> This is further complicated by the fact that governments can use subsidies formally (de jure) or practically (de facto) and in different forms, including export subsidies, import substitution subsidies and subsidies for the use of domestic products instead of imported products.<sup>6</sup>

But the important issue is that there will also be the possibility of fraud by governments by resorting to the claim that domestic products are subsidized. These governments, which have gained less from liberalization, will accuse the opposing government or governments of fraud by granting subsidies in order to erode their concessions through the imposition of countervailing duties.

During the 1970s and 1980s, the lack of clear rules on subsidies and related countervailing measures caused many disputes among GATT contracting parties.<sup>7</sup> The problems and loopholes in GATT 1947 regarding subsidies caused countries to abuse and cheat in the liberalization game; in such a way that with the slightest hesitation Under the pretext of combating subsidies, they raised their tariffs on the product in question. In particular, the US government, ignoring the serious injury provision in GATT 1947, unilaterally imposed countervailing duties in accordance with its domestic law.<sup>8</sup>

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<sup>1</sup> The 2016 World Trade Organization report shows that in 2019, an amount equivalent to \$911 billion in subsidies was paid by contracting governments, 89 percent of which was from developed countries. World Trade Organization, Exploring the Links between Subsidies, Trade and WTO, World Trade Report 2006, XXX, 112

<sup>2</sup> Rouhani, Hamed; Subsidies and Countervailing Measures System in the World Trade Organization, World Trade Organization, Structure, Rules and Agreements, Plenipotentiary Representative Office of the Republic of Iran, Commercial Printing and Publishing Company, 210, p. 2

<sup>3</sup> Various forms of government need to provide subsidies: helping the poor, helping disadvantaged individuals and areas, national security, and similar matters.

<sup>4</sup> van den Bossche, 2007, op. cit., p. 551.

<sup>5</sup> Mousavi Zenouz; Ibid., p. 221...

<sup>6</sup> Canada- Certain Measures Affecting the Automotive Industry, Appellate Body Report, WT/DS 139/AB/R, WT/DS/142/AB/R, 31 May 2000, Para. 142.

<sup>7</sup> van den Bossche, 2007, op. cit., p. 553.

<sup>8</sup> Rouhani; Ibid., p. 281

For this reason, the GATT contracting parties put this issue on the agenda during the Tokyo Round negotiations (1973-9), which resulted in an agreement on the interpretation and application of Articles VI, XVI and XXVIII of GATT<sup>1</sup>, which is generally referred to as the Tokyo Round Subsidies Code.<sup>2</sup> However, in 1986, many ambiguities and frequent disputes led the ministers of the contracting parties, in the Final Declaration of the Punta del Este Summit<sup>3</sup>, to call on the Uruguay Round negotiators to amend the provisions of Articles VI and XVI of GATT VII as well as the Tokyo Round Subsidies Code. The result of these negotiators' work was the "Agreement on Subsidies and Countervailing Measures"<sup>4</sup>, which today, together with Articles VI and XVI of GATT 1994, constitute the legal framework governing subsidies in the World Trade Organization.

To explain the logic of the emergence of the Agreement and the rules on subsidies in the World Trade Organization, the opinions and opinions of the delegations of this organization will be more telling: According to the delegation, in the Brazil-Aircraft case, the purpose and purpose of the Agreement on Subsidies is to apply multilateral order to subsidies, the granting of which causes disruption of international trade.<sup>5</sup>

Also, the dispute settlement body of this organization in another case, in summarizing the reason for the emergence of the Agreement on Subsidies and Countervailing Measures, states that the existence of such an agreement is based on the premise that certain interventionist behaviors of states cause disruption or imbalance in international trade.<sup>6</sup>

To face the fact that states need subsidies and also eliminate the possibility of fraud through resorting to them, the Agreement on Subsidies and Countervailing Measures seeks to increase and improve the provisions of the GATT regarding the use of subsidies and countervailing measures.

For this reason, it is said that there are two agreements at the same time in this agreement. This agreement first seeks to determine what types of subsidies can be granted by governments. Accordingly, subsidies are divided into two categories: non-permissible subsidies and permissible subsidies, and the condition for countervailing measures is that domestic investigations and assessments show injury or threat of injury to industries producing like domestic products. Therefore, countervailing duties can only be imposed if it is proven that there are subsidized imported products and that domestic products have suffered injury as a result of the subsidies paid by governments.

The requirement to maintain the balance of payments requires that countervailing measures take the form of an increase in tariffs above the tariff ceiling (previously agreed). However, since the investigation into the existence of a subsidized foreign product and its injurious effects is

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<sup>1</sup> Agreement on Interpretation and Application of Articles VI, XVI and XXIII of the General Agreement.

<sup>2</sup> Tokyo Round Subsidies Code

<sup>3</sup> Punta del Este

<sup>4</sup> Agreement on Subsidies and Countervailing Measures

<sup>5</sup> Brazil- Export Financing Programme for Aircraft, Report of Panel, WT/DS 46/R /14 April 1999, para. 7.26.

<sup>6</sup> Canada- Measures Affecting the Export of Civilian Aircraft, Report of Panel, WT/DS 70/R, 14 April 1999, paras. 9-119.

conducted by the complaining State, a State objecting to countervailing measures is entitled to file a complaint with the WTO Dispute Settlement Body.

In order to eliminate the possibility of granting an artificial competitive advantage to domestic products through subsidies and to prevent fraud by claimants of subsidized products, the first condition for countervailing measures is that the financial contribution must be from a government or a public entity. The Korea-Merchant Vessels Panel held that a public entity is public if it is controlled by the government or other public entity and its action is attributable to the government.<sup>1</sup>

Furthermore, financial contributions from non-governmental entities can also be defined as subsidies, and that this is the case if the government has delegated the task to a private entity or has directed it to carry out the aforementioned actions.<sup>2</sup> However, there are cases where the element involved in the fraud is not the government but private individuals. The following is a discussion of how the world organization deals with this type of fraud.

### **9. Price-cutting, a trick by private firms**

Another type of business behavior that can provide a basis for fraud and distorting the liberalization game, and which the World Trade Organization has also addressed as unfair trade behavior, is price-cutting.<sup>3</sup>

This practice is carried out by importing goods into another country's market at a price lower than the cost price and less than the real value of the goods. An important difference between subsidies and dumping is that governments may not be aware of price-cutting practices by their firms. In the Japan-Semiconductors case, the GATT panel implicitly considered price-cutting to be the result of a private decision.<sup>4</sup>

Perhaps this is why the WTO documents and procedures condemn (not prohibit) anti-dumping measures.<sup>5</sup> Dumping is one of the most complex and, at the same time, the most common methods of fraud in trade. In this method, a firm sells its products below the actual price in the hope of obtaining a monopoly market.

If this method of fraud achieves the desired result, the formation of a monopoly market compensates for the initial loss of the cheating firm. Given the harmful nature of dumping, even the domestic competition laws of some countries have prohibited such commercial behavior. An example of such laws can be seen in the antitrust law of the United States.

The conditions of trade liberalization and the need to maintain coherence in the process that has been referred to as the game, required that price dumping be explained, regulated, and harmonized between members through laws and agreements. However, at the time of the GATT negotiations

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<sup>1</sup> Korea - Measures Affecting Trade in Commercial Vessels, Report of the Panel, WT/DS273/R, 7 March 2005, paras. 7-50.

<sup>2</sup> Mousavi Zenouz; Ibid., p. 211.

<sup>3</sup> Dejmakhvi; Ibid., p. 290.

<sup>4</sup> Japan- Trade in Semi Conductors, Report of Panel, L/6309-35S/116, Adopted 4 May 1988, para. 120

<sup>5</sup> However, even conviction is possible if the price-cutting products cause serious harm to the domestic industries of the importing country.

in 1947 The negotiating governments disagreed on the need to apply countervailing measures against price dumping. However, at the insistence of the United States, this was also added to the GATT 1947 to clarify the framework within which governments could respond to price dumping.

However, the passage of time proved that Article 6, which was included in the GATT for this purpose, was not sufficient to respond to price dumping issues. The vagueness of the article caused it to be interpreted and applied inconsistently, so that many GATT contracting parties felt that anti-dumping measures were themselves becoming a barrier to trade.<sup>1</sup>

However, the shortcomings of Article 6 of the GATT led to the creation of the Anti-Dumping Measures Agreement.<sup>2</sup> At present, it can be said that the real purpose of this agreement is nothing more than to support the cooperation that has been formed and to prevent fraud by members in the path of trade liberalization.<sup>3</sup>

It should be noted that, like subsidies, price gouging in the trade liberalization system can be used as a tool of abuse and fraud by those who engage in it, as well as by the government or those who claim to be harmed by it. Many believe that governments ignore dumping by their domestic firms in order to apply targeted protection. However, the World Trade Organization does not impose a duty on governments to prevent their firms from resorting to price gouging measures.

However, to prevent fraud by those who claim to be harmed by the import of price gouging goods, it stipulates that anti-price gouging measures must be taken after the necessary investigations and proof of the existence of the price gouging goods and their serious injury to similar domestic goods.<sup>4</sup>

Anti-price gouging measures,<sup>5</sup> like measures against subsidies, will take the form of tariff increases. The important point is that the identification of price-cutting goods is based on a comparison of the actual value<sup>6</sup> of that product with its export price

Therefore, all that the organization's rules allow for is taking measures to protect domestic industries, which under normal circumstances would be considered illegitimate and fraudulent actions.<sup>7</sup>

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<sup>1</sup> van den Bossche, 2007, op. cit., pp. 514-515.

<sup>2</sup> Anti-dumping Agreement.

<sup>3</sup> Of course, the emergence and completion of this agreement was not so simple. Issues related to anti-dumping measures were negotiated in the Kennedy Round (1967) and the Tokyo Round (1979), and in each of these rounds a specific code of conduct was agreed upon. Nevertheless, in 1980, anti-dumping measures became a serious challenge for countries in the North and the South. For this reason, anti-dumping measures were one of the most important axes of negotiations in the Uruguay Round, which ultimately led to the formation of the current Agreement on Anti-Dumping Measures.

<sup>4</sup> Material Injury

<sup>5</sup> Normal Value

<sup>6</sup> Export Price

<sup>7</sup> van den Bossche, 2007, op. cit., p. 513.

## 10. Escape from the liberalization game

The designers of the liberalization game at the World Trade Organization have recognized that governments may need to be flexible in their rules in certain circumstances to limit the requirement of reciprocal market access.<sup>1</sup>

Ordinarily, in ongoing trade relations, losses are tolerated to the extent that they are not severe and irreparable. In principle, minor losses are tolerated in the hope that the situation will change, and profitability will return. In the face of heavy losses, WTO members have two options:

- a) withdrawal from cooperation and abandonment of the liberalization relationship by the injured party,
- b) the emergence of new cooperation in the form of giving the injured party a breathing space to find itself back to the first cooperation.

The second option, based on the assumption of the self-interest of governments, has the advantage that in this way, the initial cooperation (trade liberalization) will not be destroyed and will be restored. As could be expected, the WTO chose the second option in dealing with heavy losses of members.

In situations where one of the players suffers heavy losses, in order to overcome their temptation to leave the game and terminate the cooperation, Article 19 of the GATT (1973) has put forward the escape clause.<sup>2</sup>

According to this article, when the domestic industry of a country suffers serious injury from a sudden wave of imports or there is a possibility of such serious injury, the latter government will have the right to temporarily suspend its obligations under conditions that<sup>3</sup> However, in order to prevent fraud through recourse to the escape clause, it is necessary to prove the necessity of resorting to this clause, in accordance with the procedures to be described. To this end, it must be ensured that the following conditions are met: first, imports of the product in question have increased significantly; second, the increase is the result of a previously unforeseen development; and third, the increase in imports has caused serious injury<sup>4</sup> to domestic enterprises producing like or directly competing products.<sup>5</sup>

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<sup>1</sup> Hoekman and Mavroidis, 2007, op. cit., p. 19

<sup>2</sup> Escape Clause

<sup>3</sup> Article 19 reads as follows: If, as a result of unforeseen changes and as a result of the commitments accepted under this Agreement, including the tariff concessions granted, any product is imported into the territory of any contracting party under such conditions and in such quantities as to cause serious injury or threaten to cause serious injury to domestic competing producers of like products, that contracting party shall have the right to withdraw or suspend all or part of its commitments or concessions in respect of that particular imported product to the extent and for such period as may be necessary to prevent such injury.

<sup>4</sup> Serious Injury

<sup>5</sup> Directly Competitive

Paragraph 1 of Article 9 of the Agreement on Safeguards<sup>1</sup> sets out the procedures for proving the three conditions mentioned above. Accordingly, Members of the Organization must carry out specific investigations in order to resort to the escape clause.

The said investigations are themselves subject to requirements such as the need to publicly announce the conduct of the investigations, the need for interested parties to have the opportunity to comment on the investigations, and the need to issue a report containing the findings and arguments of the investigating authorities in each case.<sup>2</sup> On the other hand, under Article 12(1)(a) of the Agreement on Safeguards, Members must notify the WTO Working Party on Safeguards immediately of the initiation of an investigation. In the United States – Safeguards on Wheat Gluten case, the Appellate Body held that a delay of even a few weeks would violate this requirement.<sup>3</sup>

Although the countervailing measures in such cases need not necessarily take a specific form, it is likely that an increase in the level of the envisaged tariffs will be used. More importantly, however, any countervailing measures must be applied in accordance with the principle of the State of the Whole.<sup>4</sup>

The duration of the escape clause should not normally exceed four years and may, under certain circumstances, be up to eight years, but in no case more than eight years.<sup>5</sup> In order to invoke safeguard measures, it is not necessary to prove<sup>6</sup> unfair trade practices.<sup>7</sup>

The Appellate Body in the Safeguards on Line Pipes case emphasized that safeguard measures are available to Members. The WTO allows for restrictions on imports that are made in the course of fair trade.<sup>8</sup>

Anti-dumping and subsidy measures and circumvention of the liberalization game are referred to as the WTO's safety valves. The condition for applying countervailing measures is that they are in response to circumstances that could not reasonably have been foreseen at the time the tariff levels were agreed upon.<sup>9</sup>

The circumvention condition reflects the political reality that trade liberalization will not be tolerated if it causes severe and unexpected economic hardship.<sup>10</sup> Uncertainty is a characteristic feature of the trade liberalization game and can negatively affect cooperation and lead to deviations from it. This feature may even prevent cooperation from taking shape in the first place. In such

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<sup>1</sup> Safeguards Agreement

<sup>2</sup> Mousavi Zenouz; Ibid., p. 229

<sup>3</sup> United States – Definitive Safeguard Measures on Imports of Wheat Gluten from the European Communities, Report of the Appellate Body, WT/DS166/AB/R, 22 December 2000, paras. 108-112.

<sup>4</sup> Ibid., p. 236.

<sup>5</sup> van den Bossche, 2007, op. cit., p. 637.

<sup>6</sup> Unfair Trade Actions

<sup>7</sup> World Trade Organization, op. cit., p. 235.

<sup>8</sup> United States- Definitive Safeguard Measures on Imports of Circular Welded Quality Line Pipe From Korea, Appellate Body Report, WT/DS 202/AB/R, 15 February 2002, paras. 80-81.

<sup>9</sup> Argentina – Safeguard Measures on Imports of Footwear, Report of the Appellate Body, WT/DS121/AB/R, 14 December 1999, paras. 91-96.

<sup>10</sup> van den Bossche, 2007, op. cit., p. 633.



circumstances, there needs to be an agreement to maintain the principle of cooperation under any contact between the actors. The existence of a condition for deviation from cooperation for a severely affected state provides such an opportunity for the parties to the liberalization game.

It is believed that by allowing the possibility of applying some exceptions not only the chance of reaching an agreement in the first step increases but also the level of cooperation in the entire game process.<sup>1</sup>

Furthermore, game models predict that the greater the internal uncertainty of countries, that is, the more sensitive leaders are to unforeseen changes and the political pressures that arise from them, the more necessary the existence of an escape condition is to enter the liberalization game.

## **Conclusion**

This article sought to examine the legal structure of the World Trade Organization from the perspective of game theory in international law. First, this theory was briefly introduced and its applicability in the legal system of the World Trade Organization was explained, and it was stated that game theory provides an argumentative framework and the final results of the inferences will depend on the initial hypothesis.

The hypothesis was that the goal of governments in participating in the trade liberalization system is to gain greater economic profit, but governments are also aware that if they cheat against the liberalization of others and protect their domestic markets, they will gain much more profit, which is due to the harm to the opposing governments.

The legal framework of the World Trade Organization is designed to maintain the equations of the trade liberalization game and prevent fraud by the participating governments in this game. Therefore, to demonstrate this, first the behavioral model of the players participating in the trade liberalization game was explained, and then this behavioral model, as well as other teachings of game theory, were evaluated regarding some of the principles and documents of the World Trade Organization.

Although it was not possible to review all the documents and agreements of the World Trade Organization in this context, the authors believe that the logic observed (framing the game and preventing player cheating) can be applied to the entire legal structure of this organization.

## **References**

- Adam Smith, *An Inquiry into the Nature and Causes of the Wealth of Nations*(5th ED.1789) University of Chicago Press, Edwin Cannan, Ed, 1976.
- Andrew T. Guzman, “A Compliance Based Theory of International Law”, *California Law Review*, vol. 90, Issue. 6, 2002.
- Anne van Aaken, “To Do Away with International Law? Some Limits to the Limits of International Law”, *EJIL*, vol. 17, No. 12, 2006.

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<sup>1</sup> Ibid., p. 2.

- Argentina – Safeguard Measures on Imports of Footwear, Report of the Appellate Body, WT/DS121/AB/R, 14 December 1999.
- Bernard M. Hoekman and Petros C. Mavroidis, *The World Trade Organization, Law, Economics and Politics*, Routledge, First Published, 2007.
- Boris Rigord, “The Purpose of the WTO Agreement on Application of Sanitary and Phytosanitary Measures”, *EJIL*, vol. 24, No. 2, 2013.
- Brazil- Export Financing Programme for Aircraft, Report of Panel, WT/DS 46/R/14 April 1999.
- Canada- Certain Measures Affecting the Automotive in Industry, Appellate Body Report, WT/DS 139/AB/R, WT/DS/142/AB/R, 31 May 2000.
- Canada- Measures Affecting the Export of Civilian Aircraft, Report of Panel, WT/DS 70/R, 14 April 1999.
- Colin B. Picker, “Regional Trade Agreements v. the WTO: A Proposal for Reform of Article XXIV to Counter to this Institutional Threat”, 26 *U Penn. J. Intl. Econ. L.* 267, 2005.
- Dejmakhavi, Ghazaleh; (2010) *Dispute Settlement System in the World Trade Organization*, World Trade Organization, Structure, Rules and Agreements, Representative Office of the Trade Authority of the Republic of Iran, Publisher: Commercial Printing and Publishing Company, Tehran, Iran.
- Detlev F. Vagts, “International Relations Looks at Customary International Law: A Traditionalists Defense”, 15 *EJIL*, 1031, 2004.
- Drew Fudenberg, *Game Theory*, The MIT Press, Cambridge, Massachusetts, Forth Printing, 1995.
- Eric A. Posner, “Do States Have a Moral Obligation to Obey International Law”, 55 *Stanford Law Review*, 2003.
- Fiona Carmichael, *A Guide to Game Theory*, Pearson Education Limited, First Published, 2005.
- Francesco Parisi & Nita Ghei, “The Role of Reciprocity in International Law”, *Cornell International Law Journal*, vol. 36, Art 4, 2003.
- Hector Correa, “Game Theory as Instrument for the Analysis of International Relation”, *The Ritsumeikan Journal of International Studies*, 2001.
- Irwin, D.A., *Against the Tide: An Intellectual History of Free Trade*, Princeton University Press, 1996.
- Jack L. Goldsmith and Eric A. Posner, “A Theory of International Customary International Law”, 66 *U. Chi. L. Rev.* 1113, 1999.
- Jack L. Goldsmith and Eric A. Posner, *Further Thoughts on Customary International Law*, 23 *Mich. J. Int.*, 17, 191, 2001.

- Jack L. Goldsmith and Eric A. Posner, *The Limits of International Law*, Oxford University Press, 2005.
- Japan- Taxes on Alcoholic Beverages, Report of Appellate Body, WT/DS8/AB/R, WT/DS10/AB/R, WT/DS11/AB/R, 4 October 1996.
- Japan- Trade in Semi Conductors, Report of Panel, L/6309-35S/116,
- Jens David Ohlin, "Nash Equilibrium and International Law", *EJIL*, vol.23, No. 4, 2012.
- John von Neumann and Oskar Morgenstern, *Theory of Games and Economic Behavior*, Princeton University Press, ISBN: 069110613, 60th Anniversary Edition 20, 1944.
- Joost H. B. Pauwelyn, "The Role of Public International Law in the WTO: How Can We Go?" *American Journal of International Law*, vol.95, 2001.
- Korea- Measures Affecting Trade in Commercial Vessels, Report of the Panel, WT/DS273/R, 7 March 2005.
- Mansfield, Edward & Eric Reinhardt, "Multilateral Determinants of Regionalism: The Effect of GATT/WTO on Formation of Preferential Trading Arrangements", *International Organization*, vol. 57, Issue 4, 2003.
- Mathias Herzing, "A Prisoner's Dilemma Tariff Setting Game with an Escape Clause", Institute for International Economic Studies, Stockholm University, August 2003.
- Meredith Kolsky Lewis, "The Prisoners Dilemma Posed by Free Trade Agreement: Can Open Access Provisions Provide an Escape", *Chicago Journal of International Law*, vol. 11, No. 2, 2011.
- Mousavi Zenouz, (2013) Mousavi; Book, *The Evolution of International Trade Law in the World Trade Organization*, Publisher. Mizan, Tehran, Iran.
- Nedias F. Lunfeld; (2013) *International Economic Law*, translated by Mohammad Habibimjandeh, second edition, Iran Tahjangal Publishers,
- Nicolas F. Diebold, *Non-Discrimination in International Trade in Services, Likeness in WTO/GATS*, Cambridge University Press, First Published, 2010.
- Niels Petersen, "How Rational is International Law", *EJIL*, vol. 20, 2010.
- Omidbakhsh, Esfandiar; (2010) *From the General Agreement on Tariffs and Trade to the World Trade Organization, World Trade Organization, Structure, Rules and Agreements, Representative Office of the Trade Authority of the G.A.A., Published by the Commercial Printing and Publishing Company, Tehran, Iran.*
- Pascal Lamy, "The Place of the WTO and Its Law in the International Legal Order", *EJIL*, vol. 17, No. 5, 2007.- Jurisprudence
- Peter van den Bossche, *The Law and Policy of World Trade Organization, Text, Cases And Materials*, Cambridge University Press, 2007.

- Rouhani, Hamed; (2010) Subsidies and Countervailing Measures in the World Trade Organization, World Trade Organization, Structure, Rules and Agreements, Representative Office of the Trade Representative of the Republic of Iran, Publisher: Commercial Printing and Publishing Company, Tehran, Iran.
- Turkey- Restriction on Import of Textile and Clothing Product, Report United States- Countervailing Duties on Certain Corrosion-Resistant Carbon Steel Flat Products from Germany, Report of Panel, WT/DS 213/AB/R, 28 November 2002.
- United States – Definitive Safeguard Measures on Imports of Wheat Gluten from the European Communities, Report of the Appellate Body, WT/DS166/Ab/R, 22 December 2000.
- United States- Definitive Safeguard Measures on Imports of Circular Welded Quality Line Pipe from Korea, Appellate Body Report, WT/DS 202/AB/R, 15 February 2002.
- United States- Taxes on Petroleum and Certain Imported Substances, Report of the Panel, L/6175 - 34s/136, Adopted on 17 June 1987.
- World Trade Organization, Exploring the Links between Subsidies, Trade and WTO, World Trade Report, 2006.
- World Trade Organization, The WTO Multilateral Trade Agreements, WTO E-Learning, 2010.

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