# ECONOMIC ANALYSIS OF INTERNATIONAL LAW: INTERNATIONAL AGREEMENTS

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Abstract: International agreements represent an effective mean to solve externalities that arise from international relations, in order to reduce transaction costs and information asymmetry that may affect states, enabling them to reach an optimum point of efficiency in their relations. On the other hand, international agreements present their own problems and externalities, such as the conditions of uncertainty and difficulties of enforcement, which can affect the desired result from the interaction between countries. In this context, Law and Economics can be an efficient tool to assist in such issues, by means of incorporating an economic methodology to legal thinking. From the Law and Economics perspective applied to International Law, states can be seen as rational actors willing to maximize their welfare and international agreements are comparable to contracts, entered into by the parties with the expectation of mutual gains. Furthermore, International Law plays the role of coordinating the behavior of the states in order to address externalities and regulate fields of interests – task in which the contributions of Law and Economics can be of great value.

Resumo: Tratados internacionais representam uma forma efetiva de solucionar externalidades que surgem a partir das relações internacionais, a fim de reduzir os custos de transação e assimetria informacional que podem afetar os Estados, possibilitando-os atingir um nível ótimo de eficiência em suas relações. Por outro

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lado, acordo internacionais apresentam suas próprias externalidades, como as condições de incerteza e dificuldades de execução, que podem afetar o resultado desejado a partir da interação entre os Estados. Nesse contexto, a análise econômica do direito pode ser uma ferramenta eficiente para auxiliar em tais questões, por meio da incorporação de uma metodologia econômica ao pensamento jurídico. Do ponto de vista da *Law and Economics* aplicada ao Direito Internacional, Estados podem ser vistos como agentes racionais dispostos a maximizar seu bem-estar, e acordos internacionais são comparáveis a contratos, celebrados pelas partes com a expectativa de ganhos mútuos. Além disso, o Direito Internacional desempenha o papel de coordenar o comportamento dos Estados a fim de abordar as externalidades e regular áreas de interesse – tarefa na qual as contribuições da *Law and Economics* podem ser de grande valia.

## INTRODUCTION

The relationship between law and economics has been historically characterized by a hostility. However, over the past decades, this view has changed, precisely because of the need for interaction between the two subjects. Law and Economics, through the incorporation of economic methodology to legal thinking, enables the interpreter to use a tool capable of assisting in the solution of the controversies that arise in many areas of law, such as contract law, tort law, criminal law and procedural law.

The fundamental premise for the economic analysis of law consists in the verification that the human being seeks what he considers to be the best for himself, acting in a rational way, in order to maximize his usefulness. By acting in such a way, individuals are influenced by the incentives they receive from the environment in which they live, generated from legal rules,

which can be evaluated based on the economic efficiency generated by their application[2].

In this sense, Law and Economics provided a scientific theory able to predict the effects of legal sanctions and measures on the behavior of the agents. For economists, sanctions are similar to prices, as people react to higher prices by consuming less of that given product[3]. When it comes to law, people will react to tougher legal sanctions by practicing less of that sanctioned activity.

As Law and Economics has proven to be a valuable tool to assist other areas of law in the assessment of the reactions and consequences of various measures and sanctions in the action of the agents, the application of such tool is being expanded to other areas of law in which this analysis was not historically made or thought. This work intends to demonstrate that Law and Economics can be useful to International Law, especially when it comes to international agreements.

The study has as its starting point the examination of the theory of Law and Economics, in order to provide an initial understanding of the theme and the guidelines of such theory, as well as an analysis of how institutes, concepts and themes of International Law can be studied in the light of Law and Economics. In the second part of the paper, we will analyze how an economic analysis of international agreements can be useful to better understand and solve issues related to signing, enforcement and compliance with agreements, as well as identify some solutions that are being proposed by scholars and that could be further developed.

## PART I – INTERNATIONAL LAW UNDER THE FOCUS OF LAW AND ECONOMICS

[2] PINHEIRO, Armando Manuel da Rocha Castelar; SADDI, Jairo. *Direito, economia e mercados*. Rio de Janeiro: Elsevier, 2005.

[3] COOTER, Robert; ULEN, Thomas. *Direito & Economia*. 5. ed. Porto Alegre: Bookman, 2010.

## A) LAW AND ECONOMICS' BACKGROUND AND METHODOLOGICAL ASSUMPTIONS

The main purpose of the Law and Economics' thinking is to incorporate an economic methodology to legal thought, which makes legal problems best solved through a cost/benefit analysis and identifies the elements involved in the process of decision making of rational agents. According to Armando Pinheiro[4], agents react to the external incentives that they receive and legal rules shape these incentives and, therefore, influence in their decisions regarding trade, consumption, investments, among others.

In this sense, if law wants to prevent certain injuries from happening, for instance, the sanction imposed to the injurer should be severe enough that he does not get any advantage from his attitude. Otherwise, he may still opt to act in such a way that causes damages to someone else or to the environment, for example, by virtue of the economic benefits that such conduct may confer to him. This is what Steven Shavell[5] indicates:

> Given the assumption that the utility the injurer obtains from doing harm is not credited in social welfare, society wants to discourage the injurer's harmful act. To accomplish that, the damages that are imposed must exceed the utility that the injurer would obtain from his act. Therefore, damages may have to be higher than the losses caused

On the other hand, Rachel Sztajn[6] highlights that law cannot ignore the impacts that its rules have in the agents' behavior, when it comes to defining sanctions or measures, but should also observe that law shapes the incentives and is likewise affected by the acts of the rational agents and the market:

> Law, in its turn, by establishing rules of conduct ("*dever-ser*")

[4] PINHEIRO, Armando Manuel da Rocha Castelar; SADDI, Jairo. Op. Cit

[5] SHAVELL, Steven. *Foundations of economic analysis of law*. Cambridge (USA): Belknap Press of Harvard University Press, 2004. p. 245

[6] SZTAJN, Rachel. *Direito e Economia*. Rio de Janeiro: Elsevier, 2005. p. 102.

> that model relationships between people, should take into account the economic impacts that will result from the effects on the distribution or allocation of resources, the incentives that influence the behavior of the private economic agents. Thus, Law influences and is influenced by Economy and the organizations influence and are influenced by the institutional environment. (Free translation)

In view of this premise that law affect and is affected by the economy, it is important to analyze the three basic concepts of Law and Economics, which are maximization, balance and efficiency. Economics generally assume that each economic agent maximizes something (the consumer maximizes happiness; the politician maximizes votes, for instance), and a conception of rationality holds that a rational agent can sort the alternatives according to the degree of satisfaction provided.

Firstly, the meaning of maximization of utility can be better understood when we analyze the concept of scarcity. In summary, it means that the agents' desires will always be greater than the means or resources to satisfy them. In view of these shortages, the agent is induced to act rationally in order to choose the option that best meets his/her interests. This is the lesson of Cooter and Ulen[7]:

> In practice, the alternatives available to the agent are restricted. For example, a rational consumer can sort alternative packages of consumer goods, and his budget restricts his choice. A rational consumer should choose the best alternative that the restrictions allow. Another common way of understanding this conception of rational behavior is to recognize that consumers opt for alternatives that are appropriate for achieving their goals. Understanding the best alternative that constraints allow can be described mathematically as maximization. (Free translation)

The concept of scarcity can be applied to International Law, as well pointed out by Gustavo Ferreira Ribeiro and José Guilherme Caiado[8]:

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[7] COOTER, Robert; ULEN, Thomas. Op. Cit. p. 36-37.

[8] RIBEIRO, Gustavo Ferreira; CAIADO, José Guilherme Moreno. Por que uma

> The inferences are immediate to the international level. There are not enough resources in the world to satisfy global hunger, eliminate pollution of the sea, conserve forests, eliminate unemployment, welcome refugees, eliminate international trafficking in children, and ensure peace, among others. Choices will be made and discussions will go through the legitimacy of these choices and how actors, if they want to achieve the goal with the least possible waste of resources, can maximize the intended results. (Free translation)

Regarding the model of rational choice that guides the conduct of agents, Mackaay and Rousseau[9] highlight that it is directly connected with the premise of predictability of the agents' acts and, consequently, of the impact that certain legal measures will have on society:

> The rational choice model allows for generalizations about human behavior. It gives humans a predictable line of conduct; supposes that humans will always choose among the available options the one that offers them the greatest satisfaction. This implies, for example, that if the cost of an option (price of a good to be purchased, sacrifice to take action) increases, affected people will less often choose this option (law of demand). (Free translation)

Secondly, the concept of balance can be explained by the assumption that, generally, interactions tend to balance, whether they occur in markets, club, games, business or weddings. In this sense, a balance is a pattern of interaction that tends to persist, unless disturbed or affected by external forces. This concept, which is almost a logical consequence of the concept of maximization, is also well explained in the work of Cooter and Ulen[10]:

> We characterize the behavior of every individual or group as a maximizer of something. Maximizing behavior tends to push

análise econômica do direito internacional público? Desafios e perspectivas do método no Brasil. *Revista de Direito Internacional*, Centro Universitário de Brasília (UNICEUB), v. 12, n. 2, 2015. p. 250-251.

[9] MACKAAY, Ejan; ROUSSEAU, Stéphane. *Análise Econômica do Direito*. 2. ed. São Paulo: Atlas, 2015. p. 31.

[10] COOTER, Robert; ULEN, Thomas. Op. Cit. p. 37.

> these individuals and groups toward a resting point, to an equilibrium. They certainly do not seek balance as a result; instead, they simply try to maximize what interests them. Nonetheless, the interaction of maximizing agents usually results in an equilibrium. (Free translation)

Finally, economists have several different definitions for efficiency. It is said that a production process is efficient when either two conditions are present: (i) there is no way to generate the same amount of product using a combination of lower cost raw materials; and (ii) there is no way to generate more production using the same combination of raw material. In strictly economic terms, efficiency refers to the relationship between the benefits and added costs to a given situation.

These three basic concepts (maximization, balance and efficiency), explained in an objective and succinct way in this section, are the key elements for explaining the economic behavior, especially in the areas of law that require coordinated interaction of the parties, such as contract and international law. The economic analysis conducted in the framework of each specific area of law will apply such concepts to the institutes and specificities of the area in question, in order to collaborate in solving problems and promoting more beneficial alternatives, adding the economic point of view.

When it comes to the application of the concepts of Law and Economics, the binomial efficiency and justice can be deemed critical. This happens because the economist will always value efficiency, but justice is the key element that rules the legal discussion. The difficulty is to adjust the economic efficiency (as part of the rational behavior) to the search for justice based on human behavior. Apart from the well-known difficulties of communication between the areas, the sense that law and justice are being affected by economists may seem uncomfortable, but economy can, in fact, work in collaboration with lawyers and law scholars in order to pursue justice efficiently.

## B) ECONOMIC ASPECTS OF INTERNATIONAL LAW

In the International Law field, the concepts of Law and Economics can be useful to understanding and study of international agreements, mainly because treaties can be seen as efforts to coordinate the behavior of states when addressing externalities. These externalities – that can be pecuniary or non-pecuniary, such as the absence of competitive conditions and bargaining power – are elements that affect the balance between the parties and, therefore, can lead to inefficiency.

In addition, in the context of international treaties, states are rational actors, as they maximize preferences over a set of preferences and alternatives, in order to seek a given purpose. As analyzed in the previous section of this paper, agents are deemed rational when it comes to their choices and welfare, and this is also applicable to states. According to Alan Sykes[11],

> […] states behave as if they are rational maximizers over some set of preferences regarding the outcome of their interaction. […] States may be assumed to behave as economic welfare maximizers, or to maximize a social welfare function that weights the welfare or certain constituencies more heavily than others.

However, the same author explains that the preferences of the state may vary overtime, considering that it can be a reflection of the preferences of the leader, who can choose to maximize a given or even their personal welfare[12]. In this sense, although we may refer to states as acting as a rational actor, in fact we have individual decision-making in such process, which depends on how the power is distributed and organized internally, as referred by Anne van Aaken[13]:

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[11] SYKES, Alan O. International Law. In: POLINSKY, Mitchell; SHAVELL, Steven. *Handbook of Law and Economics*. v. 1. Elsevier, 2007. p. 762.

[12] "The preferences of the "state" may be assumed to be those of its political leaders, who may maximize votes, campaign, contributions, or their personal welfare". (SYKES, Alan O. Op. Cit. p. 762).

[13] AAKEN, Anne van. Behavioral International Law and Economics. *Harvard*

> The same biases of leaders or other individual decision-makers may lead to different outcomes depending on whether the respective state is authoritarian, a presidential system, a parliamentary system, a federal system or something other. This makes cross-country comparisons more difficult but also generates very interesting research questions.

Thus, a change in the decision-maker or leaders can affect the choices of a given state, once the priorities and interests of the state are, in fact, a consequence of the preferences of the actors that have power and influence within the country and government. This is the understanding of Alan Sykes[14]:

> The actor with the power to choose among alternatives may change over time (in the United States, think of the President as the actor with power to make choices on international matters, subject to constraints imposed by the Congress). Even when it is plausible to assume that a pertinent decision maker has a preference ordering over the available alternatives at a point in time, therefore, the notion that "preferences" of the "state" are stable over time, or that they obey potentially important regularity assumptions, may be quite problematic.

Also, the preferences of the state can change, as a state represents an aggregation of different actors. When addressing international legal orders, Terence Halliday and Gregory Shaffer[15] indicate that, in addition to states, we have new actors (non-state actors) playing a role in constituting international legal orders, such as multinational companies and industry groups, which have their own agenda and interests regarding trade, intellectual property and other relevant issues:

> The *involvement of the U.S. delegations at the WTO, UNCITRAL, and the new Transpacific Partnership (TPP),* for instance, clearly exhibit an effort by the United States to advance

*International Law Journal*, v. 55, n. 2, 2014. Available at: http://www.harvardilj.org/wp-content/uploads/552vanAaken.pdf. p. 443-444.

[14] SYKES, Alan O. Op. Cit. p. 762.

[15] HALLIDAY, Terence C; SHAFFER, Gregory. Transnational Legal Orders. Chapter 1, *Transnational Legal Orders*, Cambridge University Press, 2015; UC Irvine School of Law Research Paper No. 2015-56. Available at SSRN: http://ssrn.com/abstract=2605625. p. 27.

> its international trade interests, in support of particular constituencies within it, through the creation of TLOs. […]
> *Non-state actors* also gain and lose leverage over time, facilitating and constraining their ability to advance their interests and goals through TLOs. […] *Multinational companies and industry groups press for TLOs* that govern investment, intellectual property protection, and other business regulation (emphasis added).

Therefore, non-state actors may influence the decisions made by the states, according to their interests, even when it comes to international relations and related decisions. Along with major players and developing countries, we also have private players, who advocates their own agenda and make pressure so that their positions reflect internationally and in international relations, through agreements, for instance. In this sense, Horatia Muir-Watt highlights[16]:

> The fundamental paradox of international law is that this supremacy of the public has led to an extraordinary empowerment of the private, demeurely masked all the while by its neutral, apolitical stance. Whereas private international law might, conceivably, have continued after the schism to articulate the legal and moral limits for the functioning of the global market beyond the state, it was inhibited in both scope and ambition by the exclusionary ethos of sovereignty and the imperious requirements of the public international legal ordering.

According to Anne van Aaken[17], the bias of private actors can be also identified in states:

> The research shows evidence for loss aversion in corporate actors. For example, companies take higher risks if their industry performs poorly compared to other industries (loss frame). It seems reasonable to assume that the bias can be present for all corporate actors, including (democratic) states.

When it comes to decisions made on behalf of a state,

[16] MUIR-WATT, Horatia. Private International Law as Global Governance: Beyond the Schize, from Closet to Planet. Disponível em: <https://works.bepress.com/horatia_muir-watt/1/.>. Acesso em: 29 de jan. 2017. p. 12.

[17] AAKEN, Anne van. Op. Cit. p. 444.

one can say that the decision-maker will not face the decision in the same way as he/she would if their own interests were at stake. In this sense, it is possible that a decision regarding the private property of the leader follows a more careful or preventive pattern than a decision that involves states' property. In Anne van Aaken's lesson, this represents the fact that leaders do not have what the author calls "endowment effect"[18].

The role of International Law is to address externalities between states and coordinate their behavior towards the position that maximizes their welfare. This purpose can be achieved through the regulation of common areas of interest (such as trade, environment and immigration) and reducing transaction costs in their communication. An international agreement is a way of establishing communication between countries and reducing transaction costs. For instance, if two or more states have already established a rule regarding environment, when a situation of stress or conflict arise, these countries will not need to incur in the costs of discussing the matter and a possible penalty, if that was object of an international agreement.

On the other hand, international agreements have their own externalities, such as transaction costs, information asymmetry, bargaining power and enforcement. First, treaties involve transaction costs, as all contracts. According to Cooter and Ulen[19], transaction costs (such as costs to find a partner, negotiate the terms, draft the contract and force compliance) can be so high that prevent the parties to reach an agreement:

> Making a contract involves seeking partners, negotiating the conditions, drafting the contract and having it enforced. Search requires effort; trading takes time; writing requires knowledge of the cause; and getting the contract done requires perseverance. In many contracts, these transaction costs are small compared to the surplus resulting from the cooperation. In fact, sometimes these transaction costs are high enough compared

[18] AAKEN, Anne van. Op. Cit.
[19] COOTER, Robert; ULEN, Thomas. Op. Cit. p. 231.

> to the surplus to the point of stopping cooperation. (Free translation)

Transaction costs, in Ronald Coase's view[20], would be disincentives to trading, as successful trading would be a consequence of the efficient use of resources:

> In order to carry out a market transaction it is necessary to discover who it is that one wishes to deal with, to inform people that one wishes to deal and on what terms, to conduct negotiations leading up to a bargain, to draw up the contract, to undertake the inspection needed to make sure that the terms of the contract are being observed, and so on. These operations are often extremely costly, sufficiently costly at any rate to prevent many transactions that would be carried out in a world in which the pricing system worked without cost.

In addition, informational asymmetry can have a number of origins, such as the withholding of information by the parties, who wish to obtain advantages in the negotiation, the impossibility of understanding the information transmitted by the other party, or it may be a result of the transaction costs, as the transmission of information represents a cost. In this sense, the transmission of information would not be rational when the costs of obtaining the information exceeded the benefits expected by the parties from that legal transaction. This is the understanding of Mackaay and Rousseau[21]:

> Economic theory predicts that rational agents, in order to minimize accidents of course in the celebration and execution of contracts, given the probability of their occurrence, will adopt all precautions that cost less than the inconveniences they can avoid.

In order to enter into an agreement, states must communicate, negotiate, draft the clauses and embody the results in a document. All these steps are extremely though when it involves a powerful nation that can make its interests prevail or that have a higher bargaining power. In this sense, the process

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[20] COASE, Ronald H. The Problem of Social Cost. *The Journal of Law and Economics*, 1960, p 15.

[21] MACKAAY, Ejan; ROUSSEAU, Stéphane. Op. Cit. p. 414.

can be costly to non-developed countries, especially when there is a dependence relationship between the states involved. Finally, the enforcement of the agreement can also be a relevant issue, as it represents a cost that most countries do not want to pay.

## PART II – THE ECONOMICS OF INTERNATIONAL AGREEMENTS

### A) CODIFICATION OF INTERNATIONAL LAW: TREATIES AS INCOMPLETE CONTRACTS AND FACTORS INVOLVED IN INTERNATIONAL AGREEMENTS

From the Law and Economics standpoint, international agreements are like incomplete contracts, once they involve transaction costs and also the states' interest to (or not to) regulate specific issues and certain behaviors. According to Law and Economics, contracts are always incomplete and subject to the change by the events and circumstances, as the contracting agents can change their will, they can be unaware of a given information or a new fact prevents them from acting as previously agreed.

It is impossible to assume all the events that may occur between the parties, especially when it comes to future facts and circumstances. In the case of International Law, this conclusion is easily verified, once treaties are designed to last for a long period of time, in which the facts and events, or even the will of the parties, may change. This is Anne van Aaken's lesson[22]:

> Changing conditions are a prevalent characteristic in international law, since most contracts are made with a long-term perspective in mind. […] International law is incomplete due to its long-term nature and multilateral character and often lacks specified sanctions for non-compliance. It is therefore paradigmatic for incomplete and difficultly enforceable contracts,

[22] AAKEN, Anne van. Op. Cit. p. 460.

> which makes a consideration of implicit agreements and social norms even more necessary.

The conditions of uncertainty compromises the effectiveness of the agreements in the long-term perspective, once states may experience a change in the decision-maker or in the interests regarding that specific matter that is regulated in the agreement. In view of this, scholars argue that agreements should allow efficient adjustments in order to remain valid and effective.

According to Alan Sykes, agreements should foresee a possibility of withdrawal, perhaps after a period of notice, the terms for a future renegotiation, or even the possibility for the state to breach the obligation at a certain price, allowing an efficient breach. However, as highlighted by the author, these alternatives are not free from criticism:

> Some treaties will address the problem simply by providing for the possibility of withdrawal, perhaps after a period of notice (the SALT treaty, for example). But many treaties address a broad range of issues, and changes circumstances may justify only a modification of the bargain, but not a complete end to it. Accordingly, treaties may contain provisions providing for the renegotiation of parts of the bargain or may specify contingencies under which states may deviate from their prior commitments. A treaty may provide that a party can breach its obligations at a price, which if set correctly can facilitate "efficient breach"[23].

However, even though the breach of international agreements can be efficient from the economic standpoint, it might affect the reputation of the country for future negotiations. In this sense, the breach should not be seen as an alternative, although economically viable, as it has the potential to influence the trust between the parties. This is the understanding of Gustavo Ferreira Ribeiro and José Guilherme Caiado[24]:

> When State observes (fulfills) a treaty, it conveys a message that it has a willingness to honor its obligations. That good

[23] SYKES, Alan O. Op. Cit. p. 772.
[24] RIBEIRO, Gustavo Ferreira; CAIADO, José Guilherme Moreno. Op. Cit. p. 253.

> reputation would be valuable in making more credible and less costly new commitments to that state. Put simply, one believes one has a good reputation, and the other is true.

In Anne van Aaken's view, a trade-off arises from strong commitment devices *ex ante* and flexibility *ex post*, in order to uphold the efficiency of the agreement. On one hand, precise terms ensure credible commitments and give less space for interpretation, but on the other hand, hard terms might lead to outcomes less desirable for the parties in face of a change of conditions. The author concludes:

> Anticipating this, the parties would want to incorporate flexibility to adjust the investment whenever future circumstances render the investments no longer profitable (for either side). More flexibility in turn leads to a weakening of the credibility of the parties *ex ante*. Under RC [rational choice] assumptions, flexible contracts often are preferable to rigid ones[25].

In addition to the fact that agreements might be adjusted to future circumstances and events, it is important to highlight that international agreements can be hampered by the high transaction costs for negotiating and writing the clauses. According to William Aceves, transaction costs will have a significant impact on whether states choose treaty law or customary international law in the development of international institutions[26].

In Andrew Guzman's lesson, the failure to reach an agreement can be described as an inability to overcome transaction costs. In his view, a possible solution would be to identify other states that may have interest to join the agreement and offer sufficient transfers to persuade the non-participants that joining the agreement is in their best interest[27]. Andrew Guzman's idea is connected with the solution proposed by Alan Sykes,

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[25] AAKEN, Anne van. Op. Cit. p. 461.

[26] ACEVES, William J. The Economic Analysis of International Law: Transaction Cost Economics and the Concept of State Practice. *Journal of International Economic Law*, University of Pennsylvania, v. 17, n. 4, 1996, p. 995-1068.

[27] GUZMAN, Andrew T. The Consent Problem in International Law. *Berkeley Program in Law and Economics*, Working Paper Series, 2011. Available at http://escholarship.org/uc/item/04x8x174.

consisting of issue linkage.

Alan Sykes argues that the linkage of matters can greatly expand the scope of the treaties, and, therefore, facilitate the negotiation between states. It would be a mechanism to conclude treaties, due to the wider range of bargaining, and a tool to induce compliance, once it would be possible to link, for instance, a rule on human rights to a trade agreement[28]. The author exemplifies his understanding:

> The general lesson is that issue linkage in international negotiations can greatly expand the scope of possible agreements. A likely recent example is the Agreement on Trade Related Aspects of Intellectual Property (TRIPs) in the WTO. Developing nations, which are primarily consumers rather than producers of intellectual property, were induced to agree to strengthen their intellectual property laws in ways that would confer considerable rents on foreign right holders in exchange for concessions on other trade issues such as textiles and agriculture[29].

On the other hand, increasing the number of matters covered by the agreement implies that the states must negotiate these issues, which increases the transaction costs of negotiation. In addition, such negotiations may give rise to domestic political deliberation on the matters discussed. In this sense, although issue linkage can be the element that allows the completion of an international agreement, it can also undermine the process if the transaction costs are great enough to exceed the expected benefits for the parties.

An emblematic example of an international agreement is the one entered into by Brazil and the United States, which ended a dispute of several years on the World Trade Organization (WTO) over the legality of US subsidy programs that affected Brazilian cotton exporters. In the context of WTO, Brazil is considered a very active country when it comes to participation in litigation, once initiated twenty-four (24) cases until 2010, which is a high number given the relevance of the country

[28] SYKES, Alan O. Op. Cit.
[29] SYKES, Alan O. Op. Cit. p. 769.

in international trade and in comparison with other developing countries.

Initially, it is important to highlight that the creation of a dispute settlement body within the scope of the World Trade Organization encouraged the participation of developing countries, which demonstrate the importance of the organization to maintain a certain level of balance between the interests of developed and developing countries. The increase of the cooperation among developing countries in the formation of the WTO's agenda is interpreted by many scholars as a crucial element for the success of the dispute settlement body. According to Ivan Tiago Machado Oliveira[30]:

> Since the creation of the WTO, and with the consequent institutional improvement of the system, there has been an increase in the participation of developing countries as demanders in matters related to agricultural products, beverages, textiles, steel and other manufactured goods. From 2001 to 2008, developing countries stood out as plaintiffs in actions in the WTO dispute settlement system, with a significant decline in US and European Union (EU) performance. (Free translation)

An example of this is the fact that, until 2010, the cases initiated by Brazil in the WTO were against the United States (42%) and the European Union (25%)[31], demonstrating that the dispute settlement body can be an alternative to regulate disputes between nations with different bargaining power and importance in the context of international trade. In the case involving cotton litigation, the advantage was to secure concrete financial compensation for cotton producers in Brazil, in the amount of US$ 300 (three hundred) millions of dollars.

The dispute was set after decades of losses to Brazilian cotton producers due to the heavy subsidies provided by the

[30] OLIVEIRA, Ivan Tiago Machado. A atuação do Brasil no sistema de solução de controvérsias da OMC: o caso do contencioso do algodão contra os EUA. *Boletim de Economia e Política Internacional do Instituto de Pesquisa Econômica Aplicada (Ipea)*, n. 2, abr. 2010. p. 19.

[31] OLIVEIRA, Ivan Tiago Machado. Op. Cit.

United States to agricultural production. For this reason, the cotton produced in the United States was protected and its production stimulated, causing damages to international competitors. With the purpose to challenge the legality of such subsidy programs, Brazil initiated a proceeding in the WTO in 2002. Even though Brazil succeeded in two instances (in 2004 and 2005), the United States did not comply with the WTO's decision, which granted the right of retaliation to Brazil[32].

However, what is emblematic on this case is that Brazil had the opportunity to take measures in order to force the United States to comply with the WTO's decision, by means of retaliation, but chose to negotiate instead. This option made many people question the reason why Brazil chose not to retaliate in the United States, some even in a certain critical tone. Regarding this positioning, Welber Barral and Renata Amaral[33] indicate that an understanding was the best outcome that the parties could achieve in the case at stake:

> After months of studies and meetings, the negotiators involved and Itamaraty were convinced that understanding was the best solution for Brazilian producers. This is because the changes made in the GSM-102 program (especially that the US will not offer guarantees for export credits with a term greater than 18 months) are not only applicable to cotton, but to all agribusiness.
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> Clearly, like any compromise solution, the understanding does not address all of Brazil's complaints, but it was the best solution that could be achieved after a struggle and unique negotiations in Brazilian history. (Free translation)

Gustavo Ferreira Ribeiro and José Guilherme Caiado[34] indicate that the reasons why states enter into agreements are the same reasons that lead private actors to sign contracts, which are the expected gains from cooperation:

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[32] BARRAL, Welber; AMARAL, Renata. Fim do contencioso do algodão: lições de uma disputa na OMC. *Revista Brasileira de Comércio Exterior (RBCE)*, n. 122, jan./mar. 2015.

[33] BARRAL, Welber; AMARAL, Renata. Op. Cit. p. 15

[34] RIBEIRO, Gustavo Ferreira; CAIADO, José Guilherme Moreno. Op. Cit. p. 251.

> But in considering the State (unit of analysis) as a rational being, parallels will be possible to understand the meaning of rational action. For example, if one considers the reasons to which states treat treaties, as Guzman suggests, States celebrate treaties for the same reason that individuals enter into contracts: to obtain a cooperative surplus and to secure the course of present and future conduct. (Free translation)

In the case of cotton litigation, Brazil was allowed by the WTO to apply retaliation measures against the United States, but made an assessment that it would be more advantageous to enter into an agreement rather than retaliate. According to the information provided in the Brazilian government's official website, retaliation could have negative consequences for Brazil, in addition to the fact that the cotton producers would not be directly benefited, which would not solve the problem in question[35]. Another factor that may have influenced the decision not to retaliate is the fact that the retaliation itself represent a cost, and does not represents the certainty of an efficient result.

The outcome of the cotton litigation is relevant because illustrates the Coase Theorem. In an initial analysis of the matter, it is important to highlight the conclusion that, when transaction costs equals zero, the efficient use of the resources will result from the negotiation between the parties, regardless of its initial allocation (as both parties will have the same bargaining power, for instance, due to the absence of transaction costs). In practice, however, we know that there are no situation in which transaction costs are zero, and this results in the fact that the parties may wish to enter into agreements to perceive gains and mutual benefits. In this sense, Alan Sykes[36] conceptualizes well the theorem by explaining:

> One would expect international agreements to exhaust

[35] PORTAL BRASIL. Brasil e Estados Unidos encerram disputa sobre algodão. Disponível em: <http://www.brasil.gov.br/economia-e-emprego/2014/10/contencioso-entre-brasil-e-estados-unidos-e-encerrado>. Acesso em: 29 de jan. 2017.

[36] SYKES, Alan O. Op. Cit. p. 768.

> potential joint gains from solving externality problems only to the degree that those gains remain after all transaction costs have been accounted for in the calculus (which must be understood broadly to include not only monetary costs of achieving agreement but all factors that affect the political acceptability of agreement. […] Trivially, agreement can only arise if some agreement lies in the core of the bargaining game – each state that becomes party to an agreement must perceive itself better off than by refusing to participate […]

According to the excerpt above, the two main elements that influence the signing of international agreements are the expectation of mutual gains and the conclusion that the agreement will improve the country's position on the subject under discussion. In the case of cotton litigation, one can say that both elements were present and led to the decision of entering into an agreement with the United States, mainly because it was a situation involving high transaction costs (arising from the facts that the dispute involved a developed and a non-developed country and that the subsidies provided by the United States to agricultural production was causing damage to Brazil in the context of international trade).

Obviously, Brazil would not have entered into such agreement if verified the possibility to stay in a worse or equivalent position in comparison to the period prior to the agreement, which reinforces the conclusion that it was probably the best solution for that impasse. In this sense, Alan Sykes[37] brings in his work an illustrative example:

> For example, imagine two states, one of which contains a monopoly producer and exporter of widgets, and the other of which is a consumer of widgets with no monopoly power over any tradable good or service. The monopolist exploits its market power with the familiar deadweight losses, although much of its monopoly profit comes as a transfer from consumer abroad. Global welfare would increase if each state pursued a sensible anti-monopoly policy. But if the two states try to strike a bilateral agreement that merely requires each of them to adopt

[37] SYKES, Alan O. Op. Cit. p. 768-769.

> an anti-monopoly policy, the state with the export monopolist may well object that such an agreement leaves it worse off than without it.

International agreements were reached in a number of areas (such as trade and investments), but it seems that, in many other fields, the externalities were not properly discussed and addressed through treaties, as happens with issues related to immigration and human rights. So, as questioned by Alan Sykes, "[w]*hat explains these various 'successes' and 'failures'?*"[38]. The answer to this question may be linked with the transaction costs of international agreements, which can be high enough to prevent the discussion to move forward. When it comes to issues involving finance, investment and profit (such as the cotton litigation), the mutual benefits of an international agreement may be more palpable and immediate, encouraging the parties to incur the transaction costs necessary for their success.

## B) ENFORCEMENT AND DISPUTE RESOLUTION

When it comes to contracts entered into by private actors, the parties rely on state enforcers to hold them up to their commitments or to award damages in case of a breach. However, when it comes to international agreements, the scenario is different. In spite of the fact that use of military force and seizure of assets can be applied in the context of international relations, they are not part of the enforcement mechanisms of most agreements.

According to Andrew Guzman[39], the signature feature of International Law is lack of coercive enforcement:

> Most international legal obligations come without coercive enforcement and the international legal system works because these obligations sometimes succeed in changing the behavior of states. […] In the face of security threats, countries are likely

[38] SYKES, Alan O. Op. Cit. p. 768.
[39] GUZMAN, Andrew T. Op. Cit. p. 42.

> to prioritize their own narrow interests above compliance with international law. Without a credible threat to authorize the use of force, many Security Council resolutions will fall on deaf ears.

In this sense, the challenge of international agreements is to force states to comply with the obligations assumed, once the parties cannot rely on a third party with enforcement powers over the sovereignty of the states involved. Even in cases in which there is a third party involved (such as the WTO), it is not unusual that it will only authorize retaliation and measures to enforce compliance, but this actions will be put into practice by the concerned country, as happened with Brazil in the cotton litigation.

However, the cotton litigation is relevant because authorized the use of cross-retaliation mechanism, which was justified in light of the nature and gravity of the violations committed by the United States, including the maintenance of the subsidy programs, although at odds with the decision rendered by the WTO. The cross-retaliation allows the country to apply the sanction in segments other than the sector involved in the dispute, if the desired compensation is not obtained.

Another issue that must be highlighted is the fact that retaliation represents a cost to the country involved, not only monetary costs related to the retaliation itself, but also the costs (direct and indirect) of a possible counter-retaliation[40]:

> The costs of retaliation must, however, also be borne in mind.

[40] In this sense, Micaela Ferreira highlights: "Even the winning country in a dispute may end up harming its own interests, or segments of its domestic industry, through the so-called boomerang effect, causing, for example, the vanquished country to seek out other trading partners, causing a shrinkage in the trade flow between the two countries in areas that were not intended to be". (O sistema de solução de controvérsias da OMC: lições do contencioso do algodão (Brasil - EUA). In: LOBATO, Anderson Orestes Cavalcante; OLMO, Florisbal de Souza Del; FERREIRA, Gustavo Assed (Coords.). *XXV Encontro nacional do CONPEDI*: Direito Internacional I. Florianópolis: CONPEDI, 2016. Disponível em: <http://www.conpedi.org.br/publicacoes/y0ii48h0/j152b899/deZm8I0c429BL1x2.pdf>. Acesso em: 29 de jan. 2017. p. 412; free translation).

> In order to minimize them, it should be noted that retaliation must be made in such a way as to make it less difficult to access important inputs and the purchase option of the Brazilian consumer, especially of basic necessities. [...] It should be highlighted that any counterfactual threat posed by the US in disregard of multilateral rules would call into question the credibility of the WTO as a regulator of international trade[41]. (Free translation)

According to Chad Bown and Joost Pauwelyn[42], the WTO system for solution of controversies is problematic and imposes adverse effects on countries that apply the authorized retaliation, which can be especially harmful for developing countries:

> A further concern with retaliation through the withdrawal of tariff concessions is that the remedy may, in fact, have detrimental effects on consumers and economic welfare in the retaliating member. It has been commented that '[p]erhaps the biggest disadvantage of WTO sanctions is that they bite the country imposing the sanction'. Others rue that the suspension of concessions goes 'against the very trade liberalizing principles that GATT/WTO system stands for' and is 'bad policy' that amounts 'shooting oneself in the foot'.

However, as indicated by Micaela Fernandes at the publication of CONPEDI[43], although the WTO system for solution of controversies foresees punishment mechanisms, it contains characteristics of the diplomatic relations' system. The purpose is conciliatory and multilateral, in the sense that a consensual solution is preferable and that the decisions aim to eradicate attitudes of the states in the context of the international trade, and not only to solve the inter-party dispute. The work of Ivan Tiago Oliveira[44] brings important data regarding this issue:

> Out of a total of more than 400 cases initiated until this date,

[41] OLIVEIRA, Ivan Tiago Machado. Op. Cit. p. 25.
[42] BOWN, Chad P.; PAUWELYN, Joost. *The Law, Economics and Politics of Retaliation in WTO Dispute Settlement.* Nova Iorque: Cambridge University Press, 2014. p. 322.
[43] FERNANDES, Micaela Barros Barcelos. Op. Cit.
[44] OLIVEIRA, Ivan Tiago Machado. Op. Cit. p. 25.

> retaliation in the case of cotton litigation against the US is the fifth to be authorized by the WTO Dispute Settlement Body. As can be seen in table 5, only US, EU, Canada and Japan, as plaintiffs, have already retaliated, with the US or EU being accused in cases. Some members have already been authorized to retaliate but did not perform it, basically because they found room for negotiation and reached an agreement with the defendant: Brazil (in two cases: against Canada in the case of aircrafts and in the case involving the Byrd Amendment against the USA), Chile, India, South Korea, Mexico, Ecuador and Antigua and Barbuda. (Free translation)

Because of the costs and risks involved in a retaliation process, Brazil understood that it would be best to enter into an agreement with the United States, in order to put an end to the cotton conflict, even if authorized by the WTO to do otherwise. However, the same issues also affect international agreements when one party refuses to comply with the obligations assumed.

Alan Sykes proposes some alternatives to solve the enforcement problem that affects international agreements, which can be further discussed and developed by scholars. One mechanism proposed by the author is the hostage exchange, which consist of mutual threats. The hostage exchange can be explained from a theoretical example:

> The paradigm example of the hostage exchange involves a hypothetical peace treaty between warring kings. Each king sends a son to live in the other kingdom, with the understanding that if he attacks the kingdom his son will be killed. Both kings value their sons' lives more than any possible gains from aggression, and so peace is sustained[45].

Obviously, the exchange of human hostages and death threats do not apply to modern standards, but analogous situations may arise, such as rules of ambassadorial immunity. In the cotton litigation, Brazil was authorized to retaliate in the sectors of services and intellectual property, as it would not be effective to adopt sanctions in the area of goods, in the form of tariff increases. However, the United Stated threaten to counter-retaliate

[45] SYKES, Alan O. Op. Cit. p. 774.

Brazilian products, which would be harmful to Brazil. In this sense, it is possible to verify that the hostage exchange mechanism might be effective only in situations in which both countries have the same bargaining power (the same advantages from complying and run the same risks in case of non-compliance). In Alan Sykes' theoretical example, it would not be effective if only the son of one of the kings lived in the neighboring kingdom, as this would not prevent attacks on his own kingdom, and this situation is quite similar to what happened to Brazil in the cotton litigation.

Another mechanism proposed by Alan Sykes is the application of international sanctions: "[f]or example, if state A violates its obligations under a Nonproliferation Treaty, state B might impose a sanction in the form of a suspension of trade relations"[46]. However, as previously referred, when the sanction is imposed by the country itself, it represents costs and risks, such as counter-retaliation and the possibility of incurring in losses in other segments. For instance, in the example above, if state B applies a suspension of trade relations, state A might establish relations with another country in such segment, jeopardizing the resumption of relations with state B after the suspension is finished.

Alan Sykes also discuss the reputation factor involved in the compliance with international agreements, in the sense that states prefer to enter cooperative agreements with other states that will honor them. Thus, states would think twice before breaching an international agreement, as it might affect future relations and treaties[47].

However, when it comes to agreements entered into by states with different bargaining power, the reputation factor becomes almost irrelevant in comparison with the other factors and advantages involved in signing an agreement. In the cotton

[46] SYKES, Alan O. Op. Cit. p. 775.
[47] SYKES, Alan O. Op. Cit.

litigation, Brazil did not apply retaliation measures, as it would be more beneficial to settle the situation (not only because the cotton producers would not benefit from retaliation, but also given the possibility of counter-retaliation), and it seems that the reputation of the United States – whatever it was – would play an insignificant role in that context.

However, it is not clear how reputation survives through time and to what extent reputation crosses over other issues and interest (such as trade or military security). Anne van Aaken criticizes the reputation factor based on the conclusions that (i) different states perceive actors and situations differently; (ii) states can have reputation for different things (for instance, being a good global citizen or being compliant with international law); (iii) behavior is attributed to a given situation and reputation might not be affected (situational attribution does not have cross-situation validity); and (iv) states will try to influence of justify its behavior, as they do not want to be seen as "bad guys"[48]. The author concludes:

> In short, there are many biases and heuristics that may impact a state's reputation. Awareness of this might lead states to alter their communication strategies (for example, in front of international courts). Are there any mechanisms that allow states to strengthen the reputational mechanism? In order to reduce the informational deficit in the international system, mechanisms for better fact-finding and monitoring could be introduced. Although many treaties already contain such mechanisms, treaty makers should be more aware of the importance of those for effectuating the reputational mechanism. Furthermore, over-attribution can be attenuated by accountability mechanisms, that is, the need to justify one's causal inferences by giving reasons for those inferences[49].

In summary, we can conclude that, even with the valuable contributions of the scholars, the reality is that enforcement is still a problematic issue involving international agreements.

[48] AAKEN, Anne van. Op. Cit.
[49] AAKEN, Anne van. Op. Cit. p. 479.

The problem is aggravated by the fact that states have different bargaining power and are affected by information asymmetry, which makes agreements between developed and non-developing countries sometimes not fair or effective.

## CONCLUSION

The codification of International Law, which produces a system of standard and rules, with greater or less degree of detail and binding, consists of an effective mean to reduce transaction costs resulting from international relations. Even though international agreements will always be comparable to incomplete contracts, the presence of established rules will contribute to the reduction of the transaction costs when a situation of crisis or conflict arises.

However, the equilibrium without international cooperation will only achieve an optimal level of efficiency in the absence of externalities, which is not the real context of international relations, considering that states have different bargaining power and access to information, especially when the situation involves developed and developing countries. In this sense, the purpose of International Law is to enable states to commit to a behavior that will move them closer to what the economists call the Pareto frontier, which is when it is not possible to improve one agent's situation or, more generally, the utility of such agent, without degrading the situation or utility of any other economic agent.

This paper aimed to demonstrate that international agreement has advantages (such as reducing the transaction costs resulting from international relations and address externalities in order to benefit the state on key issues), but also represent challenges, once states have different bargaining power and information, the negotiation and drafting of an agreement represents costs, and enforcing obligations can be problematic. In this

sense, Law and Economics can contribute to International Law in identifying possible solutions and alternatives to solve these issues, adding the economic point of view to the discussions.

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