

On Economic Analysis of International Law

ANALYSE ECONOMIQUE DE LA LOI INTERNATIONALE

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Abstract: The economic analysis of international law is the new development of international law theories in last decade. Based on existing references, this thesis intends to promote application of economic analysis of international law in China with pluralistic ways of research (for examples, political, legal and economic) in order to understand the contemporary issues of international law and to have new ideas. The part I is a brief comparison between domestic and international laws from economic perspective, and then a description of applicable economic analysis for international law with an emphasis of its theoretical and practical significances. The part II is focused on Coase's Law & Economics as the basis of economic analysis of international law. The part III to V provide with a few examples of economic analysis of international laws, i.e. law of international economic organization, international environmental law and international humanitarian law. The conclusion is given finally.

Key words: theory of international law, economic analysis, law of international economic organization, international environmental law and international humanitarian law

Résumé: L'analyse économique de la loi internationale est le nouveau développement des théories de la loi internationale dans la dernière décennie. Basé sur des références existantes, cette thèse tente de promouvoir l'application de l'analyse économique de la loi internationale en Chine avec des méthodes de recherche pluralistes (par exemple, politique, légale et économique) afin de comprendre les problématiques contemporains de la loi internationale et de s'en faire de nouvelles idées. La partie I procède à une comparaison brève entre les lois domestiques et internationales sous l'angle économique et à une description des analyses économiques applicables aux lois internationales en mettant l'accent sur leurs significations théoriques et pratiques. La partie II se concentre sur la Loi de Coase & Economie qui sert de base d'analyse. De la partie III à la partie V, on trouve des exemples de l'analyse économique des lois internationales, par exemple, la loi internationale de l'organisation économique, la loi internationale de l'environnement et la loi internationale humaniste. Enfin, la conclusion est dégagée.

Mots-Clés: théorie de la loi internationale, analyse économique, loi internationale de l'organisation économique, loi internationale de l'environnement et loi internationale humaniste

1. INTRODUCTION

It could be traced back 1930s when the economic analysis was applied for domestic laws.² It has been more than thirty years since Richard Posner published his famous book *Economic Analysis of Laws* in 1973.³ But, it was the recent development in last decade that economic analysis was applied for international laws. In spring of 1995, a symposium was held in the United States to discuss the economic analysis of international laws, and then the collection of seventeen papers was published entitled as *The Economic Dimension of*

*International Law*⁴ focused on international trade laws from perspectives of micro-economics, normative economic analysis, game theory and theory of public choice. As the matter of fact, people began to apply economic analysis for international law when the World Trade Organization (WTO) was established in 1995 due to global harmonization of the trade laws and policies. For example, Professor John Jackson, the chief editor of book *Legal Problems of International Economic Relations*⁵, was widely regarded as one of the institutional designers of the WTO. He prefers economic analysis of legal issues in respect of government regulations of international trade based on traditional theory of comparative advantages and modern theory of market failure. He encourages applying the New

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² See Edmund W. Kitch ed., 'The Fire of Truth: a Remembrance of Law and Economics at Chicago, 1932-1970', *Journal of Law and Economics* Vol. 26 (April 1983).

³ See Richard A. Posner, *Economic Analysis of Law*, Little, Brown and Company, 1973.

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⁴ See Jagdeep S. Bhandari and Alan O. Sykes ed., *Economic Dimensions in International Law: Comparative and Empirical Perspective*, Cambridge University Press 1997.

⁵ John H. Jackson, William J. Davey and Alan O. Sykes ed., *Legal Problems of International Economic Relations*, 3rd edition, West Publishing Co., 1995.

Institutional Economics of two winners of Nobel Rewards of Economics, Professor Ronald Coase and Professor Douglas North, for the research of future development of the world trading system.⁶ John Jackson's idea has been taken to initiate "the revolution of international economic law" because of its implication of theories of transaction costs and institutional evolution for study of international economic law.⁷ In 1999, two American international lawyers, Jeffery L. Dunoff and Joel P. Trachtman contributed their landmark article on economic analysis of international law with more applications of economics of transaction costs, theory of games and economics of information for the legal disciplines of international treaty and international organization,⁸ which was of great significance for its extension to the wide coverage of international laws although its focus was still on international economic relations. In July 2004, Professor Alan O. Syke, the co-editor of mentioned books *The Economic Dimension of International Law* and *Legal Problems of International Economic Relations*, presented his paper on economics of public international laws at the seminar of Law & Economics held by Chicago Law School. It extends economic analysis further into many subjects of public international laws such as protection for human rights.⁹ Therefore, it seems to the Law & Economics scholars that there are no limitations in applications of economic analysis for international laws.

It has been more than 20 years since the Law & Economics was introduced into China. The first seminar on Law & Economics held in Beijing in spring of 1988 remarked the real steps into this academic field of mutual disciplines by Chinese scholars.¹⁰ In 1990s, many books on Law & Economics were published by Shanghai Sanlian Publishing House, such as Chinese translations of Coase *The Firm, the Market and the Laws* (1990), Coase *The Institutional Structure of Production* (1994), Cotter and Ulen *Law and Economics* (1991), Shen Hong *Division of Labors and Transaction* (1992), Zhang Jun *Modern Economics of Property Rights* (1991) and my book *Economic Analysis of Law* (1995). In recent years, younger scholars with dual academic backgrounds of economics and laws made new contributions.¹¹ Some new translations have been published, in particular, on

economic analysis of special laws.¹² But, it is unknown yet so far for publication on economic analysis of international laws in China. Therefore, this thesis is written based on existing references outside China in the hope to promote economic analysis of international law in China with pluralism of methodology. The part I will discuss the applicable economic analysis for international laws in comparison with domestic laws; the part II is focused on Coase theory of Law & Economics with its application for international laws; the part III to V will give a brief economic analysis of international organization laws, international environmental laws and international humanitarian laws; finally, the conclusion will be given.

2. ECONOMIC ANALYSIS OF INTERNATIONAL LAWS: APPLICABILITY AND SIGNIFICANCE

It is applicable to analyze both international and domestic laws from economic perspective because they share some similarities. It is controversial whether there should be a dualistic or monistic system between international laws and domestic laws. The pure theory of law believes that both international and domestic laws have binding forces with legal norms implemented for each other; therefore a universal legal system should be established to unify different laws of nations under the principle of international laws prevailed over domestic laws.¹³ This monism is not realistic because of its ignorance of national sovereignty. The dualistic scholars argue, "international laws and domestic laws are different legal systems", but "there are closed relations between two systems, i.e., the relations to penetrate and corporate each other."¹⁴ Generally speaking, Chinese scholars stand with this viewpoint. It is still on debate over the relationship between international laws and domestic laws. Actually, different nations have different systems in this regard. As Professor Luis Henkin summarizes, "[T]he international system today, then, is essentially dualist in principle but it has slowly moved a few steps towards monism in practice. A state may insist on its autonomy and its impermeability but inevitably every state must order its domestic system so as to help meet its international obligations."¹⁵

My idea is dualism-oriented, but emphasizes more on the similarities between international and domestic laws

⁶ John H. Jackson, 'International Economic Law in Times that are Interesting', *Journal of International Economic Law*, Vol.3, No.1 (March 2000), p.5.

⁷ See Joel P. Trachtman, 'The International Economic Law Revolution', 17 *UPJIEL*. 33 (1996).

⁸ Jeffrey L. Dunoff and Joel P. Trachtman, 'Economic Analysis of International Law', *The Yale Journal of International Law*, Vol. 24:1 (1997).

⁹ Alan O. Sykes, 'The Economics of Public International Law', Chicago John M. Olin Law & Economic Workshop Paper No. 216 (2D Series), July 2004.

¹⁰ See the report of this seminar at *Newsletter of Legal Study* (edited by Law Society of China, Issue of June, 1988).

¹¹ See Zhang Jiangwei, *Transition, Change of Law and Comparative Law & Economics: Development of Law & Economics in China*, Beijing University Press, 2004.

¹² See Chinese translation of Frank Eastbrook and Dinal Feicht, *The Economic Structures of Corporate Law* (2005) and William M. Lands and Richard Posner, *The Economic Structure of Intellectual Property Laws* (2005).

¹³ See Hans Kelsen, *The Pure Theory of Law* (trans. by Max Knight), University of California Press, 1967.

¹⁴ Wang Tieya, ed., *International Laws*, Law Press, 1981, p.44.

¹⁵ Luis Henkin, *International Laws: Politics and Values*, Press of Chinese University of Politics and Laws, 2005, p.95.

in order to reinterpret international laws from economic perspective. Even though the international laws are different from domestic laws, there are more inter-actions to influence each other because of being increased external relations among nations and accelerated global integration in economic dimension. Furthermore, something has already been taken placed in respect of international and domestic laws. For example, the WTO laws have the binding force upon all Members' domestic implementation of "the single package of agreements"¹⁶ It is another example that International human right laws have penetrated more domestic regimes. "The national governments' behaviors and domestic institutions have been tested by the standards of the *Universal Declaration of Human Rights*. No nation can ignore these standards, and each nation gets feelings of being influenced and bound while making its domestic or foreign policies."¹⁷

Furthermore, once the origin of modern international laws is put on our agenda, these similarities will be clearer. It has been trusted that Hugo Grotius developed his theory of international law based on Roman Laws. By his first publication on freedom of sea, he argues that:

"[T]he most conclusive argument on this question by far however is the one that we have already brought forward based on the opinions of eminent jurists, namely, that even over land which had been converted into private property either by states or individuals, unarmed and innocent passages not justly to be denied to persons of any country, exactly as the right to drink from a river is not to be denied. The reason is clear, because, inasmuch as one and the same thing is susceptible by nature to different uses, the nations seem on the one hand to have apportioned among themselves that use which cannot be maintained conveniently apart from private ownership; but on the other hand to have reserved that use through the exercise of which the condition of the owner would not be impaired. It is clear therefore to every one that he who prevents another from navigating the sea has no support in law."¹⁸ Modern international laws are governing varies of relation between or among nation-states, therefore it is called as public international laws. The concept of public law comes from Roman Laws including the laws related to regulatory functions of government. In contrast, the private laws regulate the civil relation between or among persons. Roman private laws were so developed as that their inherited main idea,

i.e., just (*ius*)¹⁹, had deeply influenced the public laws. Cicero pointed out that, while he explained the Roman idea of state: "no importance is to be attached to anything which, as we suppose, has hitherto been established about the state, and that no further advance is possible, unless we shall prove both the falsity of the view which regards injustice as a necessary part of government, and the truth of the view which regards a high degree of justice as essential if the state is to function at all."²⁰

If we compare public international laws with domestic civil laws in respects of frameworks and conceptions, we can find many similarities such as international personality with law of persons, territory with law of property, international treaty with law of contract, peaceful settlement of international dispute with law of action (civil litigation).

The international personality is the subject of international laws. "The international personality has legal statue in international laws, meaning that it is the subject of international law, therefore it has the rights, obligations and powers under international laws."²¹ We can find its original model of legal personality in domestic civil laws. Under Roman Laws, a person as civil subject is free to enjoy rights and to take obligations. In modern civil laws, there is no such distinguish of free man or not. Any natural person at statutory age of adult would enjoy all civil rights and take obligations accordingly. The legal person such as business organization has statutory rights and obligations. Therefore, the personality means that any natural or legal person has existed with legal status. A nation-state, an international organization and even an individual in some cases such as protection for human rights shall be treated as international personality after having existed no matter how to be recognized.

The object of international law is national territory including its territorial soil, territorial sea and national space, which are the physical scope for nation-state to exercise its sovereignty. It is similar with property in the sense of domestic civil laws. Any property would be treated as object, by which civil subject can enjoy rights and take obligations. In accordance with Roman Laws, there are three basic categories of property, i.e., private property owned by individual person, public property by particular group or common property by all, and thing by no one (*res nullius*, which would be occupied by person or group as property with owner). Any property rights are exclusive. "Nation-state has the exclusive jurisdiction

¹⁶ See Zhang Naigen, 'On Relation between the WTO and Domestic Laws: Example of Dispute Settlement of the WTO', at *Relation between International Treaties and Domestic Laws* (Edited by Zhu Xiaoping and Huang Lie), World Intellectual Press, 2000, p.111.

¹⁷ Gudmundur Alfredsson and Asbjorn Eide ed., *Universal Declaration of Human Rights: A Common Standard of Achievement*, (Chinese translation), Shichuan People's Press, 1999, p.1.

¹⁸ Hugo Grotius, *The Freedom of the Seas, or the right which belongs to the Dutch to take part in the East India trade*, (Chinese translation) Shanghai People's Press, 2005, pp. 45-46.

¹⁹ *Iustiniai Institutions* (Chinese translation), Press of Chinese University of Politics and Laws, 1999, p.11.

²⁰ Cicero, *On the Commonwealth* (trans. by Gerge Holland Sabine and Stanley Barney Smith), Macmillan/Library of Liberal Arts, 1976, p.194.

²¹ Sir Robert Jennings and Sir Arthur Watts, *Oppenheim's International Law* Vol. I part I (Chinese translation) Encyclopedia Press, 1995, p.91.

over its territory under international laws.”²²

In principle, the law of treaty is identified with contract laws. “Treaty is an agreement between two or among more international personalities to create, or to change, or to terminate their rights and obligations accordingly on the consensus.”²³ The Preface of *Vienna Convention on the Law of Treaties* makes it clear that:

“the principles of free consent and of good faith and the *pacta sunt servanda* rule are universally recognized.”²⁴

In comparison with Article 1101 and Article 1134 of the *Napoleon Code (French Civil Code)*, which provide respectively that “Contract is an agreement and accordingly, one or more persons will be obligated to pay others, or to do something, or not to do something,” and “the contract must be carried out in good faith”,²⁵ there are no essential differences between treaty and contract in regarding legal ideas and rules.

When Grotius created his theory of international laws, he firstly analyzed the war as the mean to settle disputes between or among states, and then followed discussion on laws of peace. It is similar with the logic of *Twelve Tables* of ancient roman laws, which put the procedures of civil litigation first and followed some substantial rules.²⁶ After its growing, Roman Laws were made of four books, i.e., the laws of person, the laws of thing, the laws of obligation and the laws of action. It is same for international laws to be changed after growing, which means that the laws of peace became the first part before the laws of war or of peaceful settlement of international disputes.

It needs no more comparisons in detail for us to believe that international laws, originated from western legal cultures, naturally share some basic ideas and conceptions with domestic civil laws. That is the solid legal basis for us to apply economic analysis of domestic laws for international laws.

Economic analysis of international law implies some changes of ideas and methods for international law study. In early 17 century, Grotius learned from Roman jurists to create new ideas of justice for justification of war with the goal of peace, and to develop his theory of modern international law. His theory took the jurists-orientation with mixture of theories of natural law and legal positivism. In later of 19 century, Immanuel Kant tried to overcome the shortcoming of Grotius’ theory of international law because of its failure to stop war forever. Kant created the idea of perpetual peace with a

preliminary norms of federation of free states, which was based on his fundamental ideas of humanitarianism with the philosophy and ethics-orientation.²⁷ Since 1950s, more international organizations have been established with the multi-purposes to harmonize different national regimes, to keep world peace and security, to promote trade and economic development as well as cultural exchanges between or among nations because peoples believe that international community needs more global governances. The current situation is similar with 1930s when economic analysis was firstly applied for domestic laws due to national governments policy to regulate market. The increased demands for economic analysis of international laws reflect the great impact of development of international organizations on contemporary international laws. That is why Coase’s theory of Law & Economics (i.e., New Institutional Economics)²⁸ has been applied for international law study since middle 1990s. Even though unilateralist has been dominating over American foreign policy since “9.11”, it is still the basic principle governing international relation through corporation and peaceful means to settle international disputes. In the view of long run, the global international organization would be put more functions.

3. THE BASIS OF ECONOMIC ANALYSIS OF INTERNATIONAL LAWS

For economic analysis of international laws, scholars have adopted different instruments such as micro-economic analysis, norm-economic analysis, and theory of game, theory of public choice, economics of transaction costs and economics of information. I think that it is more suitable to apply Coase’s theory of Law & Economics based his doctrine of transaction costs for international laws.

Professor Coase obtained his award of 1991 Noble Prize of Economics due to his remarkable thesis, “the Nature of Firm” and “the Problems of Social Costs”.²⁹ The former applies theory of transaction costs for analysis of firm, market and laws; the later takes further application of this theory for economic analysis of torts, in particular, the laws of nuisance, which makes possible for wider coverage of economic analysis of domestic laws. Coase’s theory has already been recognized as the basis of economic analysis of laws.³⁰ My thesis intends

²² See note 13, p.135.

²³ Li Haopei, *An Introduction to Law of Treaties*, Law Press, 2003, p3.

²⁴ *Vienna Convention on the Law of Treaties* [23 May 1969], *id.* p.514.

²⁵ *Code Civil Francais* (Chinese translation), ShanWu Press, 1981, p.148.

²⁶ See Zhou Nan, *The Principles of Roman Law*. ShanWu Press, 1994, pp.931-942.

²⁷ See Kant, *Perpetual Peace* (ed., by Lewis White Beck), Bobbs-Merrill/Library of Liberal Arts, 1957.

²⁸ See Zhang Naigen, *Law and Economics*, Press of Chinese University of Politics and Laws, 2003.

²⁹ See Ronald Coase, *The Firm, the Market and the Law* (Chinese Translation), Shanghai Sanlian Publishing House, 1990.

³⁰ See note 27, Chapter IV on Chicago School and Law & economics, Chapter V on Firm, Market and Laws, Chapter VI Legal Issues of Social Costs.

to apply his theory into the domain of international laws.

According to Coase's theory, the firm is different from the market in respect of institutional structure for production. Assuming that firm simply needs management costs (MC) and market needs transaction costs (TC), we would have two formulas as following:

(1) $MC < TC$ is the basic condition for firm to be survival;

(2) $MC = TC$ is the ceiling limit for scale of firm.

That is to say, a firm would be remained to organize the production if it is satisfied for $MC < TC$; in contrast, it is not efficient to enlarge the scale of firm if it appears $MC = TC$. The nature of firm is that the firm is the institutional structure of production to save the market transaction costs. The core of Coase's theory depends on its introduction of transaction costs into economic analysis, and further more, the transaction costs are inherently related to laws, because Coase believes that vertical management of firm depends on the labor contracts between employers and employees, and horizontal management of market will be impossible if there are no contracts between or among firms. Naturally, the contract laws include economic logics of transaction.

If we observe contemporary international community from the perspective of Coase's Law & Economics, we can find that there are two institutional structures governing international relations, which are similar with firm and market. In horizontal international community (*market*), nation-states as international personality with political independent and equal sovereignty evolve different activities for political, economic or cultural purposes by international agreements (*contract*), which are either expressed (*treaty*) or implied (*custom*). In particular, it needs transaction costs for any negotiation and enforcement of international treaty, which is similar with contracting for business in market between or among firms. It would reduce transaction costs, in particular, the sunk costs due to contracting interrupted, if different horizontal contracting activities are centralized in same institutional structure of international organization. But, it remains unchanged that the inter-governmental organization is essentially based on common consensus of sovereign states, which likes a firm of limited partnership. Sovereign states have limited obligations and rights under the treaties of relevant organizations. Currently, there is no international organization with the centralized powers in the institutional mode of firm with an employer to organize production. Therefore, the international community looks like one with no supreme governance. In domestic evolution from primitive society to civilized one with sovereignty, it was promoted by economic development and technology revolution. In contemporary radical changing world, the development of science and technology makes global economy more integrated. It becomes necessary for international community to establish the WTO to regulate inter-governmental trade

relations between or among the Members with its compulsory jurisdiction on their disputes. It is one of the radical changes for global governance to allocate sources of political powers in international affairs, which likes the firm, takes place of the market to allocate economic sources efficiently. It is expected that international community needs more institutional based governances in order to get better solutions for different conflicts between or among nations or regions. Of cause, we may not apply Coase's theory of Law & Economics for economic analysis of international laws. It is wise for us to explore the underlying factors of institutional changes and its future developments in the world with more organizations.

In his article "the Problems of Social Costs", Coase not only makes it clear that the legal institutions is critical important for efficient allocation of resources in the world with transaction costs, but also analyzes the legal problems of social costs from the perspective of externalities of nuisance. His contribution provides Law & Economics with solid foundation, which has been called as the Coase Theorem. Coase said: "I did not originate the phrase, the 'Coase Theorem,' nor its precise formulation, both of which we owe to Stigler. However, it is true that his statement of the theorem is based on work of mine in which the same thought is found, although expressed rather differently"³¹ He emphasizes that limitation of rights is the precondition of market transactions, and results of wealth maximization will not depend on legal decisions if transaction cost is zero. "It is the essence of the Coase Theorem"³² It is similar with negative externalities resulted from private nuisances in domestic society that one or more nations' nuisances would have negative externalities for other members of international society, which requires us find solutions to minimize social costs. International environmental law is still lack of institutional framework. Mostly, it will take domestic remedies to resolve the problems of social costs of international community if a transnational pollution has been taken placed. Law & Economics would provide with better solutions for transnational protection for environment. In same token, the humanitarian crisis would result in huge number of refugees across board, which is similar with negative externalities of transnational pollutions. How to deal with such problems? We may take economic analysis as means in this regard.

In sum, this thesis believes that transaction costs and externalities are two essential ideas of economic analysis of international laws. They are taken as the standpoints for us to consider the efficient allocation of powers to deal with the international affairs.

³¹ R.H. Coase, *The Firm, The Market and The Law*, The University of Chicago Press, 1988, p.157.

³² *Id.* p.158.

4. ECONOMIC ANALYSIS OF INTERNATIONAL ECONOMIC ORGANIZATION

The idea of political international organization was originated from Kant's *Perpetual Peace* in 1795, but the first one did not come into being until the League of Nations was established in January 1920. It was replaced by the United Nations after the World War II in 1945. It was very significant that major international economic organizations were also established (e. f., IMF in 1944 and World Bank in 1945 as twin global financial institutions). The International Trade Organization would have been established under the Charter of Havana adopted in March 1948 if it was not failed to be approved by key contracting states. These international economic organizations were assumed with strong political functions, as professor Jackson pointed out: "[D]uring the years near the end and just after World War II, as leaders of the victorious nations began formulating postwar plans for international economic institutions, one could detect in speeches and documents a strong political goal arose from the view that the interwar economic problems were causes in part for World War II. The Great Depression, the mishandling of policy toward Germany after World War I, and other similar inter-war circumstances weighed heavily on the minds of policy-makers who wanted to design post-World War II institutions that would prevent a recurrence of these problems."³³ These international economic organizations with political functions developed in the different ways outside the United Nations. In particular, the General Agreement on Tariff and Trade (GATT) was designed as a trade agreement instead of an organization, but actually, it became a trade organization. Finally, the WTO was established in 1995 based on GATT. The evolution of world trading system implies its economic logic. This thesis will focus on economic analysis of world trading system from the GATT to the WTO, which is a strong argument for applicable Coase's theory of transaction costs.

The corner stone of world trading system is the Most-Favored-Nations (MFN) treatment for multilateral trade relations. Before the GATT was entered into force on provisional base in 1948, the MFN was taken only for bilateral and reciprocal trade agreements. For examples, the United States concluded 32 bilateral trade agreements based on reciprocal MFN with its trade partners during the period of 1934-1945 under the Congressional authorization for President to sign these executive agreements.³⁴ These bilateral trade agreements could be regarded as business contracts between firms in domestic market. It was conducted individually to negotiate, conclude and implement. The total transaction costs of these agreements were assumed very high.

Therefore, the United States and its allies, after the World War II, wanted to have a multilateral trade agreement, i.e., GATT to reduce tariff in accordance with the general and unconditional MFN, demonstrating their pursuit to minimize the transaction costs for liberal trade, because any contracting parties of the GATT shall grant MFN for any other parties unconditionally and immediately if it concluded a bilateral trade agreement with any other parties. The GATT was regarded as a standard contract for any relevant or potential firms to do their business in market with equal basis to grant any favors within a circle of contracting parties. It was the MFN to make the GATT very attractive for more trade partners and further to promote Uruguay Round for establishing the WTO. At very beginning of Uruguay Round, Prof. Jackson argued for development of world trading system based on the MFN from Law & Economics perspectives: "MFN concepts stress general rules applicable to all participating nations, which can minimize the costs of rule formation (such as the difficulty of negotiating a multitude of bilateral agreements). Some theoretical arguments incidental to the 'prisoner's dilemma' suggest that an optimum approach to avoid mutually destructive actions is to enter into an agreement that effectively restrains by any party to engage in 'exploitative' behavior. When many parties are involved (such as 96 or more member nations of GATT — note: It was in 1989), a generalized rule seems the best approach. In addition, of course, attention must be given to making the rule effective. Finally, MFN helps minimize transaction costs, since customs officials at the border may not need to ascertain the 'origin of goods' to carry out their tasks with respect to goods controlled by MFN."³⁵ It is not surprised that the MFN was one of the earliest subjects for economic analysis of international laws because of its obvious economic logic.³⁶

But, the MFN is facing big challenge due to hundreds of regional Free Trade Area (FTA) developed within the legal framework of the WTO in last decade. One of the recent WTO reports mentioned that: "there must be concern that some PTA agendas might lead the WTO in the wrong direction, as we shall discuss, but that risk should not be used to deny some potential benefits."³⁷

It includes advantages for some WTO Members to have more favors in FTA if it does not reduce any existing MFN treatments. Meanwhile, the FTA has economic logic of rapid development because the WTO has more Members, which also increase transaction costs dramatically for multilateral trade negotiation. It is not expected to have more market accessions according to the global treatment of MFN, therefore more WTO Members to pursue FTA for regional treatments of MFN

³⁵ John. H. Jackson, *The World Trading System*, The MIT Press, 1989, pp.134-135.

³⁶ Warren F. Schwartz and Alan O. Skeys, 'The economics of the most favored nation clause', see note 3, p.43.

³⁷ *The Future of the WTO: Addressing institutional challenges in the new millennium*, Report by the Consultative Board to the former Director-General Supachi Panitchpakdi, 2004, p.19.

³³ John H. Jackson, *World Trading System*, (Chinese translation), Press of Fudan University, 2001, pp14-15.

³⁴ See note 4, p.80.

as early as possible. It is clear that both MFN and FTR need us to analyze from Law & Economics.

The central pillar of the WTO is mechanism of dispute settlement, which has been running for 11 years to hand 335 cases including 95 adopted panel or Appellate Body reports and 15 authorizations to impose trade sanctions.³⁸ In the term of cases handled in a decade, it is more efficient in comparison with any other mechanisms of dispute settlement in history of international laws. It's most distinguished character is the compulsory jurisdiction on trade disputes submitted by the WTO Members similar with domestic civil procedure, which means that any respondent Member is unable to block the ways for WTO Dispute Body to handle cases including establishment of panel, review of appeal, adoption of reports and authorization to impose trade sanctions. It demonstrates the strong binding force of WTO dispute settlement, which is closer to the idea of global governance with centralized powers. The WTO Members have agreed to let Dispute Body settle any disputes under the covered agreements. It looks like employees' agreement to let an employer organize the production in firm, because "the operation of a market costs something and by forming an organization and allowing some authority (an "entrepreneur" to direct the sources, certain marketing costs are saved." ³⁹ In accordance with theory of transaction costs, it is more efficient for a centralized body to deal with something (vertical integration) under rules agreed by individual members in comparison with decentralized mode to let individuals handle something (horizontal integration). If we regard WTO Members sovereignty rights to handle governmental disputes on international trade as political equivalents of economic resources, it would have been approved by efficient mechanism of WTO dispute settlement that the said equivalents of resources should be allocated within the WTO. Of course, it will take transaction costs to reallocated any resources if they have been allocated as specialized capitals ("Asset specificity has reference to the degree to which an asset can be redeployed to alternative uses and by alternative users without sacrifice of productive value." ⁴⁰). The current WTO mechanism of dispute settlement is not perfect, in particular, it is not efficient to allow some Members frequently take domestic measures inconsistent with WTO rules without compensations for other Members' injuries if the inconsistent measures have been simply taken off. But, the "capitals" have been specialized in such ways so that it is very difficult to change them.

³⁸ See Update of WTO Dispute Settlement Cases (WT/DS/OV/25, 12 December 2005).

³⁹ Ronald. H. Coase, 'The Nature of Firm', from *The Nature of Firm: Origins, Evolution, and Development* (ed., by Oliver E. Williamson, Sidney G. Winter), Oxford University Press, 1993, p.22.

⁴⁰ Oliver D. Hart, 'the Logic of Economic Organization', from *The Nature of Firm: Origins, Evolution, and Development* (ed., by Oliver E. Williamson, Sidney G. Winter), Oxford University Press, 1993, p.94.

It can be trusted that more WTO issues are suitable for economic analysis. This section only gives a few examples to show applicability of economic analysis of international economic organization.

4. ECONOMIC ANALYSIS OF INTERNATIONAL ENVIRONMENTAL LAWS

Trail Smelter Arbitration (U.S. v. Canada) was the big case on dispute of transnational air pollution with very significance for setting up the principle of international environmental laws.⁴¹ It was arisen from air pollution made by Trail Smelter in Canadian near the state of Washington in the United States. In 1920s, the company stepped up production and by 1930 over tons of sulphur, containing considerable quantities of sulphur dioxide, were being emitted daily. Some of fumes were being carried down the Columbia River Valley and across into the United States where they were allegedly causing considerable damage to land and other interests in the state of Washington. The United States requested that Canada should take its state responsible for damages. After negotiation between the two countries, Canada agreed that the case should be referred to the arbitration under the Boundary Waters Treaty of 1909. The arbitration award was made in 1931, assessing the damages at \$ 350,000. Canada had no dispute on its responsibility, but the Trail Smelter continues to operate with serious pollution. In 1938, the second award was granted for the United States at \$78,000 as damages even though the United States requested more. In 1941, the tribunal had to take the third arbitration because of unresolved pollution. The tribunal was asked "whether the Trail Smelter should be required to refrain from causing damages in the state of Washington in the future and, if so, to what extent?"

The case is essentially same with the nuisance cases taken by Coase in his article "the Problems of Social Costs". The nuisance would result negative externality, i.e., injury for others. Under Coase Theorem, externalities have two-sides effects, i.e., delimitations of defendant nuisance (one of externalities) would result another externality, e. f., the employees would lost their works and local treasures would be reduced if the manufactory is closed due to its pollution. Assuming zero transaction costs, dispute on pollution would be settled based on most efficient solution. But, transaction costs would not be zero in reality; therefore, it is very important to have legal definitions of relevant responsibility.

When Trail Smelter case was on third arbitration in 1941 for limitation of pollution, the tribunal of arbitration had no existing applicable rules of

⁴¹ Trail Smelter Arbitration, U.S. v. Canada (1938 and 1941), 3 R. I. A. A. 1905.

international laws. In accordance with general principle of international laws and references of case laws of American Supreme Court, the tribunal delivered its award: "under the principle of international law, as well as of the law of the United States, no State has the right to use or permit the use of its territory in such a manner as to cause injury by fumes in or to the territory of another or the properties or persons therein, when the case is of serious consequence and the injury is established by clear and convincing evidence."⁴² It was recognized later as the general principle of international environmental laws and was essentially adopted by the Article 21 of the United Nations Declaration of Human Environment in 1972: "State have, in accordance with the Charter of the United Nations and the principles of international law, sovereign right to exploit their own resources pursuant to their own environmental policies, and the responsibility to ensure that activities within the jurisdiction or control of such States to areas beyond their jurisdiction."⁴³ In Trail Smelter case, there were no disputes on Canadian responsibility for compensation of injuries in the United States resulted from air pollution made by Trail Smelter, but the problem was how to reduce the pollution. The award was preferred to set the acceptable limitation of pollution. In the term of technology promised, it would cost more than US\$ 20 millions if the award were satisfied. As a private chemical manufactory with a dominating position in local economy, Trail Smelter spend millions dollars to improve its production and even took measures to suspend production periodically for substantial reduction of pollution. The case was finally settled on the basis of international environmental laws regarding responsibility and acceptable limitation of pollutions. In sense, it was one of cases to support the Coase Theorem.

In later 20 century, the focus of international protection of environment was put on global protection instead of control transnational or regional pollutions because global economic integration. But, there are no global environmental organizations as like the WTO in the world with many multilateral environmental agreements (there has been about 100 such agreements since 1945).⁴⁴ Before establishment of the WTO, Law & Economics scholar pointed out that the lacking of a global environmental organization would result two negative effects: "(1) an economic failure to internalize environmental costs and to make consumers and producers pay the true economic price for the negative environmental externalities that they cause and (2) a political failure to override special interests and adopt cost-internalization policies that protect the environment while encouraging trade."⁴⁵ It makes hundred of

multilateral environmental agreements as separated contracts in market. It would dependent on contracting parties to negotiate, conclude and implement individual environmental pact. One parties' unwilling to cooperate would have significant effects on contracting process. For example, it is goal of the UN Framework Convention of Climate Change, which was entered in, to force in 1994 to control global warming weather by limiting emission of dioxide. The Kyoto Protocol entered in force on 16 February 2005 aims to limit volume of emission of developed countries. But, as the largest developed country having the largest volumes of emission, the United States has not approved this protocol with the arguments of protection for its national interests, which makes it very difficulty to implement this protocol. Meanwhile, some trade disputes related to environmental protection had to be submitted to the WTO because of no global environmental organization in this regard. But, the WTO has no special agreement on environmental protection; therefore, it is difficulty to get supports from panel or Appellate Body with more favors for environmental protection. Up- to-date, only in the case "European Community-Measures Affecting the Prohibition of Asbestos and Asbestos Products"⁴⁶, it was confirmed that the measures taken by European Community to restrict importation was not inconsistent with the general exception of Article 20 (b) regarding environmental protection for human life and health. Two cases were decided to reject the United States' arguments to restrict importation for environmental protection.⁴⁷ The WTO did establish a special committee of trade and environment in 1995 and its Ministerial Conference in 2001 initiated Doha round of trade negotiation including agenda of trade and environment with a proposal to revise existing paragraphs (b) and (g) of Articles 20 as general exceptions for environmental protection, and further more to include major multilateral environmental agreements as the binding attachment of the WTO covered agreements.⁴⁸ But, it has not yet reached the phase to change something due to top priorities on subside of exportation of agriculture goods and more favorable treatments for lest developed Members.⁴⁹ We hope that in near future, the WTO is able to hand more affairs of trade related environmental protection.

Global: Toward the Transformation of International Environmental Law', Harvard Environmental Law Review, Vol. 19:24 (1995). p.258

⁴⁶ See European Community-Measures Affecting the Prohibition of Asbestos and Asbestos Products, WT/DS135/AB/R (5 April 2001).

⁴⁷ See United States-Standards for Reformulated and Conventional Gasoline WT/DS2, 4/AB/R (20 May 1996); United States-Import Prohibition of Certain Shrimp and Shrimp products, WT/DS17, 58/AB/R (6 November 1998).

⁴⁸ See Chantal Thomas, 'Trade-related Labor and Environment Agreement', *Journal of International Economic Law*, Vol.5 No. 4 (December 2002), p.813.

⁴⁹ See Ministerial Declaration (Adopted on 18 December 2005), WT/MIN (05)/DEC (22 December 2005), para. 30.

⁴² *Id.* 1941 Report of the Tribunal.

⁴³ Stockholm Declaration on the Human Environment (June 16, 1972), UN Doc.A/Conf.48/14/Rev.1 (UN Pub. 73. II. A. 14).

⁴⁴ See UNEP/Environmental Law Programme/Global Environmental Agreements, <http://www.un.org>.

⁴⁵ Daniel C. Esty, 'Greeting the GATT: Trade, Environment and the Future' (1994), from Jeffrey L. Dunoff, 'From Green to

5. ECONOMIC ANALYSIS OF INTERNATIONAL HUMANITARIAN LAWS

International humanitarian laws aim to restrict use of force in the wars or military conflict. "International Humanitarian Law (IHL) applies in two very different types of situations: *international armed conflicts and non-international armed conflicts*."⁵⁰ The later is also called as "civil war". The traditional international laws are not applied for civil wars, but the serious violations of international humanitarian laws were found in ethnical military conflict of 1991 within territory of former Yugoslavia and Rwanda civil war of 1994, which attracted very attentions of international community. The UN Security Council adopted relevant resolutions in 25 May 1993 and 8 November 1994 to declare that these disasters resulted from violations of international humanitarian laws in domestic military conflict or civil war "constituted threats for international peace and security,"⁵¹ and decided to set up the International Criminal Tribunal of Former Yugoslavia (ICTY) and the International Criminal Tribunal of Rwanda under the authorization granted by Chapter 7 of United Nations Charter. It is no doubt for legality of these two special international criminal tribunals. It is helpful for us to understand its legality through the economic analysis of new development of international humanitarian laws.

The UN resolutions declared that the crimes of ethnic Massacre and anti-human beings resulted serious consequences, which "constitute threats for international peace and security". These threats have negative externalities against interests of neighboring nations and international community, including large number of refugees moving to neighboring nations and even extend of civil war to other nations. It is similar with transnational pollution injuring other nations. The UN Security Council believes that it is global issue, not simply a regional peace and security. The negative externality in the sense of international humanitarian laws includes not only the lost of life and property of neighboring nations, but also moral worry of international community. As the resolutions declared, international community could not tolerant such serious violations of humanitarian laws as "mass killing, massive, organized and systematic detention and rape of women, and the continence of the practice of 'ethic cleansing', including for the acquisition and the holding of territory" in former Yugoslavia, as "genocide and other systematic, widespread and flagrant violations of international humanitarian law" in Rwanda.⁵² Only these

criminals have been punished due to their personal responsibilities, could the moral injury be remedied for international community.

It is criminal responsibility for violation of international humanitarian laws, which is different from the principle of remedy for transnational pollution. The former standpoint is to keep international peace and respect for human dignity instead of monetary compensations of later civil procedure.

The Permanent International Criminal Court (ICC) was established on 11 April of 2002 based on same principles of international humanitarian laws with ICTY and ICTR in order to overcome the problems of so called "justice of selection" due to the individual selected base.⁵³ From perspective of Coase's theory of transaction costs, ICC takes the firm-mode as the way to get separated market-mode tribunals together, which has economic logic similar with the WTO, in particular, its mechanism of dispute settlement. In comparison with trend of global governance of the WTO, it is difficulty to implement international environmental laws without global environmental organization. The new ICC is very positive approach to implement international humanitarian laws. That is the development of global governance in the area of globalization.

The Roma Statute of ICC emphasizes that "ICC established under this Statute shall be complementary to national criminal jurisdictions."⁵⁴ The principle of supplementation aims to bind the Member states to prosecute any crimes in its territory standing in violation of international humanitarian laws by its domestic procedure, which internalizes the negative externality. That is to say, the case will be taken by a competent foreign court or ICC under Roma Statute of ICC with universal jurisdiction or ICC's compulsory jurisdiction."

⁵⁵ It is efficient to allocate the "source" of jurisdiction in this approach.

6. CONCLUSION

From the Europe system of international law after Peace Westphalia of 1648 to the global system of international law after establishment of the United Nations in 1945; from the request of Dutch people in early 17 century to have freedom of sea (i.e., freedom of trade) to request of economic globalization in early 21 century to have global governance or efficient allocation of powers to

⁵⁰ Maroc Sassoli and Antoine A. Bouvier, *How Does Law Protect in War? ICRC*, 1999, p.88.

⁵¹ Resolution 827 (25 May 1993), Resolution 955 (8 November 1994).

⁵² *Id.*

⁵³ *Report of the International Law Commission*, 1996, from Overview of ICC <http://www.un.org/law/icc/general/overview.htm>

⁵⁴ Rome Statute of the International Criminal Court 17 July 1998, <http://www.un.org/law/icc>

⁵⁵ Jeffery L. Dunoff and Joel P. Trachtman, 'The Law and Economics of Humanitarian Law Violation in Internal Conflict', *The American Journal of International Law*, Vol.93: No. 2, (April 1999), p.405.

dealing with international affairs by the organizations such as the WTO and the ICC, which makes possible to take economic approach of international law. I believe that new area needs new theory and methodology. In comparison with traditional approaches such as legal, political. Philosophical or ethical analysis, economic analysis will refresh the international law study. This thesis is focused on the basis of economic analysis of international and a few examples of international economic organization, international environmental

protection and international humanitarian laws in order to demonstrate the possibility of economic analysis of international law and the necessity of this new approach. It is true that the economic approach has limitation, in particular, in the some areas of international laws it is very difficulty to approach economically because national interest are so vital that no transaction could be considered. Therefore, we should analyze contemporary international laws from multiple approaches including economic analysis.

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