

# Internationalization of state contracts: Is internationalization reasonable?

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**Abstract-** This paper addresses the definition of internationalization as it encompasses both direct and indirect internationalization. Before the implementation of internationalization, the traditional view claimed that the state contracts should be governed by the law of the country in which the contract is performed. However, international law identifies the obligation of the host state to not to deny any foreigner of justice by identifying concepts such as denial of justice. Eventually, the aim of scholars and arbitrators favored developed countries was to withdraw state contracts from the domestic legal system and place them in the international sphere by applying some external law to regulate the state contract rather than the host state's law. They used concepts like "direct internationalization" and "indirect internationalization". However, the scholars from developed countries overlooked the elements such as the obligation of the sovereign states to protect the public interest and the fact that the profit gained by the foreign investor is sent back to the home state which will eventually contribute to the development of the home state, in the process of internationalization.

**Index Terms-** Denial of Justice, Internationalization, State Contracts, Traditional View

## 1. Introduction

'State contracts' were introduced in to the foreign investment legal regime as a way of securing the international obligations between the contracting host state and the foreign investor with regard to the particular investment, in a written format [1]. According to the United Nations Conference on Trade and Development (UNCTAD), state contracts, which are also known as investment contracts, has been identified as contracts created between a state and a national of a foreign country. A "state" can be represented by any entity created by the legislative of the country. When it comes to the foreign national, it can be a natural person as well as a legal person which means a corporate national. The subject matter which is discussed in the state contract may vary according to the requirement of the state and the foreigner who is planning on entering into the contract. Contracts for loan agreements, contracts for sale and purchase of goods and services, contracts for foreign investment projects, contracts of employment, contracts for the development of

infrastructure such as roads and ports, contracts which permit the foreign national to exploit the natural resources of the states and many more sectors can be involved in state contracts [2]. However, for the purpose of this paper, the contracts created for the purpose of foreign investments between a state and a foreign national would be considered.

Regardless of the subject matter of the state contract, it can be difficult to identify the applicable substantive law to the disputes arising out of such contracts. The reason for such a difficulty can be identified as the differences existing on the status of the two contracting parties. One party is a foreign national carrying out the contract in a foreign state and the other party is a sovereign state which has the sovereignty power and which has the obligation to protect the public interest of the nationals of the host country. Therefore, the applicable law governing the state contracts can be understood as difficult to identify or rather a disputed thing between the contracting state and the foreign national.

This paper would be focused on the traditional view accepted with regard to the identification of applicable law to the disputes arising out investment contracts and the former developments in the identified applicable law in state contracts. The former development on the field would be internationalization of state contracts and the rationale behind those developments would also be discussed, opposing the traditional view.

## 2. Traditional View of The Application of The Substantive Law When Dealing with State Contracts

A contract between a foreign investor and a state was historically considered to be regulated by municipal law. This view is identified as the traditional view on the subject. The traditional view is that if a foreign investor enters into a contract with a state, the contract should be regulated by a municipal law or a domestic law of the host state, rather than international law or any kind of an external legal system [2]. This traditional view was generally reinforced on the idea that the most appropriate applicable substantive law regarding the state contract should be the law of the state in which the contract is performed, which is the municipal or domestic law of the host state. However, according to this traditional view, public international law will only be applied in the most extreme circumstances, such as when there is a denial of justice. Therefore, while the traditional view

of investment contracts denies the application of public international law, it also acknowledges that, while the contract is primarily governed by domestic law, there may be extraordinary circumstances in which international law is applicable.

## 2.1 Denial of Justice

"Denial of Justice" is a concept accepted in customary international law on the treatment of aliens [3]. The concept of "denial of Justice", which is utilized in the traditional view regarding the application of the domestic law of the host state has a broader meaning than it appears and has identified as being disputed constantly regarding its interpretation as the phrase has come through a long way from early middle ages [4]. The concept can be defined as the failure to establish the justice by the national courts of a country, which can be a result of the poorly functioned judiciary, executive and legislature of that particular country [5]. Furthermore, the term justice has been defined as the continuous desire to uphold the rights and privileges of every person and therefore, the denial of justice can be defined as the prevention of a person accessing justice [6]. This concept identifies the obligation lying on the shoulders of a country, to make sure that a foreigner entered into their country is treated properly and given equal opportunities to access the justice through the judiciary, executive and the legislature of that country. This concept has been developed to the level where any act or omission committed by a state towards a foreigner, which has been identified illegal in the international sphere, the foreign national seeking diplomatic protection from his state has been justified on the ground of denial of justice [6]. Therefore, it can be identified under traditional view about the applicable substantive law to the state contracts, it is an accepted concept to apply the public international Law in an event of a denial of Justice. Consequently, it can be concluded that the traditional view does not disregard the application of public international law in disputes regarding the state contracts. However, the application of public international law has been limited to certain circumstances such as denial of Justice.

## 3. Internationalization

### 3.1 The Rationale Behind the Concept of Internationalization

If the domestic law of the host State is enforced as the law applicable to the investment contract and if it is settled by the domestic courts, it is a matter of domestication. Since it actually resolves everything within the territory of the host State, it is a localization of the conflict and the contract [7]. Localization is not beneficial for the foreign investors, because they claim that they do not believe in domestic courts and domestic systems of justice. Therefore, that's the reason they came up with a counter idea concerning the internationalization of these contracts. The reasoning behind the internationalization theory is that the law applied to these investment contracts is not just the municipal law of the host State [8].

The theories of "internationalization" was coined to challenge the traditional view about the subject by the scholars of the developed States. The general idea of internationalization is that

the disputes arising out of the state contracts should not be dealt in the domestic courts of the host state and should be resorted to the international arbitration. Furthermore, the applicable substantive law with regard to the state contract should be some kind of an external legal system [9]. The reasoning behind that is the fact that foreign investors often want to settle their investment disputes, particularly arising from investment contracts, in a different forum than the local courts of the host state because they believe that if they resort their disputes to the domestic courts of the host state they would be denied of justice. At the same time, they want these contracts to be regulated by separate laws from that of the host state because the host state law can be modified at any given moment at the will of the legislature of the states. As a result, legal scholars calling for the rights of foreign investors have created a definition of the internationalization of these contracts [8]. The external legal framework mentioned by these scholars of the developed countries may be described as international law, or transnational law, or any kind of national law or merely the universal concepts of law accepted by the civilized nations [10]. However, if it is going to be a national law, it should be something other than the domestic law of the host state. These were the legal systems suggested by legal scholars that endorse the theory of internationalization as the interpretation of the term "external legal system".

### 3.2 Types of Internationalization

#### 3.2.1 Direct Internationalization

In the beginning of the development of cross border investment, the state contracts were identified as contracts which are subjected to the national law of the host state according to the traditional view on the subject. However, in 1950 with regard to petroleum contracts, the legal scholars of the developed states tried to develop a theory to identify and characterize these state contracts as international contracts through a process known as direct internationalization. The thought process they proposed in the process of direct internationalization of the state contracts in the field of petroleum was that such contracts are playing a role in the development of the economy of the host state and therefore, such contracts should be governed by international legal norms [2]. The reasoning behind the direct internationalization was that since these state contracts in the petroleum field was closely linked with the economic development of the host state they should be governed by some kind of external legal system and not by the domestic legal system of the host state. So, in direct internationalization the state contracts have not been identified as commercial contracts, but have been characterized as international contracts due to the economic development obtained by the host state in the process of signing the state contract and thereby the scholars of developing countries stated that these contracts should be governed by international law.

In the case of *Sapphire Petroleum's Ltd. v National Iranian Oil Company (NIOK)* ILR 1963, at 136 et seq. A state contract has been concluded between Iran and Sapphire Petroleum's Ltd. For the purpose of exploration and exploitation of oil in Iran. However due to an administration dispute between the investor

and the state, NIOK, on behalf of the Iranian government decided to not to enter into the second stage of the exploration and exploitation of the oil in Iran according to the state contract. Since NIOK did not follow through the state contract, Sapphire Petroleum's decided to go to the international arbitration to recover the damage occurred and the profit which has been lost due to the discontinuation of the oil exploitation project. The arbitral award has been given by a sole arbitrator and in the process of deciding the applicable substantive law to this particular state contract, the sole arbitrator identified that the investment contract between Sapphire Petroleum's Ltd and NIOK should be governed by general principles of law recognized by the civilized Nations, and not by the domestic law of Iran. The rationale behind his decision was that the usage of Iranian domestic law would result in denial of justice due to the possibility of the changes which might occur in the domestic legal system of Iran due to the legislative power held by the Iranian government. Furthermore, he identified that the contract between the foreign investor and the state is a contract which gives the host state some economic development and therefore is not a mere commercial contract. The contract was characterized as carrying quasi-international characteristics due to one party being a sovereign state and the subject matter of the state contract is providing the host state long lasting economic development. This case can be identified as the first case which characterized the state contracts as quasi-international contracts in the history of international arbitration.

In the case of *Texaco Overseas Petroleum Co. v. Libyan Arab Republic* 17 I.L.M. 1; (1978), the Libyan government nationalized the properties of Texaco Overseas Petroleum Corporation, and as a result Texaco Overseas Petroleum Corporation resort the dispute to the international arbitration. The sole arbitrator who delivered the arbitration award identified that the contract between Texaco and Libya is having an international character and therefore should be governed by international law instead of the domestic law of the host state. Furthermore, he emphasized that the application of international law to this state contract is necessary because the private contracting party can be denied of the justice as the other contracting party which is a sovereign nation can change the legislation unilaterally in such a manner that will affect the investor. Therefore, he concluded that the applicable substantive law to this particular state contract should be international law, by characterizing the contract as a quasi-international contract following the previous judgement of *Sapphire Petroleum's Ltd. v National Iranian Oil Company (NIOK)* ILR 1963, at 136 et seq.

In the case of *Revere Copper & Brass, Inc. v. OPIC* 17 ILM 1978, at 1321 et seq. also the method of characterization of the state contract as having a quasi-international characteristic due to the public nature of the contract opposed to commercial contracts, has been utilized to identify international Law as the applicable substantive law to the particular state contract in an event of a dispute.

In contrary to the above arguments presented by the scholars of the developed nations, scholars such as professor M. Sornarajah has emphasized that the characterization of state contracts due to

the existence of economic development towards the host state should not be utilized as an excuse to internationalize the state contracts in order to take those contracts from the domestic legal system to the international law [11]. Furthermore, it should also be mentioned that even though the state contract is providing economic development to the host state, it should not be forgotten that the profit earned through these kinds of projects done through state contracts are always taken by the international investors, rather than the host state.

### 3.2.2 Indirect Internationalization

However, the direct internationalization got a large amount of criticism from the scholars of developing countries. As a result, different theories got developed for the purpose of internationalization of the state contracts and the disputes arising out of them. Indirect internationalization can be identified as such an attempt.

In the indirect internationalization, there is no mention of the contract being equivalent to international treaties, or why international law should be enforced. Instead, the arbitrators and scholars suggest to apply private international law to find out the substantive law that is applicable to the contract [12]. Here instead of applying domestic law, private international law concepts are being applied to decide what is the applicable law to a given investment contract. The traditional view regarding the subject states that domestic law of the territory in which the contract is executed should apply to the state contract in an event of a dispute. However, the internationalization theories try to rationalize the application of some kind of external legal system to the state contract in an event of a dispute. Therefore, the requirement is to prevent the application of domestic law, and one way is to explicitly categorizing the contract as a document that brings out obligations similar to international treaties, and then justify the application of international law in the name of quasi-international character. Scholars, especially those from developing countries, have harshly criticized this. As a result, some arbitral tribunals tried to explain the application of international law, transnational law, or another external legal framework in such a way without merely characterizing the state contract as a contract having quasi-international elements, they came up with the concept of using private international laws to identify the substantive law [13]. This theory of internationalization has been identified as indirect internationalization.

In the case of *Serbian Loans Payment of Various Serbian Loans Issued in France (Fr. v. Yugo.)*, 1929 P.C.I.J. (ser. A) No. 20 (July 12), the arbitration tribunal used the concepts of private international law to identify the applicable substantive law for the dispute between the foreign investor and the state. The public international Law concept of party autonomy has been used in this award to utilize an external legal system from the domestic legal system of the host and to internationalize the dispute. The term "party autonomy" refers to the right of the contracting parties to agree upon whatever they desire [14]. The parties can freely decide the terms and conditions that relate to their contract,

as well as the relevant law in the event of a dispute and the forum in which they should attempt to settle their disputes. Consequently, the arbitral tribunal decided to follow what is written in the state contract with regard to the applicable substantive law.

However, freedom of contract in its traditional view was only open to private parties and the question is whether this freedom of contract or party autonomy can be extended sufficiently to state contracts. Parties to a state contracts, such as private parties, has the capacity to exercise this right and according to the scholars advocating for the indirect internationalization, the sovereign states also can exercise this right. However, the government is not a profit-driven private party. Government bears some responsibility to its constituents. The difference between a private party and a government of a sovereign state is that the government is exercising the sovereign power of the people of that country. The government hold responsibility act upon the public interest of the people of that sovereign country. As a result, such a responsible institute should not be granted the freedom to choose whatever law they want. However, according to the theory of indirect internationalization, the unrestricted party autonomy can be extended in the case of state contracts as well, regardless of whether one of the parties is a state [12]. Consequently, the parties to the contract, namely the foreign investor and the host state, are free to choose the substantive law that applies to the contract without any limitations. Therefore, if they have this kind of unrestricted ability to apply and decide substantive law, the arbitral tribunal should respect their preference. Accordingly, the relevant law to the contract will be decided, not by following the conventional view of these being regulated by host state law, but by applying the private international law rule to determine what is the parties' opinion, which can be expressed or implied. Consequently, there is no need to follow the traditional approach and enforce the law of the host state. It's simply a matter of withdrawing the contract from the domestic legal system, not because of the characterization, but because the parties have exercised their right to select which law will control their contract. Therefore, it's up to the arbitral tribunals to identify the applicable law, and it's only a matter of enforcing the relevant law; there's no need for them to follow the traditional view [15].

However, in some state contracts the parties might not have expressly mentioned the applicable law to the state contract in an event of a dispute. If the contract does not specify the legal framework by which they expect their contractual relationship to be governed, the host state would inevitably argue that they have not expressly consented for this contract to be governed by any external legal system, and thus must adhere to the traditional view. On the other hand, the foreign investor will argue that since they have not expressly mentioned the proper law of the contract in an event of a dispute, they never intended to use the domestic law of the host state and has implied their intention between the lines of the state contract to use international law or some kind of an external legal system other than the domestic law of the host state. As a result, they have always pointed out the dispute

settlement mechanism clause to demonstrate their implied intention to use an external legal system [15].

Scholars such as Professor M. Sornarajah have claimed that in the case of a state contract, full party autonomy and contract freedom are not present [11]. He claims that in the case of state contracts, full contract freedom and full party autonomy are not applicable. According to him, the choice of law should be a fair choice of law under the principle of party autonomy [15]. Private parties can use any law in their contracts and have complete freedom, but he argues that this does not apply in the case of a state contract. He claimed that the state has the potential to make a decision on the applicable law to the state contract, but that the only legitimate option is the host state's internal law. However, he claimed that whilst there is party autonomy and that any law can be enforced, this only applies to private contracts. The only legitimate choice of law, according to his claim, is the host state's internal law. He stated that the foreign nationality of the foreign investor is the only foreign factor in the state contract, and that the foreign investor, has voluntarily entered the state. Therefore, just because one party is a foreign private party, the concept of party autonomy of private international law should not be applied, disregarding the requirement of the government of the sovereign state to act according to the public interest of the people. Consequently, if a foreign investor voluntarily entered a state, it is the foreign investor's duty to comply with the host state's laws.

#### **4. Discussion**

It is evident that many scholars and arbitrators from various developed countries have suggested that the state contracts should be internationalized. The rationale behind that is to provide the foreign investors who are investing in other countries, appropriate protection from the government of the host state. The reasoning given by the scholars of the developed countries for requiring such a protection is that the government of the host states possessing the legislative power to control the activities done in the territory of the host state including the foreign investment activities by changing the undertakings of the state contracts or to completely neglect the undertakings of state contracts and therefore, the developed countries argue that the state contracts should be internationalized. Furthermore, another reasoning given by the scholars of the developed countries for the internationalization of state contracts is that the inefficient court system in the developing host states. Moreover, they argue that the foreign investors are more likely to be denied of justice if they resort their disputes between the host state courts because they are foreign nationals and the domestic courts of the host states are more likely to give a judgement favorable to the government of the host state, instead of giving a fair and impartial judgement.

However, it should not be forgotten that in the traditional view on identifying the applicable law for the state contracts, it is emphasized that any foreigner facing any activity conducted by the host state, that denied the particular foreigner from justice, can seek diplomatic protection from the home country and



resolve the dispute between the two countries as a international dispute, in international forums using international law. In the same manner foreign investors are also encouraged to resort their disputes into International arbitration to apply international law, in an event where the foreign investor is denied justice in the host state. Therefore, it is evident that the traditional view never advocated to suppress the foreign nationals entering into a foreign territory by pointing a blind eye to events such as denial of justice.

However, even with the existence of such an international law concept; 'denial of justice', the scholars of developed countries continued to internationalize the state contacts signed for the purpose of foreign investment activities. The scholars of developed countries tried to internationalize the state contacts through direct internationalization by characterizing them as quasi-international due to the economic development obtained by the host state by signing the contract and therefore emphasizing how the state contracts not being a mere commercial contract because of the existence of the public aspect in the state contract. However, they have ignored that fact that not only the host state who acquire a long-lasting economic development, but the foreign investors are also receiving a massive profit from this kind of development projects and all that profit is going to be sent back to the home state, which eventually will contribute to the economic development of the home state.

Thereafter the scholars of developed countries internationalized the state contracts by utilizing private international law principle; freedom of contract, where the applicable law to the state contacts have been determined by the expressed or implied opinions of the parties to the contract. However, they have completely ignored that the host state is not a mere private party but an institution who has the responsibility to act according to the public interest of that state. Simply because one party to the state contract was a private party, the scholars of the developed countries have suggested that the massive obligation on the shoulders of the host state to protect the public interest could be ignored and the host state also should be allowed the unlimited party autonomy in determining the proper law of the state contacts.

The developed countries have taken these various paths to internationalize the state contacts while ignoring other elements which are involved in the process such as the obligations of the host state towards the citizens because the developed countries who voluntarily sign in state contracts for purposes of profit, does not believe that they can achieve justice in the domestic courts of the host state. However, it should be accepted that there is a possibility of bias in the domestic legal system of the host state, it should also be mentioned that the international law principles such as denial of justice were always there to protect the foreign investors who face injustice in host states. Therefore, this paper suggest that the theories of internationalization are unreasonable to certain extent because the developed countries

has taken actions to internationalize the state contracts even though there are remedies available for injustice actions taken by host states against the foreign investors and the developed countries has completely disregarded the position of host states who has to act according to the public interest.

## 5. Conclusion

Considering the above information about direct and indirect internationalization, it is evident that they are just two faces of the bigger concept of internationalization. Before the introduction of the concept of internationalization, the traditional view was that the state contracts should be governed by the law of the place where the contract is performed which is the host state. In the concept of internationalization, the objective of the scholars and the arbitrators favoring the developed countries was to remove the state contracts from the domestic legal system and to put them into the international sphere by applying some external law to govern the state contract instead of the law of the host state. They utilized concepts such as direct internationalization, where the state contract is characterized as a quasi-international contract due to the economic development element obtained by the host state and thereby identified state contract not as a mere commercial contract, but a similar contract to an international agreement or a treaty. This theory of internationalization first appeared in *Sapphire Petroleum's Ltd. v National Iranian Oil Company (NIOK)*, where the arbitrator removed the state contract from the domestic legal system and applied internal law on the ground that the state contract carries quasi-international characteristics. After receiving some criticism towards the concept of direct internationalization, the scholars and arbitrators of developed states came up with a new theory to internationalize the state contracts. That is indirect internationalization which was first introduced in the case of *Serbian Loans*. The rationale behind the indirect internationalization is that the concept of freedom of contract or party autonomy of the private international law should be used to determine the appropriate substantive law to be applicable to the state contract. The scholars of developed countries argued that if the parties to a private contract including state contracts have agreed upon any applicable substantive law as the proper law of the contract, then that law should be applied to the contract by appreciating the parties' right to agree upon whatever they want. However, the scholars of developed countries ignored the fact that the sovereign states entering into the state contracts with a private party is having an obligation towards the citizens of that country, who are the actual owners of the sovereign power, to act according to the public interest of the people. The scholars of developing countries highly criticized this opinion and stated that since the private party is not forced to enter into the state contract and since the private party is the only private element in the state contract, it is unreasonable to apply concepts of private international law to these state contracts. Furthermore, they

emphasized the obligation on the part of the government of the host state to protect the public interest and thereby emphasized the inappropriateness of allowing such an institution to choose the substantive law in a state contract without any limitations. These scholars suggested that the only appropriate law to a state contract in the domestic law of the host state.

*Entrepreneurship Research Conference (BCERC)*, Madrid, Spain, 2007.

- [14] M. Salehi, Investment Treaty Arbitration as a Public and Unilateral Dispute Settlement, Master Programme in Investment Treaty Arbitration, Master's Thesis 15 ECTS, 2020.
- [15] P. J. Borchers, "The Internationalization of Contractual Conflicts Law," *Vanderbilt Journal Of Transnational Law*, vol. 28, no. 03, pp. 421-486, 1995.

## References

- [1] F. O. Okpe, "A Historical Account of the Internationalization of Invest Disputes: What the Global South Should Know When Negotiating Bilateral Investment," *Florida A & M University Law Review*, vol. 12, no. 2, pp. 219-245, Spring 2017.
- [2] State Contracts, New York and Geneva: United Nations Conference On Trade And Development, 2004.
- [3] F. Francioni, "Access to Justice, Denial of Justice and International Investment Law," *The European Journal of International Law*, vol. 20, no. 03, pp. 729-747, 2009.
- [4] A. C. Trindade, "Denial Of Justice And Its Relationship To Exhaustion Of Local Remedies In International Law," *Philippine Law Journal*, vol. 53, no. 04, pp. 404-420, 1978.
- [5] C. Focarelli, "Denial of Justice," Oxford University Press, 10 2013. [Online]. Available: <https://opil.ouplaw.com/view/10.1093/law:epil/9780199231690/law-9780199231690-e775>. [Accessed 01 02 2021].
- [6] O. J. Lissitzyn, "The Meaning Of The Term Denial Of Justice In International Law," *The American Journal of International Law*, vol. 30, no. 04, pp. 632-646, Oct.,1936.
- [7] E. Stein, "International Law In Internal Law: Toward Internationalization Of Central-Eastern," *The American Journal Of International Law*, vol. 88, no. 03, pp. 427-450, July, 1994.
- [8] M. A.F.M., "Internationalization of Foreign Investment Agreement, Some Fundamental Issues of International Law," *The Journal Of World Investment*, vol. 01, no. 02, pp. 293-320, December, 2000.
- [9] J. E. Alvarez, "The Internationalization of U.S. Law," *Columbia Journal Of Transnational Law*, vol. 47, no. 03, pp. 537-575, 2009.
- [10] C. S. K. Robert E. Morgan, "Theories Of International Trade, Foreign Direct Investment And Firm Internationalization: A critique," *Management Decision*, vol. 35, no. 01, pp. 68-78, 1997.
- [11] M.Sornarajah, *The International Law On Foreign Investment*, New York: Cambridge University Press, 2010.
- [12] K. Kalotay, "Indirect FDI," *The Journal of World Investment & Trade*, vol. 13, no. 04, pp. 542-555, 2012.
- [13] J. H. Siri Terjesen, "Indirec Internationalization Of Small Firms: A Development And Test Of Two Theories," in *Proceedings Babson College*

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