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Market Access Obligations and Foreign Investments in Renewable Energy: an Analysis of International Trade and Investment Law Instruments

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Cover Page Footnote

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MARKET ACCESS OBLIGATIONS AND FOREIGN INVESTMENTS IN RENEWABLE ENERGY: AN ANALYSIS OF INTERNATIONAL TRADE AND INVESTMENT LAW INSTRUMENTS

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Abstract

Today's development of renewable energy technologies is perceived as an essential ingredient of the world's response to emerging challenges of energy security, global warming, and climate change. However, the global deployment of renewables needs huge financial and technological contributions that many States cannot afford. Therefore, the promotion of foreign investments in this sector is at the stake. However, the global flow of investment and technology in this sector is not free from the regulations of international trade and investment law instruments. Among the prominent provisions common to these instruments are Market Access obligations. WTO agreements and IIAs provide for different levels of market access. Moreover, the possible contribution of these provisions in each case depends on the approach of the applicable agreements to the renewable energy sector in particular. Therefore, it is also important to collaterally understand the overall approach of international trade and investment agreements to this sector since it appears to be a two-dimensional matrix. Therefore, to clarify the possible contribution of market access provisions to the promotion of foreign investments in the renewable energy sector, this article, after providing an introduction, expounds on the status of the applicable market access obligations to this sector under trade law. Consequently, it deals with the approach of IIAs in this regard. Finally, it concludes that so far both the legal systems have to a great extent overlooked the importance of establishing robust pro-renewable energy market access obligations.

Keywords: IIAs, international investment law, international trade law, market access, renewable energy

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I. INTRODUCTION

It is nearly indisputable that International Investment Agreements (IIAs) including Bilateral Investment Treaties (BITs), Multilateral Investment Treaties (MITs), and Free Trade Agreements (FTAs) play a pivotal role in the

protection and promotion of foreign investments. 1 IIAs consist of a mixture of binding and non-binding obligations which have direct and indirect effects on foreign investments.² Market access obligations are among these. Such provisions are particularly important for the promotion of foreign investments since most foreign investors looking to invest, assess the regulatory barriers in the particular host jurisdiction before making an investment.³ They may find the lack of market access commitments in a State which means that significant de facto or de jure barriers exist. This concern is exacerbated by the fact that in the absence of any commitments to the contrary, host States are not necessarily bound to admit foreign investments or to provide them market access in a non-discriminatory manner.⁴ This situation ceteris paribus undermines the competitiveness between domestic and foreign investors in favor of the former. Although such restrictions allegedly serve legitimate public interests, in many cases they can be more restrictive than necessary and in some cases, give rise to a monopoly in the market.⁵ In contrast, there is econometric evidence on the contribution of market access to the promotion of foreign investments and overall economic development levels in various regions. 6 This is a significant

¹ Karl P. Sauvant and Jennifer Reimer, *FDI Perspectives: Issues in International Investment* (New York: Vale Columbia Center on Sustainable International Investment, 2012), 165. Cees Verburg and Jaap Waverijn, "Liberalizing the Global Supply Chain of Renewable Energy Technology: The Role of International Investment Law in Facilitating Flows of Foreign Direct Investment and Trade," *Brill Open Law* 2, no. 1, (2019): 101. UNCTAD, *The Role of International Investment Agreements in Attracting Foreign Direct Investment to Developing Countries* (New York: United Nations Publication, 2009), 39-60. Jeswald W. Salacuse and Nicholas P. Sullivan, "Do BITs Really Work? An Evaluation of Bilateral Investment Treaties and Their Grand Bargain" in *The Effect of Treaties on Foreign Direct Investment: Bilateral Investment Treaties, Double Taxation Treaties, and Investment Flows*, Karl P. Sauvant and Lisa E. Sachs, eds. (Oxford: Oxford University Publication, 2009), 118.

² Kyla Tienhaara and Christian Downie, "Risky Business? The Energy Charter Treaty, Renewable Energy, and Investor-State Disputes," *Global Governance* 24, no. 3 (2018): 451, 452.

³ Kyla Tienhaara, "Unilateral Commitments to Investment Protection: Does the Promise of Stability Restrict Environmental Policy Development?" *Yearbook of International Environmental Law* 17, (2008): 148. Nikolaos Giannopoulos, "International Protection of Foreign Investments in Offshore Energy Production and Marine Environmental Protection: Birds of a Feather or Frenemies Forever?" *Netherlands International Law Review* 68, (2021): 262.

⁴ Verburg and Waverijn, "Liberalizing the Global Supply Chain of Renewable Energy Technology," 125.

⁵ Jennifer A. Haverkamp and Leslie Parker, "Governments Must Act to Boost Trade in Biofuels: World Trade Organisation Rules Governing Biofuels and Feedstocks Need Updating" in *From Debate to Design: Issues in Clean Energy and Climate Change Law and Policy*, Leslie Parker et al., eds. (New Haven: Yale School of Forestry and Environmental Studies, 2008), 226. ⁶ Marco Fugazza and Claudia Trentini, *Empirical Insights on Market Access and Foreign Direct Investment* (New York: United Nations Publication, 2014). See especially Harry Garretsen and Maarten Bosker, "Market Access: A Key Determinant of Economic Development in Sub-Saharan Africa," World Bank Blogs, accessed 20 November 2022, https://blogs.worldbank.org/

criterion and therefore the European Union, for instance, has made it clear that 'the main focus of international investment agreements should continue to be effective and ambitious investment protection and market access.'⁷

According to the doctrine of party autonomy (*libertas contractuum*), incorporating market access obligations is a matter of bargaining between the States and they may decide based on their own priorities and national interests. For instance, they may restrict market access *inter alia* due to the apprehension that foreign investors could dominate the local market by driving out the weak local competition. In fact, the institution of the free market is still evolving in many States. And there is a need for effective mechanisms in place to protect foreign investments because the forces of nationalism often favor domestic investors over foreign investors.⁸

However, it is important to note that the world is increasingly threatened by emerging challenges and issues of energy security, global warming, and climate change due to the extensive consumption of fossil fuels. And the development of renewable energy is perceived as an essential component of the world's response to these crises. 10

Unsurprisingly, the worldwide deployment of renewable energies will cost billions of dollars and many countries cannot afford the costs and technologies of such a transition.¹¹ This dilemma calls for the promotion of

developmenttalk/market-access-a-key-determinant-of-economic-development-in-sub-saharan-africa

⁷ The Council of the European Union, Conclusions on a Comprehensive European International Investment Policy, 3041st Foreign Affairs Council Meeting, Luxembourg, 25 October 2010, para. 16.

⁸ M. Sornarajah, *The International Law on Foreign Investment* (Cambridge: Cambridge University Press, 2021), 96-97, 430-431. Generally, the assumption is that there is tension between the free market and democracy, as the free market makes a minority rich whereas democracy gives power to the majority.

⁹ David Vetter, "'Climate Security Is Energy Security': COP26 President's Warning To The World," Forbes, accessed 20 November 2022, https://www.forbes.com/sites/davidrvetter/2022/05/16/climate-security-is-energy-security-cop26-presidents-warning-to-theworld/?sh=97d653f2a215.

¹⁰ "Energy Transition Holds Key to Tackle Global Energy and Climate Crisis," IRENA, accessed 22 November 2022, https://www.irena.org/News/pressreleases/2022/Mar/Energy-Transition-Holds-Key-to-Tackle-Global-Energy-and-Climate-Crisis. See also Feja Lesniewska, "Renewable Energy Waste Management and the Circular Economy in the EU: Solar PV and Wind Power" in *Research Handbook on EU Energy Law and Policy*, Rafael Leal-Arcas and Jan Wouters, eds. (Cheltenham: Edward Elgar Publishing, 2017), 460.

¹¹ International Energy Agency, *Perspectives for the Energy Transition – Investment Needs for a Low Carbon Energy System* (Bonn: IEA/IRENA, 2017), 8. Stuart Bruce, "International Law and Renewable Energy: Facilitating Sustainable Energy for All?" *Melbourne Journal of International Law* 14, no. 1 (2013): 26-27.

foreign investments in this sector.

Various studies admit the possible contribution of IIAs to this agenda in general, and in particular the importance of market access provisions in this context. ¹² Most notably, Schefer, who proposed the new theory of 'The Strong Responsibility to Protect (R2P*)', claims that all parties to IIAs have an obligation to provide market access rights for investors who intend on mitigating the impacts of climate change, and to actively protect the investments in renewable energy or low-carbon technologies. ¹³

However, most IIAs at hand do not provide pro-renewable energy investment provisions as such. Less than 87 percent of IIAs make a reference to Market access as an obligation on parties, while most of these instruments provide no explicit mention of the term 'renewable energy' whatsoever. ¹⁴ Therefore, there is arguably a need for the evolution of IIAs in this regard. ¹⁵

It is important to note that the issue of market access may arise either in trade or investment. Therefore, a discriminatory treatment in the field of trade (e.g. imports) may equally amount to discriminatory treatment in the field of investment if it can be shown that this discriminatory treatment has affected a foreign investor or their investment. ¹⁶ In other words, the economic concepts

¹² OECD, *Better Policies for Development 2015: Policy Coherence and Green Growth* (Paris: OECD Publishing, 2015), 73. Edna Sussman, "The Energy Charter Treaty's Investor Protection Provisions: Potential to Foster Solutions to Global Warming and Promote Sustainable Development," *ILSA Journal of International & Comparative Law* 14, no. 2 (2008): 400.

¹³ Krista Nadakavukaren Schefer, "Climate Change, Trade, and Investment Law: What Difference Would a Real Responsibility to Protect Make?" in *Emerging Issues in Sustainable Development: International Trade Law and Policy Relating to Natural Resources, Energy, and the Environment,* Mitsuo Matsushita and Thomas J. Schoenbaum, eds. (Japan: Springer, 2016), 383. In this work, Schefer has proposed a new theory named 'The Strong Responsibility to Protect (R2P*)'. According to this concept, the investment law system should recognise the responsibility of States towards a goal of climate stabilisation. Accordingly, the international investment law system should evolve to better reflect contemporary concerns of climate change. She suggests that all States are obliged to promote climate-friendly activities and to pursue low-carbon economies. Therefore they must offer full protection to investments that encourage lower emissions levels or assist in the resilience of local communities. This concept dictates that investments that aim to increase human security would continue to enjoy all of the protections granted in conventional IIAs – and indeed, perhaps be eligible for even greater protections. In the same way, IIA parties have an obligation to address the market access rights of investors with the same normative perspective of R2P*: at 383-95.

¹⁴ Federico Ortino, *The Origin and Evolution of Investment Treaty Standards* (Oxford: Oxford University Press 2019), 2. "Mapping of IIA Content", UNCTAD Database, accessed 30 September 2022, https://investmentpolicy.unctad.org/international-investment-agreements.

¹⁵ Stephan W. Schill, "Multilateralization: An Ordering Paradigm for International Investment Law" in *International Investment Law: A Handbook,* Marc Bungenberg et al., eds. (London: C.H. Beck-Hart-Nomos, 2015), 1823.

¹⁶ Andreas R. Ziegler, "Investment Law in Conflict with WTO Law?" in *International*

relating to international trade are transferable to international investment since both trade and investment are not only partly interchangeable but also mutually supportive. As a result, the nexus between market access obligations and renewable energy promotion may be found as a common criterion in both legal regimes of investment law and trade law.¹⁷

Therefore, to expound on the present status of market access obligations in terms of promoting foreign investments in the renewable energy sector, this article intends to shed some light on this legal nexus in both trade law and investment law regimes.

Thus after providing a conceptual understanding of market access, in Part III we describe the status of market access provisions and renewable energy products in trade law. Part IV focuses on the provisions of IIAs in terms of their market access obligations and renewable energy implications. This is a more complicated issue since investment law does not enjoy a highly institutionalized international agreement such as the World Trade Organization (WTO). Therefore this legal nexus needs to be analyzed under a broad network of IIAs. It finally concludes that so far both the regimes have, to a great extent, overlooked the importance of establishing robust pro-renewable energy investment market access obligations.

II. THE CONCEPT OF MARKET ACCESS

Market Access is one of the most profound norms of trade and investment. Yet there remain debates about the definition of 'Market Access'. ¹⁸ Traditionally, this term is used to establish the ability of a company or country to sell goods and services across borders. Therefore, it is often concerned with international rather than domestic trade as it relates to the measures that a country may use to restrict imports. ¹⁹

However, the concept of market access can be read in a broader sense. It has been decades since trade experts have asserted that market access is

Investment Law: A Handbook, Marc Bungenberg et al., eds. (London: C.H. Beck-Hart-Nomos, 2015), 1795.

¹⁷ Yamashita Tomoko, "Procedural and Normative Competition between the WTO's Dispute Settlement and the Investor-State Arbitration: Focusing on the National Treatment Principle," *Public Policy Review* 16, no. 5 (2020): 21.

¹⁸ Calvin S. Goldman, Q.C. and Brian A. Facey, "Antitrust and Trade Policy: International Business Perspectives" in *International Antitrust Law & Policy: Fordham Corporate Law 1998*, Barry Hawk, ed. (New York: Juris Publishing, 1999), 290-291.

¹⁹ Will Kenton, Michelle P. Scott, "Market Access," Investopedia, accessed 30 November 2022, https://www.investopedia.com/terms/m/market-access.asp.

more important than any other principle of free trade.²⁰ On the other hand, trade and investment are increasingly emerging as coequals and the traditional distinctive lines between free trade and freedom to invest across national borders are blurring.²¹ As a result, market access issues are extending beyond the historical focus of reducing tariffs on imports, and this concept does not only implicate the opportunity for entry into a market, but such entry needs to be meaningful.²² In other words, it may also be utilized to prevent bureaucracy and to increase the efficiency of administration, besides dealing with domestic requirements, technical standards, antidumping suits, import quotas, import licensing, and variable levies.²³

There are particularly important concerns in the renewable energy sector since the energy sector was always riddled with protectionism.²⁴ Therefore, the promotion and protection of foreign investments in renewable energies requires not only market access which is facilitated by trade law but also an effective market presence after entry which may be facilitated by IIAs.

III. THE STATUS OF MARKET ACCESS AND RENEWABLE ENERGY IN TRADE LAW

As mentioned earlier, the issue of market access may arise either in trade or investment. A discriminatory treatment in the field of trade (e.g. imports) may equally amount to discriminatory treatment in the field of investment if it can be shown that this discriminatory treatment has affected a foreign investor or his investment.²⁵ In fact, the economic concepts relating to international trade are transferable to international investment since both trade and investment are not only partly interchangeable but also mutually supportive. As a result, Preferential Market Access is a common criterion in both legal regimes of investment law and trade law.²⁶

However, to analyze the contemporary trade rules and regulations concerning market access, one must inevitably refer to WTO agreements since

²⁰ Peter F. Cowhey, Jonathan David, *Managing the World Economy: The Consequences of Corporate Alliances* (New York: Council on Foreign Relations Press, 1993), 59.

²¹ *Ibid*. 75-76.

²² Goldman, Q.C., and Facey, "Antitrust and Trade Policy," 290-291.

²³ Bijit Bora, Aki Kuwahara, and Sam Laird, "Quantification of Non-Tariff Measures," Policy Issues in International Trade and Commodities Study Series, United Nations Conference on Trade and Development, 2002, 1-5.

²⁴ Cowhey and David, Managing the World Economy: The Consequences of Corporate Alliances, 75.

²⁵ Ziegler, "Investment Law in Conflict with WTO Law?" 1795.

²⁶ Tomoko, "Procedural and Normative Competition," 21.

they oversee the trade rules among nations, and affect market access *inter alia* by lowering trade barriers and providing a platform for the Member States to negotiate and resolve trade issues.²⁷ The significance of WTO agreements in this context is reflected in the preamble of the Agreement Establishing WTO which mentions its objectives as the substantial reduction of tariffs and other trade barriers.²⁸

Looking at the General Agreement on Tariffs and Trade (GATT), one can easily find that it has made no explicit mention of the term 'market access'.²⁹ Instead, it has provided for the basic market access principles. For instance, Article II (Schedules of Concessions) prohibits the member states from imposing on imported products a treatment less favorable than the maximum level of tariff listed in its Schedule.³⁰ Moreover, Article I provides the Most-Favoured-Nation (MFN), and Article III is on National Treatment (NT), the principles that establish non-discrimination in trade relations by the GATT. These provisions try to guarantee that all trade partners must be offered the same privileges. Furthermore, GATT prohibits quantitative restrictions and other possible prohibitions 'by any contracting party on the importation of any product of the territory of any other contracting party or on the exportation or sale for export of any product destined for the territory of any other contracting party', particularly because they are detrimental to competition and administration is less transparent than that of tariffs.³¹

In the General Agreement on Trade in Services (GATS), the market access provision is significant insofar as it clearly mentions 'Market Access' and provides that:

In sectors where market-access commitments are undertaken, the measures which a Member shall not maintain or adopt [...] are defined as:

- (a) limitations on the number of service suppliers whether in the form of numerical quotas, monopolies, exclusive service suppliers or the requirements of an economic needs test;
- (b) limitations on the total value of service transactions or assets in

²⁷ Kenton and Scott, "Market Access."

²⁸ Agreement Establishing the World Trade Organization, 1867 UNTS 154, (adopted 15 April 1994).

²⁹ General Agreement on Tariffs and Trade, opened for signature 30 October 1947, 1867 UNTS 187 (entered into force 1 January 1948).

³⁰ Ibid., art. II.1

³¹ *Ibid.*, art. XI.1.See especially Ichiro Araki, Gabrielle Marceau, "GATT/WTO and Managing International Trade Relations" in *Global Governance: The Role of International Institutions in the Changing World*, Sejong Institute ed. (Seongnam: Sejong Institute, 1997), 202-205.

the form of numerical quotas or the requirement of an economic needs test;

- (c) limitations on the total number of service operations or on the total quantity of service output expressed in terms of designated numerical units in the form of quotas or the requirement of an economic needs test:
- (d) limitations on the total number of natural persons that may be employed in a particular service sector or that a service supplier may employ and who are necessary for, and directly related to, the supply of a specific service in the form of numerical quotas or the requirement of an economic needs test;
- (e) measures which restrict or require specific types of legal entity or joint venture through which a service supplier may supply a service; and
- (f) limitations on the participation of foreign capital in terms of maximum percentage limit on foreign shareholding or the total value of individual or aggregate foreign investment.³²

However, GATS does not oblige WTO members to provide market access or the right of establishment to foreign investors.³³ GATS follows a system of 'progressive liberalization' in which the market access and NT obligations merely apply to the sectors that are inscribed in the Members' Schedules and subject to the restrictive measure they wish to maintain in sectors where liberalization commitments are undertaken.³⁴ Given the voluntary nature of these market access obligations, it is not surprising that few States have in practice reduced the market access barriers to any significant extent.³⁵

It appears that WTO agreements apply to trade in energy much in the same way as they apply to any other products and its rules are poorly designed to address the widespread practice of export taxes in energy trade.³⁶

³² General Agreement on Trade in Services, opened for signature 15 April 1994, 1869 UNTS 183 (entered into force 1 January 1995) (GATS) art. XVI.2.

³³ *Ibid.*, art. XVI-XXI.

³⁴ See generally Lillyana Daza Jaller, Panos Delimatsis and Martín Molinuevo, "Market Access under the GATS – A Legal Commentary on Article XVI GATS," TILEC Discussion Paper No. DP2022-011, accessed 30 May 2023, https://ssrn.com/abstract=4141380 or http://dx.doi.org/10.2139/ssrn.4141380

³⁵ C. Christopher Parlin, "Current Developments Regarding the WTO Financial Services Agreement" in Current Developments in Monetary and Financial Law,vVol. 3 (USA: International Monetary Fund 2005), 943-56.

³⁶ Michael Hahn, Kateryna Holzer, "Special Agreements and Energy: Filling the Gaps" in *Emerging Issues in Sustainable Development*, Mitsuo Matsushita and Thomas J. Schoenbaum, eds. (Japan: Springer, 2016), 264.

Despite all these achievements in creating market access and solving trade-related problems, WTO agreements apply to trade in energy much in the same way as they apply to any other products. Therefore, the members have to observe the standards of National Treatment (NT) and Most Favored Nation Treatment (MFN) in the application of import duties, internal taxes, and regulations on energy products, and they may not use quantitative restrictions on energy imports and exports. However, WTO rules are poorly designed to address the practice of export taxes widespread in energy trade.³⁷

Another drawback is particularly evident in the classification of renewable energy goods and services under WTO Agreements. Generally, renewable energy includes all forms of energy produced from renewable sources. including bioenergy, geothermal energy, hydropower, ocean energy, solar, and wind energy.³⁸ Foreign investment or trade in the renewable energy sector may directly engage with one or more of the components of the renewable energy supply chain including energy commodity, network services, and retail services.³⁹ In other words, foreign stakeholders may conduct technology research, develop renewable energy facilities, and/or pursue the commercialization (i.e. distribution, marketing, sales, customer support, etc.) of their renewable energy products and services. 40 But the goods and services related to these sources are not classified in a systematic manner. For example, biofuels are differently classified under WTO Agreements. While ethanol is considered an 'agricultural good', biodiesel is classified as an 'industrial good' and therefore is expected to have faster liberalization.⁴¹, because industrial goods are governed by the rules of GATT and receive protection from the Agreement on Subsidies and Countervailing Measures (SCM), which monitors the use of subsidies to reduce their trade-distorting

³⁷ Michael Hahn, Kateryna Holzer, "Special Agreements and Energy: Filling the Gaps" in *Emerging Issues in Sustainable Development,* Mitsuo Matsushita and Thomas J. Schoenbaum, eds. (Japan: Springer, 2016), 264.

³⁸ International Energy Agency, World energy outlook 2002 (Paris: International Energy Agency 2002).

³⁹ M. Hasanuzzaman and Laveet Kumar, "Energy Supply" in Energy for Sustainable Development: Demand, Supply, Conversion and Management, Md. Hasanuzzaman and Nasrudin Abd Rahim, eds. (London: Academic Press, 2020), 91.

⁴⁰ REN21, Renewables in Cities 2021 Global Status Report (Paris: REN21 Secretariat, 2021), 154-56.

⁴¹ Masami Kojima, Donald Mitchell and William Ward, Considering Trade Policies for Liquid Biofuels (Washington, DC: The World Bank Group, 2007). Ethanol falls under Chapter 22 of the Harmonised Commodity Description and Coding System whereas biodiesel falls under Chapter 38. Thus ethanol is included in Annex 1 to the Agreement on Agriculture and biodiesel is excluded from this agreement. The rationale behind this differentiation is that ethanol is undenatured and can be imbibed: at 62.

effects. ⁴² In other words, these classifications are central to WTO regulations on subsidies, and accordingly, no export subsidies and subsidies contingent upon the use of domestic over imported goods are allowed with respect to industrial goods. ⁴³

As it is evident from the EU's MFN tariffs of around 50 percent on imported undenatured ethanol, and a mere 6.5 percent on biodiesel imports, tariffs on agricultural goods are substantially higher than those on industrial goods and such different classifications overshadow the interests of stakeholders in ethanol trade.⁴⁴

It is important to note at this point that investment tribunals will in case of dispute, and as a prerequisite for liability under MFN and/or NT clause, conduct a 'likeness test' to determine that the subject matter of the dispute is of the same kind (*ejusdem generis*). As there is no one-size-fits-all criterion for determining the 'like circumstances', tribunals may refer to these classifications and the reports of the WTO dispute settlement bodies as the 'relevant rules of international law applicable in the relations between the parties'. This potentially exposes foreign investors in the renewable energy sector to different treatments due to the inconsistent approach of WTO agreements to classification of the renewable energies.

As for now the scope of protections and treatments provided by these instruments is relatively ambiguous. For instance, under the rules of WTO, the production of energy goods from oil, gas, and coal, comes under the scope of GATT and energy-related services fall under the scope of GATS. Although electric energy is qualified as a good and thus subject to GATT, it is not clear where various types of renewable energy fall. Indeed, the WTO provisions concerning renewable energies are not precisely articulated and still do not systematically address the energy sector. 46 Such ambiguities are exacerbated

⁴² Agreement on Subsidies and Countervailing Measures, signed 15 April 1994, 1869 UNTS 14 (entered into force 1 January 1995), arts 3, 4, 12, and annex 1.

⁴³ Kevin Robert Fingerman, *Measuring and Moderating the Water Resource Impact of Biofuel Production and Trade* (Doctoral Thesis, University of California, Berkeley, 2012), 83.

⁴⁴ Alison Burrell, Stephan Hubertus Gay and Aikaterini Kavallari, "The Compatibility of EU Biofuel Policies with Global Sustainability and the WTO," *The World Economy* 35, no. 6, (2012): 788.

⁴⁵ Vienna Convention of the Law of Treaties, adopted 23 May 1969, 1155 UNTS 331 (entered into force 27 January 1980), art. 31(3)(c). Mohammad Akefi Ghaziani, Vahid Akefi Ghaziani, and Moosa Akefi Ghaziani, "Most Favoured Nation Clause: Unleashing its Legal Potential in Favour of Foreign Investors in Renewable Energy Sector," *Indonesia Law Review* 12, no. 2, (2022): 71-2. See e.g. Parkerings-Compagniet AS v Republic of Lithuania (Award) (ICSID Arbitral Tribunal, Case No ARB/05/8, 11 September 2007) para 369.

⁴⁶ Martijn Wilder Am, Lauren Drake, "International Law and the Renewable Energy Sector" in *The Oxford Handbook of International Climate Change Law*, Cinnamon P. Carlarne, Kevin R.

by the existence of WTO provisions that favor developing economies over developed ones in different ways. The world trade regime long recognized the need for 'positive efforts' to ensure trade benefits for developing economies.⁴⁷ For instance, Article XVIII of GATT allows a member to deviate from certain GATT obligations in order to promote infant industries. And Part IV of this agreement has recognized the need for developing countries to diversify the structure of their economies and to avoid excessive dependence on the export of primary products.⁴⁸

As the Doha Round is the first round of significant negotiations on trade and the environment in the GATT/WTO, it is not far from the expectation that member States address these issues more systematically and consistently.⁴⁹

Although the investment arbitration arena is not free from these uncertainties about renewable energy sectors either, the classification of renewable energy and its related services under WTO Agreements is relevant since the economic concepts relating to international trade are transferable to international investment law.⁵⁰ Therefore, in dealing with investment disputes, it is possible to refer to trade law regulations as the 'relevant rules of international law applicable in the relations between the parties'.⁵¹

However, IIAs may help bring order to these chaotic issues. Therefore, the relevant clauses and their significance in terms of contribution to renewable energy investments are discussed below.

IV. MARKET ACCESS OBLIGATIONS AND RENEWABLE ENERGY INVESTMENTS

Generally, restrictions on the passage of foreign goods and services into domestic markets single out foreigners for discriminatory treatment. Thus the concept of market access in investment law could be understood as an

⁴⁸ Julia Ya Qin, "Reforming WTO Discipline on Export Duties: Sovereignty Over Natural Resources, Economic Development and Environmental Protection" in *Emerging Issues in Sustainable Development*, Mitsuo Matsushita and Thomas J. Schoenbaum, eds. (Japan: Springer, 2016), 160.

Gray, and Richard G. Tarasofsky, eds. (Oxford University Press, 2016), 360-370.

⁴⁷ General Agreement on Tariffs and Trade, art. XXXVI. 2-5.

⁴⁹ "Doha Round: what are they negotiating?", World Trade Organization, accessed 25 August 2022, https://www.wto.org/english/tratop e/dda e/update e.htm.

⁵⁰ Ziegler, "Investment Law in Conflict with WTO Law?," 1795. Tomoko, "Procedural and Normative Competition," 21.

⁵¹ Vienna Convention of the Law of Treaties, opened for signature 23 May 1969, 1155 UNTS 331 (entered into force 27 January 1980), art. 31(3)(c).

equivalent of 'pre-establishment' NT.⁵² As mentioned earlier, NT limitations may apply in the pre-establishment phase. However, some authors point out that there is some confusion in the relationship between market access and NT, and a generally accepted comprehension is that limited NT obligations may undermine or limit market access.⁵³

In any case, granting preferential market access through the elimination of tariff and non-tariff barriers may in turn create trade and investment incentives for foreign investors in the renewable energy sector. This is particularly true since, when original equipment manufacturers sell renewable energy goods in tandem with services such as construction and maintenance, trade barriers can constitute significant obstacles regardless of the mode in which the service is supplied.⁵⁴ Therefore a State's openness to trade is known as one of the most reliable indicators that contribute to increasing the country's attractiveness before foreign investors.⁵⁵ Moreover, by lowering trade and investment barriers and creating preferential schemes between States, investors with export-oriented projects may be encouraged to invest in the territory of the other party to benefit from the possible lower manufacturing costs and duty reductions on goods exported back to the home State.⁵⁶ This could result in an investment climate that observes the engagement of efficient companies while creating a level playing field for emerging industries, by addressing their needs and problems, to compete with their foreign counterparts.⁵⁷

It is important to recall that the regional presence of international corporations offers beneficial opportunities as they often rely on local personnel. This means that there will be many opportunities for local job creation, transfer of technology and knowledge, etc. Moreover, the local renewable energy sources may be further explored and extracted. Therefore, one of the most important techniques to achieve global development of renewable energy is the establishment of various local commercial presence

⁵² Christopher Arup, *The New World Trade Organization Agreements: Globalizing Law Through Services and Intellectual Property* (Cambridge: Cambridge University Press, 2000), 62.

⁵³ OECD, International Investment Law: Understanding Concepts and Tracking Innovations (Paris: OECD Publishing, 2008), 276.

⁵⁴ Verburg and Waverijn, "Liberalizing the Global Supply Chain of Renewable Energy Technology," 128.

⁵⁵ Avik Chakrabarti, "Determinants of FDI: A Comment on Globalization-Induced Changes and the Role of FDI Policies," University of Wisconsin, accessed 25 November 2022, https://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.199.8067&rep=rep1&type=pdf.

⁵⁶ UNCTAD, UNCTAD Series on International Investment Policies for Development: Investment Promotion Provisions in International Investment Agreements (New York: United Nations Publication, 2008), 19-21.

⁵⁷ Charlotte H. Brink, *Measuring Political Risks: Risks to Foreign Investments* (London: Routledge, 2016), 162.

and subsidiaries of renewable energy companies.⁵⁸ As Egger and Merlo have observed, for German multinationals, the applicable BITs had an increasing effect on both the number of multinational firms and the number of plants per firm ⁵⁹

Generally, IIAs have a critical role to play in this context, particularly with the same normative perspective of R2P*. By means of these agreements, States may waive their traditional rights, and instead facilitate access to their markets by investors who intend on lowering GHG levels or mitigating the impacts of climate change, including renewable energy investors.⁶⁰

However, States have provided for different levels of Market Access and are adopting the relevant clauses at quite different paces, on the basis of their own different agendas and interests. So far, only around 87% of IIAs contain a NT clause, and fewer agreements make a reference to 'Market access', 'Access to markets', or 'Open and competitive market', as an obligation on parties. For instance Article 3 of the Energy Charter treaty (ECT) states that: 'The Contracting Parties shall work to promote access to international markets on commercial terms, and generally to develop an open and competitive market, for Energy Materials and Products and Energy-Related Equipment'. According to this general and soft obligation, each State party may establish within its jurisdiction its own principles and regulations with the aim of creating an internationally competitive market. Moreover, the ECT provides that:

Each Contracting Party shall endeavour to accord to Investors other Contracting Parties, regards the Making as Investments in its Area, the Treatment described in paragraph (3). (3) For the purposes of this Article, 'Treatment' means treatment accorded by a Contracting Party which is no less favourable than that which it accords to its own Investors or to Investors of any other Contracting Party or any third state, whichever is the most favourable.64

⁵⁸ Verburg and Waverijn, "Liberalizing the Global Supply Chain of Renewable Energy Technology," 136.

⁵⁹ Peter Egger, Valeria Merlo, "BITs Bite: An Anatomy of the Impact of Bilateral Investment Treaties on Multinational Firms," *Scandinavian Journal of Economics* 144, no. 4 (2012): 1240.

⁶⁰ Schefer, "Climate Change, Trade, and Investment Law," 395.

⁶¹ Ortino, *The Origin and Evolution of Investment Treaty Standards*, 2. UNCTAD Database, "Mapping of IIA Content".

⁶² Energy Charter Treaty, opened for signature 17 December 1994, 2080 UNTS 100 (entered into force 16 April 1998).

⁶³ Tarcisio Gazzini, "Energy Charter Treaty: Achievements, Challenges and Perspectives" in *Foreign Investment in the Energy Sector Balancing Private and Public Interests*, Eric De Brabandere and Tarcisio Gazzini, eds. (Leiden: Koninklijke Brill nv, 2014), 108.

⁶⁴ Energy Charter Treaty, art. 10(2)-(3).

Interestingly, ECT being the biggest IIA, and the only energy-specific multilateral treaty open to all States, has called upon the parties to negotiate towards the conclusion of a 'supplementary treaty' which would 'oblige each party thereto to accord to Investors of other parties, as regards the Making of Investments in its Area, the Treatment described in paragraph (3)'.65 Although negotiations took place, the supplementary treaty was never adopted and the efforts of the Secretariat to resume negotiations have not yielded the expected results.66

As for now, the ECT recognizes pre-establishment NT subject to the 'endeavor' of the host State and hence does not bind the parties with a hard legal obligation as such. Nevertheless, such soft law obligations may deliver a valuable contribution to the promotion of foreign investments, since according to the general rules of interpretation, investment tribunals interpret the provisions of each agreement 'in good faith in accordance with the ordinary meaning to be given to the terms of the treaty in their context ...'.67 Moreover, such provisions unveil the original intention of the parties to the agreements and the extent to which they have expected the covered investment to enjoy the protections of the agreement.⁶⁸

Although the possibility exists for foreign investors to lobby and negotiate market access with host States and other interested parties, this is a cumbersome and lengthy process with uncertain outcomes which significantly increases transaction costs.⁶⁹ And the development of bilateral and multilateral standards as such may significantly facilitate foreign investments.

The relationship between the non-discrimination obligations (i.e. NT and MFN) under IIAs and the promotion of foreign investment and trade in the renewable energy sector is undeniable. However, no State will grant unlimited market access to foreign investors, therefore wide sectoral exceptions are often

⁶⁵ *Ibid.*, art. 10(4).

⁶⁶ Energy Charter Secretariat, Decision of the Energy Charter Conference: Adoption by Correspondence – Policy Options for Modernisation of the ECT, CCDEC 2019 08 STR (adopted on 6 October 2019), 54.

⁶⁷ Vienna Convention of The Law of Treaties, art. 31(1).

⁶⁸ *Ibid.*, Daniel Rietiker, "The Principle of 'Effectiveness' in the Recent Jurisprudence of the European Court of Human Rights: Its Different Dimensions and Its Consistency with Public International Law – No Need for the Concept of Treaty Sui Generis," *Nordic Journal of International Law* 79, no. 2 (2010): 245, 256.

⁶⁹ Verburg and Waverijn, "Liberalizing the Global Supply Chain of Renewable Energy Technology," 125.

⁷⁰ Mohammad Akefi Ghaziani, Vahid Akefi Ghaziani, and Moosa Akefi Ghaziani, "Most Favoured Nation Clause: Unleashing its Legal Potential in Favour of Foreign Investors in Renewable Energy Sector," *Indonesia Law Review* 12, no. 2 (2022): 64-75.

used, particularly where an agreement provides for pre-establishment NT. These exceptions may be specified through a negative list which is a common practice. For instance, under the EU-Canada Comprehensive Economic and Trade Agreement some Provincial Governments of Canada have restricted market access in the renewable energy sector by means of such negative lists (reservations).⁷¹ Similarly, IIAs may incorporate a positive list similar to Article XX of GATS.⁷² The positive list approach, though seldom used, is by nature narrower in scope, as it allows States to make very limited offers of pre-entry rights of investment.⁷³ This approach may be contemplated as a legal technique to achieve more investment liberalization in various sectors, including renewable energy.

It is important to mention at this point that if the markets are structured in such a way that they reward innovation in clean energy, the non-discrimination provisions will help them access a level playing field. Key policies such as feed-in tariffs (FITs), renewable portfolio standards (RPSs), Tax regulations, and rebates are among these. These provisions will ensure that the host States do not create regulatory barriers to renewable energy technologies based on protectionist and nationalist concerns.

Frustratingly, these incentive policies are often carried out in tandem with domestic content requirements. Such requirements may make investors reluctant to invest. 77 These are considered similar barriers to foreign investment and some countries impose them in relation to the renewable energy sector. Following such requirements, a patchwork of national and provincial standards is emerging, which is likely to make it difficult for manufacturers to supply different markets. 78 Although WTO law has been employed to challenge these

⁷¹ Comprehensive Economic and Trade Agreement between Canada and the European Union, adopted 30 October 2016 (not yet in force) reservations [I-PT-56]-[I-PT-134].

⁷² General Agreement on Trade in Services, art. XX.

⁷³ Armand de Mestral, "Pre-Entry Obligations under International Law" in *International Investment Law: A Handbook*, Marc Bungenberg et al., eds. (Beck-Hart-Nomos, 2014), 685.

⁷⁴ Makane Moïse Mbengue, Deepak Raju, "Energy, Environment and Foreign Investment" in *Foreign Investment in the Energy Sector Balancing Private and Public Interests*, Eric De Brabandere and Tarcisio Gazzini, eds. (Leiden: Koninklijke Brill nv, 2014), 184.

⁷⁵ Bradford Gentry, Jennifer Ronk,"International Investment Agreements and Investments in Renewable Energy" in *From Barriers to Opportunities: Renewable Energy Issues in Law and Policy*, Leslie Parker et al., eds. (New Haven: Forestry & Environmental Studies Publications Series, 2007), 65.

⁷⁶ Mbengue and Raju, "Energy, Environment and Foreign Investment," 184.

⁷⁷ Jan-Christoph Kuntze, Tom Moerenhout, *Local Content Requirements and the Renewable Energy industry - A Good Match?* (Geneva: International Centre for Trade and Sustainable Development, 2013) 6-7.

⁷⁸ Haverkamp and Parker, "Governments Must Act to Boost Trade in Biofuels," 226.

requirements,⁷⁹ the non-discrimination provisions in IIAs may strike not only at domestic content requirements but also other performance requirements, including trade balancing requirements, foreign exchange restrictions, export controls, the requirements to transfer technology or technology localization, etc.⁸⁰

This contribution of IIAs to investment liberalization is particularly important since WTO Agreements do provide different exemptions and are not always equally applied to all parties. For instance, Articles 4 and 5.3 of TRIMS. provide temporary exemptions from the implementation of the Agreement for developing countries, particularly the least developed countries. In other words, IIAs, and particularly FTAs, are exceptional mechanisms for giving particular trading partners more favorable market access than that otherwise offered by the WTO agreements by means of MFN.81 Moreover, the parties to FTAs commit to eliminate or substantially reduce tariffs on goods; this is usually across all sectors, though certain sectors or products may sometimes be excluded. In this way, IIAs have the potential to leave renewable energy investments intact and ensure that energy suppliers are free to base their procurement decisions on effectiveness and competition rather than the host State's requirements. This is a significant task since domestic requirements are generally inconsistent with free market access and NT because they are not imposed on national investors.82

However, foreign investors and particularly companies do often adhere to domestic requirements in different ways, 83 and the overall economic impact of these requirements on the development of host States remains disputable, there are studies that suggest these requirements have trade and investment distortive effects. 84 Particularly, such requirements could potentially skew the market for renewable energy and create inefficiencies. 85

Therefore various IIAs have imposed restrictions on these policies. Notably, the United States-Mexico-Canada Agreement (USMCA) contains

⁷⁹ Agreement on Trade-Related Investment Measures, opened for signature 15 April 1994, 1868 UNTS 186 (entered into force 1 January 1995), art. 2 and annex. GATT art. III and XI. See also Julien Chaisse, "Renewables Re-energized? The Internationalization of Green Energy Investment Rules and Disputes," *World Energy Law & Business* 9, no. 4 (2016): 271.

⁸⁰ Mbengue and Raju, "Energy, Environment and Foreign Investment," 184.

⁸¹ Louisa Fitz-Gerald, Paul Curnow, "Australian Case Study" in *From Debate to Design: Issues in Clean Energy and Climate Change Law and Policy,* Leslie Parker et al., eds. (New Haven: Yale School of Forestry and Environmental Studies, 2008), 119-120.

⁸² Sornarajah, The International Law on Foreign Investment, 342.

⁸³ *Ibid.* 138-39.

⁸⁴ *Ibid*. 206.

⁸⁵ Mbengue and Raju, "Energy, Environment and Foreign Investment," 184.

a set of prohibitions against performance requirements.⁸⁶ Interestingly, the US and Canadian IIAs often consider vast prohibitions on performance requirements for both pre-entry and post-entry phases.⁸⁷ In fact, these requirements are slowly disappearing as a policy option.⁸⁸ For instance, the US Model BIT not only prohibits trade-related performance requirements but also the requirements 'to transfer a particular technology, a production process, or other proprietary knowledge to a person in its territory'.⁸⁹

Interestingly, some IIAs have addressed local content requirements, especially concerning the renewable energy sector. Most notably, the recent Free Trade Agreement between the EU and Vietnam provides a chapter titled 'Non-tariff barriers to trade and investment in renewable energy generation', under which a party shall:

- (a) refrain from adopting measures providing for local content requirements or any other offset affecting the other Party's products, service suppliers, investors or enterprises;
- (b) refrain from adopting measures requiring to form a partnership with local companies, unless those partnerships are deemed necessary for technical reasons and that Party can demonstrate those reasons upon request of the other Party;⁹⁰

Such sector-specific drafting of an IIA not only appears to be the right solution to overcome the challenges of market access and investment liberalization in the renewable energy sector.

However, most IIAs are not renewable energy targeted so far. These

⁸⁶ United States–Mexico–Canada Agreement (entered into force 1 July 2020), art. 14.10

⁸⁷ Chaisse, "Renewables Re-energized?," 271.

The Government of China, for instance, has amended the Chinese-Foreign Equity Joint Ventures Law of the PRC in 2001, the Chinese-Foreign Contractual Joint Ventures Law of the PRC in 2000, and the Wholly Foreign-owned Enterprise Law of the PRC in 2001, deleting several mandatory requirements which were imposed on foreign-invested companies, such as export performance requirement, local purchase requirement, foreign exchange balance requirements, etc; See Lei Cai, "Where does China Stand: the Evolving National Treatment Standard in BITs?," *The Journal of World Investment & Trade* 13, (2012): 386.

⁸⁹ The US Model Bilateral Investment Treaty (2012), art. 8(1)(f).

⁹⁰ Free Trade Agreement between the European Union and Vietnam, signed 30 June 2019, [2020] OJ L 186/3 (entered into force 1 August 2020), art. 7.4. EU - United Kingdom Trade and Cooperation Agreement, signed 30 December 2020, 2020 OJ L 444/14 (provisionally applied 1 January 2021), part. 2 title. VIII. See generally Treaty on the Functioning of the European Union, opened for signature 25 March 1957, 2010 OJ C 83/13 (entered into force 1 December 2009), arts. 49–53.

instruments often provide a superficial approach to investment in this sector. ⁹¹ Most IIAs do not mention renewable energies and are often inattentive to the energy sector in-toto. Against this background, the recent IIAs signed by the EU have taken great steps in meeting the needs of this sector and in further liberalizing the investment flows.

In other words, the global thrust of liberalization has largely focused on NT at both the pre-entry and post-entry phases. While most States are still reluctant to provide market access, there is an increasing tendency among developed States to provide investment liberalization and market access for all sectors, including renewables. However, given the vitality of renewable energies, IIAs need to keep pace with the contemporary requirements of sustainable energy development and the mitigation of global warming by providing preferential market access for investments in this sector.

V. CONCLUSION

This article has been both a tribute to and a critique of the contemporary WTO agreements and IIAs. Some reflection on the deeper trade and investment law approach to the promotion of foreign investments in the renewable energy sector reveals how these instruments have overlooked the importance of trade and investment facilitation to meet the growing renewable energy demand throughout the world. Neither of these regimes is utilizing their provisions to contribute to this goal. WTO agreements are suffering from primary drawbacks in categorizing renewable energy goods and services and providing consistent treatment for trade in this sector. And it is still to be seen how the Doha round of negotiations is going to address this issue.

On the other hand, IIAs have a relatively better situation. Whilst most IIAs do not address renewable energies whatsoever, and many of them have not so far come up with adequate market access obligations, there are few agreements that have taken great steps in addressing the trade and investment facilitation needs of this sector. Similarly, other agreements need to keep pace with contemporary global priorities. This is a considerable step since international investment law, in contrast to trade law, is comprised of a segregated network of IIAs and each agreement governs the investment relations between its parties and their national. Therefore, providing novel approaches similar to the EU-Vietnam agreement can bring consistency and predictability to all possible disputes arising under the applicable IIAs and prevents contradictory and inconsistent awards in similar or identical disputes.

⁹¹ UNCTAD Database, "Mapping of IIA Content".

BIBLIOGRAPHY

Journals and Periodicals

- Ghaziani, Mohammad Akefi, Vahid Akefi Ghaziani, and Moosa Akefi Ghaziani. "Most Favoured Nation Clause: Unleashing its Legal Potential in Favour of Foreign Investors in Renewable Energy Sector." Indonesia Law Review 12, no. 2 (2022): 60-85.
- Bruce, Stuart. "International Law and Renewable Energy: Facilitating Sustainable Energy for All?." Melbourne Journal of International Law 14, no. 1 (2013): 18-53.
- Burrell, Alison, Stephan Hubertus Gay and Aikaterini Kavallari. "The Compatibility of EU Biofuel Policies with Global Sustainability and the WTO." The World Economy 35, no. 6, (2012): 784-798.
- Cai, Lei. "Where does China Stand: the Evolving National Treatment Standard in BITs?," The Journal of World Investment & Trade 13, (2012): 373-389.
- Chaisse, Julien. "Renewables Re-energized? The Internationalization of Green Energy Investment Rules and Disputes." World Energy Law & Business 9, no. 4 (2016): 269-281.
- Egger, Peter and Valeria Merlo. "BITs Bite: An Anatomy of the Impact of Bilateral Investment Treaties on Multinational Firms." Scandinavian Journal of Economics 144, no. 4 (2012): 1240–1266.
- Giannopoulos, Nikolaos. "International Protection of Foreign Investments in Offshore Energy Production and Marine Environmental Protection: Birds of a Feather or Frenemies Forever?." Netherlands International Law Review 68, (2021): 149-280.
- Rietiker, Daniel. "The Principle of 'Effectiveness' in the Recent Jurisprudence of the European Court of Human Rights: Its Different Dimensions and Its Consistency with Public International Law No Need for the Concept of Treaty Sui Generis." Nordic Journal of International Law 79, no. 2 (2010): 245-277.
- Sussman, Edna. "The Energy Charter Treaty's Investor Protection Provisions: Potential to Foster Solutions to Global Warming and Promote Sustainable Development." ILSA Journal of International & Comparative Law 14, no. 2 (2008): 391-404.
- Tienhaara, Kyla. "Unilateral Commitments to Investment Protection: Does the Promise of Stability Restrict Environmental Policy Development?." Yearbook of International Environmental Law 17, (2008): 139-167.
- Tienhaara, Kyla and Christian Downie. "Risky Business? The Energy Charter Treaty, Renewable Energy, and Investor-State Disputes." Global Governance 24, no. 3 (2018): 451-741.
- Tomoko, Yamashita. "Procedural and Normative Competition between the WTO's Dispute Settlement and the Investor-State Arbitration: Focusing on the National Treatment Principle." Public Policy Review 16, no. 5 (2020): 1-23.
- Verburg, Cees and Jaap Waverijn. "Liberalizing the Global Supply Chain of Renewable Energy Technology: The Role of International Investment Law in Facilitating Flows of Foreign Direct Investment and Trade." Brill Open Law 2, no. 1, (2019):

101-139.

Books and Book Chapters

- Araki, Ichiro and Gabrielle Marceau. "GATT/WTO and Managing International Trade Relations" in Global Governance: The Role of International Institutions in the Changing World, edited by Sejong Institute, 187-251. Seongnam: Sejong Institute, 1997.
- Arup, Christopher, The New World Trade Organization Agreements: Globalizing Law Through Services and Intellectual Property. Cambridge: Cambridge University Press, 2000.
- Bora, Bijit, Aki Kuwahara, and Sam Laird, Quantification of Non-Tariff Measures. New York: United Nations Publication, 2002.
- Bradford, Gentry and Jennifer Ronk. "International Investment Agreements and Investments in Renewable Energy" in From Barriers to Opportunities: Renewable Energy Issues in Law and Policy, edited by Leslie Parker et al., 25-87. New Haven: Forestry & Environmental Studies Publications Series, 2007.
- Brink, Charlotte H., Measuring Political Risks: Risks to Foreign Investments. London: Routledge, 2016.
- Cowhey, Peter F. and Jonathan David, Managing the World Economy: The Consequences of Corporate Alliances. New York: Council on Foreign Relations Press, 1993.
- De Mestral, Armand. "Pre-Entry Obligations under International Law" in International Investment Law: A Handbook, edited by Marc Bungenberg et al., 685-699. London: Beck-Hart-Nomos, 2014.
- Fingerman, Kevin Robert, Measuring and Moderating the Water Resource Impact of Biofuel Production and Trade. Doctoral Thesis, University of California, Berkelev. 2012.
- Fitz-Gerald, Louisa and Paul Curnow. "Australian Case Study" in From Debate to Design: Issues in Clean Energy and Climate Change Law and Policy, edited by Leslie Parker et al., 113-162. New Haven: Yale School of Forestry and Environmental Studies, 2008.
- Fugazza, Marco and Claudia Trentini, Empirical Insights on Market Access and Foreign Direct Investment. New York: United Nations Publication, 2014.
- Gazzini, Tarcisio. "Energy Charter Treaty: Achievements, Challenges and Perspectives" in Foreign Investment in the Energy Sector Balancing Private and Public Interests, edited by Eric De Brabandere and Tarcisio Gazzini, 105-129. Leiden: Koninklijke Brill nv, 2014.
- Goldman, Q.C., Calvin S. and Brian A. Facey. "Antitrust and Trade Policy: International Business Perspectives" in International Antitrust Law & Policy: Fordham Corporate Law 1998, edited by Barry Hawk, 279-297. New York: Juris Publishing, 1999.
- Hahn, Michael and Kateryna Holzer. "Special Agreements and Energy: Filling the Gaps" in Emerging Issues in Sustainable Development, edited by Mitsuo Matsushita and Thomas J. Schoenbaum, 259-278. Japan: Springer, 2016.
- Hasanuzzaman, M. and Laveet Kumar. "Energy Supply" in Energy for Sustainable Development: Demand, Supply, Conversion and Management, edited by Md. Hasanuzzaman and Nasrudin Abd Rahim, 88-104. London: Academic Press,

- 2020.
- Haverkamp, Jennifer A. and Leslie Parker. "Governments Must Act to Boost Trade in Biofuels: World Trade Organisation Rules Governing Biofuels and Feedstocks Need Updating" in From Debate to Design: Issues in Clean Energy and Climate Change Law and Policy, edited by Leslie Parker et al., 225-228. New Haven: Yale School of Forestry and Environmental Studies, 2008.
- International Energy Agency, Perspectives for the Energy Transition Investment Needs for a Low Carbon Energy System. Bonn: IEA/IRENA, 2017.
- International Energy Agency, World energy outlook 2002. Paris: International Energy Agency, 2002.
- Kojima, Masami, Donald Mitchell, and William Ward, Considering Trade Policies for Liquid Biofuels. Washington, DC: The World Bank Group, 2007.
- Kuntze, Jan-Christoph and Tom Moerenhout, Local Content Requirements and the Renewable Energy industry A Good Match?. Geneva: International Centre for Trade and Sustainable Development, 2013.
- Lesniewska, Feja. "Renewable Energy Waste Management and the Circular Economy in the EU: Solar PV and Wind Power" in Research Handbook on EU Energy Law and Policy, edited by Rafael Leal-Arcas and Jan Wouters, 460-468. Cheltenham: Edward Elgar Publishing, 2017.
- Mbengue, Makane Moïse and Deepak Raju. "Energy, Environment and Foreign Investment" in Foreign Investment in the Energy Sector Balancing Private and Public Interests, edited by Eric De Brabandere and Tarcisio Gazzini, 171-191. Leiden: Koninklijke Brill nv, 2014.
- OECD. Better Policies for Development 2015: Policy Coherence and Green Growth. Paris: OECD Publishing, 2015.
- OECD. Green Finance and Investment: Overcoming Barriers to International Investment in Clean Energy, OECD Publishing, Paris, 2015.
- OECD. International Investment Law: Understanding Concepts and Tracking Innovations. Paris: OECD Publishing, 2008.
- Ortino, Federico. The Origin and Evolution of Investment Treaty Standards. Oxford: Oxford University Press 2019.
- Parlin, C. Christopher. "Current Developments Regarding the WTO Financial Services Agreement" in Current Developments in Monetary and Financial Law, Vol. 3, 943-56. USA: International Monetary Fund 2005.
- Qin, Julia Ya. "Reforming WTO Discipline on Export Duties: Sovereignty Over Natural Resources, Economic Development and Environmental Protection" in Emerging Issues in Sustainable Development, edited by Mitsuo Matsushita and Thomas J. Schoenbaum, 139-183. Japan: Springer, 2016.
- REN21. Renewables in Cities 2021 Global Status Report. Paris: REN21 Secretariat, 2021.
- Salacuse, Jeswald W. and Nicholas P. Sullivan. "Do BITs Really Work? An Evaluation of Bilateral Investment Treaties and Their Grand Bargain" in The Effect of Treaties on Foreign Direct Investment: Bilateral Investment Treaties, Double Taxation Treaties, and Investment Flows, edited by Karl P. Sauvant and Lisa E. Sachs, 109-170. Oxford: Oxford University Publication, 2009.
- Sauvant, Karl P. and Jennifer Reimer. FDI Perspectives: Issues in International Investment. New York: Vale Columbia Center on Sustainable International

- Investment, 2012.
- Schefer, Krista Nadakavukaren. "Climate Change, Trade, and Investment Law: What Difference Would a Real Responsibility to Protect Make?" in Emerging Issues in Sustainable Development: International Trade Law and Policy Relating to Natural Resources, Energy, and the Environment, edited by Mitsuo Matsushita and Thomas J. Schoenbaum, 383-398. Japan: Springer 2016.
- Schill, Stephan W. "Multilateralization: An Ordering Paradigm for International Investment Law" in International Investment Law: A Handbook, edited by Marc Bungenberg et al., 1817-1838. London: C.H. Beck-Hart-Nomos, 2015.
- Sornarajah, M., The International Law on Foreign Investment. Cambridge: Cambridge University Press, 2021.
- UNCTAD, The Role of International Investment Agreements in Attracting Foreign Direct Investment to Developing Countries. New York: United Nations Publication, 2009.
- UNCTAD, UNCTAD Series on International Investment Policies for Development: Investment Promotion Provisions in International Investment Agreements. New York: United Nations Publication, 2008.
- Wilder Am, Martijn and Lauren Drake. "International Law and the Renewable Energy Sector" in The Oxford Handbook of International Climate Change Law, edited by Cinnamon P. Carlarne, Kevin R. Gray, and Richard G. Tarasofsky, 357-390. Oxford University Press, 2016.
- Ziegler, Andreas R. "Investment Law in Conflict with WTO Law?" in International Investment Law: A Handbook, edited by Marc Bungenberg et al., 1784-1801. London: C.H. Beck-Hart-Nomos, 2015.

Legal Documents

- Agreement on Subsidies and Countervailing Measures, 1869 UNTS 14 (signed 15 April 1994, entered into force 1 January 1995) (SCM).
- Agreement on Trade-Related Investment Measures. 1868 UNTS 186 (opened for signature 15 April 1994, entered into force 1 January 1995).
- Comprehensive Economic and Trade Agreement between Canada and the European Union. (adopted 30 October 2016, not yet in force).
- Energy Charter Secretariat, Decision of the Energy Charter Conference: Adoption by Correspondence Policy Options for Modernisation of the ECT, CCDEC 2019 08 STR (adopted on 6 October 2019).
- Energy Charter Treaty. 2080 UNTS 100 (opened for signature 17 December 1994, entered into force 16 April 1998) (ECT).
- EU United Kingdom Trade and Cooperation Agreement. 2020 OJ L 444/14 (signed 30 December 2020, provisionally applied 1 January 2021).
- Free Trade Agreement between the European Union and Vietnam. [2020] OJ L 186/3 (signed 30 June 2019, entered into force 1 August 2020).
- General Agreement on Tariffs and Trade. 1867 UNTS 187 (opened for signature 30 October 1947, entered into force 1 January 1948) (GATT).
- General Agreement on Trade in Services. 1869 UNTS 183 (opened for signature 15 April 1994, entered into force 1 January 1995) (GATS).
- Parkerings-Compagniet AS v Republic of Lithuania (Award) (ICSID Arbitral Tribunal,

- Case No ARB/05/8, 11 September 2007).
- The Council of the European Union. Conclusions on a Comprehensive European International Investment Policy. 3041st Foreign Affairs Council Meeting. Luxembourg. 25 October 2010.
- The US Model Bilateral Investment Treaty (2012).
- Treaty on the Functioning of the European Union. 2010 OJ C 83/13 (opened for signature 25 March 1957, entered into force 1 December 2009).
- United States-Mexico-Canada Agreement (entered into force 1 July 2020).
- Vienna Convention of the Law of Treaties. 1155 UNTS 331 (opened for signature 23 May 1969, entered into force 27 January 1980).
- WTO Agreement: Marrakesh Agreement Establishing the World Trade Organization. 1867 UNTS. 154 (adopted 15 April 1994).

Websites

- Chakrabarti, Avik. "Determinants of FDI: A Comment on Globalization-Induced Changes and the Role of FDI Policies." University of Wisconsin. Accessed 25 November 2022, https://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.199 .8067&rep=rep1&type=pdf.
- Garretsen, Harry, Maarten Bosker. "Market Access: A Key Determinant of Economic Development in Sub-Saharan Africa." World Bank Blogs. Accessed 20 November 2022, https://blogs.worldbank.org/developmenttalk/market-access-a-key-determinant-of-economic-development-in-sub-saharan-africa.
- IRENA. "Energy Transition Holds Key to Tackle Global Energy and Climate Crisis." Accessed 22 November 2022, https://www.irena.org/News/pressreleases/2022/Mar/Energy-Transition-Holds-Key-to-Tackle-Global-Energy-and-Climate-Crisis.
- Jaller, Lillyana Daza, Panos Delimatsis and Martín Molinuevo, "Market Access under the GATS – A Legal Commentary on Article XVI GATS." TILEC Discussion Paper No. DP2022-011. Accessed 30 May 2023, https://ssrn.com/abstract=4141380 or http://dx.doi.org/10.2139/ssrn.4141380
- Kenton, Will, Michelle P. Scott. "Market Access." Investopedia. Accessed 30 November 2022, https://www.investopedia.com/terms/m/market-access.asp.
- Kulkarni, Siddharth, Lin Wang and Demetrios Venetsanos. "Technology Transfer Challenges in the Renewable Energy Sector." Scholarly Community Encyclopedia. Accessed 30 May 2023, https://encyclopedia.pub/entry/21444.
- The Office of the United States Trade Representative. "Environmental Goods Agreement." Accessed 20 November 2022, https://ustr.gov/trade-agreements/other-initiatives/environmental-goods-agreement.
- UNCTAD Database. "Mapping of IIA Content." Accessed 30 September 2022, https://investmentpolicy.unctad.org/international-investment-agreements.
- Vetter, David. "Climate Security Is Energy Security': COP26 President's Warning To the World." Forbes. Accessed 20 November 2022, https://www.forbes.com/sites/davidrvetter/2022/05/16/climate-security-is-energy-security-cop26-presidents-warning-to-the-world/?sh=97d653f2a215.
- World Trade Organization. "Doha Round: what are they negotiating?" Accessed 25 August 2022, https://www.wto.org/english/tratop_e/dda_e/update_e.htm.

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