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Ph.D. Dissertation of Public Policy

Greening International Trade
- How are International Environmental
Commitments Diffused and Implemented through
Trade Agreements?-

국제무역의 친(親)환경화: 자유무역협정(FTA)을
통한 국제환경규범의 확산과 집행을 중심으로

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- How are International Environmental
Commitments Diffused and Implemented through
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Abstract

There have been a growing number of FTAs signed around the world that specifically mention environmental challenges and regulations as well as sustainable development. These environment-related provisions (EPs), which have been included into free trade agreements (FTAs) through a dynamic process, vary in terms of the agreement's location within it, its language, its extent, its depth, as well as its institutional and legal ramifications. These variations also have an impact on how those EPs are used domestically. This dissertation aims to explore two closely related questions: *why do countries link seemingly contradictory two issues—the environment and free trade?, and how are the EPs implemented at the domestic level?*

Chapter 2 discusses recent studies on the spread of EPs in FTAs. I concentrate on the research that explains the origins and causal mechanisms of EP dissemination in FTAs in Chapter 2. The first part of Chapter 2 offers a summary of the academic work on the spread of environmental standards through trade agreements. A focus on the relationship between trade and the environment and an evolution of trade agreements from multilateral to bilateral levels are described in the literature study. I then go on to illustrate the development of EPs. The studies on the drivers for tying commerce to the environment are what I primarily concentrate on next. Then, in order to better understand the group of EPs that are regularly incorporated into FTAs, I provide numerous typology studies on EPs of FTAs.

Chapter 3 provides a theoretical framework explaining the casual mechanism of including EPs in FTAs and how these environmental norms and policies are implemented domestically. Environmental norms and policies in FTAs are internalized into the trading partner's domestic policy through two stages. First, trade and environmental issues are discussed together in FTA

negotiations, and then the outcome is incorporated in FTA agreements as a form of legal provisions. Afterward, those provisions are adopted and implemented into the trading partner's domestic policy chains. Thus, I theorize about the international level and domestic level separately. In theorizing international level, I first review linkage mechanisms that drive environment-trade linkage in FTA negotiation. Then, I hypothesize how these mechanisms affect the legalization of EP. I argue that different linkage mechanisms are likely to formulate different legalization of EPs. In theorizing the domestic level, I focus on implementation over commitments. By including EPs, a country commits to complying with or upholding the environmental regulations. However, the mere statement of the commitment may not lead to policy compliance. In this sense, I analytically distinguish between the notions of commitment and compliance, and implementation. I argue that the level of legalization of EPs affects the goal ambiguity, and the combination of ambiguity and the level of conflict between actors creates different implementation patterns.

Chapter 4 explains the heterogeneity of EPs. I will use a large-N analysis to identify the linkage mechanisms driving the variation of EPs. I used a logistic regression model with a dependent variable with meaningful order. In the quantitative analysis, the main finding is as follows: First, consensual knowledge plays a crucial role in incorporating highly legalized EPs in FTAs. Second, competition has a strong and consistent impact on all three dependent variables. This implies that market competition is the most influential factor that leads countries to willingly accept strong trade-environment linkage during trade negotiations. My analysis challenges the conventional view of conflicting trade-environment relationships. This implies that international trade can facilitate a "race-to-the-top" effect by inducing countries to accept stringent environmental protection policies in exchange for economic benefits.

Third, emulation is found to lower the level of obligation. Norm diffusion theories argue that emulation is one of the major drives for the diffusion of the international norm across borders, but my analysis reveals that a copying of the front-runners model is not likely to diffuse substantive commitments that cannot guarantee effective compliance of international agreements.

Chapter 5 and Chapter 6 focused on the case study for the two individual FTAs: Korea-US (KORUS) FTA and Japan-EU FTA. In Chapter 5, I employed a process-tracing method. A case study of the KORUS FTA confirms that the highly legalized EPs in FTAs guaranteed effective compliance and facilitate the diffusion and implementation of anti-IUU fishing norms into Korea. This also confirms that international agreement can be a source of ambiguity in the domestic implementation process. Highly obligatory, precise, and delegatory international agreements can play a role in reducing conflict between domestic actors by enhancing the knowledge of the linkage and giving normative legitimacy to implement the commitment. From this, it was confirmed that the FTA's EPs can raise the level of domestic environmental protection and play an important role in the spread of multilateral environmental norms. In other words, the strong sanction mechanism and specific and regular cooperative mechanisms included in the FTA can play a role in supplementing the enforcement mechanisms lacking in multilateral environmental norms.

Chapter 6 focuses on the EU-Japan EPA and how Japan implemented the energy and climate-related provisions in the EPA. Japan has long pursued a leading role and had a lot of experience in related energy and climate policies. The EU also stated trade and environmental links in EU law, and therefore shared perceptions of the two created the learning mechanism in linking trade and the environment, leading to incorporating strong and specific EPs on climate and energy policy in the EPA while including dispute settlement

mechanism that limited to environmental chapter. Japan's implementation of energy and climate commitments under EPA has undergone political implementation, where, with low ambiguity, implementation outcomes are decided by the power of one actor or a coalition of actors. Therefore, Japan's energy and climate policy tend to gravitate toward the preference of the METI and the major industries. The EPA is one reason that makes domestic conflict remains. The EPA includes strong obligations and specific measures for implementation, while it lacks a trade retaliation mechanism that the parties can utilize to secure effective compliance of the counterpart with EPs. This gives more leeway to Japan of choosing an optimal policy and implementation of them, as long as the policies do not deviate from the provision of the EPA.

Finally, Chapter 7 provides the findings of the dissertation, the contribution, and its limitations. This dissertation offers an innovative analytical and methodological approach to the diffusion of environmental norms and policies, by combing international negotiation explanation and domestic implementation. The thesis' argument is grounded in norm diffusion and problem linkage, both in theory and in the broader literature on domestic and international environmental politics. My linking mechanism's many components and its result are not particularly original. However, the uniqueness in this case is that a combination of crucial analytical elements allowed me to take into account the varied impact of causal factors on the various EPs in FTAs dimensions. Also, competition for the export market is an important addition to the diffusion and implementation of environmental norms that shed light on the understanding of the current practice of linking trade and environmental issues. This has demonstrated that economic concerns drive the linkage of trade and environmental clauses. From the

findings presented in this research.

We can better comprehend major powers' actions when they compel their partner states to adhere to political, social, and environmental criteria and when they refrain from doing so out of concern for the export market.

This study does have potential limitations. Major limitations arise from methodology. First, there may exist a question about the appropriateness of the measurement of knowledge. As the 'climate change threat perception' of Gallup and Lloyd's are only available for two years, the data do not exactly represent the periods of analysis from 1995 to 2021, Also, climate change perception may not appropriately reflect the perception of overall environmental issues. This may lead to biased estimation results. Despite this weakness, this study has no choice but to use this data because the Gallup data is the only data that includes the environmental perception of more than 145 countries. Second, there may exist a question about the appropriateness of the coding of legalization. To minimize random coding error, I performed a crosscheck with a dataset covering similar variables. However, there remains a question about the coding of legalization along the three dimensions of obligation, precision, and delegation. Because this study is novel in that it gauges the strength of EPs according to the three dimensions, no other previous studies to perform crosschecking exist. There is no choice but to justify my coding based on the theory of legalization. These limitations can be complemented by future studies.

Keywords: trade-environment linkage, issue linkage, policy diffusion, policy implementation, free trade agreements, environmental politics, bureaucratic politics, sustainable development

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Glossary

Term	Definition
CITES	Convention on International Trade in Endangered Species of Wild Fauna and Flora
CPTPP	Comprehensive and Progressive Agreement for Trans-Pacific Partnership
CEC	Commission for Environmental Cooperation
DSB	dispute settlement mechanism
DSM	dispute settlement body of the World Trade Organization
DWFDA	Distant Water Fishery Development Act
EP	Environmental provisions included in FTA legal texts
EPA	Economic Partnership Agreements; an free trade agreement that eliminates barriers to the free movement of goods, services, and investment between countries
FTA	Free Trade Agreement
GATT	General Agreement on Tariffs and Trade
IUU fishing	illegal, unreported, and unregulated fishing
KORUS	Korea-US FTA
MEA	Multilateral Environment Agreement
METI	Ministry of Energy Trade and Industry
MOE	Ministry of Environment
MOF	Ministry of Oceans and Fisheries
MOFA	Ministry of Foreign Affairs
NAFTA	North American Free Trade Agreement
PTA	Preferential Trade Agreement; trade agreements to increase trade preferences, such as lower or zero tariffs, which a member may

offer to a trade partner unilaterally

RCEP	Regional Comprehensive Economic Partnership; a regional free trade agreement among the 15 Asia-Pacific nations
USMCA	United States, Mexico, and Canada Agreement
USTR	United States Trade Representative
UNFCCC	United Nations Framework Convention on Climate Change
WTO	World Trade Organization

Chapter 1. Introduction

1.1. Background

Since the Rio Declaration on Environment and Development in 1992, countries have been seeking to link trade and the environment. The first attempt was to link the two issues through WTO Committee on Trade and Environment. However, criticism remains that the trade organization systematically favors the principle of trade liberalization while being ambivalent about environmental issues. Multilateral environment agreements (MEAs) are still not nested within WTO rules, and the organization's Dispute Settlement Body (DSB) takes ambiguous positions on the trade–environment relationship (Rieder 2020; Vogel 2013: 31-32)

Skepticism has also increased regarding the feasibility and efficacy of environmental treaties to solve global environmental problems. Despite an impressive level of international cooperation on these issues, with over 1,200 environmental treaties currently in force, environmental problems continue to worsen (Mitchell 2018; UNEP 2012). One explanation for this lack of progress is that global environmental governance operates based on consensus. In trying to bring all countries on board, a consensus-based approach often does little to solve environmental problems. Another explanation is that global environmental governance is weak because it lacks enforcement power. This deficit can create incentives for some countries to free ride on the actions taken by others. This has catalyzed interest in alternative options to protect the global environment. In particular, there has been a recent resurgence of using trade agreements. For example, in July 2021 the EU adopted European Climate Law and officially introduced the carbon

border adjustment mechanism, trying to address the international and environmental issues together. The EU's attempt represents the unilateral way of linking trade and the environment while linking the two issues between a small number of countries through free trade agreements (FTAs) is the most frequently observed case and covers various environmental issues (Han 2021; Lee et al. 2020; Rieder 2020).

Linking trade and environmental issues through FTAs *prima facie* contradicts conventional wisdom because trade liberalization and environmental protection have long been considered conflicting issues (Conca 2000; Morin & Bialais 2018). First, trade liberalization tends to worsen environmental pollution because it promotes the production, consumption, and transportation of goods. Second, trade agreements can limit the regulatory capacity of countries to establish environmental regulations that frustrate the interest of exporters and investors (Jinnah & Morin 2020). Third, bilateralism is often considered to undermine multilateral governance, in which global environmental issues have been addressed, by creating inconsistent rules and exacerbating power imbalances (Bhagwati 2008). After all, more countries have been utilizing FTAs to seek environmental protection outside of their borders, and the environmental provisions (EPs) in FTAs have become stronger and more specific over time (Dröge & Schenuit 2018; Jinnah and Kennedy 2011; Koo and Kim 2018; Monteiro 2016).

However, both the quantity and coverage of EPs in FTAs have rapidly increased throughout the world. Particularly, a rising number of FTAs have made specific mention of environmental and sustainable development challenges and regulations. These EPs are incorporated in FTAs, but because the process of doing so is dynamic, there are significant differences between them in terms of where they are located within the agreement, their language, breadth, and depth, as well as the institutional and legal ramifications.

(George 2014a; George 2014b; Monteiro 2016; OECD 2007; OECD 2018). This analysis of 412 global FTAs reveals that this trend is best illustrated by the rapidly increasing EPs in FTAs. For example, the U.S. and the European Union (EU) have utilized their recent FTAs for environmental purposes with greater enthusiasm than ever before (Jinnah & Kennedy 2011; Jinnah & Lindsay 2016; Lee et al. 2020; McNeill 2021). The US Trade Representative (USTR) has requested a consultation with South Korea under the Environmental Chapter of the Korea-US (KORUS) FTA concerning South Korea's ongoing illegal, unregulated, and unreported (IUU) fishing practice, leading to the revision of Korean domestic laws related to anti-IUU fishing norms. The 1993 North American Free Trade Agreement (NAFTA) is one of the first regional treaties to include a side agreement to create a separate Commission for Environmental Cooperation (CEC) under the jurisdiction of the member countries' environmental ministries. Although the US withdrew from the deal, the Trans-Pacific Partnership (TPP) also stipulates a high level of environmental protection and contains provisions regarding far-reaching environment-related issues such as wildlife trafficking, illegal logging, illegal fishing, and marine pollution. The EU has raised concerns about illegal logging under EU-Korea FTA's Trade and Sustainable Development Chapter since 2015. *Why do countries link seemingly contradictory two issues—the environment and free trade?*

Abundant studies have examined this trend and hypothesized the reasons for such trends. The WTO disputes have been the main theme in scholarly discussions on trade-environment politics. Much of this work has dissected the WTO's approach to environmental dispute settlement under Article XX of the General Agreement on Tariffs and Trade (GATT), which addresses the environmental exemption from WTO free trade rules. In contrast to the environmental activists' strong critique of the WTO's handling of

environmental disputes, much scholarly literature has assessed the WTO's dispute settlement records. Several scholars have argued that the WTO's record is not as bad as its critics have made, highlighting that poor decision-making by developed countries in implementing environmental policies in unnecessarily discriminatory ways, even if the environmental policies in question were in line with Article XX exceptions (Desombre & Barkin 2002; Howse 2002; Neumayer 2004).

WTO-focused trade-environment literature has also delved into the empirical politics of trade-environment linkages, exploring how the WTO Secretariat has influenced trade-environment decision-making at the WTO (Jinnah 2010; Jinnah 2014), and the conditions under which the WTO has linked to environmental issues (Johnson 2015). Most recently, scholars have examined what Wu & Salzman (2013) have called the "next generation" of WTO environment conflicts, which have been largely related to renewable energy subsidies and industrial policy (Meyer 2017). This work has explored, for example, the implications for low carbon development (Lewis 2015); why renewables have been challenged even though fossil-fuel subsidies have not (de Bievre et al. 2017; Espa & Marín 2018; Meyer 2017), and the domestic coalition politics that lead to protectionist policies for renewables (Hughes & Meckling 2017). These connections at the intersection between trade and climate change are sure to be an important locus of trade-environment politics for years to come (Pereira 2018). There is true quite a bit of overlap between these two areas of scholarship, with trade-environment cases serving to demonstrate linkage politics dynamics for many scholars.

There is also a more limited body of work that looks at the WTO's Committee on Trade and Environment, wherein delegates discuss environmental issues, including those outlined in the Doha Development Agenda, such as tariff reductions for environmental goods and services. The scholarship is divided

on the effectiveness of the committee's work, with some seeing important contributions to environmental cooperation and others responding more skeptically (Eckersley 2004; Han 2021; Horn & Mavroidis 2014; Postnikov 2018).

Few studies, however, have explored these questions in the context of FTAs. The existing studies on FTAs have been largely focused on NAFTA and the novel set of EPs it introduced in the mid-1990s. Those environmental contents in NAFTA went beyond the WTO's environmental exceptions. Many studies on NAFTA focused on the negotiation process (Markell & Knox. 2003; Steinberg 1997); the environmental impacts of NAFTA (Gallager 2004; Hufbauer et al. 2000); the Commission for Environmental Cooperation of NAFTA (Raustiala 2003); and how the NAFTA experience can inform environmental governance moving forward (Deere & Esty 2002).

The 412 other global FTAs currently in force as of May 2022 have received surprisingly little attention. Aside from a few scholars, there has been very little analysis of the rapidly growing politics of environmental governance through FTAs. For example, Jinnah & Morgera (2013) have examined the difference between US and EU approaches to how they incorporate EPs in their FTAs, and Jinnah (2011) has explored the US approaches to strategically linking trade agreements to MEAs. Morin et al. (2017) have analyzed the drivers for the inclusion of EPs in FTAs. Morin's other works also explored the introduction of new EPs in trade governance; and the convergence between the US and the European approach (Morin and Rochette 2017). Most recently, Morin & Jinnah (2018) have analyzed how trade linkages to climate change could be better leveraged to offer similar benefits. In addition to Jinnah & Morin's works, Steinberg (2002) provided an early assessment of how major regional trade organizations have handled environmental issues. Building upon this work and a 2007 analysis from OECD, Colyer (2012) and

Monteiro (2018) provide a largely descriptive explanation of FTA EPs. Very few studies have conducted a statistical analysis of FTA environmental clauses. Koo & Kim (2018) have analyzed EPs in 80 FTAs concluded by 15 East Asian countries and have confirmed that, contrary to the conventional wisdom, East Asian countries' environmental awareness is high and tends to incorporate strong and specific EPs in their FTAs. Baccini & Urpelainen (2014) have conducted a statistical analysis of the timing of domestic implementation of North-South Preferential Trade Agreement standards. Specifically, they argue that the nature of enforcement mechanisms directly affects the timing of trading partner implementation of EPs in North-South FTAs. They show that while both US and EU enforcement approaches can be effective in facilitating environmental policy change in trading partner nations, the United States' sanction-based enforcement mechanisms have catalyzed the implementation of EPs earlier than the European Union's softer, more cooperative approach.

Despite the vast amount of previous studies on environmental clauses in FTAs, few studies have explored how those provisions are implemented domestically. With the growing pressure on the implementation of non-trade issues included in FTAs, exploring the domestic implementation of environmental clauses that are most frequently linked to FTAs is important.

1.2. Research Purpose

Despite the rich literature on the trade-environment nexus, the pace of trade-environment politics scholarship lags far behind the empirical developments. FTAs now engage deeply and directly in environmental governance, yet we know very little about how and why they do so and with what effects. The

objectives of this dissertation are to fill the gaps in the existing studies on trade-environment linkage, as follows.

First, despite the existence of several typology research, very few studies explain the cause of EP variability. The majority of studies hardly go beyond describing the heterogeneity and fall short of effectively explaining the reasons why various nations include various EPs in their FTAs. Also, the explanation is limited to economic benefits such as trade dependency, import competition, and seeking the export market (Lechner 2016; Morin et al., 2018). However, this does not adequately reflect the recent trend of rapidly increasing EPs that are not directly related to economic gains. For example, the recent trend shows an increase in MEA-related provisions and cooperation in diverse environmental sectors (Jinnah & Morgera 2016; Morin & Jinnah 2018; Song 2021), these clauses do not directly involve economic benefit or economic loss upon the commitments.

Second, the majority of research currently available addressed US and EU cases and looked at the development of EPs covered by US and EU trade agreements (Bastiaens & Postnikov 2017; Colyer 2011; Jinnah 2011b; Jinnah & Lindsay 2016; Postnikov 2018; Vaillant & Ons 2002). They also contrasted their methods between the US and the EU (Jinnah & Morgera 2013; Morin & Rochette 2017; Postnikov 2018), and they discovered that national trade policies were the primary factors influencing the EPs in both the US and the EU's free trade agreements (Cuyvers 2014; Jinnah & Lindsay 2016). Scholarly attention to these countries' instances has been taken for granted because they were early adopters of EPs in their FTAs. Since EPs are increasingly being included in FTAs, it is necessary to look into these examples outside of the context of industrialized nations. The findings of this dissertation can be applied to the changing situations of developing nations

by studying 412 FTAs that are reported to the WTO at the time of writing. Third, few studies have attempted to explain the implementation of EPs although there are several studies on the adoption and diffusion of the EPs. The majority of studies hardly go beyond merely describing heterogeneity and fall short of accurate explanation of how EPs are implemented at a domestic level. Given that commitment to and participation in international institutions alone are not enough in securing effective compliance, the domestic implementation of those provisions and how the different designs of EPs in FTAs affect the implementation behavior need to be explored. These studies focus on both international and domestic factors that affect the trade-environment linkage. By doing so, this dissertation contributes to developing a theory that links international and domestic levels to explain an evolving case of interacting environmental and trade regimes.

In short, in asking how EPs in FTAs impact environmental policy abroad, this study uncovers how the countries pursue environmental objectives through trade agreements; the factors that enable and constrain their decisions about which EPs are included in FTAs; and the impacts of these provisions on trading partner nations' environmental policy and law by both quantitative and qualitative methods.

To this end, I applied mixed methods using quantitative and qualitative analyses. The quantitative approach studied the relationship between the linkage mechanism (independent variable) and the degree of legalization of EPs (dependent variables) in a cross-case analysis (in Chapter 4). Meanwhile, the qualitative approach focused on a within-case analysis of the Korea-US (KORUS) FTA and Japan-EU EPA (in Chapters 5 and 6). Although there are some skeptics of employing a single case study approach, a mixed-method strategy can serve as a tool to answer different research questions. I believe that the application of the mixed methods is an appropriate approach to

answer the research questions of this dissertation because it provides two different research questions—linking environmental issues and FTAs and their implementation.

The quantitative analysis aims to find the reasons for the heterogeneity of EPs design. I present a logit model for the quantitative analysis. Then, I describe the sample of population and operationalization of dependent variables, independent variables, and control variables drawn from theories to identify the probability of including EPs in FTAs. For qualitative analysis, the case study approach used a within-case level of analysis to trace the process of implementing certain EPs of a given FTA and how the design of EPs in FTA affects the implementation behavior, combined with domestic politics.

1.3. Outline of Dissertation

The remainders of this dissertation are as follows.

Chapter 2 presents a literature review discussing the current state of knowledge on the spread of EPs in FTAs. In Chapter 2, I concentrate on the scholarly research that may shed light on the causes and causal mechanisms of EP diffusion in FTAs. A survey of the academic literature on the proliferation of trade agreements is given in the first part of Chapter 2. The review of the existing studies shows that trade agreements have evolved from global to bilateral levels, with a focus on the relationship between international trade and the environment. I then go on to illustrate the development of EPs. The studies on the drivers for tying commerce to the environment are what I primarily concentrate on next. I next go over a number of typology research on EPs of FTAs. Finally, I discuss scholars on the domestic implementation of international commitments. To conclude, I

discuss the research gaps and contributions.

Chapter 3 provides a theoretical framework explaining the casual mechanism of including EPs in FTAs and how these environmental norms and policies are implemented domestically. Thus, I theorize about the international level and domestic level separately. In theorizing international level, I first review linkage mechanisms that drive environment-trade linkage in FTA negotiation. In the next section, I characterize the benefits and costs of incorporating EPs. Then, I hypothesize how these mechanisms affect the legalization of EP. I argue that different linkage mechanisms are likely to formulate different legalization of EPs.

In theorizing the domestic level, I put more emphasis on implementation than commitments. Making an international promise does not ensure that it will be carried out at home. The simple act of expressing a commitment might not result in policy compliance. I analytically separate the concepts of commitment, compliance, and execution in this way. I argue that the level of legalization of EPs affects the goal ambiguity, and the combination of ambiguity and the level of conflict between actors creates different implementation patterns.

Chapter 4 explains the heterogeneity of EPs. I use a large-N analysis to identify the linkage mechanisms driving the variation of EPs. In the quantitative analysis, I present three dependent variables: obligation, precision, and delegation. *Obligation* is a six-point scale, a categorical variable of how much trade and environmental policies are harmonized. *Precision* is a six-point scale, a categorical variable of how precise a given FTA stipulates environmental issues. *Delegation* is a four-point scale, a categorical variable of how much third parties have authority to implement an FTA and resolve disputes. I then test linkage hypotheses using ordinal logistics regression techniques. My model tests under what conditions

countries are likely to choose to include more obligatory, precise, and delegatory EPs in their FTAs. After describing the hypothesis and operational measures, I present the empirical results of my regression analyses. The finding of this chapter fills a gap in the empirical studies of a variety of EPs in trade agreements.

Chapter 5 and **Chapter 6** focus on the case study for the two individual FTAs: KORUS FTA and Japan-EU EPA. The goal of case studies is to explore how a certain EP that is adopted in FTA negotiations is implemented domestically. To do so, I employ the trace-processing method. **Chapter 5** focuses on KORUS FTA and anti-IUU fishing norms. To do so, I analyze four steps. First, I show how the linkage took place in the FTA negotiation and the outcome of the negotiation. Then, I showed how the FTA incorporates highly legalized EPs, to measure the degree of policy ambiguity. Specifically, I examine MEA-related provisions in KORUS FTA in terms of the three dimensions of legalization—obligation, precision, and delegation. Third, this study traced the conflicts between major ministries to explore how the anti-IUU fishing norms had been implemented in South Korea. Finally, I show how the implementation has evolved according to the combination of the degree of conflict and ambiguity. Specifically, I analyze how the legislation that South Korea Adopted to combat IUU fishing and whether the laws and policies effectively reduced the IUU fishing practice.

Chapter 6 focuses on the EU-Japan EPA and how Japan implemented the energy and climate-related provisions in the EPA. In this chapter, I first show what linkage mechanism occurs in EPA negotiation. I then analyzed the level of legalization of EPs to measure the degree of ambiguity. Specifically, I examine climate change and energy-related provisions in the EPA in terms of the three dimensions of legalization. Third, I trace the conflicts between major actors—METI, MOE, and *keidanren*— to explore how the anti-IUU fishing

norms had been implemented in Japan. Finally, I show how the implementation has evolved according to the combination of the degree of conflict and ambiguity.

Finally, **Chapter 7** summarizes the finding of my quantitative and qualitative analyses. I then present theoretical contributions and policy implications.

Chapter 2. Literature Review

2.1. Environmental Issues in Trade Deals

2.1.1. Environmental Issues at a Trade Negotiation

A Committee on Trade and Environment was established at the Uruguay Round in 1994 to investigate how environmental concerns relate to trade interests. However, “many saw without a doubt that the two systems—the environment and trade—could not exist under the same roof, because their objectives and implementation strategies differ.” (Shahin 2002: 49). The WTO's attempts to take environmental considerations into account have failed.

At the 2011 WTO Ministerial Conference, the Doha Development Agenda (DDA) officially kicked off the trade and environmental negotiations. The international trade negotiations, however, fell short due to incompatibility between the interests of developing and developed countries. The EU was active in discussing environmental issues, not only at the time of the launch of the DDA but also in the ongoing negotiations. These developed countries have relatively many environmental regulations, and many of them are related to agricultural products (food). Therefore, it can be said that they are active in environmental discussions not just in terms of strengthening environmental protection, but also in part due to restrictions in agricultural trade and justification of agricultural subsidies. While participating most actively in international environmental protection efforts and making large donations, the U.S. does not agree with the EU's environmental discussion because it is promoting trade liberalization of agricultural products first. Meanwhile,

developing countries have also opposed environmental discussions, fearing that environmental measures in developed countries are used as an excuse for trade barriers. In this confrontation, environmental issues were difficult to include in the DDA negotiations, but the agendas are bound to be very limited and it seems difficult to produce tangible results in future negotiations. (Bhagwati 2003; Shahin 2002; WTO n.d.^a).

Researchers have looked at how WTO regulations might influence or support domestic environmental governance (Kulovesi 2014; Green 2005). Green (2005) discovered that domestic regulatory policy on environmental issues, particularly climate change, was constrained by the WTO regulations in effect. Furthermore, the requirement for scientific evidence to prove the effects of environmental degradation constrained the policy choice at a domestic level. On the other hand, Kulovesi (2014) stated that there is a "significant overlap" between the WTO and multinational climate change governance, particularly the United Nations Framework Convention on Climate Change (UNFCCC). For instance, it may be possible to create energy efficiency standards that are not compatible with WTO legal requirements. The Canada-Renewables case was cited in this paper as an example of how the WTO dispute dealt with the subject of renewable energy. The WTO ruled that the Canadian province of Ontario's requirement for local content was incompatible with the Trade-Related Investment Measures Agreement. In other words, this ruling suggested that the government's legislation requiring local content to be included in renewable energy gadgets was in conflict with WTO rules. The Court did not state explicitly whether feed-in tariffs are considered subsidies, nevertheless.

Researchers have also noted that certain topics, including the environment, that had been challenging to include in multilateral trade could be addressed by bilateral or regional trade agreements. Environmental concerns seemed to

be mentioned in a different way in a recent announcement of regional trade agreements. The opposing visions for the Asia-Pacific trading system were included in the Trans-Pacific Partnership (TPP) and the Regional Comprehensive Economic Partnership (RCEP) (Wilson, 2015). The TPP and RCEP featured the WTO as well as challenges from many perspectives in addition to the economic benefits (Wilson 2015). The TPP lays out strong environmental criteria, whereas the RCEP included equivalent standards as a WTO plus problem. Countries anticipate economic gains from entering the regional trade agreements, as well as other non-economic linked interests like geopolitical competition and defense concerns (Mercurio 2014). (Wilson 2015). Countries may be able to learn from these accords about trade-related and non-trade-related concerns, which "have frequently been disregarded or excluded from multilateral negotiations" (Benini & Plummer 2008: 269). Particularly, regional trade agreements gave developing nations like China, India, and Brazil the chance to engage in a "learning process" (Hufbauer & Schott 2007). Regional trade agreements could serve as a testbed for including EPs in FTAs with its regional members as opposed to addressing the desire to address environmental issues at multilateral trade discussions. Bilateral trade agreements also follow a similar pattern, particularly US accords. The concerns covered in US trade agreements with developing Asian nations, such as China and the Association of Southeast Asian Nations (ASEAN), vary (Ravenhill 2008). For instance, the US FTAs included the WTO Plus concerns like intellectual property, labor, and environmental norms in addition to the most thorough coverage of commodities and services. However, the accords with Asian developing countries were described as "nothing more than outlines" (Ravenhill 2008: 132). The trade accords between Japan and Korea were viewed as falling somewhere in the middle of

the range between the situations of the US and developing Asian nations.

2.1.2. The Evolutions of Environmental Provisions in FTAs

Between 1995 and 2021, there was a considerable rise in FTAs both in terms of quantity and regulatory coverage. Particularly, a rising number of FTAs have made specific mention of environmental and sustainable development challenges and regulations. These environmental-related provisions in FTAs are the result of a dynamic process that has grown and changed over time, thereby varying greatly in terms of the agreement's position, language, extent, and depth, as well as the implication for law and institutions (George 2014a; George 2014b; Monteiro 2016; OECD 2007; OECD 2018).

The scope and strength of EPs in FTA have been growing over time. Out of 412 bilateral FTAs that are notified in the WTO, 405 FTAs include environmental contents, which accounts for about 98%. Some of them are only vague references to sustainable development or are exceptions similar to the ones found in the GATT of 1974 (WTO n.d.^b). However, many other provisions are more far-reaching. As highlighted in Figure 2.1, the great majority of FTAs include at least one provision that specifically mentions the environment. It is noteworthy that, unlike the number of FTAs with only environmental preambles and exceptions, the number of FTAs with beyond preambles and environmental exceptions has increased rapidly. This shows that FTA EPs are growing and deepening in their scope and degree of substantiveness (Jinnah and Morin 2020; Koo and Kim, 2018; Lee et al. 2020;

Monteiro 2016; OECD 2007; OECD; 2018).

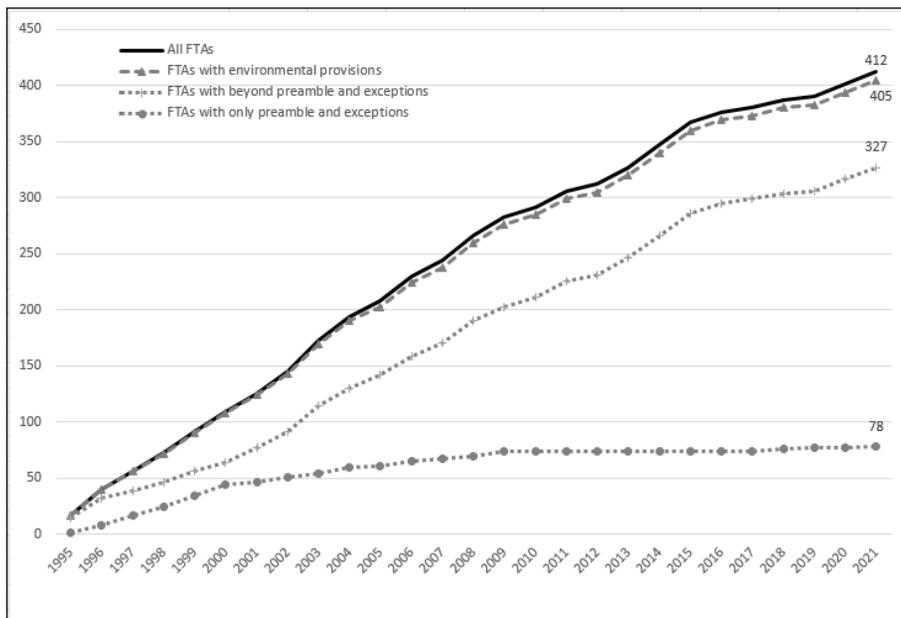


Figure 2.1. Evolution of FTAs with environmental provisions

Three distinct phases describe the development of FTAs with environmental measures. Only a small number of FTAs were negotiated before 1993. The first FTA with an environmental component is the Treaty creating the European Economic Community (Monteiro 2016). According to the environmental exceptions clause, restrictions or prohibitions on imports, exports, or goods in transit that are justified by the need to protect the health and lives of animals or plants are not prohibited as long as they don't amount to arbitrary discrimination or a covert trade restriction. The European Free Trade Association (EFTA) is the second FTA containing environment-related rules and the first one mentioning expressly the environment (Lee et al. 2020; Monteiro 2016). (Lee et al. 2020; Monteiro 2016). In its safeguards provision, it is stated that if significant environmental issues arise in a sector or regional

area, a party may unilaterally take necessary steps under the terms and guidelines outlined in the agreement (Monteiro 2016).

The number of FTAs with environmental provisions expanded more quickly between 1994 and 2005, although the number of individual EPs contained in those FTAs remained small, with the majority of them being preamble language and exclusions linked to the environment. However, this time period saw the rise of some FTAs that included novel kinds of EPs. The NAFTA, which was signed in 1992 and came into effect in 1994, is the first FTA to include comprehensive environmental rules both in the main text of the FTA and in a separate agreement for environmental cooperation (Monteiro 2016, Jinnah and Morin, 2020). The agreement states that environmental rules and standards would be strictly upheld and won't be lowered to entice investment. The side agreement also includes a variety of institutional frameworks, evaluating and monitoring methods, and conflict resolution processes linked to the environment.

After 2005, not only has the number of FTAs with environmental protections (EPs) increased but so has the number of FTAs with additional features, especially since 2008. The rise in the number of such agreements involving developing nations is primarily responsible for the rise in the overall number of FTAs containing environmental provisions.

As Figure 2.2 indicates, the U.S. on average has more EPs per FTA than do other major players in the global trade regime, such as the US, Japan, and China (the lines represent the median values).¹ The number of EPs in EU's FTAs varies. Several European agreements have a low number of EPs because the European Economic Community concluded several FTAs prior

¹ The number of EPs in figure 2.2 is based on the OECD typology. The OECD categorizes EPs into 12 types. More detailed explanation of the OECD typology is provided in section 2.1.3.

to the 1990s, when trade agreements typically included few EPs (Jinnah and Morin 2020: 177). Among East Asian countries, South Korea includes many EPs per FTA, while Japan and China tend to be reluctant to incorporate EPs in their FTAs. EPs in China's agreements were specifically constrained to the preamble's recognition of the principle of sustainable development, the inclusion of environmental measures as exceptions to trade obligations, some non-binding clauses on environmental cooperation. However, China has adopted a more accommodating stance and demonstrated a greater readiness to incorporate more substantial EPs in its more recent FTAs.

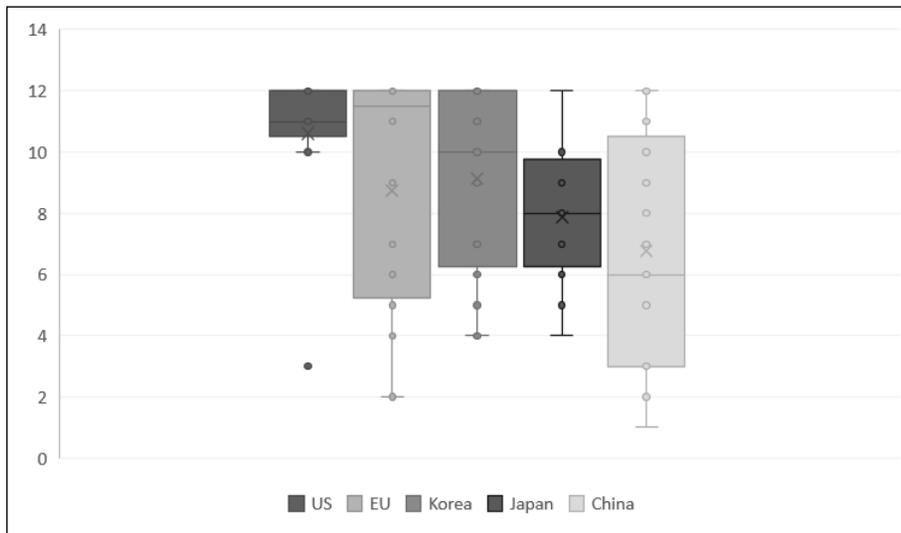


Figure 2.2. Number of environmental provisions in U.S., EU, Korean, Japanese, and Chinese FTAs (1995-2021)

FTAs negotiated between developed countries are driving the deepening EPs in FTAs. But an increasing number of FTAs being negotiated between rich and developing nations also have a tendency to include a wide variety of EPs (Monteiro 2016: 6-8). The fact that many affluent nations have domestic legislation requiring the inclusion of environmental elements in all FTAs they

negotiate helps to explain this tendency in part. Various instruments, such as parliamentary orders to maintain the compatibility of trade and environmental policies and government commitments to integrate trade and environment, provide the basis of countries' mandates to include environmental issues in FTAs. For instance, the US Trade Act of 2002 mandated that the country include comprehensive EPs in all of its FTAs, making the US the first nation to make EPs fully enforceable in its FTAs. Similar to this, the EU's 2001 Sustainable Development Strategy mandates that the EU aggressively support sustainable development across the globe (European Commission 2002). Additionally, since 2001, all international agreements involving the New Zealand government must incorporate trade and environmental policy (Monteiro 2016: 7).

2.1.3. Typologies of Environmental Provisions in FTAs

Previous studies have created EP typologies and identified several types of EPs. The typologies of EPs differ significantly between research, as this section has shown. It is challenging to distinguish similarities and differences, in particular, because different FTAs can address the same issues in different wording and locations in the primary text (Monteiro 2016: 12). As a result, similar typologies among current studies are difficult to uncover.²

There are also classified provisions in the working papers that are released by foreign research institutions. A number of working papers on EPs in regional trade agreements were released by the OECD. The initial study from 2007 described how EPs changed in trade agreements up until 2006. Additionally,

² All of the studies reviewed in this section seemed to identify exceptional clauses as one of the items in their typologies.

it covered the discussion from the Joint Working Party on Trade and Environment (JWPTE), in which developed and developing nations discussed how they had dealt with environmental issues in trade negotiations and put relevant measures into practice. Annual reports on EPs in FTAs have been prepared by the OECD since 2007. (OECD 2008; OECD 2009a; OECD 2010; OECD 2011; OECD 2012; OECD 2013). Over time, general and specific exceptions based on GATT Article XX or the General Agreement on Trade in Services Article XIV for the protection of people, animals, and plant life were the most frequently discovered EP (George 2014: 8).

A report on the development of environmental issues covered by FTAs signed by rising nations was recently published by the DIE (German Development Institute). The FTAs that China, India, Indonesia, Brazil, and Mexico signed between 1945 and 2015 were the focus of the DIE criteria shown in Table 2.1. (Berger et al., 2017). The paper divided EPs into nine categories in order to analyze the environmental issues in these trade agreements (see Table 2.1.). The most commonly used EP among the grouped provisions was the "environmental exception," which is comparable to GATT Article XX. The EP "public engagement in environmental matters," which outlines the process of public participation in the development of environmental policy, was the least commonly discovered EP.

A typology of EPs was also developed by the WTO (Monteiro 2016). Based on the locations of agreement texts and forms, the WTO study categorized EPs. For instance, the main text, supplement/protocol, and side documents to the main trade agreement text were defined as the locations and structures. Depending on its contents, the publication offered different types of EPs. Ten major dimensions were mentioned in the typology, and for each of those, there were subcategories (see Table 2.1.). The report discovered that the extraordinary provision was the one that appeared in trade agreements the

most frequently, which is in line with prior findings. Additionally, research noted that environmental cooperation provisions were the most typical EP.

Overall, there are significant disparities in the purpose, nature, scope, and wording of FTA EPs, even across FTAs negotiated by the same country. It is possible for a clause to appear in two distinct FTAs, referring the same issue but in a different way, in a different section of the FTA, and using a different language. It is particularly difficult to identify similarities and differences because of this variety.

Based on a coding analysis of 412 FTAs, this study identified 86 distinct EPs in FTAs (see Appendix 2). These provisions are diverse but can be grouped into the following 12 categories: preamble, environmental exceptions, affirmation of state sovereignty, domestic level of protection, enforcement of domestic measures, public participation, environmental cooperation, implementation mechanism, coherence with non-environmental issues, specific environmental issues, relationship with multilateral environmental agreements (MEAs), and dispute settlement procedures. This classification is mostly based on OECD (2014) classification because it is mutually exclusive and exhaustive. However, it does not reflect the current development of EPs, so I added a category—coherence with non-environmental issues, referring to Morin et al. (2018).

Table 2.1. Typologies of EPs

OECD typology (2014)	DIE typology (2017)	WTO typology (2016)
Preamble	Reference to environmental goals in the preamble or other chapters	Preamble language
GATT or GATS exceptions Uphold environmental law	Environmental exceptions	Objectives of the RTA
Domestic level of protection	References to multilateral environmental agreements	Domestic environmental laws
Enforcement of domestic measures	Inclusion of a whole chapter on the environment or sustainable development	Multilateral environmental agreements (MEAs)
Cooperation	Obligations to uphold environmental law: Incorporation of the right to regulate environmental matters	Intellectual property rights
Public participation	Cooperation in environmental matters: Transparency in environmental matters	Environment-related goods, services, and technologies
Dispute Settlement	Public participation in environmental matters	Natural resources management and specific environmental issues
Specific environmental Issues		Environmental governance Cooperation
MEAs		Institutional arrangements
Implementation mechanism		Consultations procedures
Ex Ante impact assessment		Dispute settlement procedures

Notes 1: The list of EPs in the WTO typology (2016) does not include the sub categories.

2: OECD typology is derived from the study by George (2014); DIE typology from Berger et al. (2017); and WTO typology from Monteiro (2016).

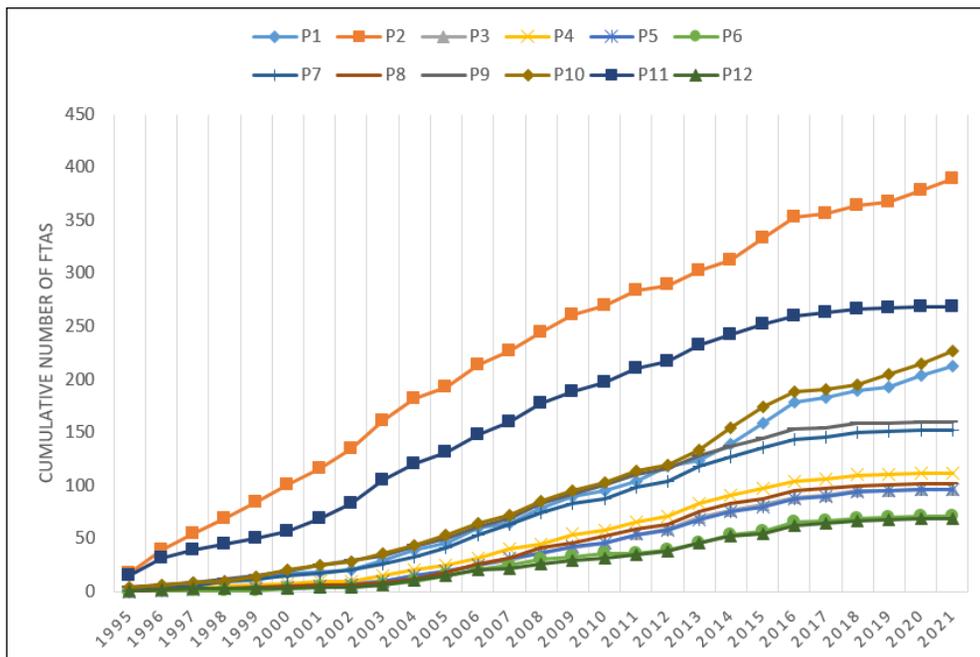


Figure 2.3. Evolution of key environmental provisions

Figure 2.3 shows how the key environmental components in FTAs have evolved over time. With the growing number of EPs in FTAs, preamble language (P1), environmental exceptions (P2), MEA-related provision (P11), and specific environmental issues (P10) have increased rapidly while the enforcement of domestic measures (P5), public participation (P6), and dispute settlement mechanism (P12) have slowly increased. This implies that some countries are still reluctant to incorporate substantive EPs which impose the responsibility for implementing the EPs, as adoption of these provisions possibly involves the revision or enactment of related domestic laws (Lee et al. 2020: 34).

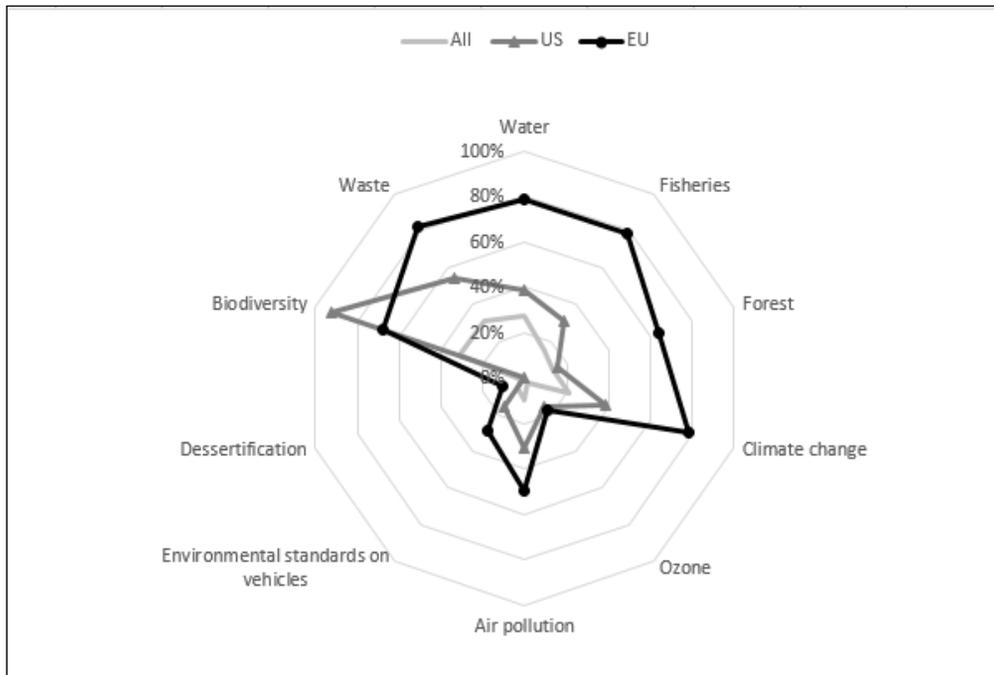


Figure 2.4. Specific environmental issues mentioned in FTAs (1995-2021)

Figure 2.4 shows that countries link FTAs to different environmental issues. This chart indicates the percentage of FTAs signed since 1995 that includes provisions on ten different environmental issues. Biodiversity is one of the key issues that are addressed in US FTAs. As explored in chapter 5, biodiversity is closely related to illegal fishing issues, and the US government has addressed illegal fishing of its trade partners through FTA. On the other hand, climate change is explicitly mentioned in a limited number of FTAs, including the EU and Canada CETA. These FTAs mandate trade-related aspects in the international climate change system, promotion of energy efficiency, and cooperation in the development and utilization of clean energy. Second, concerning the contents of obligations, the multilateral environmental agreements (MEAs) that are parties are participating in are mentioned within the agreement. This type emphasizes the importance of

multilateral environmental agreements, reaffirming obligations in multilateral environmental agreements, or reflecting such obligations in domestic law. The number of cases in which multilateral environmental agreements are mentioned in the FTA began to increase in the mid-2000s. For example, starting with the NAFTA signed in 1992, 105 agreements have regulations on endangered species, outpatient invasive species, migrant animals, protected areas, genetic resources, biosafety, and genetically modified organisms. In particular, in recent years, there has been a growing number of regulations pursuing mutual support and rebalance of sustainability goals related to trade and the environment through FTAs. This trend is more evident in the EU-Canada CETA, which has been temporarily applied since 2017, the CPTPP, which took effect in 2018, the US-Japan trade agreement, and the USMCA, which took effect in 2020.

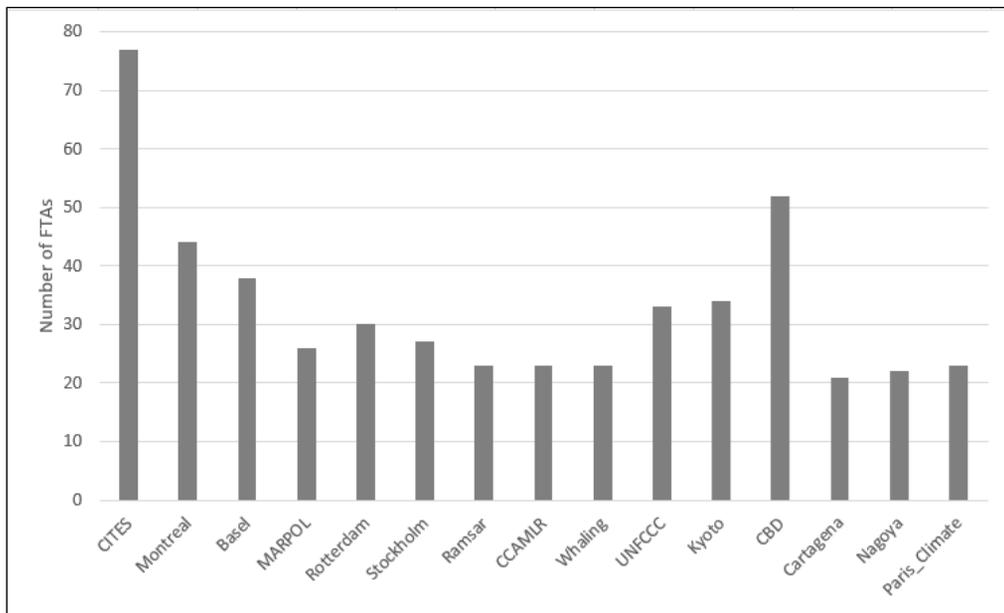


Figure 2.5. Cumulative number of FTAs referring to selected MEAs (1995-2021)

Third, regarding the level of obligation and enforceability, the FTA Environmental Chapter is a symbolic meaning to show that FTA parties respect environmental values in trade in goods and services, and in some cases, environmental obligations are defined as substantially legally binding and have an enforcement mechanism. In many cases, the previously concluded FTA stipulates only the obligation to cooperate rather than specifically defining legally binding obligations. These types of EPs usually consist of phrases that mean effort and cooperation, such as ‘endeavor’, ‘encourage’, and ‘promote’, and stipulate that EPs are not subject to the general dispute resolution system within the agreement. Therefore, in this type of FTA, it is not easy to enforce EPs (Lee et al. 2020: 36; Morin and Jinnah 2018; OECD 2018). This is because one party to the FTA cannot impose effective sanctions on the grounds of non-performance of obligations even if the other party fails to fulfill its environmental obligations under the agreement. Similarly, instead of failing to stipulate a separate enforcement mechanism in the agreement, many agreements stipulate effective enforcement of domestic.

On the other hand, in some FTAs signed more recently, import conditions related to environmental obligations, etc. It guarantees the enforceability of environmental obligations in a way that includes market access conditions. It stipulates that environmental protection obligations are described as legally binding "shall", specifically specify the scope and contents of obligations borne by the parties, stipulate that EPs are subject to FTA general dispute resolution, and restrict import conditions or other market access (Morin and Jinnah 2018; Lee et al. 2020: 37). Therefore, environmental obligations under the FTA are legally binding and enforceable. CPTPP and USMCA, which will be examined later, are typical examples. The content included in this type of FTA is likely to consist of deliberately selected terms and phrases.

2.2. Why Link Trade and the Environment in FTAs?

2.2.1. Norm and Policy Diffusion

Environmental regimes are frequently described using a diffusion theories. Countries are more inclined to comply with norms if they believe the laws and provisions are legitimate and do not weigh the costs and advantages (Dobbin et al. 2007; Young & Levy 1998). The evidence of norm-conforming behavior can be linked to institutionalization and routine policy practice (Finnemore & Sikkink, 1998).

Competition, learning, emulation, and coercion are the four categories of mechanisms that have been uncovered by diffusion studies (Braun & Gilardi 2006; Dobbin et al. 2007; Gilardi 2012). First, to attract economic resources, competitive pressure forces a nation to embrace a new policy from others and harmonize environmental policies at the top (Vogel 1995). Second, learning involves referring to the experiences of others in order to update one's knowledge about uncertain policy outcomes. Learning happens when elites agree on the causes of and remedies to a particular societal issue, and as a result, learning is the outcome of deliberate action (Dobbin et al. 2007). Third, emulation or imitation happens when a nation adopts the policies of another nation because of social or normative affinities. Emulation merely copies the strategy used by the front-runner nations in an effort to win credibility from the international community (DiMaggio and Powell 1983; Simmons and Elkins 2004: 175). Last but not least, the coercive mechanism occurs when stronger countries limit the opportunity structure, either directly or implicitly, to compel weaker countries to adopt their preferred policies. In the context of the transmission of environmental norms, coercion is

comparatively understudied.

Given the complexity of the diffusion process, it is not surprising to find that multiple mechanisms play a substantial role in policy diffusion research (Graham et al., 2013). For instance, Elkins et al. (2006) observed that the dissemination of bilateral investment treaties among developing nations is significantly influenced by competition, coercion, and learning mechanisms. Comparable findings have been provided by other empirical research (Barthel & Neumayer 2012; Cao 2010; Simmons & Elkins 2004).

Jinnah and Lindsay (2016) looked at the role of US FTAs as a transnational mechanism for disseminating environmental standards and regulations. Their study, which used a process tracing methodology, discovered how trade agreements with the US helped spread environmental standards to partner nations. Three US free trade agreements—NAFTA, CAFTA, and US-Peru Trade Promotion Agreement—were chosen as examples of different trade policy eras. Similar to this, Garcia & Masselot (2015) verified that despite the Asian countries' opposition to the EU's strategy, trade agreements with the EU can serve as an effective mechanism for transferring social and environmental norms and legislation. Morin and Rochette (2017) also showed how over time, as nations learn from one another, the policy links of many nations converge. This reasoning is comparable to how norm diffusion literature is learned.

To summarize, diffusion scholars identified four mechanisms that drive environmental norms and policies diffusion of which competition is more prevails in trade-environment linkage than other mechanisms. This policy diffusion theory has the advantage because it parsimoniously shows the mechanism of norm and policy diffusion. However, there is a limit to explaining the spread of environmental norms through FTAs. First, the spread of environmental norms through FTAs is different from that of norms on a

single issue in that two different issues are linked and spread. Second, given that FTAs are based on bilateral negotiations, the pattern of the diffusion may differ from that of multilateral environmental agreements as the outcome of FTA negotiation likely depends on the political and economic ‘relationship’ between two or more countries.

2.2.2. Issue Linkage Politics

Issue-linkage refers to “linkage between unrelated or only loosely-related issues to gain increased leverage in a negotiation is an ancient and accepted aspect of diplomacy” (Wallace 1976: 164). It is often perceived as an effective bargaining strategy to overcome cooperation problems in IR studies.³ The incorporation of EPs into trade agreements is a classic example of linkage politics. At its core, the politics of institution linkages seeks to understand how, why, and with what implications different areas of international law and politics interact with one another. Linkage has been expressed in a slightly different way in existing studies, such as “interplay”, “overlap,” “interaction,” and “reconciliation” to analyze why and how two different international law and politics intersect and interact (Aggarwal, 1998; Haas, 1980; Koo and Kim, 2018; Van Asselt, 2014; Young, 2002). Oran Young differentiates linkage and overlap, defining that linkage is a result of “self-conscious” decision-making, whereas overlap is a result of “unreflective” decisions (Young 2002: 115). Haas (1980) distinguished different types of issue linkages: tactical, substantive, and fragmented linkages. When intellectually-unpackaged subjects are connected and added to the agenda in order to give the parties

³ It should be acknowledged that some scholars disagree on effectiveness of the issue linkage strategy in eliciting cooperative agreements (Aggarwal, 1998; Eichengreen & Frieden, 1993; Moravcsik, 2013; Morrow, 1992).

involved more negotiating leverage, this is known as tactical linkage. Contrarily, substantive linkage happens when newly discovered knowledge provides conceptual coherence among concerns that were previously thought to be distinct issues (Aggarwal 1998). Finally, fragmented linkage seeks to keep a coalition together in order to advance social objectives. The actors are more likely to link several concerns "in the goal of securing maximal concessions and holding their coalition" since they are unsure of the costs and rewards in the future. The issue linkage strategy is considered as a tool for "reaching an otherwise unattainable level of cooperation" (Poast 2012: 281). Haas (1980) catalyzed the discussion of issue linkage by outlining three rationales for linking issues in international regimes: tactical, fragmented, and substantive. He identified tactical linkage, which is used to obtain bargaining leverage; fragmented linkages that are developed to maintain the cohesion of coalition; and substantive linkages, which are based on consensual knowledge associated with an agreed social goal. Importantly, Haas highlights that power relations lie under all decisions to link issues within regimes.

Building upon Haas (1980), Aggarwal (1998, 2013) more specifies four different types of linkage mechanisms, according to the interplay between knowledge and power: substantive, tactical, failed substantive, and failed tactical. According to Aggarwal (2003), who represents knowledge is the central issue in the question of how consensus is formed. Therefore, he hypothesized four different mechanisms based on the knowledge difference between negotiating parties.

Many scholars have navigated the politics of institutional linkages. Jinnah (2014) argued that linkage politics between trade and environmental issues at the WTO have entrenched the existing power dynamics in ways that disadvantage developing countries' interests. Johnson (2015) has explored

how specific types of trade-environment linkage at WTO emerged in the first place, arguing that some can be traced back to political pressures faced by governments in the late 1980s and early 1990s. Young (2002) defines two forms of temporal linkages: formative and operational. Formative links occur during the formation or reformation of a regime. Operational links are associated with the day-to-day operation of a regime. For example, provisions built directly into FTAs are formative, whereas environmental cooperation activities developed based on FTA's environmental cooperation agreements are operational in nature.

2.2.3. Empirical Studies on Linking Environmental Issues to Trade Agreements

Several authors have explored the question of why governments choose to link environmental issues to trade agreements. Four explanations are particularly prolific in the literature: domestic pressure from trade protectionist interests, environmental groups, low compliance costs for EPs, and international power relationships.

At first, the earlier studies identify the likelihood of linking trade and environmental issues covaries with trade protectionism. They argue that a desire to level the playing field is an explanation for the inclusion of EPs in trade agreements (Bhagwati 1995b; Lechner 2016; Morin et al., 2018; Subramanian 1992). The basic argument is that firms based in countries with higher levels of environmental protection bear higher costs of production than do firms based in countries with lower levels of environmental protection. In requiring trading partners to raise their levels of environmental protection, costs associated with this disparity are reduced. This disparity, and thus the desire to ameliorate it, is higher between developed and developing countries

where trade has more significant distributional effects between trading partners. For example, Lechner's study (2016) identified import-competing, import-dependent firms as a major factor that influence the decision of what NTIs are included. Morin et al. (2018) have also demonstrated that democracies, countries that face import competition, and those that care most about the environment have been more likely to incorporate EPs into their trade agreements. In an analysis of WTO, NAFTA, and EU environmental negotiations, Steinberg (1997) argues that rich "green" states drive trade-environment linkages to force developing countries to accept higher environmental standards and greener rules. However, the premise has been challenged recently by scholars who highlight that developing countries also have strong interests in incorporating EPs into trade agreements, though their priorities may be quite different (Bernauer & Nguyen 2015).

Second, domestic pressures from environmental groups are thought to be important because, in most countries, a large proportion of citizens consider the benefits of environmental protection to be well worth the costs (Battig & Bernauer 2009; Bernauer & Nguyen 2015). Several scholars have highlighted the role of NGOs, trade unions, and businesses in lobbying governments for particular types of linkages and shifts from past practice in such linkages (Lechner 2016; Johnson 2015). For example, Lechner (2016) finds that the government's decision to incorporate non-trade issues (NTIS) related to stakeholders' strategic interest concerning the import-competing, import-dependent firms, and social actors. This role is well established empirically in the case of NAFTA, wherein the National Wildlife Federation, the Natural Resources Defense Council, and the World Wildlife Fund were instrumental in shaping NAFTA's environmental side agreement (Gallagher 2004; Strange 2015).

Existing research on domestic pressure has revealed that personal preferences

are likely to affect whether or not EPs are preferred in FTAs (Bechtel et al. 2012; Bechtel & Tosun 2009; Drezner 2005; Hultberg & Barbier 2004). The personal choice may be influenced by economic growth, since people in rich countries value environmental concerns in commerce more than people in underdeveloped nations. The poll in Switzerland revealed that the substantial support for job-related protectionism and strict environmental criteria of import goods were related to the unfavorable expectation of globalization (Bechtel et al. 2010). Similar to this, a majority of US citizens (60%) believed that environmental deterioration would worsen as a result of trade liberalization, according to an opinion survey done in the country during the NAFTA negotiations. (2012) Bettel et al. This study appears to support the voter appeasement theory, which maintained that trade agreements' greater environmental criteria are an effort to allay voters' concerns (Drezner 2005). This argument makes the assumption that trade agreements can effectively translate individual desires.

Similar studies have conducted in the context of developing countries (Bernauer & Nguyen 2015; Koo & Kim 2018). For example, Bernauer and Nguyen (2015) analyzed how individual preference concerning environmental protection and environmental protection relates. Contrary to the prevailing belief that citizens in developing countries tend to outweigh economic growth over environmental protection, the study found that individuals with greener preferences are more supportive of trade liberalization.

Third, is regarding international powers. This argument mainly focus on the role of the US and the EU in linking the environmental in trade deals. The early research mainly focused on understanding their motive and their effects on partner countries because to their sheer market sizes and power advantage in trade. According to Vogel (2013), the US and the EU entered into bilateral

trade agreements as a result of the failure to push for social elements in the WTO, where their hegemony allowed them to build FTAs to suit their needs. In a similar spirit, Hafner-Burton (2009) asserts that hegemony allows actors like the US or the EU to include stringent NTI terms in their PTAs. In order to include NTIs in trade agreements, Aggarwal and Govella (2013) also concur that power leverage is essential. The analysis of the effects of EPs of US FTAs was first attempted in Jinnah's paper (2011b). Using interviews and a process tracing method, the study chose the 2009 US-Peru Trade Promotion Agreement as a case study to highlight the negotiating and implementation processes to include the Convention on International Trade in Endangered Species (CITES) and dispute-settlement provisions. She came to the conclusion that because the dispute-settlement clause ensured the stronger enforcement of the former, the CITES requirement in the trade agreement had developed to be more enforceable than CITES alone. This study's general conclusion was that trade agreements might give governments the chance to establish environmental policies.

Bastiaens & Postnikovs (2017) focused on contrasting EPs in the US FTAs and the EU FTAs and looked at how environmental criteria were put into practice. They used a large-N analysis, which was the first attempt to compare the implementation consequences of EPs in US and EU free trade agreements. The results of the regression analysis using the Environmental Performance Index as dependent variables showed that the US trade agreements were more likely to have a favorable impact on environmental policies during negotiation, whereas the impact of the EU trade agreements is likely to appear at a later stage, post-negotiation period. The environmental policies of partner nations have benefited from both US and EU strategies. Although this study attempted to assess the impact of deploying EPs in a novel way, they do not appear to be able to distinguish between EPs addressing various

environmental challenges.

Complementing these central explanations in the trade-environment literature, several important case studies also offer instructive explanations for why states link policies across institutions. Jinnah's (2011) analysis of the US-Peru PTA has argued that states may choose to link institutions as a way to transfer regulatory authority from an agreement with weaker enforcement mechanisms (environmental) to one with stronger enforcement mechanisms (trade). Furthermore, Poletti and Sicurelli (2015) have analyzed the inclusion of provisions relating to biofuels in the EU-Malaysia PTA argues that states may choose to export environmental standards as a means to achieve immunity from legal challenges.

The broader literature on environmental linkages offers several additional insights that might be relevant to trade-environment linkages specifically. Axelrod's (2011b) examination of regional fisheries management organizations, for example, argues that countries create linkages to high-profile issues, such as climate change, as a way to divert attention from more contentious regime priorities. In their assessment of why states choose to integrate policy areas. Johnson and Urpelainen (2012) provide a somewhat different perspective. Looking across policy fields within environmental governance (e.g., ozone-climate, forest-climate), they theorize that linkages that enhance positive spillovers are less likely to be pursued than those that mitigate negative ones. In other words, they argue that states are more likely to link policy areas, such as trade and environment, not to capitalize on synergies, but rather when cooperation in one area undermines cooperation in another area.

Finally, although these contributions are far more scarce, there are also some important insights into how states choose to link one type of environmental policy over another within trade agreements. Blümer et al. (2018) argue that

states choose provisions that preserve regulatory sovereignty and, to a lesser extent, to level the playing field to pursue other interests.

2.3. Domestic Implementation of International Commitments

This section presents studies about why and how countries implement their international commitments. International agreements are effective only when they are domestically adopted and implemented by the parties (Bennet & Lightart 2001; Jinnah & Lindsay 2016; Seo & Koo 2014; Raustiala 2000). Participation and ambition alone “are of little value as long as parties do not do what they said they would do and refrain from complying with their commitments set out in international agreements” (Mitchell 2007: 401).

The process of carrying out international agreements includes implementation, which includes enacting domestic legislation, issuing regulations, setting up organizations, and enforcing laws (Gasser 1998; Raustiala 2000; Seo & Koo 2014; Simmons 1998; Young 2013). Although implementation can take place at the international level, as in the creation of a secretariat established by an agreement, my main focus in this article is on the national level implementation of commitments made by the parties to a specific agreement.

2.3.1. Legalization and Compliance effectiveness

The lack of effective compliance mechanism is often considered as a major obstacles to implementing international agreements (Abbott et al 2000; Guzman 2005; Raustiala 2000; Young 1979). Many scholars have focused on the relationship with the extent to which international agreements are equipped with compliance mechanism and countries’ commitment to the

agreements (Abbott et al 2000; Guzman 2005; Raustiala 2000; Voigt 2016; Yong 2013). Compliance is defined as the degree to which country behavior conforms to what an agreement prescribes or proscribes (Young 1989: 104). The effectiveness of an agreement also depends on the extent to which parties follow up on the commitments set out in international agreements (Voigt 2016: 161). Therefore, it is indispensable requirement to establish effective compliance mechanism among parties to yield effective implementation of an agreement. For these reason a number of environmental treaties, including environmental clauses in FTAs, include compliance procedures that aim at preventing cases of non-compliance and facilitating parties' required performance (Voigt 2016: 162).

International relations scholars assume that highly legalized international agreements are more likely to yield higher levels of compliance in practice (Abbott et al. 2000; Raustiala; 2000). This is because, for realist, a stronger sanction mechanism imposes less possibility of violation of the given agreements because of tit-for-tat, and for constructivist, international agreements that are based on shared idea provide the source of legitimacy to follow the rules (Raustiala; 2000). It is frequently assumed that more legalistic commitments, which are more mandatory and enforceable, are "stronger" and more likely to secure compliance with the commitments (Abbott et al. 2000; Guzman 2005; Jinnah & Lindsay 2016; Morin & Jinnah 2018). Thus, although the measurement is imperfect, the degree to which EPs in FTAs are legalized can provide a compelling rationale for the likelihood of enhanced compliance.

Abbott et al. (2000) have suggested the "concept of legalization" of international law. Legalization refers to "a particular set of characteristics that institutions may or may not possess" (Abbott et al. 2000: 401). They suggested three dimensions of legalization: obligation; precision, and

delegation. Obligation means that states or other actors are bound by a rule or commitment or by a set of rules or commitments. Highly obligatory rules state that its relationship to pre-existing rules of customary international law. This attribute is closely related with legitimacy of EPs in FTAs. Legitimacy is one of the most important component in obligation (Abbot et al. 2000). Legitimacy is generated when countries recognize a certain law is essential (Finnmore & Toope, 2001).⁴

“Precision means that rules unambiguously define the conduct they require, authorize, or proscribe. Precise legal provisions narrow the scope for reasonable interpretation in terms of both the intended objective and the means of achieving it in a particular set of circumstances.” (Abbott et al. 2000: 412). Precision is related with the leeway of interpretation.⁵ More specific or detailed commitments are more precise, and thus more strongly legalized than commitments that are vague and open to interpretation in varied domestic contexts (Busch & Jorgen 2005; Morin & Jinnah 2018). For example, a FTA requirement that a party designate a specific domestic agency as lead in implementing an environmental clauses in it is more precise than one that simply requires parties to implement the provisions.

⁴ The other way to find obligation is language. If provisions in international agreements use legal language of “shall” or “must”, they imposes unconditional (strong) obligation in formal. By contrast, a provisions expressed in “should” “endeavor”, and “seek to promote” only imposes weak and hortatory legal obligations (Abbott et al. 2000: 412). This standard will be also used in case studies in Chapter 5 and 6.

Table 2.2. Indicators of three dimensions of legalization

	Obligation	Precision	Delegation
High	Harmonization with pre-existing international law	Narrow issues of interpretation	Sanction or remedies
	Harmonization with pre-existing domestic law	Substantial but limited issues of interpretation	Judicial mechanism without sanctions
	Hortatory commitments	Substantial issue of interpretation	Third-party participation
	Optional commitments	Discretionary measure	Political bargaining
	Mere recognition	Mere standards	
Low	Explicitly negation	Impossible to determine whether conduct complies	

Source: adapted Abbott et al. (2000: 410-416)

“Delegation means that third parties have been granted authority to implement, interpret, and apply the rules; to resolve disputes; and possibly to make further rules” (Abbott et al. 2000: 145).⁶ When the parties consent to legally binding conclusions by third parties, dispute resolution procedures are most highly legalized; yet, they are least legalized when the procedure entails political bargaining between the parties (Abbott et al. 2000: 415). Dispute resolution procedures are most highly legalized when the parties consent to binding conclusions made by third parties, while they are least legalized when the procedure entails political bargaining between the parties (Abbott et al

⁶ For delegation, Abbott et al. (2000) have suggested that legalization is “the extent to which states and other actors delegate authority to designated third parties—including courts, arbitrators, and administrative organizations—to implement agreements” (Abbott et al 2000: 415).

2000: 415).⁷

Some scholars have measured the three dimensions of legalization of international agreements. Morin & Jinnah (2018) explored the role of PTAs in making global climate change governance using 688 PTAs signed between 1947 and 2016. They analyzed climate change-related provisions along four dimensions—innovation, legalization, replication, and distribution. Following Abbott et al. (2000), they measure the level of legalization along obligation, precision, and delegation. As a result, they find that climate change provisions in PTAs are highly obligatory, rarely precise. Also, the level of delegation is very low as 70 % of PTAs with climate-related provisions do not provide for dispute settlement mechanisms. Despite it sheds light on how PTAs contribute to global cooperation for climate change mitigation, their study does not mention why each PTAs show different level of legalization.

A number of existing studies explain why states enter into soft law agreements. The two most salient arguments are states' favor for flexibility and domestic politics. The basic flexibility argument is that "soft legalization allows states to adapt their commitments to their particular situations rather than trying to accommodate divergent national circumstances within a single text, which provides for flexibility in implementation" (Abbott & Snidal 2000: 445; Guzman 2005: 591; Lipson 1991: 500). Soft law has the benefit of being less restrictive on governments, enabling them to react to unforeseen future occurrences. The argument's flaw, though, is that this kind of flexibility makes the agreement less valuable to the parties. A state would prefer that its counterpart follow their pledge even while it desires that its own obligations

⁷ For example, delegation that involves adjudicators with the power to impose penalties for non-compliance exhibits high delegation in comparison to delegation that relies on nonbinding arbitration, delegation of enforcement to nongovernmental organizations (NGOs), or is excluded from dispute settlement entirely (Morin and Jinnah 2018).

be flexible. The domestic legal system and politics are the other justification for the application of soft law. Use of a soft law instrument as opposed to a treaty results in a distinct set of domestic practices, which may influence the states' decision (Abbott & Snidal 2000; Guzman 2005; Lipson 1991).

2.3.2. Policy Implementation

Existing studies have explored the implementation of international environmental agreements and the obstacles that prevent the parties from effective implementation. Many of them identify the failure of coordinate between domestic actors as a factor that makes it difficult enforce international agreements at domestic level. For example, Xue et al. (2015) explored main challenges in domestically implementing international treaties and agreements related bio diversity. Their study identified the lack of coordination and communication between the relevant ministries as a major obstacle in implementing international environmental agreements at the domestic level. Perkins & Neumayer (2007) looked at why states implement or does not implement MEAs in the context of EU environmental policy. They found that countries with greater administrative and legal capacity explains the implementation of MEAs in EU countries.

Matland's (1995) tried to synthesize the top-down and bottom-up models.⁸

⁸ Policy implementation theory has evolved from the two principal models: top-down and bottom-up. The top-down models start with an authority's judgment, determining the problem's tractability, its ability to be organized, as well as the non-statutory factors influencing execution (Elmore 1979; Sabatier 1986; Head and Alford 2013; Mazmanian and Sabatier 1989). The majority of top-down models encourage governments to set clear and consistent goals, to restrict the amount of change required, and to entrust implementation to an organization that shares those goals. For instance, Sabatier and Mazmanian (1979) contend that laws and regulations need to contain clear policy directives in order to ensure efficient policy implementation and maximum target group compliance. The importance of taking into account the causal relationship, or "technical validity," between policy goals (desirable outcomes that should be attained), policy measures (how to achieve the goals), and the policy outcome that results from the application of

He argues that the successful implementation is “to execute faithfully the goals and means present in the statutory mandates” (Matland 1995: 155). Two key elements are identified by his ambiguity-conflict model as contributing to the success (or failure) of policy implementation. Both policy ambiguity and policy disagreement fall under these categories. The placement of particular policies within an implementation matrix depends on the domestic circumstances of each country, and the degree of ambiguity and the degree of conflict are best viewed as interconnected axes (Gakou-Kakeu et al. 2020). When there is little dispute and uncertainty, administrative implementation is successful provided that resources are available. The implementation is symbolic when there is a lot of dispute and uncertainty, and how well it works will rely on how strong the coalition is. When there is a lot of controversy and little uncertainty, implementation is political, and power is the main factor in whether it is successful. Last but not least, the implementation is experimental and will depend on the surrounding circumstances when conflict is low and ambiguity is high (Matland 1995: 155).

The degree of policy conflict is based on the idea that people are rational, self-interested actors, and that when those interests routinely vary, a situation of conflict results. The theory behind bureaucratic politics is that policy decisions result from negotiations between organizational actors inside an institution, whose objectives and interests may not always line up with those

such policy measures is highlighted by top-downers (Sabatier and Mazmanian 1979). Bottom-up approaches, on the other hand, see policy from the viewpoint of the target population and the service providers (Maynard Moody et al. 1990; Hjerm and Hull 1982; Elmore 1979; Lipsky 1980). According to bottom-up theorists, flexibility is necessary to achieve objectives and that centralized decision-making is poorly suited to local circumstances. Matland (1995) noted that "policy implementation occurs on two levels" in this vein (Berman 1978). Centrally positioned actors design a government program at the macro level; at the micro level, local groups respond to the plans at the macro level by creating their own programs and implementing them (Matland 1995: 148).

of individual institutional actors (Allison 1971; Halperin 1974).

When policy aims are unclear, policy uncertainty develops (Maitland 1995). Goal ambiguity is said to cause miscommunication and uncertainty, which frequently results in implementation failure (Matland 1995: 157). Matland (1995) is unsure of where goal ambiguity comes from. When an organizational goal represents the anticipated future state of the organization, goal ambiguity, according to Chun & Rainey (2005), refers to the extent to which an organizational goal or collection of goals allows for interpretation (Chun and Rainey 2005: 531). They observe that when regulations and laws allow for a lot of room for interpretation, the degree of purpose ambiguity is likely increasing.

Despite the extensive literature on the trade-environment linkage and its implementation, I found weakness of the existing studies and theories. First, the existing studies fail to link domestic politics and international politics. Trade negotiations are not just a matter for policymakers. Negotiations reflect the interests of various domestic actors. However, existing studies have regarded the state as a single actor and ignored the reality that the needs of domestic actors are reflected in the trade-environment link. Even if it reflects the needs of domestic actors, it only focused on economic factors and considered only specific domestic actors (e.g. industrial interest groups). This does not properly capture the nature of the negotiations.

Second, although diffusion literatures have an advantage of parsimony, they have limitation in explaining the mechanism of incorporating EPs in FTAs. First, the spread of environmental norms through FTAs is different from that of norms on a single issue in that two different issues are linked and spread. Second, given that FTAs are based on bilateral negotiations, the pattern of the diffusion may differ from that of multilateral environmental agreements as the outcome of FTA negotiation likely depends on the political and economic

‘relationship’ between two or more countries.

Third, issues related to EP typology exist. There have been many topology studies that shows the development of EPs, but their typology is mere an identification of EPs that appear in FTA and does not categorize based on concrete standards. Also, although a few studies that used EPs as a variable, their measurement did not address EPs exhaustively. They selected a few EPs for their purpose of study. This may lead to misunderstanding of why a certain EPs are included in FTAs. Therefore it is necessary to categorize EPs in a systematic way to better use it as variable.

Chapter 3. Theoretical Framework

This chapter provides a theoretical framework explaining the casual mechanism of including EPs in FTAs and how these environmental norms and policies are implemented domestically. Environmental norms and policies in FTAs are internalized into trading partner's domestic policy through in two stages. First, trade and environmental issues are discussed together in FTA negotiations, and then the outcome is incorporated in FTA agreements as a form of legal provisions. Afterward, those provisions are adopted and implemented into the trading partner's domestic policy chains. My theory not only focuses on both domestic politics and international politics. I first explain overall concept of my theory and show how domestic and international politics are linked. Then, for better understanding, I theorize the international level and domestic level separately to show what happens at each level.

In theorizing international level, I first review linkage mechanisms that drive environment-trade linkage in FTA negotiation. In the next section, building neoliberalist institutionalist literature that discusses the impact of cost-benefit calculation on institutional design choices, I characterize the benefits and costs of incorporating EPs. Then, I hypothesize how these mechanisms affect the legalization of EP. I argue that different linkage mechanisms are likely to formulate different legalization of EPs.

I place more emphasis on compliance than commitment when I theorize domestic level. A domestic commitment is not always followed by its international commitments. A nation's commitment to upholding or tightening environmental standards is reaffirmed by including EPs in their FTAs. The mere declaration of the commitment, however, might not result in

policy compliance. I analytically separate the concepts of commitment, compliance, and implementation in this way. I argue that the level of legalization of EPs affect the goal ambiguity, and the combination of ambiguity and the level of conflict between actors create the different implementation patters.

3.1. A Modified Linkage Framework

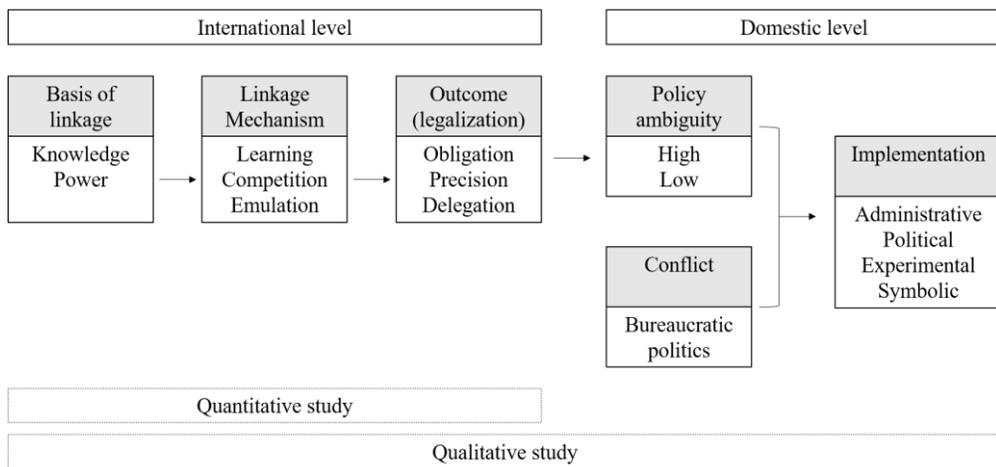


Figure 3.1. Theoretical framework

Figure 3.1 presents theoretical framework. Building upon Aggarwal (2013) and Matland (1995), I conceptualize the international negotiation of linking trade and environment and how the linkage outcomes are implemented domestically. At the international level, three types of linkage—leaning, competition, and emulation— can occur, according to the combination of knowledge (a)symmetry and power asymmetry.

The outcome of issue linkage comes as a form of international agreement.

FTAs, as an international institution, are “explicit arrangements, negotiated among international actors that prescribe, proscribe, and/or authorize behavior” (Koremenos et al. 2001: 762).⁹ FTAs are the formal rules on trade as well as non-trade issues between countries. The EPs in each FTA vary to a great degree but are not randomly chosen either (Koremenos et al. 2001). Governments may have many motives to include EPs in their FTAs, but the most significant is to make a credible commitment to protect the environment without hindering free trade. EPs allow governments to make credible commitments because they increase the cost to the parties in the event of violation (Elkins et. al. 2006; Guzman 2005). They do this by (1) clarifying the commitment and specific issues and measures (*high precision*), (2) increasing the compatibility of the environmental rules and trade rules (*high obligation*), and (3) adopting third-party participation and formal dispute settlement mechanism (*high delegation*).

The level of legalization can be measured three dimensions: obligation, precision, and delegation. If an FTA includes legally binding environmental obligations that are more precise and that delegate authority for interpreting and implementing the law, it is considered highly legalized. If an FTA includes weaker EPs, it is low legalization.

The level of legalization affect the policy ambiguity when the EPs are implemented domestically. Highly legalized EPs reduce the leeway of interpretation, and then lower the level of ambiguity in implementing the environmental commitments in FTAs. With ambiguity, conflict between

9 Simmons and Martin (2002) offered the definition of international institutions “as sets of rules meant to govern international behavior” and the rules “are often conceived of as statements that forbid, require or permit particular kinds of actions” (p. 194). Keohane (1988) denoted a broader definition, institutions are “persistent and connects sets of rules (formal or informal) that prescribe behavior roles, constrain activity, and shape expectations” (p.384). Duffield (2007) proposed international institutions “are...relatively stable sets of related constitutive, regulative, and procedural norms and rule that pertain to the international system, the actors in the system (including states as well as non-state entities), and their activities” (p. 2).

domestic actors the other variables that affect the implementation. According to the combination of ambiguity and conflict, the implementation evolves.

In this dissertation, I conduct large-N data analysis to explore the causal relationship between linkage mechanism and the legalization of EPs. In qualitative study, I conduct case study to explore what linkage mechanism occur in an FTA negotiation and how highly the EPs are legalized along the three metrics. I then describe domestic politics surrounding the implementation of EPs. Finally I show how the implementation evolves over time depending on the combination of level of ambiguity (legalization) and conflict.

3.2. International Linkage

3.2.1. Issue-linkage Politics

Why do countries link issues? The desire to construct a new institution by linking two different issues arises only when the existing process seemed to pass out of their control (Haas 1980: 371). When countries consider the issue-specific institution does not effective in solving a given social problem, issue-linkage occurs. That is, countries attempt to link issues when they think they can improve their pay-offs by linking issues. In issue-linkage, two factors matter: knowledge and power.¹⁰

To begin with, the role of power is key aspect of international negotiations. It

¹⁰ Understanding the connection mechanism also requires understanding the concepts of issue and issue-area. Understanding the relationships between issues, issue areas, and the functions of knowledge and power in relationships between domestic players and policymakers is helpful when discussing links (Aggarwal 2013: 96-99). Ernst Haas (1980: 362-23) investigates “the origins of ‘international difficulties’ as emerging from contexts where there is some potential for conflict over the terms of interdependence as a starting point.” According to him, “‘issues’ are

is hard to imagine that, smoothly particularly when negotiating parties have different view about the linkage, the economic interests of the two countries in each negotiation issue will naturally coincide without any compensation or threat of retaliation so that negotiations reach an agreement (Aggarwal, 2013: 98). For example, some countries may not want to link trade and the environment. There are two reasons. First, they may think that the primary goal of trade negotiations is to secure economic benefits from tariff reductions and environmental issues should be addressed in separation from trade issues. Second, although they acknowledge the logical connection between trade and the environment, they may be reluctant to link the two issues because they do not have enough capacity to address the issues together. The power balance between the parties involved in the negotiations is crucial since it is common to utilize asymmetrical power to pressure peers to make concessions in either the political or commercial spheres. (Axelrod & Keohane 1985; Hirschman 1980).

However, our dilemma would have an obvious solution if it were feasible to foresee the result of international negotiations by extrapolating the power of the participants. There would be no controversy if social classes and governments remained steadfast in their beliefs regarding individual and collective advantages. However, no such forecast is feasible in the presence of intricate interconnection. Because the international agenda has a shifting hierarchy of topics, opinions are constantly shifting. Therefore, it is necessary to focus on changing knowledge and changing goals in addition to power

distinct agenda items, and 'issue-areas represent the apparent interconnection of different concerns.' Issue-areas are a "recognized cluster of concerns featuring interconnectedness not just among the parties but among the issues themselves," according to Haas (1980: 365). Countries should identify "issue areas" in international negotiations where all negotiating parties with various interests and objectives might gain to some extent through mutual agreement.

asymmetry (Haas 1930: 361).

Knowledge or “causal understanding... is the sum of technical information and of theories about that information which commands sufficient consensus at a given time among interested actors to serve as a guide to public policy designed to achieve some social goal.” (Haas 1980: 367-68). Knowledge is embedded in many social processes that are to be found in all economic and social systems. Knowledge does not necessarily mean scientific notions but include “questionable metaphors, imperfect analogies, exaggeration” as long as these activities are accepted as a basis for public policy by groups and individuals in a given society (Haas 1980: 368). Also, knowledge of a country are rarely free from ideological element and technical capacity (Haas 1980: 368).

In the context of trade-environment linkage, knowledge refers to the extent to which policymakers of the negotiating parties agree that environmental issues and international trade are logically linked. When negotiating parties believe that environmental issues are social problem that needs to be addressed within the framework of international trade, they are willing to take the costs of arranging the two institutions, and therefore knowledge becomes relevant and prevailing in FTA negotiations. Therefore, if policy-makers of negotiating parties agree that environmental issues are logically linked with international trade and share this view with their counterparts, they are more likely to incorporate environmental concerns in trade agreements. This logical connection between trade and environmental issues here includes not only that countries are seeking to protect the environment through trade, but also in pursuit of a realistic goal to protect their industrial competitiveness by including environmental regulations in FTAs.

Depending on the combination of knowledge and power, three linkage mechanisms are formed: substantive, fragmented, and tactical. First, the

substantive linkage may be achieved by connecting otherwise different issues “based on consensual knowledge linked to an agreed social goal.” For Earnst Haas (1980), Knowledge becomes helpful when it is agreed upon by all interested parties at a particular time to direct the purposes of public policy. In a similar spirit, Peter Haas (1999) observes that "epistemic communities" (p. 2), which alludes to a network of knowledge-based professionals and experts, are responsible for the formation of consensual knowledge. Therefore, a stable issue area is likely to be established if there is a substantial link between two or more issues. In order to achieve this goal during discussions, the linker country must persuade its partner nation that "the issues are coherently packaged" (Aggarwal 1998: 16; 2013: 98).

The policy diffusion mechanism of the policy diffusion literature's "learning" process and substantive linkage are closely related (Simmons and Elkins, 2004). Second, fragmented linkage is formed when it is necessary to maintain coordination to solve some social goals, even if "the elements of agreed knowledge are unevenly distributed among countries" (Haas, 1980: 371). In other words, there is an intellectual basis for linking the two issues, but a country's policymakers do not recognize that the two issues are connected. This can be examined separately. First, in order not to be excluded from the alliance led by the powerhouse when a powerhouse attempts to connect link multiple issues, an agreement is inevitable even if the decision-makers of the weak country do not acknowledge it (failed fragmented linkage). Second, although rare in reality, weak countries may propose an issue linkage, and powerful countries may not recognize it. In this case, the powers can still cooperate taking into account their reputations in the international community (failed substantive linkage). Fragmented links are not as stable as practical links, but they can be a temporary solution to social problems. Some fragmented links may change to practical links as knowledge

of issue links changes (Aggarwal, 1998).¹¹ These two linkage mechanisms relate to ‘competition’ and ‘emulations’ mechanisms of policy diffusion literature (Simmons & Elkins, 2004).

Linkage types	Stronger country <i>i</i> 's view of connection	Weaker country <i>j</i> 's view of connection	Basis for connection	Outcomes
Learning	Connected	Connected	Knowledge	Stable issue area
Competition	Connected	Unconnected	Market competition	Temporary solution to externalities
Emulation	Unconnected	Connected	Reputation/peer pressure	Unstable issue area
Coercion	Unconnected	Unconnected	Power	Potentially unstable issue area

Source: adapted from Aggarwal (2013: 98)

Figure 3.1. Types of issue linkages and the basis for connection

Third, tactical linkage takes place when introducing an agenda that is "not connected at all by intelligent coherence" (Haas, 1980:372). Thus, tactical linkage becomes possible when sufficient resources are provided, whether intimidation or compensation, to induce other countries to accept something of no practical interest (Haas, 2003:256). Inducing linkages positively can reduce conflicts, but coercive links, in most cases, cause sharp conflicts during negotiations or domestic discussions. Therefore, unstable agreements outcomes are likely to emerge (Aggarwal 1998).¹² Tactical linkage is closely

11 According to Aggarwal (2013), the US FTAs with Singapore, Chile, Australia, and Korea are examples of fragmented linkage (failed substantive linkage) in that these accords were driven by a desire to catalyze agreements in the region, as well as security linkages; but with few labor and environmental standards concerns.

12 NAFTA is considered as tactical linkage because all the member countries did not recognize the trade-environmental linkage but they only had to include extensive environmental clause to

related to the ‘coercion’ mechanism of policy diffusion literature (Koo & Kim 2018; Simmons & Elkins 2004).

Figure 3.2 provides a brief conceptual framework. Building upon this linkage mechanism, I hypothesize the nexus between the linkage mechanism and the heterogeneity of EPs. However, I will not consider the coercion mechanism because coercion mechanism does not seem appropriate in the environment context. Coercion is the use of physical force, the manipulation of economic costs and benefits, the monopolization of information or expertise by governments, international organizations, and nongovernmental entities to exert pressure (Dobin et al. 2007; Owen, 2002). However, in the setting of trade-environmental linkage, economic cost and benefit is determined by trade relationship, not by coercion. Also, information monopolization is not likely occur in term of environmental issues because of the development of media and environmental discourse in these days.

3.2.2. Hypothesis: Linkage Mechanism and Legalization

Building upon Aggarwal (2013), this section suggest three linkage mechanisms: learning, competition, and emulation. Table 3.2 present the summary of theoretical framework of linkage stage. In this section, I focus on exploring the rationale for the parties to go along with the trade-environment linkage based on knowledge connection and the incentives to increase costs of the linkage. Also, I hypothesize how this incentives lead to different types

tame strong environmentalist activists’ demand (Aggarwal 2013).

of legalization of EPs.

Learning

To begin with the first type of linkage, learning is the case where both stronger and weaker countries agree that trade and the environment are logically linked, and that environmental issues should be addressed with the international trade rules. Both the powerful and the weaker countries share the fact that the environment must be dealt with within the framework of trade. Thus both parties want to incorporate EPs in their FTA, based on “consensual knowledge” (Haas 1980). Policy makers does not simply adapt to the policy shifts of others, but they believes in the cause and effect change because new evidence (e.g. importance of sustainable development) changed policymaker’s beliefs (e.g. pursuing traditional economic growth) (Dobbin et al. 2007: 460; Elkins & Simmons 2005). Both parties believe that trade and environmental policy are mutually supportive and harmonizing the two institutions is a solution for the current socio-economic problems, such as climate change and environmental degradation. Therefore, the level of obligation is high under learning linkage.

Second, shared knowledge promotes detailed cooperative measures EPs because they know the rationale of the given problems and the cause and effect of them (Haas 1980; Higgott 1992). Common understanding reduces uncertainty for policymakers when choosing a certain policy options by creating a shared set of interpretations on the cause of problems and the effect of policy intervention (Adler & Haas 1992; Higgott, 1992). Recognizing that the trade-environment is linked also means that countries already have abilities and experiences to address both issues together. It is evident to choose a problem-solving strategy within one's ability (Lechner 2019). Their experience and capability may reduce the costs of incorporating precise EPs.

In this vein, countries with shared knowledge have shared incentives to incorporate specific and precise implementation measures to make EPs more credible. Clarifying the commitment and specific issues and measures allow governments to make credible commitments because they increase the cost to the parties in the event of violation (Elkins et. al. 2006; Guzman 2005). Therefore, the level of precision is high under learning linkage.

However, the level of delegation are expected to be low under learning linkage. Through specialized organizations and various forms of cooperation, knowledge facilitates the learning process for managing uncertainty. These groups have the authority to create standards or change and adapt rules. As situations are more understood, moderate delegation—including international organizations that offer support for decentralized bargaining, knowledge, and information-gathering capabilities—may be more appropriate for changing norms than domestic or international adjudicative procedures (Abbott & Snidal 2000; Abbott & Snidal 1998).¹³

Shared information also fosters trust. According to social capital theory, knowledge is a crucial component of an actor's identity and promotes higher confidence that others who receive it will reward the actor in the future (Haesebrouck et al., 2021; Hwang et al., 2009; Miller & O'Leary, 1987; Sprinkle & Williamson, 2004). Trust can be defined as an expectation regarding another member's future behavior, having faith in their acts, and realizing that the vulnerability won't be taken advantage of in the event of opportunistic behavior (Barczak et al. 2010). Trust ensure actors that they can enjoy more rewards when they act in cooperative ways (Haesebrouck et al. 2021). Therefore, under learning linkage, countries can guarantee cooperation without strong sanction in case of failure of the compliance of the EPs. Thus,

¹³ Mekouar (1998) confirms that the learning processes described here are illustrated by the joint Food and Agriculture Organization-UN Environment Program (FAO-UNEP) regime requiring prior informed consent to international transfers of hazardous chemical and pesticides.

the level of delegation is low under the learning linkage. Based on the discussion above, I provide the first hypothesis as follows.

H 1-1. If both parties perceive the trade-environment linkage as legitimate, their FTA will contain more obligatory EPs.

H 1-2. If both parties perceive the trade-environment linkage as legitimate, their FTA will contain more precise EPs.

H 1-3. If both parties perceive the trade-environment linkage as legitimate, their FTA will contain less delegatory EPs.

Mechanism (Motivation)	Country	View of connection	Obligation	Precision	Delegation
Learning (Consensual knowledge)	Stronger country	O	(+) <ul style="list-style-type: none"> • Consensual knowledge 	(+) <ul style="list-style-type: none"> • Consensual knowledge 	(-) <ul style="list-style-type: none"> • Consensual knowledge • Detailed cooperation mechanism (FAO-UNEP system) • Trust (Social capital)
	Weaker country	O			
Competition (Market competition)	Stronger country	O	(+) <ul style="list-style-type: none"> • Knowledge • Low implementation cost 	(+) <ul style="list-style-type: none"> • Knowledge • Interest group pressure • Low implementation cost 	(+) <ul style="list-style-type: none"> • Delegation cost • Interest groups demanding sanction mechanism
	Weaker country	X			

Figure 3.2. Linkage mechanism and the expected outcome of linkage

Emulation (Reputation)	Stronger country	X	(+) <ul style="list-style-type: none"> • Reputational cost • Logic of appropriateness 	(-) <ul style="list-style-type: none"> • Uncertainty about domestic support • Avoiding the possibility of renegotiation 	(-) <ul style="list-style-type: none"> • Uncertainty • Avoiding delegation cost
	Weaker country	O	<ul style="list-style-type: none"> • Knowledge 	<ul style="list-style-type: none"> • Knowledge • Power asymmetry and fear of losing export market • Logic of consequences 	

Figure 3.2. Linkage mechanism and the expected outcome of linkage (Cont.)

Competition

Competition linkage is formed when there is an intellectual basis for linking trade and environment, but the weaker country's policymakers do not recognize that the two issues are connected. From the perspectives of stronger country, it wants FTA with highly legalized EPs in terms of obligation, precision, and delegation.

A stronger party (usually a developed country) seek to include strong and specific EPs in order to level the playing field by imposing higher environmental standards to a weaker country (usually a developing country). Therefore, it wants harmonizing the existing environmental regulations and trade laws by singing with high obligation.

Also, it wants to clarify EPs to keep weaker country from reneging the commitments (Elkins et al. 2006). For, a stronger country, incorporating specific EPs are not that costly because they already have stringent environmental standards. For instance, exporters in developed nations don't care about much to EPs in trade agreements because their home nations already have strong political, social, or EP norms. Their production prices won't change even if their government signs an FTA with severe EPs because the standards stay the same. (Milner, 1997; Milner et al. 2007; Yasar, 2013). Stronger countries want high delegation because it is concerned over weaker country deviating from the commitments. Thus, stronger country wants to increase delegation cost by adopting third-party participation and formal dispute settlement mechanism (*high delegation*).¹⁴ In addition, powerful

¹⁴ EPs raise "delegation cost" by significantly enhancing contract enforcement. By incorporating mandatory dispute settlement provisions, parties are entitled to use when they feel the one party has violated the relevant EPs. Dispute resolution procedures have provisions for the direct trade retaliation—suspension of benefits previously granted to a violating party. The sanctioning party is, of course, permitted to impose sanctions only up to the point where the cost imposed on the violating party equals the ongoing costs of the violation, and this retaliation must stop when the

countries that insist on trade-environmental links are usually facing high pressure from environmental NGOs demanding for including stringent environmental regulations (Aggarwal 2013; Lechner 2015; Tversky & Kahneman 1991). Many domestic and international interest group focus on sanction mechanism as a necessary factor in international cooperation (Guzman 2005). Therefore, stronger country wants to incorporate EPs with high delegation.

On the other hand, a weaker country may see its counterpart's linkage attempt to be green protectionism but accept the linkage because of the fear losing export market. In this situation, a weaker country calculate the cost and benefit of incorporating EPs that its counterpart wants. All costs of accepting linkage may be temporary, while the gains from securing the export market are long-lasting. However, the cost of losing the export market by not accepting EP is large and critical. For weak countries, the worst scenario would be the FTA negotiation will get caught in an impasse over EPs. If so, they may face a lot of costs. They will face the backlash from domestic actors who support for the FTA. They also have given up all the resources that they put in the negotiation so far.

This assessment of consequences follows a “logic of (expected) consequences” (March & Olsen, 1998). “When a logic of consequences determines the choice, the basic assumption notes man's natural proclivity is to pursue his own interests” (Brenna & Buchanan, 1985). Their actions are “often one based on subjective-expected utility theory” (Hechter & Kanazawa, 1997: 193). Here, countries demonstrate “instrumental behavior-perceived as semiautonomous of rational individuals under institutional constraint” (Hicks,

violative measure is ended. This might not be sufficient to offset the loss of the party who suffer harm as a result of counterpart's violation of an agreement, but it still impose a reputational loss to the violating party by signaling to other states that it does not take its international promises seriously (Guzman 2005: 596).

1995: 1221). They calculate the balance of costs and benefits, which “essentially lead us to derive actions from given preferences” (Goldmann, 2005: 44).

Negotiating environmental issues involves serious collective action problem among countries, as we can see in the negotiation of MEAs. Collectively, they might be better off resisting signing MEAs to avoid the costs described above, but bilaterally it is rational to sign in hopes of stimulation of trade. As a result, a weaker country show its credibility by accepting highly legalized EPs that the stronger country demands (Elkins, Guzman, & Simmons, 2006). Upon the discussion above, the hypotheses for competition are as follows:

H2-1. If a weaker party (j) does not perceive the trade-environmental linkage as legitimate but a stronger party (i) perceives it as such, their FTA will still contain more obligatory EPs.

H2-2. If a weaker party (j) does not perceive the trade-environmental linkage as legitimate but a stronger party (i) perceives it as such, their FTA will still contain more precise EPs.

H2-3. If a weaker party (j) does not perceive the trade-environmental linkage as legitimate but a stronger party (i) perceives it as such, their FTA will still contain more delegatroy EPs.

Emulation

Emulation happens a when weaker county proposes a linkage, and a stronger country does not acknowledge it. This takes place when the negotiating countries have different views on the linkage, but no one is strong enough to force the other to include an environmental provision in an FTA. FTAs between developing countries are such cases. This linkage is motivated by a mere symbolic behavior to earn legitimacy from the international community,

rather than a willingness to accept stringent environmental norms and policies (Dobbin et al., 2007). In this case, a weaker party may induce an FTA stipulating declarative and generic environmental commitments, and a stronger party can still cooperate taking into account their reputations in the international community.

Since weak countries see international trade and the environment are connected, a highly legalized linkage is preferred in terms of obligation and precision. It also want a high delegation because it is concerned about its counterpart's violation. However, it is not possible to push for the linkage unilaterally because policymakers of weaker country will undoubtedly recognize the asymmetric power (Aggarwal 2013).

For powerful country, the inclusion of strong EPs entails a high authority cost because they do not have the will and ability to connect trade and environment. In particular, it would prefer a low precision because there is great uncertainty in securing support for domestic actors—the public, NGOs, and even legal agencies for including EPs. Therefore, it wants more flexibility by adopting ambiguous EPs such as guideline, rather than constrained by precise rules.

Delegation cost is also high to the country who does not recognize the linkage. Due to the lack of ability to enforce high EPs, there is also a high probability of appeal due to violations, and therefore a high delegatory cost. Therefore, delegation is preferred.

However, the global trend of high environmental protection cannot be ignored. Under current world that emphasizes sustainable development, the reconciliation of the environment and trade can be considered 'appropriate.' The logic of appropriateness steers decision-making in favor of what society deems suitable rather than what cost-benefit analysis deems optimal (March & Olsen 1995). Thus, an agreement will be reached at harmonizing existing trade regulations and environmental regulations while not incorporating

provisions on specific issues and dispute settlements. Therefore, in emulation linkage, the degree of obligation is likely high, but the other the dimensions are likely low because the stronger party may hardly agree upon precise and judicial provisions, which put possibly more responsibility and implementation costs on it. Thus, the hypotheses are as follows:

H3-1. If a stronger party (i) does not perceive the trade-environmental linkage as legitimate but a weaker party (j) perceives it as such, their FTA will contain more obligatory EPs.

H3-2. If a stronger party (i) does not perceive the trade-environmental linkage as legitimate but a weaker party (j) perceives it as such, their FTA will contain less precise EPs.

H3-3. If a stronger party (i) does not perceive the trade-environmental linkage as legitimate but a weaker party (j) perceives it as such, their FTA will contain less delegation.

3.3. Domestic Implementation

Matland (1995) suggests that the way in which policy is implemented depends on policy ambiguity and conflict between actors involved in the implementation process, and a successful policy implementation depends on how explicitly the policy goals and values pursued by an organization are expressed. In the same vein, the extent to which FTA EPs are clear and precise is directly associated with the way that countries adopt and internalize those provisions into domestic laws. In other words, if the environmental stipulate in clear and specific languages what the parties are aiming for and what they need to do for them, it is less likely to have a disagreement regarding the

interpretation of the environmental clauses, thus leading to more effective domestic implementation (Jinnah and Lindsay 2016).

Policy ambiguity depends on the outcome of the trade-environment linkage (Seo & Koo, 2014: 152). When countries choose to accept more obligatory, precise, and delegatory EPs, policy ambiguity is possibly low because they know what they should do and what they should achieve by implementing the agreement. Therefore, FTAs concluded by learning and completion linkages may invite a low level of ambiguity while emulation linkage may invite a high level of ambiguity when parties domestically implement the EPs.

Conflict can arise when multiple organizations have different views on a single policy (Matland 1995). The existing studies have identified factors that cause conflict: the number of actors and the beliefs of actors (Gervers 1989; Morell 1990; Simon & March 1958).

First, the more actors that are involved in policy implementation, the more conflict may arise because of actors competing with each other for jurisdiction and resource allocation. For example, environmental issues embedded in FTAs involve several ministries including the foreign ministry, industry ministry, and environmental ministry, whereby it is more likely that conflict would arise among them than when a single ministry is in charge of addressing the issues.

Second, when many organizations regard a policy as being directly relevant to their interests and when the organizations' viewpoints diverge, there will be a policy conflict (Matland 1995: 156). Policy means disputes can arise over jurisdictional concerns or the specifics of the suggested means for achieving the goals. According to Matland (1995), even while environmental protection may be a shared objective, an engineer, an economist, and a lawyer may favor completely different strategies to implement the policy. In terms of implementing environmental provision in FTAs, for example, there may be a

policy conflict between the environmental ministry and industry ministry prioritizing sharpening the market competitiveness of domestic industries.

Table 3.3. Ambiguity-conflict matrix

		Ambiguity	
		Low	High
Conflict	Low	Administrative implementation	Experimental implementation
	High	Political implementation	Symbolic implementation

Source: Matland (1995: 161)

Building upon Matland (1995), I conceptualize the implementation outcome of different linkage mechanisms (Table 3.3). For learning and competition, those linkage involves specific and stronger EPs in FTAs, whereby they leads to less policy ambiguity. In terms of conflict, learning is based on belief of policy needs, which is the result of rational choices (Simmons et al. 2006).

When trade-environmental linkage is accepted due to competition, there may be conflicts between ministries in the process of integrating them into domestic policies, even though policies have been accepted by policy needs. Achieving free trade and environmental protection at the same time is not easy because, at least in the short run, those policy goals are contradictory. Say a weaker country agrees to include a clause stipulating climate change mitigation effort in the FTA in exchange of market access. Tackling climate change requires reducing the use of conventional energy and increasing the proportion of renewable energy, but this inevitably leads to weakening industrial competitiveness. This situation of high knowledge coherence and

high intergovernmental power asymmetry leads to political implementation. Emulation which are of low level of shared knowledge between trading partners, is likely to include weaker and less specific EPs in FTAs, and thus ambiguity is high. Mimicry occurs when countries just copy foreign models so as to achieve legitimacy from international community because of reputational cost and peer pressure, without a technical or rational concern with functional efficiency (Dobbin et. al, 2007). As such, there is no agreement between ministries who participate in international negotiation and the others on whether such norm is important, whereby it is likely that there is competitive interpretation over policy goals and instruments. This situation with high ambiguity and high conflict may lead to symbolic implementation.

Chapter 4. Quantitative Analysis

4.1. Data and Methods

4.1.1. Estimation Model

This study uses a logistics regression methods for 412 bilateral FTAs during 1995-2021, which is reported to the WTO at the time of writing. For the purpose of estimation, FTAs concluded between more than two countries, so-called multilateral or minilateral agreements, (e.g. CPTPP, USMCA, and ASEAN) are not include in the estimation. The number of multilateral and minilateral FTAs that involve more than two countries is 53, which account for about 10% of total FTAs reported to the WTO. Thus, I expect that analyzing the remaining 90% is enough to get meaningful analysis result. The estimation model is as follows:

$$\log\left(\frac{P(Y \leq k)}{1 - P(Y \leq k)}\right) = \alpha_k + \beta_1 \textit{knowledge coherence} \\ + \beta_2 \textit{knowledge asymmetry}_{i>j} \\ + \beta_3 \textit{knowledge asymmetry}_{i<j} + \beta_4 Z$$

Where

knowledge coherence = Main explanatory variable to operationalize learning mechanism

knowledge asymmetry_{i>j} = Main explanatory variable to operationalize competition mechanism

knowledge asymmetry_{i<j} = Main explanatory variable to operationalization emulation mechanism

Z = Control variables (*power asymmetry, ln GDPpc_{ij}, ln population density_{ij}, ln distance_{ij}, US, EU, MEA_{ij}, year*)

Y = an ordinal outcome with K categories

$P(Y \leq k)$ = Cumulative probability up to and including category k , where $k = 1, 2, \dots, K - 1$

α_k = intercept for outcome

This link function is to model the ratio of probability of choosing each category over the other categories. It allow to fit a broad class of ordinal response models. The logit is the inverse of the standard cumulative logistic distribution function.

K refers to the number of distinct categories of the dependent variables. *Obligation* consists of six categories; *precision* also consists of six categories; and *delegation* has four categories. It was coded as 1 for the presence of a category, otherwise 0.

To minimize random coding error, I performed a crosscheck with a dataset covering similar variables. Referring to Morin, J. F., Dür, A, & Lechner, L. (2018), I conducted crosschecks on 18 dimensions¹⁵, and the average Cohen's Kappa I obtained was 0.64 (the range was 0.44 to 0.88), which is considered to be a substantively agreeable result.¹⁶ “Cohen's kappa coefficient (κ) is a statistic that is used to measure inter-rater reliability for qualitative (categorical) items” (McHugh 2012).

Country i refers to stronger country and country j refers to weaker country in

¹⁵ These 18 dimensions are: EP mentioned in preamble, call for domestic enforcement, private access to dispute settlement, EP institutions, environmental experts as panelists, conciliation, suspension of benefits, consult with public, waste, forest, air, chemical, soil contamination, forest, water, and wildlife.

¹⁶ Its value varies from 0 to 1. Values ≤ 0 as indicating no agreement and 0.01–0.20 as none to slight, 0.21–0.40 as fair, 0.41–0.60 as moderate, 0.61–0.80 as substantial, and 0.81–1.00 as almost perfect agreement.

a given FTA. This study considers a country as a stronger country when its total GDP is larger than its trading partner in a given FTA. For example, for KORUS FTA, the US is stronger country because its total GDP is larger than that of South Korea.¹⁷

4.1.2. Dependent Variable: Obligation, Precision, Delegation

The dependent variable of this study is the strength of EPs in FTAs. There is no consensual way to measure the strength of clauses. Following Abbot et al. (2000), this study measures the level of legalization of these provisions in terms of three main aspects: obligation, precision, and delegation. *Obligation* refers to the strength of the commitment that states harmonize trade policy and environmental policy. *Precision* is the extent to which a given FTA limits parties' discretion by narrowing the possible interpretations of a rule. *Delegation* is related to the contribution of external actors, including judicators, in implementation and enforcement. Based on these definitions, I have identified specific indicators to evaluate the degree of obligation, precision, and delegation of FTAs EPs (see Table 4.1).

¹⁷ At the time of writing, the GDP (current million US\$) of the US amounts \$20,953,030 and the GDP of South Korea is \$1,637,895 (World Bank WDI database, <https://data.worldbank.org/indicator/NY.GDP.MKTP.CD?end=2007&start=2007>).

Table 4.1. Coding legalization

	Obligation	Precision	Delegation
Least legalized	1. No comment	1. Not determinate	1. Political arrangement
	2. Preamble	2. Domestic level of protection	2. Public participation
	3. State sovereignty	3. Enforcement of domestic measures	3. Environment-specific DSM
	4. Environmental exception	4. Cooperation	4. General DSM
	5. Coherence with non-environmental issues	5. Implementation mechanism	
Most legalized	6. MEA-relevant provisions	6. Specific environmental issues	

Source: adapted from Abbott et al. (2000:410-416)

The first index is the level of obligation of the EPs. This study measures the level of obligation along a six-degree continuum. OBLIGATION 1 signifies a case without any comments about the environment. OBLIGATION 2 refers to a reference of environmental objectives in the preamble of the general/main trade agreement. OBLIGATION 3 refers to the existence of environmental commitments that are only the inclusion of state sovereignty. OBLIGATION

4 refers to the existence of environmental exceptions in the agreement. OBLIGATION 5 signifies the inclusion of coherence with non-environmental issues and the environment. OBLIGATION 6 refers to the existence of clauses of relationship with MEAs.

For example, Australia-Chile Free Trade Agreement, Preamble stipulates:

“[the Parties], resolved to: [...] implement this Agreement in a manner consistent with sustainable development and environmental protection and conservation [...]”

This language only recognizes the principle of environmental protection and sustainable development by suggesting guidelines. Thus, preamble language is coded as OBLIGATION 2.

Also, Korea-US, art. 20.2 and annex 20-A(1)(e) stipulates:

“A Party shall adopt, maintain, and implement laws, regulations, and all other measures to fulfil its obligations under the [...] Convention on the Conservation of Antarctic Marine Living Resources (CCAMLR), done at Canberra, May 20, 1980”

This article requires strong obligation to adopt and implement the obligations under MEA (CCAMLR) while enforcing FTA. This explicitly mandates parties to harmonize trade and environmental institutions. Thus, I coded MEA-related provisions as OBLIGATION 5.

The second index is the level of precision. Precision is related to clearly and unambiguously what is expected of a country in terms of both an intended objective and the means of achieving it. For example, if an FTA stipulates that certain environmental issues should be addressed in the framework of FTA or

stipulates certain actions that need to be executed, it narrows the leeway of interpretation. I measure the level of obligation with a five-point scale ordered variable. PRECISION 1 signifies the absence of any environmental commitments in the agreements. PRECISION 2 signifies the existence of domestic level of protection. PRECISION 3 signifies the existence of enforcement of domestic measures. PRECISION 4 signifies the existence of implementation mechanism. PRECISION 5 refers to the existence of environmental cooperation, and PRECISION 6 signifies the reference to specific environmental issues.

Delegation, the third dimension of legalization, is the extent to which external actors—including courts, arbitrators, and administrative organizations—are involved in monitoring and enforcing compliance. The characteristic forms of the legal delegation are third-party dispute settlement mechanisms authorized to interpret rules and apply them to guarantee effective enforcement. I measure the level of delegation along a three-degree continuum. DELEGATION 1 signifies political bargaining. DELEGATION 2 refers to the public participation, DELEGATION 3 is specific DSM for EPs, and DELEGATION 4 is the general DSM applying for EPs.

When FTAs included several provisions on environment, I considered only the highest value reached by any provisions of the agreement, so that I do not penalize wordy agreements with long preambles. In Appendix 3, I provide the examples of the coding of provisions.

4.1.3. Explanatory Variables

This study uses three explanatory variables: *knowledge coherence*, *knowledge asymmetry_{i>j}*, and *knowledge asymmetry_{i<j}*. These variables are based on the

conceptual definition of issue-linkage theory. The first explanatory variable for Hypothesis 1 (learning) is *knowledge coherence*. As presented in Figure 3.1, each linkage mechanism involves two countries view of connection. Learning mechanism comes when both negotiating parties perceives the trade-environment linkage as legitimate. Because the unit of analysis in this study is the trade agreement, which is a dyadic relationship between two countries, the multiplication of each country's threat perception score is used to measure the level of *knowledge coherence*.

This concept is included to capture the level of a shared view. There is no consensual way to measure the level of knowledge because it is difficult to define and measure the level of knowledge. This study uses 'climate change threat perception index' estimated by the two World Risk Polls in 2008 and 2019 to measure the threat of climate change to the people of each country over the next twenty years. The poll is conducted by the Gallup and the Lloyd's Register Foundation every two year and cover the biggest risks faced globally, such as risks faced by women, safety of food, climate change, and online safety. The poll surveyed 500 to 2,000 randomly selected individuals in 145 countries who are 15 years of age and older, posing a question of how serious of a threat is climate change to you and your family? (Lloyd's Register Foundation, 2019). The threat perception score is the percentage of respondents who answered "very serious" to the question by country. Appendix 1 show the threat perception score of each country. I utilize 2008 threat perception for analyzing FTAs signed during 1995-2008; 2019 threat perception for FTAs signed during 2009-2021). In the case in which a party of an FTA is an economic union, such as ASEAN, the EU, or the European Free Trade Agreement (EFTA), the average of the member country score is utilized to estimate the economic union's awareness score.

There may exist a question about the appropriateness of the measurement of

knowledge because the time period of observations vary from 1995 to 2021 while the knowledge variable represents in the two years.¹⁸

The level of *knowledge coherence* is determined by multiplying each country's threat perception score, as the unit of analysis is of this study is a trade agreement, which is a dyadic relationship between two countries. For a particular pair of countries, the higher the coherence score, the more likely it is that a legalized trade-environment linkage will occur (Hypothesis 1).

Knowledge asymmetry is a different explanation for the strength of the linkage between trade and environment. Asymmetry can result in in two different cases. The weaker party agrees to greater or more precise EPs due to market competitiveness, but the stronger party merely considers the trade-environment relationship as acceptable (Hypothesis 2). Second, only the weaker party supports the link between trade and the environment, but due to the possibility of reputational cost and peer pressure, the stronger party chooses the EPs that the weaker party offers (Hypothesis 3).

To measure the asymmetry between the partner countries, two dummy variables are used: *knowledge asymmetry_{i>j}* and *knowledge asymmetry_{i<j}*.

The dummy variable *knowledge asymmetry_{i>j}* is coded as 1 if the threat perception index of the stronger party (i) falls beyond the upper reference limit (URL) and that of the weaker party (j) falls within the lower reference

¹⁸ To my best knowledge, the gallup data is the best available dataset to gauge the environmental awareness at the country level. Here, I can justify the measurement because of three reasons. First, as previous literature have pointed out, collective perception of a country on environmental issues is not subject to easy change (Bohdanowicz 2006; Koo & Kim 2018; Ziadat 2010). This argument is also supported by the fact that correlation between the two threat perception score in 2008 and 2019 is 6.4, which means that the two score are highly related. Second, given the fact that the FTA negotiation process takes long time, a country's threat perception during negotiations process is possibly different from at the time of signing. Third, to confirm the possibility of using other measurement, I confirmed the correlation between the threat perception and the Environmental Performance Index (EPI) from World Economic Forum, which ranks "180 countries on environmental health and ecosystem vitality [to] provide a gauge at a national scale of how close countries are to establish environmental policy targets (Environmental Performance Index 2020)." However, the correlation is only 3.2, which found to be not appropriate to measure environmental knowledge of a country.

limit (LRL); otherwise, it is coded as 0. The dummy variable *knowledge asymmetry<j* is coded as 1 if the environmental awareness index of the weaker party (j) falls inside the URL and that of the stronger party (i) falls within the LRL; otherwise, it is coded as 0. Following Gelman (2008) and Koo and Kim (2018), this analysis employs thresholds for the URL (threat perception=65) and LRL (threat perception=33) that are ± 1 standard deviations off the mean of threat perception indices for 145 nations. Figure 2 depicts the position of each nation along the URL-LRL continuum.

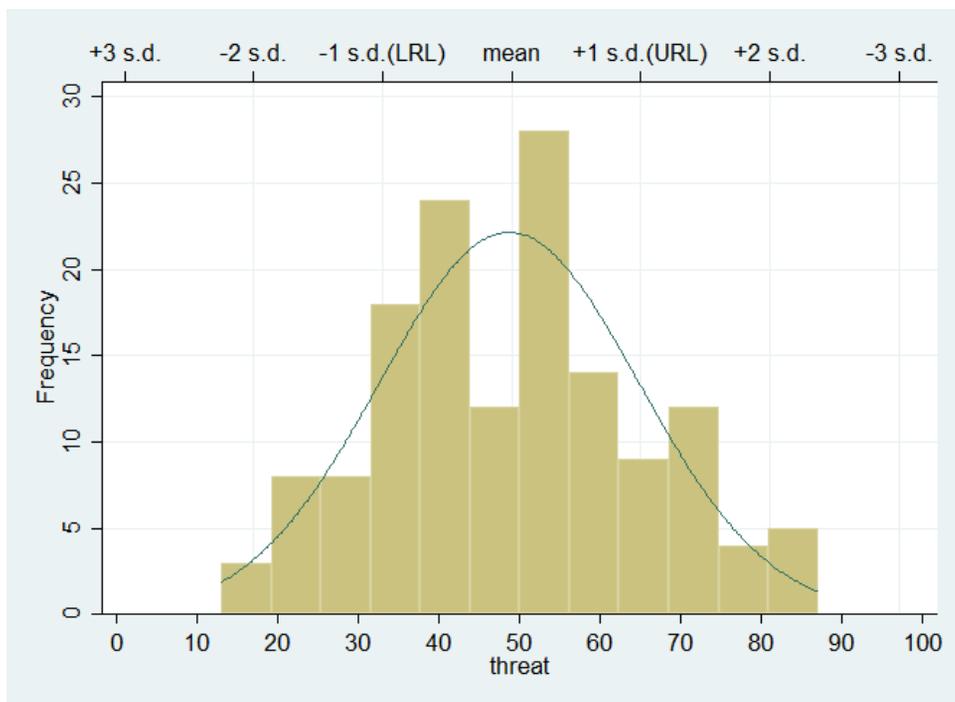


Figure 4.6. Threat Perception Index Normal Distribution Density and URL-LRL continuum

4.1.4. Control Variables

The estimation model includes a set of control variables that may confound trade-environment linkage. The multiplicative variables—GDP per capita_{ij} is included. GDP per capita to capture the joint effect of economic size on the probability of stringent trade-environment linkage to be adopted by negotiating countries. It is crucial to account for the impact of GDP per capita because a number of prior studies have found a strong association between a country's economic characteristics and its environmental regulations (Hashimi & Alam 2019; Ouyang et al. 2019; Panayoutou 2016; Jänicke 2005; Dasgupta 2001).

Second, trade asymmetry_{ij}, is used to capture the relative power of the negotiating parties of a trade agreement. I measure power asymmetry by dividing the trade dependence of stronger country by the trade dependence of the weaker country. The measurement of power asymmetry is as follows:

$$\text{Trade asymmetry}_{ij} = \frac{\text{trade dependence}_i}{\text{trade dependence}_j} \quad ^{19}$$

A higher score for power asymmetry indicates a greater inequality of trade relations. Trade asymmetry is one of the most common measures of market or power asymmetry in economics and political science. This formulation of trade asymmetry accounts for in bilateral negotiations, the extent to which a given trade partnership is valuable compared to other trade relationships. This concept is widely used in the existing literature to estimate the power asymmetry in bilateral settings (Barbieri, 1996: 85). If power asymmetry is high, a stronger country can push weaker country to achieve more concession in negotiation.

Third, population density_{ij} is another variable typically used in gravity models.

¹⁹ Trade dependence denotes the proportion of dyadic trade flow over the GDP (trade dependence_i = (import_{ij}+export_{ij})/GDP_i).

This paper assumes that the population density of countries has a positive relationship with the strength of EPs. This is because countries with a high population density are more likely to adopt stringent environmental regulations because environmental degradation is attributable to population growth contributes (Copper and Griffiths, 1994; Stern, Common, & Barbieri 1996). The data on population density are derived from the World Bank.

Distance_{ij} is geographical proximity between the parties. This concept of distance will help understand whether geographically proximate countries incorporate stronger EPs in their FTAs than others, as theories and previous empirical tests have consistently revealed. Many existing studies demonstrate that countries that share borderlines or are located in the same region share the same interests and social problems (Choi & Contractor, 2016; OECD 2007; Robst et al. 2007; Selin & VanDeveer, 2005). This study uses the distance between two state capital cities to control geographic proximity. In the case in which one side of the negotiating party is an economic union and not a single state, for example ASEAN, the EU, and EFTA, the capital city of the leading country of the economic union was utilized.

The two dummy variables—US and EU—are included to compare the different linkage practices between the U.S. and the EU. A score of 1 is assigned when a FTA have the U.S. or the EU as the one-party; otherwise, the score is 0. As many studies reveal that the U.S. and the EU have shown different trade-environment linkage in their FTAs. For example, the U.S. prefers to include judiciary mechanism that imposes remedies and sanctions when the infringement of commitments happen while the EU prefers coordination and cooperative measures to facilitate the implementation of environmental commitments (Han and Koo 2021; Jinnah and Morgera 2016; Jinnah and Morin 2020; Lee et al. 2020).

Table 4.2. Summary statistics

Variable	Source	Obs.	Mean	SD	Min	Max
Obligation	FTA legal texts	412	3.25	1.16	1	6
Precision	FTA legal texts	412	3.15	1.21	1	6
Delegation	FTA legal texts	412	0.50	0.91	1	4
Knowledge Coherence _{ij}	Gallup	412	7.96	0.62	6.09	8.70
Knowledge asymmetry _{i>j}	Gallup	412	0.05	0.21	0	1
Knowledge asymmetry _{i<j}	Gallup	412	0.13	0.34	0	1
Trade asymmetry _{ij}	UN COMTRADE	412	-7.76	15.05	-115	-0.01
ln GDP _{pcij}	World Bank	412	20.16	1.34	15.82	22.33
ln population _{ij}	World Bank	412	21.41	2.44	16.53	27.29
ln distance _{ij}	World Bank	412	8.42	0.72	5.78	9.38
US	FTA legal texts	412	0.36	0.18	0	1
EU	FTA legal texts	412	0.08	0.27	0	1
MEA _{ij}	UNEP	412	6	2.13	3	15
Year	WTO	412	2006	7.35	1995	2021

MEA_{ij} refers to the number of multilateral environmental agreements (MEAs) whose parties have a joint membership. This variable is included to control the effect of negotiating behaviour outside of FTA negotiations. This study assumes that if negotiating parties have joint membership in MEAs, it is more likely to adopt stronger and specific trade-environment linkage than other countries without a joint membership. This study uses the number of joint membership of 11 MEAs and six Regional Seas Conventions that are hosted by UN Environment Programme (UNEP).

Finally, the year of signing is the other exogenous variable to be controlled. The degree of legalization of the environmental provision included in FTAs is likely to be stronger and more specific over time because of the learning effect from previous agreements (Berliner & Prakash, 2012; Tews et al. 2003).

Table 4.2 provides summary statistics on 412 FTAs.

4.2. Estimation Results

4.2.1. Ordered Logit

Table 4.3 reports the result for main ordered logit model. The probability ratio chi-square of 19.63 with a p-value of 0.0204 tells that my model as a whole is statistically significant. Regarding the overall model fit of the respective model, I report two common measures—McFadden Pseudo R² and AIC.

Table 4.3. Ordered logit results (Odds ratio)

Variables	Obligation	Precision	Delegation
Knowledge coherence _{ij}	6.14 (5.25)***	2.34 (1.64)**	1.09 (0.04)
Knowledge asymmetry _{i>j}	3.34 (4.51)**	4.01 (3.31)**	1.19 (0.12)**
Knowledge asymmetry _{i<j}	0.34 (1.29)*	0.57 (2.56)	0.15 (0.78)
Trade asymmetry _{ij}	1.02 (0.02)	1.00 (0.01)	2.49 (0.99)
ln GDPpc _{ij}	2.49 (0.71)***	1.57 (0.38)**	7.91 (2.73)*
ln population _{ij}	1.25 (0.23)	1.21 (0.12)*	8.53 (3.59)
ln distance _{ij}	0.32 (2.45)**	0.66 (1.09)**	5.32 (0.94)
US	2.44 (1.48)*	3.09 (3.56)***	3.12 (2.45)***
EU	3.15 (2.96)***	2.55 (1.47)***	2.53 (1.48)***
MEA	2.45 (1.58)***	2.65(1.58)**	2.22 (1.71)
Year	3.09 (0.05)***	1.14(0.07)***	1.09 (0.05)***
Cut point 1	222.15 (101.34)	286.96 (123.96)	222.15 (101.34)
Cut point 2	227.49 (101.35)	289.75 (124.13)	227.49 (101.35)
Cut point 3	229.35 (101.36)	290.49 (124.18)	229.35 (101.36)
Cut point 4	234.65 (101.26)	291.12 (126.78)	
Cut point 5	241.20 (101.25)	301.25	

		(124.65)	
Observations	412	412	412
Deviance chi-square	125.813	154.533	125.813
McFadden's pseudo R ²	0.283	0.333	0.283
AIC	147.813	201.444	184.154

*<0.1, **<0.05, ***<0.01

Note: Number in parentheses are robust standard error.

The McFadden Pseudo R² is 0.283 for obligation model, 0.333 for precision model, and 0.283 for delegation model, respectively. The AIC is 147.81 for obligation model, 201.44 for precision model, and 184.15 for delegation model. Overall, considering the measures, it suggests the respective models are relatively good predictors of legalization of EPs.

The odds ratio (OR) represents the constant effect of explanatory variable, on the probability that one outcome will occur. OR means that “the odds that a dependent variable will fall into $k + 1$ as opposed to one less than or equal to k are the odds times greater for one unit of increase in the explanatory variable.” (Long & Freese 2006). Regarding the reports of the OR, it is important to note that a value greater than one suggests the covariate has a positive effect on the odds of dependent variable for a particular category, a value less than one, suggests a negative effects on the respective odds, while an odds equal to one implies no relationship between the particular covariate and the odds.

To summarize the result for *obligation*, FTAs that are concluded with *knowledge coherence* (learning hypothesis), *knowledge asymmetry_{i>j}* (competition hypothesis), *knowledge asymmetry_{i<j}* (emulation hypothesis), have more obligatory EPs. More specifically, when knowledge coherence increase by one unit, the odd of a more obligatory EPs increase by 6.14 times. The odds of a more obligatory EPs increase by 3.34 times when knowledge asymmetry in favor of a stronger country takes on the value of 1 compared to 0. In contrast, the odds of a more obligatory EPs changes 0.34 times when

knowledge asymmetry in favor of a weaker country takes on the value of 1 compared to 0.

Second, the estimation results for *precision* find that FTAs that are concluded with *knowledge coherence* (learning hypothesis), *knowledge asymmetry_{i>j}* (competition hypothesis), have more obligatory EPs. *Knowledge asymmetry_{i<j}* (emulation hypothesis) is not statistically significant have more obligatory EPs. Specifically, the OR of knowledge coherence is 2.34. This finding also indicates that a one unit increase in knowledge coherence enhances the probability of more precise EPs by 2.34 times. Countries are therefore more likely to include specific EPs in their FTA when they have common knowledge of the trade-environment nexus, other things being equal. As to competition linkage hypotheses, the analysis show statistically significant the results (OR=4.01). The odds of a more precise EPs increase by 4.01 times when the knowledge asymmetry in favor of stronger country takes on 1, compared to 0. This result implies that the weaker country's fear of losing exporting market is likely to promote precisely defined EPs.

Third, the estimation results for *delegation* find that FTAs that are concluded with *knowledge asymmetry_{i>j}* (competition hypothesis) has more delegatory EPs. In the meantime, knowledge coherence (learning hypothesis) and *knowledge asymmetry_{i<j}* (emulation hypothesis) are not statistically significant. The estimation model reveals that one unit increase in *knowledge asymmetry_{i>j}* is expected to increase the odds of incorporating more delegatory EPs by 1.19 times. This result implies that the weaker country's fear of losing exporting market is likely to include more legally-binding EPs.

4.2.2. Marginal Effects

The nexus between the legalization of EPs and linkage mechanism is explored further in Tables 4.4, 4.5, and 4.6, which illustrates the marginal effect of the variables. The marginal effects means that other explanatory variables being the average, the change in the probability that the outcome occurs when an explanatory variable increase by a 1-unit from the average (Ko, 2018).²⁰ The marginal effects are calculated for both the continuous variables as well as the dummy variables and show the change in probability when independent variable increases by one unit. For the dummy variables, this study uses the first category as the baseline. For example, US=0 and EU=0 are used as the baseline.

Obligation

Hypothesis 1 (learning) is supported by the empirical test. The result show that when knowledge coherence increases by one unit, the probability of a FTA without any comments about the environment decreases by 23.1%p. In contrast, the probability of incorporating EPs in the preamble increase by 10.5%p. Also, the probability of including more obligatory EPs—state sovereignty, environmental exception, coherence with non-environmental issues, and reference to MEAs—increases by 10.1%p, 12.1%p, 14.4%p, and 16.4%p, respectively. This implies that when countries share consensual knowledge about trade-environmental linkage, FTAs contain more obligatory EPs.

This also means that when countries agree with the linkage, they are more willing to harmonize trade institution and environmental institutions. When consensual knowledge prevails in FTA negotiation, they harmonize the two

²⁰ Marginal effects are a useful way to describe the average effect of changes in explanatory variables on the change in the probability of outcomes in logistic regression and other nonlinear models. Marginal effects provide a direct and easily interpreted answer to the research question of interest (Ko, 2018).

regimes domestically (coherence with non-environmental issues) and internationally (MEAs). This is because countries with shared knowledge of trade-environment linkage want to make EPs credible by increasing the cost of accepting higher obligation. This may be because they are willing to and able to accept the various costs of arranging the different institutions. Figures 4.5 illustrate the marginal effect of *knowledge coherence* on the probabilities of including each category of obligation. The estimated lines indicate the predictive margins with 95% confidence intervals.

Table 4.4. The marginal effect of linkage mechanism on obligation

Explanatory variables	Dependent variables	dy/dx	Std. Err.	P> z
Knowledge coherence	No comment	-.2310	.1116	0.000***
	Preamble	.1051	.0565	0.004***
	State sovereignty	.1014	.0556	0.005***
	Environmental exception	.1201	.0554	0.001***
	Coherence with non-environmental issues	.1442	.0144	0.047**
	Reference to MEAs	.1641	.1124	0.004***
Knowledge asymmetry _{i>j}	No comment	-.1062	.1410	0.000***
	Preamble	.1044	.0550	0.006**
	State sovereignty	.0903	.0828	0.021**
	Environmental exception	.0942	.0451	0.014**
	Coherence with non-environmental issues	.0214	.0225	0.077**
	Reference to MEAs	.0110		0.066**
Knowledge asymmetry _{i<j}	No comment	-.0712	.0933	0.045**
	Preamble	.3801	.0506	0.053*
	State sovereignty	.2705	.0359	0.051*
	Environmental exception	.3020	.0021	0.047**
	Coherence with non-environmental issues	-.0061	.0081	0.053*
	Reference to MEAs	-.0024	.0080	0.056*
Power asymmetry	No comment	.0324	.0022	0.090*
	Preamble	.0171	.0013	0.514
	State sovereignty	.0125	.0008	0.511
	Environmental exception	.0444	.0015	0.451

	Coherence with non-environmental issues	-.0224	.0001	0.512
	Reference to MEAs	-.0012	.0002	0.510
ln(GDPpc)	No comment	-.0093	.0013	0.000***
	Preamble	.0047	.0007	0.000***
	State sovereignty	.0054	.0005	0.011**
	Environmental exception	.0082	.0007	0.001***
	Coherence with non-environmental issues	.0042	.0001	0.012**
	Reference to MEAs	.0091	.0210	0.000***
ln(Population)	No comment	-.0168	.0114	0.141
	Preamble	.0089	.0065	0.068*
	State sovereignty	.0063	.0045	0.156
	Environmental exception	.0054	.0051	0.120
	Coherence with non-environmental issues	.0014	.0010	0.162
	Reference to MEAs	.0024	.0009	0.163
Distance	No comment	-.0101	.0093	0.019**
	Preamble	.0054	.0051	0.015**
	State sovereignty	.0038	.0036	0.011**
	Environmental exception	.1261	.0026	
	Coherence with non-environmental issues	.0008	.0008	0.014**
	Reference to MEAs	.0022	.0001	0.024
US	No comment	-.0166	.0187	0.076*
	Preamble	.1088	.0102	0.086*
	State sovereignty	.1063	.0072	0.083*
	Environmental exception	.1750	.0051	
	Coherence with non-environmental issues	.1114	.0016	0.085*
	Reference to MEAs	.1542	.0009	0.018**
EU	No comment	-.1042	.0028	0.008***
	Preamble	.1088	.0016	0.000***
	State sovereignty	.1063	.0011	0.007***
	Environmental exception	.1011	.0011	
	Coherence with non-environmental issues	.1014	.0002	0.001***
	Reference to MEAs	.2450	.0001	0.000***
MEA	No comment	-.0030	.1084	0.001***
	Preamble	.0115	.0548	0.007***
	State sovereignty	.0112	.0135	0.012**
	Environmental exception	.0154	.0021	

	Coherence with non-environmental issues	.0125	.0100	0.008***
	Reference to MEAs	.0425	.0121	0.000***
Year	No comment	-.1110	.1084	0.005***
	Preamble	.0175	.0548	0.000***
	State sovereignty	.0102	.0435	0.000***
	Environmental exception	.0145	.0154	
	Coherence with non-environmental issues	.0110	.0100	0.001***
	Reference to MEAs	.0014	.0187	0.000***

Note: dy/dx for factor levels is the discrete change from the base level.

* $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$

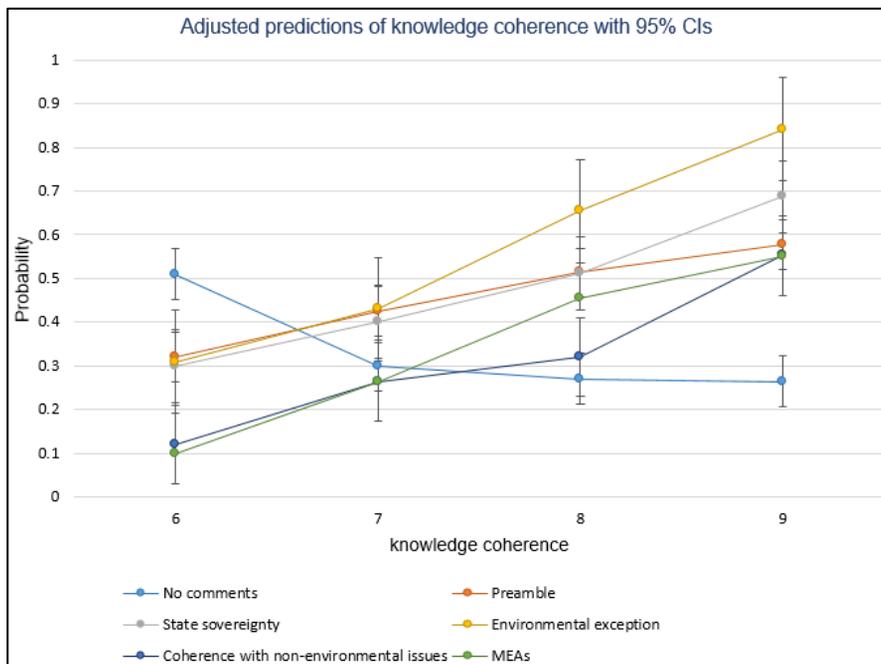


Figure 4.7. The effect of learning mechanism on the degree of obligation

Hypothesis 2 (competition) is also supported by the result. When *knowledge asymmetry_{i>j}* increases by one unit, the probability of a FTA without any comments about the environment decreases by 10.6%p. In contrast, the probability of incorporating EPs in the preamble increase by 10.4%p. Also,

the probability of including more obligatory EPs—state sovereignty, environmental exception, coherence with non-environmental issues, and reference to MEAs—increases by 9.0%p, 9.4%p, 2.1%p, and 1.1%p, respectively. This finding implies that a stronger country that is more ecologically concerned can pressure a weaker country that is less environmentally conscientious to make significant environmental concessions due to concern about losing exporting opportunities. Figures 4.5 illustrate the marginal effect of $trade\ asymmetry_{i>j}$ on the probabilities of including each category of obligation. The estimated lines indicate the predictive margins with 95% confidence intervals.

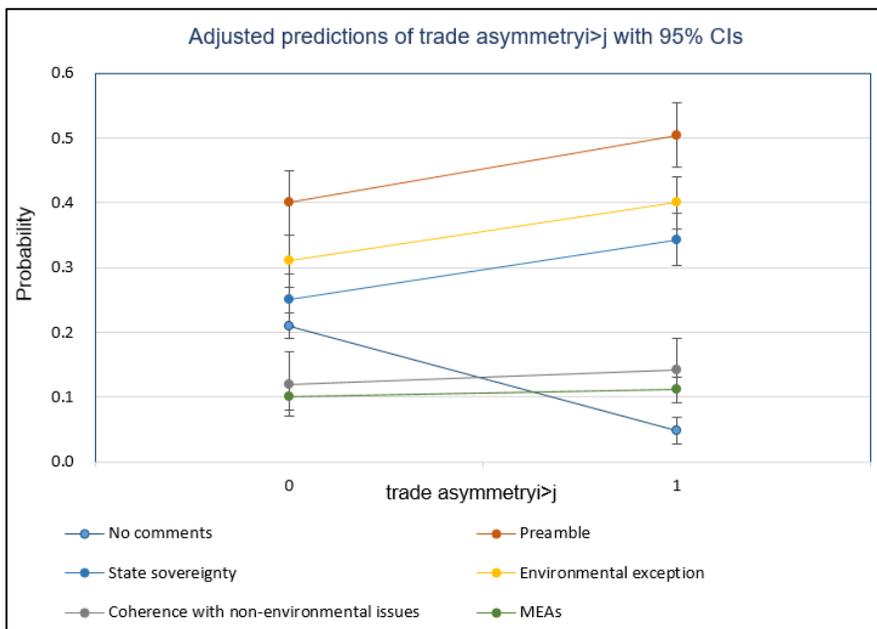


Figure 4.8. The effect of competition mechanism on the degree of obligation

Hypothesis 3 is also supported by the test. The knowledge distribution in favor of a weaker party (emulation hypothesis) decreases the probability of FTA without any environmental comments decreases by 7.1%p. In contrast, the probability of incorporating EPs in the preamble increase by 38.0%p. The

probability of including sovereignty rights provision and environmental exception increase by 27.0%p and 30.2%p, respectively as one unit increase in knowledge coherence. However, the probability of including more obligatory EPs—coherence with non-environmental issues, and reference to MEAs—decreases 0.61%p, and 0.24%p, respectively. This findings means that a one-sided preference for the environment by a weaker party can reduce the possibility of the adoption of obligatory EPs by a stronger party.

This is also implies that when countries link trade and the environment to only copy the other's behavior, they tend to incorporate less obligatory EPs which is less costly. This may be because policymakers of countries that do not recognize the linkage are concerned about an opposition from domestic actors that would face when strong EPs are included in their FTAs. Also, they may be not willing to burden costs to arrange the two different institutions domestically and internationally because they are not truly aware of the connection of the two issues.

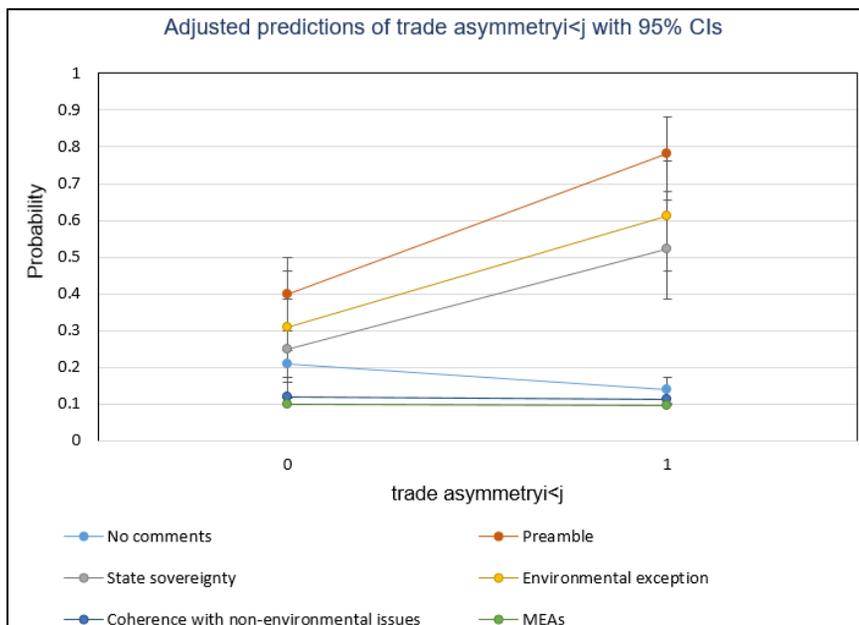


Figure 4.9. The effect of emulation mechanism on the degree of obligation

The overall results show that learning and competition mechanisms increase the level of obligation of EPs, while emulation mechanism does not. However, it is noteworthy that the marginal increase in obligation is the highest under learning mechanism. This implies the crucial impact of consensual knowledge in the level of obligation of EPs

Statistical results for control variables supports the gravity model of international trade. When power asymmetry increases by one unit, the probability that a FTA does not include EPs decreases by 0.03%p. However, the coefficient for the other obligations are not statistically significant. This means that a sheer power play is not effective mechanism to strengthen environmental standards in trading partners. This result is in line with the existing literatures (Dobbin et al. 2007; Jinnah & Morin 2018).

The coefficients of *GDP per capita* are statistically significant. The one unit increase in GDP per capita decrease by 0.93%p in the probability of no comment. In contrast the higher GDP per capita leads to the possibility of incorporating higher obligation. This may be because countries with higher income level tend to have stringent environmental standards. They can be more willing to incorporate strong EPs, and having more obligatory EPs are not too costly for them.

Population density have statistically significant impact only on the probability of incorporating EPs in preamble. One possible explanation of this is that populous countries do not prefer to incorporate stringent EPs in their FTA because they tend to be a big pollutant emitter. Mentioning environmental protection and sustainable development in preamble can be the best option for them.

Distance have positive impact on the level of obligation. This means that FTAs concluded by geographically close countries tends to incorporate more obligatory EPs. This seems to be institutional isomorphism. However,

proximity does not have significant impact on the inclusion of MEA-related provisions. This may be because proximity is not an important factor when EPs are less associated with bilateral trade (MEA EPs).

The two dummies—*US* and *EU* have statistically significant impact on obligation of EPs. They shows strong impacts on the obligation with 15.4%p and 24.5%p increase in MEA-related EPs. This result is not surprising, given the leading role of the two big powers in linking trade and the environment.

The coefficient of *MEA* is statistically significant at all level of obligation. This may be because there was a learning effect from the previous accession to MEAs. This result supports the socialization theory that countries interact and learn to comply with international norms (Finnemore & Sikkink 1998). Through interaction, countries behave in a similar way to model social norms and internalize the behavior to some degree.

The coefficient of *year* is also statistically significant at all level of obligation. As I described in Chapter 2, the scope and depth of EPs in FTAs have been remarkably developed over the past years. This result well reflect the current evolution of EPs in FTAs.

Precision

Table 4.5 presents the effect of linkage mechanism on the level of precision. Hypothesis 1 (learning) is supported by the empirical test. The result show that when knowledge coherence increases by one unit, the probability of a FTA without any comments about the measures for environmental protection decreases by 10.8%p. In contrast, the probability of incorporating domestic level of protection EP increase by 9.25%p. Also, the probability of including more precise EPs—enforcement of domestic measures, implementation mechanism, cooperation, and specific environmental issues—increases by 9.8%p, 12.1%p, 15.9%p, and 16.25%p, respectively. This means that when

countries share consensual knowledge about trade-environment linkage, FTAs contain more precise EPs.

This also means that when countries agree with the linkage, they are more willing to include specific EPs. When consensual knowledge prevails in FTA negotiation, they clarify what to do and how to do in order to harmonize the two institutions. This is because countries with shared knowledge of trade-environment linkage easily agree to make EPs credible by lowering ambiguity of cooperation. Precision removes potential avenues of plausible deniability because clear violation implies much greater reputational cost (Guzman 2002; Abbott et al. 2000).

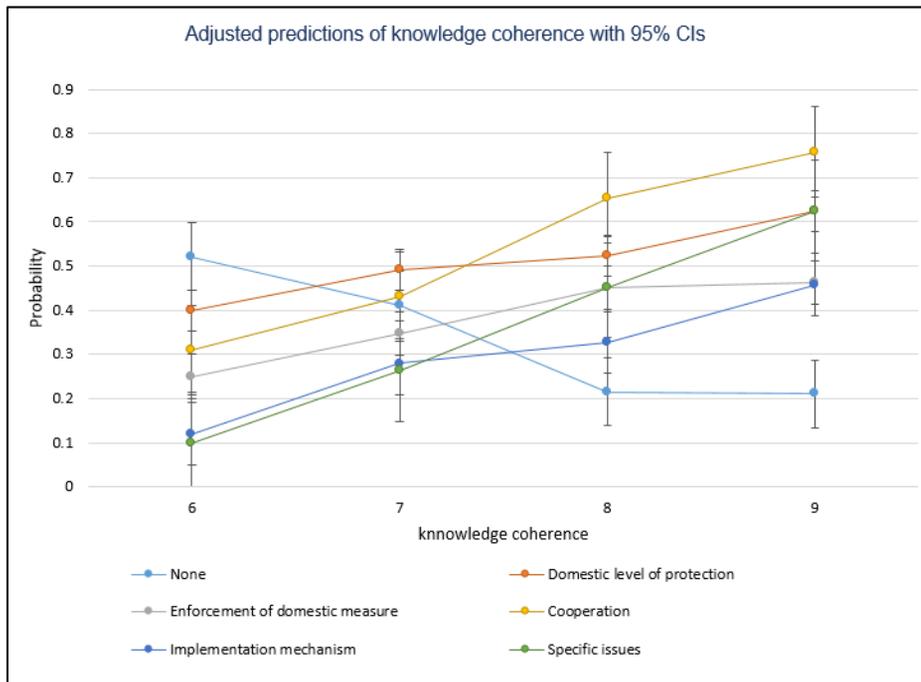


Figure 4.10. The effect of learning mechanism on the degree of precision

Table 4.5. The marginal effect of linkage mechanism on precision

Explanatory	Dependent variables	dy/dx	Std. Err.	P> z
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variables				
Knowledge coherence	None	-.1089	.0004	0.000***
	Domestic level of protection	.0925	.0004	0.011**
	Enforcement of domestic measure	.0980	.0050	0.011**
	Cooperation	.1213	.0083	0.018**
	Implementation mechanism	.1593	.0088	0.016**
	Specific Envi. issues	.1625	.0024	0.021**
Knowledge asymmetry _{i>j}	None	-.1023	.0021	0.016**
	Domestic level of protection	.1012	.0011	0.016**
	Enforcement of domestic measure	.2016	.0060	0.016**
	Cooperation	.2114	.0042	0.016**
	Implementation mechanism	.1411	.0096	0.016**
	Specific Envi. issues	.1512	.0012	0.016**
Knowledge asymmetry _{i<j}	None	-.0145	.0045	0.012**
	Domestic level of protection	.0016	.0096	0.866
	Enforcement of domestic measure	.0008	.0051	0.066*
	Cooperation	-.0060	.0036	0.866
	Implementation mechanism	.0001	.0008	0.866
	Specific Envi. issues	-.1020	.0001	0.866
Power asymmetry	None	-.0200	0.014	0.311
	Domestic level of protection	-.0100	.0798	0.311
	Enforcement of domestic measure	.0107	.0110	0.331
	Cooperation	.0076	.0075	0.313
	Implementation mechanism	-.0017	.0017	0.318
	Specific Envi. issues	-.0021	.0012	0.318
ln(GDPpc)	None	-.0025	0.021	0.042**
	Domestic level of protection	.0007	.0013	0.054*
	Enforcement of domestic measure	.0013	.0008	0.028**
	Cooperation	.0012	.0003	0.027**

	Implementation mechanism	.0040	.0001	0.045**
	Specific Envi. issues	.0015	.0001	0.034**
ln(Population)	None	-.2021	.0062	0.051**
	Domestic level of protection	.3323	.0008	0.087*
	Enforcement of domestic measure	.1773	.0036	0.125
	Cooperation	.1263	.0751	0.093*
	Implementation mechanism	.0286	.0029	0.100*
	Specific Envi. issues	-0.021	.0021	0.110
Distance	None	-.4816	.0012	0.011**
	Domestic level of protection	.2456	.0000	0.011**
	Enforcement of domestic measure	.2570	.0006	0.040**
	Cooperation	.1830	.0005	0.015**
	Implementation mechanism	.0415	.0007	0.018**
	Specific Envi. issues	.2124	.0004	0.150
US	None	-.4906	0.120	0.000***
	Domestic level of protection	.2120	.0250	0.000***
	Enforcement of domestic measure	.2955	.0689	0.003***
	Cooperation	.2666	.0769	0.000***
	Implementation mechanism	.1285	.0271	0.000***
	Specific Envi. issues	.1210	.0213	0.001***
EU	None	-2553	.0670	0.000***
	Domestic level of protection	.2153	.0821	0.000***
	Enforcement of domestic measure	.2108	.0462	0.001***
	Cooperation	.3621	.0315	0.000***
	Implementation mechanism	.4824	.0071	0.000***
	Specific Envi. issues	.3251	.0214	0.001***
MEA	None	-0.015	.0012	0.011**
	Domestic level of protection	.0000	.0000	0.014**
	Enforcement of domestic measure	.0009	.0070	0.031**

	measure			
	Cooperation	.0006	.0005	0.120
	Implementation	.0060	.0036	0.012**
	mechanism			
	Specific Envi. issues	.0078	.0062	0.041**
Year	None	-.0200	.0798	0.000***
	Domestic level of	.0107	.0110	0.000***
	protection			
	Enforcement of domestic	.0076	.0075	0.000***
	measure			
	Cooperation	.0027	.0017	0.000***
	Implementation	.0042	.0036	0.000***
	mechanism			
	Specific Envi. issues	.0045	.0008	0.000***

Note: dy/dx for factor levels is the discrete change from the base level.

*p<0.1, **p<0.05, ***p<0.01

Hypothesis 2 (competition) is also supported by the result. When *knowledge asymmetry_{i>j}* increases by one unit, the probability of a FTA without any measures decreases by 10.2%p. In contrast, the probability of incorporating domestic level of protection EP increase by 10.1%p. Also, the probability of including more precise EPs—enforcement of domestic measures, implementation mechanism, cooperation, and specific environmental issues—increases by 20.6%p, 21.1%p, 14.1%p, and 15.1%p, respectively. This result suggests that an environmentally conscious stronger country can induce an environmentally less conscious weaker country to make strong environmental concessions for the fear of losing exporting market. Developed countries aim to overcome its relative disadvantage in terms of production cost by imposing the same level of environmental standards on developing countries. Meanwhile, developing countries show their credibility by

accepting the linkage for the purpose of securing exporting market.

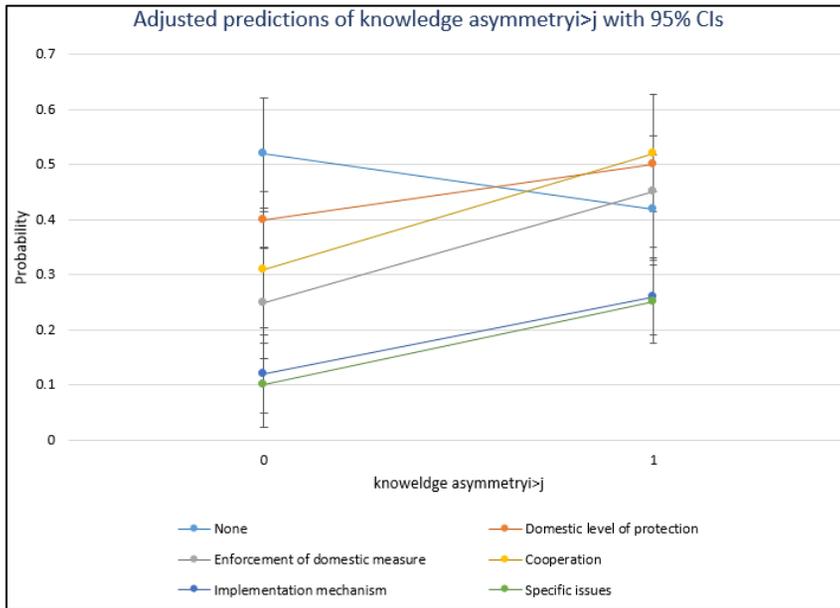


Figure 4.11. The effect of competition mechanism on the degree of precision

Hypothesis 3 (emulation hypothesis) is not supported by the test. The coefficients of *knowledge asymmetry_{i<j}* are mostly statistically insignificant. Coefficients of domestic level of protection and enforcement of domestic measure are only statistically significant. The knowledge distribution in favor of a weaker party decreases the probability of FTA without any measures decreases by 1.45%p. In contrast, the probability of incorporating enforcement of domestic measures EPs increase by 0.08%p. This findings means that a one-sided preference for the environment by a weaker party cannot effectively induce the trade-environment linkage in FTA negotiation. This is also implies that when countries link trade and the environment to only copy the other’s behavior for reputational reason, they does not incorporate specific EPs. This is because in the first place including EPs is not for substantial cooperation for enhancing environmental quality, but for reducing

uncertainty from being an outlier of international trends. Therefore, under emulation mechanism, countries do not want to cooperate beyond their sovereignty rights.

The overall results show that learning and competition mechanisms increase the level of obligation of EPs, while emulation mechanism does not. It is noteworthy that the marginal increase in precision is the highest under competition mechanism. This implies commercial benefit is important driver for specified measure and cooperation in specific areas.

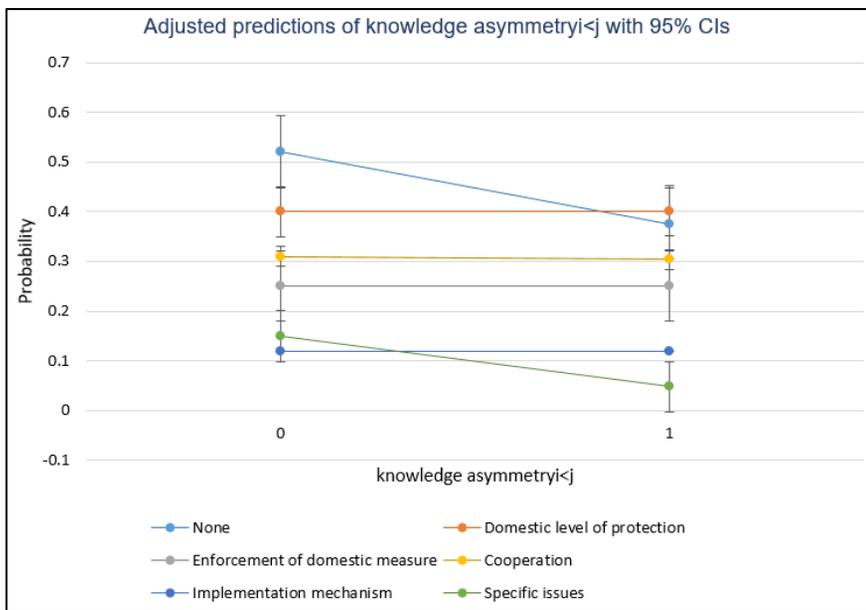


Figure 4.12. The effect of emulation mechanism on the degree of precisions

Statistical results for control variables are mixed. Power asymmetry is not statistically insignificant. The coefficients of *GDP per capita* are statistically significant. The probability of FTA without any measures decrease by 0.25%p with one unit increase in GDP per capita. In contrast, the higher *GDP per capita* leads to the possibility of incorporating more precise EPs in FTAs. *Population density* have statistically significant and positive impact on the

probability of incorporating domestic level of protection, implementation mechanism, and cooperation. It is ambiguous why populous countries incorporate only these two EPs. One possible explanation of this is that populous countries want to incorporate their needs to improve their domestic environment quality by effective implementation EPs and cooperation with its trading partners.

Distance have positive impact on the level of precision. This means that FTAs concluded by geographically close countries tends to incorporate more precise EPs. This may be because geographically close countries are more likely to share the same environmental problems. In such case, they can calibrate implementation and cooperation program that is more suitable their problems.

The two dummies—*US* and *EU* have statistically significant impact on precision of EPs. In particular, when the US or the EU is one party of an FTA, the probability that FTAs do not include any implementation measure decreases by 19% and 25%, respectively. This means that the EU and the US promote effective implementation mechanisms. Also, the EU dummy have significant effect on cooperation EP, which means the EP prefers to implement EPs by cooperative mechanisms.

The coefficients of *MEA* are statistically significant at most level of precision. This may be because cooperative experience at multilateral level have positive impact on bilateral level. Currently, MEAs have developed in its depth and scope, and this development influence countries environmental awareness and cooperative behavior.

Finally, the coefficient of *year* is also statistically significant at all level of precision. This result finds that EPs have been specific and precise over

years.

Delegation

The Table 4.6 present the effect of linkage mechanism on the level of delegation. Hypothesis 1 (learning) regarding knowledge coherence have positive impact on the level of delegation is not fully supported by the empirical test. The result show that when knowledge coherence increases by one unit, the probability of incorporating public participation increases by 8.45%p. This result shows that counties prefer over adjudication. The result implies that shared knowledge is not enough to involve in adjudication, taking a risk of losing trade benefit in case that they lose a lawsuit.

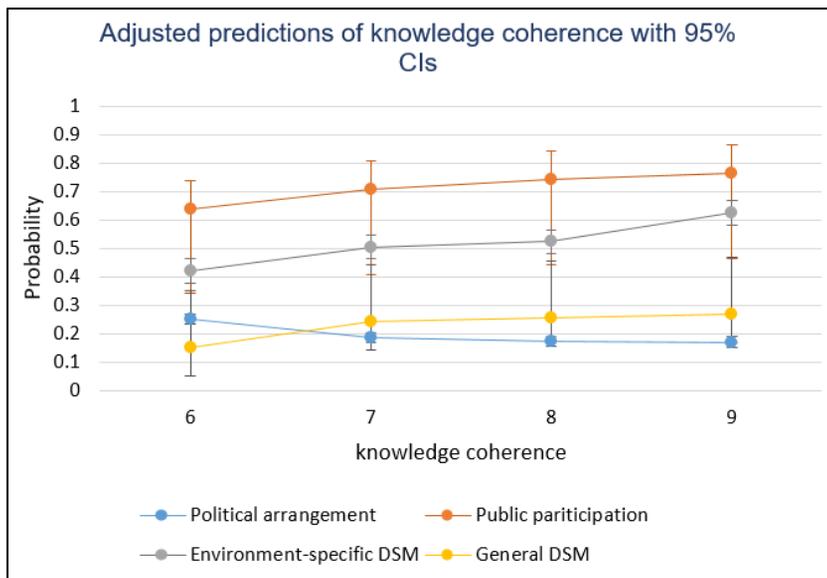


Figure 4.13. The effect of learning mechanism on the degree of delegation

Table 4.6. The marginal effect of linkage mechanism on delegation

Explanatory variables	Dependent variables	dy/dx	Std. Err.	P> z
Knowledge coherence	Political arrangement	-.0648	.0238	0.125
	Public participation	.0693	.0240	0.062*
	Environment-specific DSM	.0845	.0301	0.214
	General DSM	.0902	.0299	0.222
Knowledge asymmetry _{i>j}	Political arrangement	-0.441	.0716	0.002***
	Public participation	.0341	.0114	0.069**
	Environment-specific DSM	.0913	.0401	0.023**
	General DSM	.0761	.0381	0.045**
Knowledge asymmetry _{i<j}	Political arrangement	.1460	.0830	0.079*
	Public participation	.0006	.0121	0.963
	Environment-specific DSM	.0801	.0463	0.181
	General DSM	.0644	.0442	0.145
Power asymmetry	Political arrangement	.0171	.0013	0.514
	Public participation	.0125	.0008	0.511
	Environment-specific DSM	.0444	.0015	0.451
	General DSM	-.0224	.0001	0.512
ln(GDPpc)	Political arrangement	-.2021	.0062	0.051**
	Public participation	.3323	.0008	0.087*
	Environment-specific DSM	.1773	.0036	0.125
	General DSM	.1263	.0751	0.093*
ln(Population)	Political arrangement	.0067	.0145	0.642
	Public participation	-.0000	.0008	0.834
	Environment-specific DSM	-.0038	.0031	0.642
	General DSM	-.0029	.0025	0.647
Distance	Political arrangement	.0016	.0012	0.167
	Public participation	-.0000	.0000	0.830
	Environment-specific DSM	-.0009	.0006	0.171
	General DSM			

	General DSM	-.0007	.0005	0.170
US	Political arrangement	-.1013	.0021	0.001***
	Public participation	.0761	.0041	0.002***
	Environment-specific DSM	.0034	.0025	0.006***
	General DSM	.1641	.0064	0.000***
EU	Political arrangement	-.0921	.0045	0.000***
	Public participation	.2510	.0055	0.001***
	Environment-specific DSM	.0320	.0044	0.000***
	General DSM	.1245	.0041	0.000***
MEA	Political arrangement	.0058	.0024	0.125
	Public participation	.0054	.0046	0.111
	Environment-specific DSM	.0028	.0046	0.117
	General DSM	.0003	.0057	0.111
Year	Political arrangement	-.2648	.0629	0.000***
	Public participation	.4693	.0612	0.000***
	Environment-specific DSM	.0095	.0716	0.000***
	General DSM	.0042	.0719	0.000***

Note: dy/dx for factor levels is the discrete change from the base level.

*p<0.1, **p<0.05, ***p<0.01

Hypothesis 2 (competition) is supported by the result. When *knowledge asymmetry_{i>j}* increases by one unit, the probability that countries resort to diplomatic measure decreases by 44%p. In contrast, the probability of incorporating public participation EP increase by 3.41%p. Also, the probability of including adjudication mechanism—environment-specific DSM and general DSM—increases by 8.45%p and 9.02%p, respectively. This surprising result suggests that countries participate in adjudication only

when commercial benefits matter.

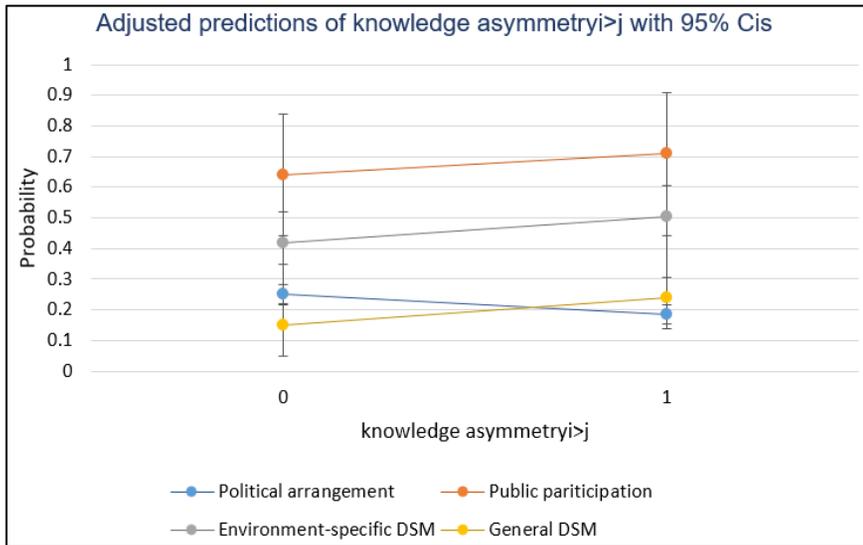


Figure 4.14. The effect of competition mechanism on the degree of delegation

Hypothesis 3 (emulation hypothesis) is not supported by the test. The coefficients of $knowledge\ asymmetry_{i < j}$ are mostly statistically insignificant. Coefficients of political arrangement are only statistically significant. The $knowledge\ asymmetry_{i < j}$ increase by one unit, the possibility of political

arrangement increases by 14.6%p.

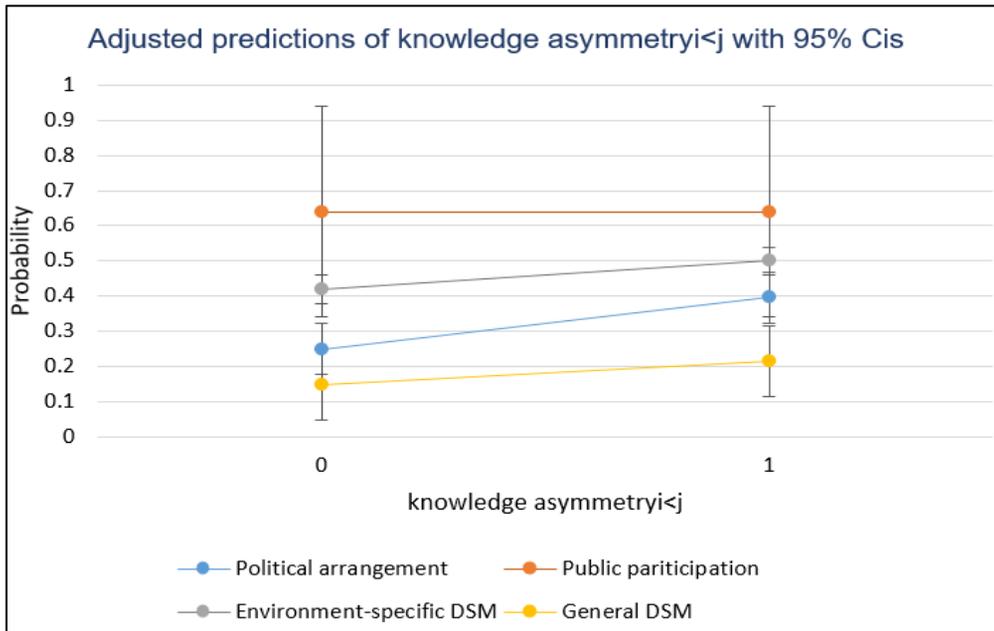


Figure 4.15. The effect of emulation mechanism on the degree of delegation

The overall results show that learning and competition mechanisms increase the level of obligation of EPs, while emulation mechanism does not. It is noteworthy that the marginal increase in precision is the highest under competition mechanism. This implies commercial benefit is important driver for specified measure and cooperation in specific areas.

The two dummies—*US* and *EU* and *year* still have statistically significant impacts. These results show that the influential role of the US and the EU in trade-environment linkage and the development of EPs. However, *MEA* does not have significant impacts on the level of delegation. This seems to be related to the fact that MEAs lack formal dispute settlement mechanisms.

In sum, other things being equal, learning mechanism induces more obligatory and precise environment provisions in FTAs. When countries

accept the trade-environment linkage due to competition factors, FTAs is likely to incorporate highly legalized EPs in terms of all the three dimensions. In contrast, when countries only copy the previous FTA model for reputational cost, the FTA is likely contain less obligatory EPs.

Table 4.1. Summary of the key findings

Linkage		Level of obligation			Result
		Obligation	Precision	Delegation	
Leaning	→	+	+	.	Partly accepted
Competition	→	+	+	+	Accepted
Emulation	→	-	.	.	Partly accepted

4.3. Discussion

In this chapter, I examine whether the linkage mechanisms identified in the previous studies can explain the reasons for the heterogeneity of the legalization of EPs within an FTA. This study began with an observation that the number of EPs in FTAs is on the rise, and they have become specific and stronger. This is counter-intuitive because promoting international trade and environmental protection has long been considered conflicting issues. Then why are some FTAs include highly legalized EPs than others in terms of addressing environmental issues in spite of the political gravity towards purely economic considerations?

To unravel this puzzle, I attempted to explore the underlying causal mechanisms for trade–environment linkage by analyzing EPs in 412 FTAs. I measured the three indices of legalization of environmental linkages in

FTAs—obligation, precision, and delegation—and then hypothesized the causal mechanisms for linking trade and the environment: learning, competition, and emulation.

I find that the high degree of obligation is driven by learning and competition mechanisms. In the meantime, the degree of precision is enhanced by learning and competition mechanism while the degree of delegation is increased by only competition mechanism. Also, I find that the US and the EU play a leading role in trade-environment linkage as many previous literature confirmed.

The implication of the estimation results is threefold. First, the empirical result shows that leaning mechanism has the biggest impact on the level of obligation while competition mechanism is the most influential to the level of precision and delegation. Taken together, consensual knowledge plays a crucial role when countries decide the degree of harmonization of the two different institutions—trade and the environment. However, in terms of the decision of how to implement the commitments and secure effective compliance, consideration of commercial benefit is important. This implies that when countries can enjoy economic benefit from the linkage, countries are willing to make EPs more credible by increasing the compliance costs. This result also gives understanding why MEAs are not effectively implemented. In bilateral setting, countries can incorporate more detailed interest that they cannot at multilateral setting. This may give countries more incentives to compliance to the commitments.

Second, competition has strong and consistent impact on all three dependent variables. This implies that market competition is the most influential factor that leads countries to willingly accept strong trade-environment linkage during trade negotiations. My analysis challenges the conventional view of conflicting trade-environment relationships. This implies that international

trade can facilitate a “race-to-the-top” effect by inducing countries to accept stringent environmental protection policies in exchange for economic benefits. Finally, emulation is found to be lower the level of obligation. Norm diffusion theories argue that emulation is one of the major drive for diffusion international norm across the borders, but my analysis reveals that a copying of the front-runners model is not likely diffuse substantive commitments that cannot guarantee effective compliance of international agreements. However, it might be too ambitious that emulation does not have any impacts on the trade-environment linkage. This might be because it is relatively rare that environmentally conscious weaker country induces the linkage. In other words, the result might be because of the small number of observations.

The results of this study provide a direction for further investigation. Adopting environmental trade measures is one thing, but meticulously putting them into practice is quite another. Will the trade-environment linkages discovered in FTAs be successfully implemented and serve as a roadmap for nations looking to boost both trade and the environment? If this question is empirically addressed in future research. the claim that preferential trade agreements can significantly reduce the transaction costs associated with aggregating the interests of several actors into a common policy position while making it easier to monitor compliance can be reasonably accepted In the remaining chapters, using three cases—KORUS FTA, and EU-Japan EPA—I will analyze how certain EPs in FTAs are internalized into trading partners’ domestic law and policy by tracing the implementation process.

Chapter 5. KORUS FTA and Implementation of Anti-IUU Fishing Norms

5.1. Introduction

KORUS FTA was signed in 2007 and came into effect in 2012. The FTA incorporates strong and specific EPs. In particular, it specifies the parties' obligation to implement CITES, Inter-American Tropical Tuna Convention (IATTC), International Whaling Convention (IWC), and Convention on Conservation of Antarctic Marine Living Resources (CCAMLR), which are all closely associated with the anti-IUU fishing norm. Although South Korea had participated in multilateral commitments that aimed for combating IUU-fishing, it did not equip domestic legislation to implement those international commitments until 2008.

IUU fishing stands for an illegal fishery, unregulated fishery, and declared fishery.²¹ IUU fishing literally means fishing activities conducted without

²¹ According to IPAO-IUU (2001: 2-3), illegal fishing refers to activities: (1) "conducted by national or foreign vessels in waters under the jurisdiction of a State, without the permission of that State, or in contravention of its laws and regulations; (2) conducted by vessels flying the flag of States that are parties to a relevant regional fisheries management organization but operate in contravention of the conservation and management measures adopted by that organization and by which the States are bound, or relevant provisions of the applicable international law; or (3) in violation of national laws or international obligations." Unreported fishing refers to fishing activities: "(1) which have not been reported, or have been misreported, to the relevant national authority, in contravention of national laws and regulations; or (2) undertaken in the area of competence of a relevant regional fisheries management organization which have not been reported or have been misreported, in contravention of the reporting procedures of that organization." Unregulated fishing refers to fishing activities: "(1) in the area of application of a relevant regional fisheries management organization that are conducted by vessels without nationality, or by those flying the flag of a State not party to that organization, or by a fishing entity, in a manner that is not consistent with or contravenes the conservation and management measures of that organization; or (2) in areas or for fish stocks in relation to which there are no

complying with the laws of each country's domestic and international fisheries organizations. The reason why IUU fishing is considered as a problem is that it negatively affects marine biological resources and their use and conservation (Kim, 2015: 70).²² To eradicate IUU fishing, in 2001 countries adopted the Unregulated Unreported International Action Prevention Plan (IPOA-IUU) at the fisheries commission of the Food and Agriculture Organization (FAO). This plan aims to use comprehensive, effective and transparent means for countries to voluntarily eradicate IUU fishing, along with local fisheries organizations.

IUU fishing norm has long been discussed with international trade together. For example, IUU fishing is one of the key issues in negotiations on fisheries subsidies in the Doha Development Agenda (DDA) at World Trade Organization (WTO). The fisheries subsidy negotiations began with the aim of protecting fisheries resources around the world from the crisis of depletion. This stems from the recognition that one of the main causes of overfishing and illegal fishing is excessive subsidies paid by the governments to fishermen. In 2015, UN SDGs (goal 14: life below water) addressed the issue of fisheries subsidies, and the in 2015 UN General Assembly countries agreed to abolish subsidies contributing to IUU fishing and ban harmful subsidies promoting overfishing by 2020.

Even after South Korea enacted Distant Water Fishery Development Act

applicable conservation or management measures and where such fishing activities are conducted in a manner inconsistent with State responsibilities for the conservation of living marine resources under international law.”

22 Because it is reliant on fisheries resources, which are finite natural resources, the fisheries sector differs from other industries. Unlike other sectors, fishing relies on the environment to produce its end products. They don't have to sow or cultivate anything (aquaculture being an exception). Fisheries resources, however, could be depleted if over-exploited, unlike non-exhaustible natural resources like solar energy. The FAO estimates that major marine fish stocks or species groups are either recovering from depletion or are completely exploited, overexploited, or seriously depleted.

(DWFDA) to control IUU-fishing committed by South Korean fleets in distant waters in 2007, the Korean distant water industry kept committing IUU fishing taking advantage of the unstable political situation of West African countries. Due to its on-going illegal fishing, Korea has continuously been warned from the U.S. and the EU since 2010 and was designated as a preliminary IUU fishing country by the U.S. in 2019, for the second time after the EU made a similar decision in 2013, which was lifted in 2015. Despite the South Korean efforts to deter IUU fishing, it continued to fail effective implementation for over ten years.

After the US's designation followed by the initiation of the environmental consultation under KORUS FTA in 2019, the South Korean government expeditiously strengthen its regime to combat illegal fishing concluded the revision and new enactment of the relevant laws and policies only less than two years.

This brief chronological overview raises two closely related questions. Why did it take so long time to fully revise the relevant laws to implement anti-IUU norms domestically? And what made the South Korean government quickly react to end its persistent implementation failure? Existing explanations have focused on policy isomorphism, domestic political and institutional factors, and reputational needs, providing important insights into the aspects of adoption and implementation of international commitments. Yet, these plausible conclusions render some elements of Korea's implementation of the international fisheries norms puzzling. First, only domestic political and institutional factors cannot fully explain South Korea's quick about-face because domestic conditions were not basically changed during the implementation. Second, reputational needs also cannot account for South Korea's implementation process because it has long acquiesced to IUU fishing committed by its vessels. Surprisingly, little scholarly attention

has been paid to the influence of the degree to which international agreements are legalized. Can highly legalize bilateral FTAs promote the successful implementation of multilateral environmental norms? Through the ambiguity-conflict matrix of Matland (1995), I show the KORUS FTA, which imposes strong obligations, is precisely defined, and involves a strong judicial mechanism plays a positive role in domestically implementing anti-IUU norm in South Korea.

In what follows, I will divide the Korea's implementation process into two periods according to the degree of conflict between the two bureaucratic actors. Then, I show that the transition between, and conclusion of the two different implementation process can be explained by the combination of the degree of ambiguity and conflicts.

5.2. Research Design: Case Study

This chapter uses process tracing to demonstrate how environmental linkage within KORUS FTAs serve as mechanisms to secure effective implementation of anti-IUU fishing norms norms in South Korea. Advantage of process tracing analysis is that process-tracing provides inferential leverage. In addition to aiding uncovering and testing causal mechanisms, process-tracing also contributes descriptive richness (Kay & Baker 2015).

This research focuses on anti-IUU fishing norms because it is closely associated with CITES and fishery MEAs, which are the most frequently referred to across FTAs. This study seeks to show how the fishing norms were implemented in South Korea and the role of the FTA in the implementation. To do so, this research conducted an analysis in four steps. First, this research show how the linkage took place in FTA negotiation and the outcome of the

negotiation. Then, this research showed how KORUS FTA incorporates highly legalized EPs, to measure the degree of policy ambiguity. Specifically, this study examined MEA-related provisions in KORUS FTA in terms of the three dimensions of legalization—obligation, precision, and delegation. Third, this study traced the conflicts between major ministries to explore how the anti-IUU fishing norms had been implemented in South Korea. Finally, this study shows how the implementation has evolved according to the combination of the degree of conflict and ambiguity.

Following Jinnah and Morin (2021), this study operationalize dependent variable as the legislative implementation, which refers to the enactment or amendment of the relevant legislation of domestic implementation means legislative implementation. This research does not attempt to evaluate the degree of implementation here. Rather, this study seeks to analyze whether anti-IUU fishing norms are internalized in South Korean domestic policies. Thus, this research looked at the laws and policies that South Korea adopted to implement anti-IUU fishing norms.

In explaining how the implementation had evolved, key variables are ambiguity and conflict. Ambiguity refers to the degree of legalization of EPs in KORUS FTA; and conflict refers to bureaucratic politics between the Ministry of Oceans and Fisheries of South Korea (MOF) and the Ministry of Foreign Affairs (MOFA), the two major government agencies involved in the implementation of anti-IUU fishing norms.

Table 5.1. The research approach

Variable	Evidence
Ambiguity:	An analysis of the degree of obligation, precision, and delegation of KORUS FTA EPs
Conflict:	A study on the incongruent policy goals in tackling

	IUU fishing within/between MOF and MOFA
Implementation of anti-IUU fishing norm:	Evidence from the legislation that South Korea adopted to combat IUU fishing and whether the laws and policies effectively reduced the IUU fishing practice

The source of data in this study are legal texts, US and Korean government reports, news articles, and NGO reports, to trace the movement of anti-IUU fishing norms from multilateral agreements, through the FTA, and ultimately into the domestic laws and policies in South Korea. The analysis of KORUS FTA legal text highlights the potential for discretion of parties in the interpreting and implementing IUU-fishing norm implementation. The analysis of official documents and news articles reveals the trajectory of conflict between the major government agencies involved in the implementation.

5.3. Linking anti-IUU norm to KORUS FTA: Competition Linkage

In this section, I show how the linkage happened depending on the U.S. and Korea's perception of linkage between trade and IUU fishing. I argue that the U.S. and Korea have very different knowledge that IUU fishing and international trade are connected. With great knowledge asymmetry between the two countries, their main goal of incorporating EPs was market competition—levelling the playing field for the U.S. and securing export market for Korea. As a result, KORUS FTA contains strong and specific EPs. To begin with the US's perception to trade-environment linkage, since the U.S. first linked environmental concerns to trade agreement in the NAFTA in

1994, using FTAs, it has long moved to strengthen the level of environmental protection of trading partners. The U.S. had originally tried to solve IUU fishing through international fishery organization, but these attempts were not effective. This is mainly because the international fishery organizations lacks a rapid dispute settlement mechanism and remedies to non-compliance. For this reason, the U.S. has tried to prevent IUU fishing by linking it with WTO and FTAs which equipped with strong dispute settlement measures (Lee 2014). Accordingly, the U.S. has amended its domestic trade laws to strengthen the provisions related to the promotion and effective enforcement of MEAs in their FTAs.

The major development in US trade-environment politics came when the US Congress passed the Trade Act of 2002. The Act reinforced the requirements to conduct environmental reviews, but it also institutionalized several concrete environmental negotiating objectives. These include ensuring that US trade partners to protect the environment, and promoting the consideration of MEAs (SEC. 2021(b)(11)(D)). On May 10, 2007, another important document, the Bipartisan Agreement on Trade Policy, was released that would shape the development of US trade policy surrounding environmental issues. Centrally, the agreement required countries to adopt, maintain, and effectively enforce laws and regulations related to a list of seven MEAs, so-called covered agreements, to which they are party (USTR, 2007:2). The list also expanded NAFTA's list of covered agreements, which included CITES and the Montreal Protocol, to now also include the International Convention for the Prevention of Pollution from Ships, the Inter-American Tropical Tuna Conventions (IATTC), the Ramsar Convention on Wetlands, the International Conventions for the Regulation of Whaling (ICRW), and the Convention on

Conservation of Antarctic Marine Living Resources (CCAMLR).²³

The other important change in the Bipartisan Agreement is that it requires, for the first time, that all FTA environmental obligations be subject to the same dispute settlement and enforcement mechanisms as all other FTA obligations. Unlike previous provisions for dispute settlement of EPs, these are now allowed in terms of remedy and apply to all EPs, not just effective enforcement and non-derogation provisions.²⁴ This marks an important policy shift in US trade politics (Jinnah and Morin 2020: 35). Indeed, the strengthened dispute-settlement procedures and extended list of seven “covered agreements” appeared in KORUS FTA and other FTAs that was negotiated and concluded after the Bipartisan Agreement.²⁵

In particular, so-called “Fish Friends Groups,” including the U.S., Australia, and New Zealand, arguing that countries must strongly regulate fisheries subsidies that drain fisheries resources and distort trade orders. In connection with international trade, acquiescing to IUU fishing has been identified with

²³ As articulated by the original text: “The Administration and Congress have agreed to incorporate a specific list of multilateral environmental agreements (MEAs) in our FTAs. The list includes (with abbreviated titles) the CITES, Montreal Protocol on Ozone Depleting Substances, Convention on Marine Pollution, Inter-American Tropical Tuna Convention (IATTC), Ramsar Convention on Wetlands, International Whaling Convention (IWC), and Convention on Conservation of Antarctic Marine Living Resources (CCAMLR).” “We have also agreed to alter the non-derogation obligation for environmental laws from a ‘strive to’ to a ‘shall’ obligation, with allowance for waivers permitted under law as long as it does not violate the MEA.”(USTR 2007)

²⁴ As articulated by the USTR: “we have agreed that all of our PTA environmental obligations will be enforced on the same basis as the commercial provisions of our agreements—same remedies, procedures, and sanctions. Previously, our environmental settlement procedures focused on the use of fines, opposed to trade sanctions, and were limited to the obligation to effectively enforce environmental law.” (USTR 2007)

²⁵ There were the other important change although it was not happened during KORUS FTA negotiation.. In 2015, the Bipartisan Congressional Trade Priorities and Accountability Act (TPA-2015) was passed. It largely replicated the environmental guideline articulated in the Trade Act 2020 and the Bipartisan Trade Agreement as related to environmental reviews, effective enforcement, promotion of MEAs, dispute settlement, and covered agreements. In TPA-2015, the U.S. finally added new provisions related to elimination of fisheries subsidies and addressing IUU fishing (Sect. 914 para. (c)).

fisheries subsidies and has been addressed within the international trade framework (Lee 2014; Koo 2021: 285).²⁶ Because of this reason, countries seek to address anti-IUU fishing norms within FTAs as well as through fishery MEAs, including the Inter-American Tropical Tuna Conventions (IATC), the International Conventions for the Regulation of Whaling (ICW), and the Convention on Conservation of Antarctic Marine Living Resources (CCAMLR).

In contrast, Korea did not see that IUU fishing and trade are logically connected. For example, in an official document titled ‘Korea’s view on Fisheries-related Issues in DDA Negotiation’ Korean government said that “Korea believes that it is undesirable to address the environmental aspects of fisheries in the DDA negotiations, which is basically a forum for trade negotiation.” (WTO 2003: 2). Korea was very skeptical about the existence of “harmful subsidies” and the empirical evidence of the relationship between the existing fisheries subsidies and IUU fishing (WTO 2003: 3).²⁷

The FTA negotiation was concluded in April 2007. However, the U.S. suddenly requested additional negotiation to add environmental and labor standard in the FTA. The U.S. held a position that it would not ratify the FTA without applying strong environmental standards following its so-called ‘New Trade Policy’ that was driven by the Bipartisan Agreement in 2007 (Lee

26 There is a large difference in position between developed and developing countries regarding fisheries subsidies. In particular, countries that provide various types of fisheries subsidies, such as Korea, argue that the causal relationship between fisheries subsidies (especially oil subsidies) and illegal fishing is unclear and that the scope of prohibited subsidies is reduced. Korea is so dependent on subsidies that the restructuring of the fishing industry is delayed (Koo 2021: 285).

27 Korean government said that “Korea is prepared to participate in international efforts aimed at creating effective disciplines against harmful fisheries subsidies for the purpose of enhancing the sustainable use of fisheries resources, if it is deemed necessary. However, our argument is that effective regulation should come only after some preliminary questions have been answered in such a way that establish that such harmful subsidies in fact exist. ... These Members have been seeking to advance the negotiation without providing sufficient empirical evidence that the existing subsidies they are trying to regulate are indeed a cause of the stated problem.” (WTO 2003: 3)

2009).²⁸ Korean government maintained its position that there would no more negotiations. However, the Korean government ended up accepting the U.S. demand, and the deal was revised the following month to incorporate provisions on labor and the environment demanded by the US government. For Korea, political economic factors are the most important in signing KORUS FTA. First, in early 2000s the US market took 21% of Korean export, which is too important for Korea to give up. Also, KORUS FTA is important from strategic viewpoint. Cooperative relationship with the US is essentially crucial for security of Korea (Sohn 2019; Koo and Sohn 2001; Koo 2011). With the increasing threat from North Korea and China's influence in the region, the US and Korea expected to consolidate the security alliance through commercial ties (Aggarwal 2013: 104). In summary, at the time of KORUS FTA negotiations, competition linkage happened with asymmetric knowledge regarding the trade-environment linkage. There was not consensual knowledge between Korea and the U.S. regarding IUU fishing and trade nexus. However, given its economic and political dependence on the U.S., Korea had no choice but to accept the U.S. demand. In other words, in the Korea-U.S. FTA, trade-environmental links occurred by competition.²⁹

28 New Trade Policy refers to the U.S.'s stance that requires the U.S. to apply high level of environmental standards to its trading partners, in order to minimize the negative impact on the environment (Kim, 2007). With the implement of the new trade policy as the U.S. Congress and the administration agreed on a bipartisan trade deal in 2007, the U.S. announced that it would first apply the new policy stance to FTAs with Korea, Peru, Panama and Colombia that were negotiated during 2006-2007 (Lee, 2009).

29 However, this does not mean that Korea was forced to accept the demands of the United States without any understanding of the environmental protection and sustainability. Since the early 2000s, Korea has been steadily promoting policies related to sustainable development domestically. During the Lee Myung-Bak administration, when the Korea-U.S. FTA was being promoted in earnest, eco-friendly policies such as green growth were actively pursued. Therefore, it is necessary to mention that from Korea's point of view, including environmental provisions in

5.4. Low Ambiguity: High Legalization of EPs

In this section, I analyze the strength of EPs in KORUS FTA that would apply to anti-IUU fishing norms. I measure the strength by evaluating the degree of legalization (obligation, precision, delegation) of EPs. As a result of competition linkage, KORUS FTA included strong and specific EPs. With the KORUS FTA including strong and specific EPs, the degree of ambiguity is low in the process of implementation.

Chapter 20 (Environment) of KORUS FTA incorporates comprehensive environmental obligations and dispute settlement procedure and remedies when parties fail to comply with the obligations. The chapter also contains several MEA-relevant compliance mechanism that are not only far more legalistic than other Korean FTAs, but also stronger in terms of its degrees of obligation, precision, and delegation.

First, the degree of obligation of EPs are high. All the MEA-related provisions are ‘shall’ clause, which mandates strong obligation of harmonizing the exiting MEA and trade rules. For example, Article 20.2 (Environmental Agreements) stipulates that “a Party *shall* adopt, maintain, and implement laws, regulations, and all other measures to fulfill its obligations under the multilateral environmental agreements.” The FTA also stipulates that “neither Party *shall* fail to effectively enforce its environmental laws and other measures to fulfil its obligations under the MEAs.” Also, both Korea and the US “*shall* continue to seek means to enhance the mutual supportiveness of multilateral environmental agreements to which they are both party and trade agreements to which they are both party.” (Article 20.10.1).” To this end, negotiations on environmental issues with mutual interests must be negotiated

the FTA was not a priority, and there was no reason to actively oppose it.

(Article 20.10.2). In addition, if one party violates its obligations under the Korea-US FTA and the MEA, the other party “*shall* seek a balance between its obligations under the two agreements (Article 20.10.3).” That is, all the obligations related to MEAs are stipulated in “shall” clause, imposing the parties a high level of obligation.

Second, the FTA incorporates precise and specific EPs. It specifies what to do and how to do. For example, Annex 20-A of KORUS FTA specified seven MEAs, so-called “covered agreements” that “the parties *shall* adopt, maintain, and implement laws and all other measures to fulfill the covered agreements.”³⁰ This is notable given that many FTAs do not specify MEAs that parties should comply with but only refer to recognition of the existing obligation under MEAs. Also, Article 20.8 stipulates environmental cooperation to expanding the cooperative relationship on environmental matters in both bilateral and multilateral settings. To this end, Korea the US signed Agreement between the Government of the United States of America and the Government of the Republic of Korea on Environmental Cooperation (ECA) in conjunction with KORUS FTA to specify activities related to

30 Annex 20-A (Covered Agreements) 1. For purposes of this Chapter, covered agreement means a multilateral environmental agreement listed below to which both Parties are party:

- (a) the Convention on International Trade in Endangered Species of Wild Fauna and Flora, done at Washington, March 3, 1973, as amended;
- (b) the Montreal Protocol on Substances that Deplete the Ozone Layer, done at Montreal, September 16, 1987, as adjusted and amended;
- (c) the Protocol of 1978 Relating to the International Convention for the Prevention of Pollution from Ships, 1973, done at London, February 17, 1978, as amended;
- (d) the Convention on Wetlands of International Importance Especially as Waterfowl Habitat, done at Ramsar, February 2, 1971, as amended;
- (e) the Convention on the Conservation of Antarctic Marine Living Resources, done at Canberra, May 20, 1980;
- (f) the International Convention for the Regulation of Whaling, done at Washington, December 2, 1946; and
- (g) the Convention for the Establishment of an Inter-American Tropical Tuna Commission, done at Washington, May 31, 1949.

2. The Parties may agree in writing to modify the list in paragraph 1 to include any other multilateral environmental agreement.

implantation of Environment Chapter. Under this additional agreement, the parties shall establish Environmental Cooperation Commission (ECC) to broaden and deepen effective cooperation (ECA Article 3). Besides, the ECA mandates the parties to identify priority projects for environmental cooperation by establishing work programs, such as joint conference, sharing of information on national environmental program, exchange technicians and specialist, etc. This work programs have to be established on regular basis through ECC (EAC Article 4).

Table 5.2. Summary of the degree of legalization

Obligation	<ul style="list-style-type: none"> • <i>Shall</i> clauses • Harmonization of trade rules and the existing multilateral environmental agreements
Precision	<ul style="list-style-type: none"> • Specified list of “covered agreements” • Detailed measures and implementation body • Additional agreement (ECA) that specifies cooperation activities
Delegation	<ul style="list-style-type: none"> • Strong sanction mechanism and remedies against the compliance failure of environmental obligations under the FTA

Finally, the degree of delegation of KORUS FTA is also high in that it actively pursues judicial solutions rather than diplomatic solutions to non-compliance with MEA. For the violation of the obligations in Environment Chapter, general dispute settlement system shall be applied, which means that any violation of MEA-related provisions will be faced with suspension of trade benefits. Specifically, Article 20.9 stipulates that “a Party may request consultations with the other Party regarding any matter arising under this Chapter”, and “the Parties *shall* make every attempt to arrive at a mutually

satisfactory resolution of the [environmental] matter...” In addition, Article 20.9.6 stipulates that “In a dispute arising under Article 20.2 (Environmental Agreements) that involves an issue relating to a Party’s obligations under a covered MEAs, a panel convened under Chapter 22 (Institutional Provisions and Dispute Settlement) *shall* make its findings and determination under Article 22.11 (Panel Report).” By allowing to invoke the ‘general dispute settlement procedure’ under Chapter 22, KORUS FTA imposes a very strong compliance mechanism to the parties. It allows suspension of benefits when a party fails to implement the EPs in FTAs.

In sum, the degree of legalization of environmental provision in the FTA is very high, whereby it imposes little leeway of interpretation of the agreements, leading to low ambiguity in the implementation of the agreement. Table 5.2 present the summary of the degree of legalization.

5.5. Implementation

5.6.1. Phase 1 (2008-2018): Political Implementation

Political implementation arises from low ambiguity and high conflict (Matland 1980; Allison 1971; Elmore 1978). This situation where actors’ goals are clearly defined, but dissension occurs because these goals are incompatible. Under political implementation, the strength of one actor or a coalition of actors determines the outcome of implementation. Successful implementation depends on either having enough authority to force one's will on the other participants or having enough resources to be able to negotiate an agreement on means, as some of the players whose cooperation is necessary may disagree with the policy goals. Mechanisms that are coercive

and pay off will be the most common (Matland 1980).

High Conflict

During this period, the degree of conflict between Ministry of Foreign Affairs (MOFA hereinafter) and Ministry of Oceans and Fisheries (MOF hereinafter) has remained high. There was two sources of conflict: the policy conflict within MOF, and the conflict between MOF and MOFA.

At first, the newly enacted DWFDA inherently contained the bone of conflict. The Act requires the MOF to implement two conflicting goals: fostering distant water fisheries and controlling anti-IUU fishing in the distant waters. Matland (1995) aptly puts that the level of conflict is more likely high when clearly defined goals cannot be compromised (Matland 1995: 158). The Act still had loopholes to make it possible that the MOF subsidized illegal fishing fleets. With the inconsistently stipulated the qualification of fisheries companies who can attain subsidies and financial support from the government and, the regulation on IUU fishing companies, large amount of subsidies and financial supports were paid to the companies who committed IUU fishing (Yeo 2018).³¹ Also, the Act lacked punishment and fines for IUU fishing. For example, administrative disposition and fines against illegal fishing were too low to effectively combat IUU fishing in distant waters.³² By contrary, the main policy goal of the MOFA is securing national interest and protecting national reputation. In line with the international standards, the

31 An annual average of 17.2 billion KRW (15 million USD) was provided to seven illegal fishing companies during 2010-2013 (The Minutes of the 316th Agriculture, Forestry, Food, Oceans and Fisheries Committee of National Assembly of South Korea, 2013)

32 For example, in 2011 a South Korean fisheries company (Insung Corporation) caught tooth fishes more than four time of the quota in Antarctic Ocean, and CCAMLR member states urged to designate South Korea as an IUU fishing countries, but only the South Korean government opposed it. At that time, the company earned about 500 million KRW from illegal fishing, but it was only fined 1.5 million KRW and imposed three months of operation suspension (Park and Ko, 2021).

MOFA perceived IUU fishing as a harmful practice that needs to be regulated and eventually eradicated. Also, the designation of an IUU fishing country was critical to South Korea's national interest and reputation because South Korea had long dispute with China over China's illegal fishing in the West Sea. Accordingly, then Foreign Minister Yoon Byung-se held several meetings with the foreign ministers of the US and EU to discuss the issue in order to remove the stigma of IUU fishing country, and second Vice Minister Cho Tae-yeol also asked the EU and the U.S. to cooperate in lifting the designation (Ministry of Foreign Affairs 2014).

Disbandment of MOF in 2008 was another source of inconsistent fisheries policy (Park & Ko 2021; Shim & Oh 2010; Yeo 2018). Then President Lee, Myung-bak disbanded the MOF and transferred the functions and responsibilities of MOF to Ministry of Land and Infrastructure, Forest Agency, and Ministry of Food and Drug Safety. The abolition of the MOF was a time when the newly acted DWFDA started to be enforced, which hindered the successful implementation of the law. Most of the functions of MOF were transferred to the newly established Ministry of Agriculture, Forestry and Fisheries, but data and manpower were not transferred sufficiently (Park & Ko 2021; Yeo 2018). These administrative difficulties postponed submitting the NPOA to the FAO, leading to effective control over IUU fishing.

In 2013, the two ministries blame each other for the EU's designation as a prospective fishing country. The MOF claimed that it had not heard any information from the MOFA in advance about the EU's designation, and criticized the lack of fisheries experts in MOFA (Park 2013). On the other hand, MOFA argued that it delivered EU criticisms in detail on illegal fishing of South Korean fleets to the Ministry of Oceans and Fisheries and helped MOF respond to EU's claims and sanctions on illegal fishing boats (Ministry

of Foreign Affairs 2013).

The conflict between the two ministries was reignited as MOF attempted to relax the punishment on IUU fishing in response to the distant water fisheries industry's demand. Once South Korea has relieved from the preliminary IUU fishing country status, the fishery industry started insisting that the renewed regulation was ridiculously high and demanded lowering the level of punishment for IUU fishing (Korea Ocean Industry Association, 2017; Kim 2016).³³ In response, MOF held a "public-private task force to revise DWFDA" in November 2017 to propose a revision to ease the level of punishment for illegal fishing (Lee 2017).

While the MOF failed to manage the conflicting goal in a consistent manner, diplomatic pressure from international community made MOFA have more clear policy goal to combat IUU fishing. The ASEAN Regional Forum (ARF) in 2017 and APEC Ministerial Chairs in 2018 adopted the Joint Statement on cooperation to prevent, curb and eradicate IUU fishing (Ministry of Foreign Affairs 2017; Ministry of Foreign Affairs 2018). The US was increasing its pressure on IUU fishing issues.

Also, the U.S. had expressed its concerns over the implementation of anti-IUU fishing regulations. During 2013-2019, the US and Korea held Environmental Affairs Council (EAC) three times to discuss work programs for environmental cooperation. Over the three EACs, priority of combating IUU fishing had increased. At the 3rd ECC under KORUS FTA held in May 2019, the work program during 2019-2022 was decided, and IUU fishing-related issues are mentioned first in the agenda. In addition, in the open

33 Distant water industry complained that the 2015 DWFDA imposed excessive penalties on illegal fishing fleets because it put both judicial penalties and administrative disposition (Kim 2015 <http://www.aflnews.co.kr/news/articleView.html?idxno=118346>). The industry also claimed that MOF had not come up with support measures to save the industry due to the issue of designating an IUU fishing country, but is only overusing easy regulatory policies (Kim 2016).

session where ordinary citizens can participate, questions and answers were conducted with international environmental organizations regarding the South Korean government's measures to prevent whale bycatch (Ministry of Foreign Affairs, 2019).³⁴

These international movements and US's pressure imposed a clearer goal of eradicating IUU fishing on the MOFA, whereby it exacerbated more conflict between the ministries. Coupled with the low ambiguity of KORUS FTA, all of this continuing debate and conflict between the two ministries evolved to political implementation of anti-IUU fishing norms. Next I examine the process of political implementation and the outcome.

Implementation: Political Implementation

The policy implementation during this periods was a prototype of political implementation, where “actors have clearly defined goals, but dissension occurs because these clearly defined goals are incompatible” (Matland 1995: 163). Strong and specific KORUS FTA led to the enactment of DWFDA to control IUU fishing, but the Act stipulated clearly defined but incompatible policy goals, which sparked the policy conflict within the MOF. The MOFA had clear goal of eradicating IUU fishing in line with the pressure from international community and the US and the EU. These conflicting goals were never converged during this period. As a result, the implantation was decided by the power of coalition—distant water fishing industry and MOF.

First, the legislation to combat illegal fishing was made in favor of the

34 At the first EAC, IUU fishing was also addressed: “Continue or expand existing technical exchanges within RFMO's and elsewhere to facilitate a holistic fisheries management approach, involving, inter alia, measures to promote sustainable fisheries; minimize bycatch; address illegal, unregulated, and unreported (IUU) fishing; improve support for science-based fisheries management; strengthen monitoring, control, and surveillance (MCS) systems; and develop robust data-collection and traceability systems for fish and fishery products” (EAC Joint Communique, 2013).

interests of the distance water fishing industry. The DWFTA, which was enacted in 2007 to regulate IUU fishing in deep waters, lacked the power to impose severe enough penalties to prevent its vessels from violating the conservation and management measures set forth by international fisheries accords, due to the incestuous relationship between the government and the industry (FAO 2008). For example, the punishment against overfishing and joint fishing with illegal fleets, which are considered a crucial international maritime crime were only fines of up to 5 million KRW. A low level of fines could not curb illegal fishing. As a result, as shown in figure 5.1, IUU fishing activities of South Korean vessels have even increased compared to before the enactment since the enactment of the Act (FAO 2008).³⁵

Second, the most of amendment of DWFDA was led by MOF who was on behalf of the distant water fishing industry. MOF's plan to enact 'IUU fishing control and management Act (tentative name)' in 2016 to adopt the FAO's Port State Action Agreement in domestic legal system was failed due to the opposition from fisheries industries. It opposed to it by claiming that the tightened control over IUU fishing would have cause a slump in the distant water industry and the sluggish economy in Busan, which was highly dependent on distant water fishing (Korea Overseas Fisheries Association 2016).³⁶ In addition, MOF attempted to relieve the level of penalties and sanctions on illegal fishing only in two years later after the regulations were

35 The number of IUU fishing vessels that was busted in 2007 was 2,205, but it had increased to 4,449 in 2008 and 3,394 in 2009, respectively (Korea Maritime Statistics 2020).

36 Korea Overseas Fisheries Association argued that the number of distant water fishing boats had decreased by 76 fleets in the past two years, due to the recent tightening of IUU fishing regulations. They also claimed the decreasing power of Korean distant water fishing industry would also have negative impacts not only on fisheries industries but also other related industries, such as distribution business and fishing tackles manufacturer (Korea Overseas Fisheries Association 2016). Korean ocean industry claimed that Korea's punishment is excessive, but the Philippines, which has weaker economic power than Korea, has also set fines for IUU fishing at more than 500 million won, and Taiwan, recently designated as a reserve partner for IUU fishing, has also raised fines to up to the equivalent to 1 billion KRW. (Kim, 2016)

heightened in 2015 amendment (Lee 2017; Park & Ko 2021; Yoe 2018).

Third, the DWFDA were not fully implemented even after it was revised to heighten fines and punishment. At first, Article 11 still gave a wide range of discretion to the Minister in deciding the level of punishment against IUU fishing activities although the penalties for IUU fishing activities was strengthened through the revision of the Act in 2015 (Lee 2014; Park & Ko 2021; Yoe 2018).³⁷ According to the DWFDA, violators might receive a fine of up to 1 billion won (\$837,000) or a maximum five-year prison sentence. But in reality, offenders have not been penalized.³⁸

In addition, although though the DWFDA stipulates harsh criminal penalties, there appeared to be major gaps in the administrative and other civil measures available to handle infractions, such as methods to deny offenders the financial gain resulting from their offenses. As a result, when the prosecutor decides not to press charges due to a lack of proof that the violation was purposeful, there are no other options for dealing with infractions or denying offenders the financial advantage of their illicit behavior. (Hong Jin No. 701) or suspends the indictment (Southern Ocean).

In addition, the toothfish catch documentation program (CM 10-05) under CCAMLR had never been fully established by MOF. Because of this, the Southern Ocean and Hong Jin No. 701's illegally harvested fish were able to enter international trade, bringing financial gain to the offenders. (NOAA

37 Art. 11 (Cancellation, etc. of Permit for Distant Water Fisheries) stipulates that “the Minister of Oceans and Fisheries may cancel a permit for distant water fisheries or order the suspension of distant water fisheries ...,” which was criticized for the wide discretion of the Minister (Lee 2014: 38). Because of this, the EU expressed its concern over the effectiveness of the law and asked for further development of the provision.

2019).

Table 5.3. The chronology of political implementation

Year	Implementation
2007	DWFDA (Act No. 8626) was enacted in 3 August 2007 Lack of control over IUU fishing Low fines (less than 5 million KRW)
2013	Designation of pre-IUU fishing country by the US and EU 1 st Environmental Affairs Council (EAC) under KORUS FTA
2015	DWFTA was amended (Act No. 13001) in 6 January 2015 Fines was increased (up to criminal penalties, and punishment regulations were greatly strengthened with fines equivalent to less than 5 years in prison or less than 1 billion won.(Art. 33) Designation of pre-IUU fishing country was lifted 2 nd EAC
2016	MOF failed to enact ‘IUU Fishing Control and Management Act (tentative)’
2017	MOF’s attempt to relieve the punishment and fines on IUU fishing On-going illegal fishing in CCAMLR waters by South Korean vessels
2018	MOF failed implementation of criminal penalty Insufficient administrative deposition Violation of CCAMLR’s CM10-05
2019	3 rd EAC Re-designation pre-IUU fishing country by the US

Table 5.3 show the summary of implementation failure of combating IUU fishing. Theses implementation failure rendered South Korean fleets keep committing illegal fishing in distant waters. In December 2017, IUU fishing activities carried out by the Korean fishing vessels *Southern Ocean* and *Hong Jin No. 701* in 2017 that violated conservation measures of the CCAMLR in Antarctic waters even after receiving the notice. As a result, South Korea was designated as a pre-IUU fishing county by the U.S once again in 2019.

In sum, during this period, ambiguity was low due to the clearly defined EPs in KORUS FTAs, but high conflict between actors hindered the successful

implementation. As a result, the compliance was not automatically happened. For an effective implementation of anti-IUU fishing norms, implementation program should consists of securing the compliance of actors whose resources are vital to policy success and ensuring that the process is not thwarted by opponents of the policy (Matland 1980). However, MOF did not enact fortified legislations and not implemented the existing DWFTA properly, leading to continued failure of securing adequate compliance of fisheries industry. Since the fishery industry whose cooperation is required disagreed with the policy goals, successful implementation was not achieved.

In this case, a successful policy implementation depends on either having sufficient power to force one's will on the other actors or having sufficient resources to be able to bargain an agreement on means (Matland 1995: 164). However, MOF who was supposed to deal with the demand from fisheries industry failed to manage the situation, and MOFA also did not have enough power or resources to bargain with MOF over IUU fishing issues. Although some international pressures were imposed on MOFA but were not enough to play as a strong implementation mechanism because these were only declarations and joint statements that lack specific measures and sanction mechanism. However, it is noteworthy that the regular EAC under KORUS FTA contributed to enhance the awareness of linkage between IUU fishing and trade, given that Korean government actually tried to revise after the EACs.³⁹

5.6.2. Phase 2 (2019-2021): Administrative Implementation

According to Matland (1980), top-down implementation is how

³⁹ For example, after the first EAC, Korean government revised DWFDA twice to increase the fine and the level of sanction.

administrative implementation is described. The top of the organization is centralized authority. Each level of the policy is clearly stated, and each link in the chain's actors are aware of their roles and duties. Implementing policies is made easier by less ambiguity. The people who should participate in implementation are obvious when there is little to no ambiguity. The actors establish standard operating procedures to speed up their work as they become steady over time. When a policy is characterized by a high level of consensus and the methods for achieving the policy goal are understood, compliance and follow-up take center stage in the implementation process. As a result, the amount of resources available and the effectiveness of the program created to implement the policy both played a significant role in determining the success of implementation.

Low Conflict

South Korea's efforts to prevent IUU fisheries, which have continued for more than a decade since the FTA was signed, began to get accelerated by the U.S. officially raising issues with IUU fisheries based on the Korea-U.S. FTA (USTR 2019b).⁴⁰ While Korea failed to effectively respond to the prevention of IUU fishing due to conflicts between domestic actors, it was again designated as preliminary illegal fishing country by the U.S. NOAA on September 19, 2019. Right after the preliminary designation, the U.S. requested first-ever environment consultation under Article 9.1 of Chapter 20 of the KORUS FTA. In October, MOF, MOFA, and the Ministry of Trade, Industry, and Energy jointly held environmental consultations with the U.S.

⁴⁰ Article 20.9.1 of KORUS (Environment Consultations and Panel Procedure) provides that “a Party may request consultations with another Party regarding any matter arising under the Environment Chapter (Chapter 20).” Article 20.2 of the KORUS Environment Chapter states “[a] Party shall adopt, maintain, and implement laws, regulations, and all other measures to fulfill its obligations under the multilateral environmental agreements listed in Annex 20-A.” CCAMLR is one of seven multilateral environmental agreements listed in the annex.

Trade Representative to explain that of Korea's efforts to amend the DWFDA, which had been pending in the National Assembly.⁴¹ This strong pressure from the U.S. gave legitimacy to MOF and national assembly to accelerate the revision of the Act.

The U.S.'s action made the positions of the South Korean actors converged. There was two reasons. First, KORUS stipulates highly legalized EPs. Low levels of ambiguity mean it is clear which actors are to be active in implementation. In particular, its strong enforcement procedures including dispute settlement mechanism, which are possible to impose export ban and other remedies on the parties against the failure of enforcement of the EPs increased played a pressure to Korean government. Second, the precedent US's request of environmental consultation to Peru regarding its concern over the Peruvian forest management law gave lessons to the ministries.⁴² The Peru-US forest protection dispute exemplified the potential of the environmental consultations when the general dispute settlement mechanism of the treaty is applicable, to press governments to comply with the environmental commitments (Restrepo 2019).

The other experience that affected the change in the actor's position was that the EU's preliminary designation in 2013. During the process of preliminary designating and lifting from the designation, Korean distant industry went

41 According to the MOF, the ministries and National Assembly made every efforts to persuade the U.S. representatives. For example, then Chair of Oceans and Fisheries Committee of the National Assembly of South Korea to send a letter to the USTR, expressing the Committee's willingness to pass the DWFDA amendment within the same year (MOF 2019)

42 The US requested consultations under Article 18.12.1 of the PTPA Environment Chapter on January 4, 2019. (Environment Consultations and Panel Procedure). The request was in response to a Peruvian government decision made in December 2018 to move the Agency for the Supervision of Forest Resources and Wildlife (OSINFOR) under the Ministry of Environment (MINAM), a move that might have compromised OSINFOR's independence and made it more difficult for it to effectively enforce forestry laws in Peru. The Supreme Decree No. 066-2019-PCM, issued by the Council of Ministers of Peru, nullified the OSINFOR relocation decision made in December 2018 and restored OSINFOR to its prior status of direct reporting to the Prime Minister of Peru (USTR 2019a).

through hardship. For example, more than 70 fishing boats which are operated around Western Africa and Indonesian fishing farms were decommissioned and many companies liquidated. Indeed, the number of distant water fishing companies and boats decreased from 88 and 359, respectively in 2011, to 67 and 289 in 2015 (Park 2018).

Implementation: Administrative Implementation

After the US's preliminary designation, MOF took an unprecedented strong measure to deprive the two vessels that violated the CCAMLR's regulation of catch permission during 2019-2021, imposing 7.9 billion KRW financial disadvantage, which were more than eight times of the amount of unjust enrichment gained from illegal fishing (Ministry of Fisheries 2019).

Less than two month later after the US's request for environmental consultation under KORUS FTA, on 31 October 2019, an amendment to DWFDA was passed by the National Assembly. The whole process took only four months from the proposal of the amendment to the decree, and it was a very prompt response given that the amendment had been sluggish for more than a decade after the FTA was signed.

The bill subdivided fishing-related prohibitions and created new provisions, such as "do not fishing in excess of fisheries quota set by the International Fisheries Organization." In addition, prior to the passage of the National Assembly bill, the Ministry of Oceans and Fisheries newly enacted a notice to implement the certification system for CCAMLR tooth fish fishery, and it took effect on July 1, 2019.

In January 2020, the U.S. Maritime and Atmospheric Administration recognized Korea's efforts and issued a 'primary positive certification certificate,' allowing Korea to resolve concerns over U.S. market sanctions 125 days after being designated as a preliminary IUU fishery country

(Ministry of Fisheries 2020). In November 2020, a partial amendment to the Enforcement Decree of the DWFDA, which contains detailed standards for illegal fishing fines, passed the Cabinet meeting and announced legislation. In addition, the Ministry of Oceans and Fisheries announced in July 2021 that it would conduct a full investigation of offshore fishing vessels unloading in Korea to eradicate IUU fishing by enacting the Public Notice on Agreement on Port State Measures to Prevent, Deter and Eliminate Illegal, Unreported and Unregulated Fishing.⁴³

Table 5.4. The chronology of administrative implementation

Year	Implementation
2019	MOF deprived the two violators of catch permissions The passage of DWFAD amendment (Act No. 17050), heightening administrative and other civil tools
2020	Enforcement Decree Of DWFDA amended (Act No. 30106) Enforcement Rule of DWFDA amended Public Notice of Agreement of Port State Measures enacted
2021	Amendment of Enforcement Rule of DWFAD regarding bycatching ocean mammals

43 It is a measure to restrict the entry of illegal fishing vessels and the use of port services through inspections before and after entering the port for suspected illegal fishing vessels. All ships loaded with marine products pursuant to the agreement must obtain permission after prior entry declaration if they intend to use the port of the country that ratified the agreement. If a ship is engaged in illegal fishing or loaded with illegal seafood, the relevant port authorities may prohibit entry or restrict the use of port services (loading, transshipment, fuel and supplies supply, maintenance, etc.). Korea ratified the Port National Action Agreement in January 2016, and based on the "Notice on the Search of Port Countries for Fisheries-loaded Vessels" enacted in January 2014, it promoted the search of port stations for ships entering Korean ports with catches. However, the "Notice on the Search of Port Bureau of Fisheries-loaded Vessels" is biased toward defining administrative procedures such as entry procedures and documents, and no details specified in the "Port Bureau Action Agreement" have been stipulated, raising the need for system improvement.

The series of enactment and amendment of relevant legislations show characteristics of administrative implantation. The fisheries policy is spelled out explicitly at each level, and actors have a clear idea of their responsibilities and tasks. The top-down changed in the fisheries laws are perceived as legitimate, and there is little controversy. Separated from domestic politics, MOF and MOFA became having shared view on the legitimacy of strong control over IUU fishing. Therefore, now the success of the implementation is up to the compliance of Korean fisheries industry.

This drastic change in Korea was due to the U.S. pressuring Korea to prevent IUU fishing through various measures, including the FTA. Whenever the revision of the DWFDA was faced an obstacles due to inconsistency and conflicts between the two ministries, the U.S. continued pressure using the FTA make policy goals and means clearer. In particular, concerns that pressure through the KORUS FTA could lead to dispute settlement procedures if the obligations were not fulfilled at the consultation stage would have played a major role. In particular, the fact that the Korea-U.S. FTA stipulates the suspension of benefits due to non-compliance with obligations in the environmental chapter is expected to have increased the effectiveness of the FTA environment provisions.

5.6. Conclusion

This study aims to explore how anti-IUU fishing norms are domestically adopted and implemented in Korea and the role of KORUS FTA in the process of implementation. To this end, I first how the trade-environment linkage happed in the KORUS FTA negotiation depending on the perception to the

trade-environment linkage, and how the linkage mechanism created the legalization of EPs. And then, using ambiguity-complex model, I explored the how the implementation of IUU-fishing norm has evolved in Korea.

The main findings of this study as follows. First, KORUS FTA is a result of competition linkage due to asymmetric knowledge between the U.S and Korea of trade-environment linkage. As a result, the agreement incorporates highly legalized EPs along all three aspects—obligation, precision, and delegation. This confirmed the result of the large-N analysis in Chapter 5.

Second, in spite of the low ambiguity, domestic conflict delayed the effective implementation of anti-IUU fishing norms. In political implementation, MOF and MOFA had clearly defined goals, but dissension occurs because these clearly defined goals were incompatible. As a result, the implantation was decided by power of coalition—distant water industry. As a result, compliance was not automatically happened. For an effective implementation of anti-IUU fishing norms, it was necessary to secure the support from distant water industry. However, since the fishery industry whose cooperation is required disagreed with the policy goals, successful implementation was not achieved.

Third, I show the KORUS FTA, which imposes strong obligations, is precisely defined, and involves a strong judicial mechanism plays a positive role in domestically implementing anti-IUU norm in South Korea. As I raised a question, domestic political and institutional factors and reputational needs are not enough to explain Korea's drastic change in its position. From the analysis, I find that the strong punishment mechanism included in the FTA and the specific and regular cooperation mechanism can play a role in supplementing the enforcement mechanism lacking in multilateral environmental norms. During political implementation, the FTA contributed to increase Korean actors' perception that IUU fishing and international trade

are interconnected (knowledge), through holding Environmental Cooperation Commission. Also, its strong sanction mechanism contributed to converge the policy goals of domestic actors, lowering the level of domestic conflicts.

Chapter 6. EU-Japan EPA and Implementation of Climate and Energy Policy

6.1. Introduction

From 2013 to 2018, the European Union (EU) and Japan engaged in negotiations on a free trade agreement and a comprehensive strategic partnership agreement. On July 17, 2018, they signed the Economic Partnership Agreement (EPA) and the Strategic Partnership Agreement (SPA). By elaborating on the climate provisions present in earlier FTAs and making more concrete obligations, it adopts the strategy of "new generation" EU RTAs that have separate chapters on trade and sustainable development.⁴⁴ The parties to these accords commit their dedication to achieving the UNFCCC's overarching goal and agree to implement the UNFCCC, the Kyoto Protocol, and more recently, the Paris Agreement.⁴⁵

In particular, the EU has defended its climate policy ambitions since the very beginning of the international climate system. When the Paris Agreement was ratified in 2015, the EU contributed to opening the door for a new global order. Since the 1990s, Japan has taken a consistent policy line of playing a leading role in the international community. As a part of this effort, it held the UN climate conference in Kyoto, reaching a successful agreement on Kyoto Protocol in 1997. Due to its high dependence on foreign resources and oil

⁴⁴ For example, the EU – Korea Free Trade Agreement and the EU – Colombia and Peru Trade Agreement.

⁴⁵ Ten EU RTAs, including those with the Andean Community, Australia, Indonesia, Japan, Korea, Mercosur, Mexico, New Zealand, Singapore, and Vietnam, all of which are still being negotiated, include the UNFCCC; eight of them also mention the Paris Agreement (excluding those with the Andean Community and Korea).

importation, Japan has pursued several policy measures to improve energy efficiency and alternative energy development such as hydrogen.

Japan's implementation of energy and climate-related EPs has fluctuated with regime change. Before EU-Japan EPA, Japan's climate and energy policy are well described by 'Abenergynomics'. This is a set of policies designed to support the economic objectives of Abenomics, which is an economic principle that was set out and implemented during Abe's second term (2012-2020). The Abe administration has placed a high priority on measures that will promote economic growth. In line with this goal, the bureaucratic dispute between the MOE and the METI, which had inclined in the former's favor under the Democratic Party of Japan (DPJ) administration, was settled in the latter's favor.. The key policies of Abenergynomics are the emphasis on hydrogen technology and energy security, and the pursuant leading role in global climate politics (Incerti and Lipsy 2018). The EU-Japan EPA was signed under the Abe administration. Followed by the Suga administration and Kishida administration, Japan's energy policy went back and forth between pro-business and pro-environment. Unlike his predecessor, Suga sought a "great transition" to a carbon-neutral society, but the movement is slowing down under the Kishida administration, getting back to Abe's era.

This fluctuation raises two closely related questions. 1) Why does Japan maintain its support for nuclear energy, despite the disastrous nuclear accident?, and 2) why do Japan's climate and energy policy gravitate towards the past, despite the EPA with strong and specific climate and energy-related provisions?

To answer this question, in what follows, I will analyze how the EU and Japan incorporate strong and specific EPs in their EPA and Japan's implementation of the EPs. I will first provide the EU and Japan's climate and energy policy before signing the EPA. Then I analyze the perception of the EU and Japan

about the trade-environment linkage. The shared knowledge of the two led to highly legalized EPs in the EPA. A more detailed discussion about the level of legalization of EPs in the EPA and how this affected the level of ambiguity follows. I then consider Japan's implementation process into three periods according to the regime changes and conflict between bureaucratic actors. Then, I show that the transition between, and conclusion of the three different implementation processes can be explained by the combination of the degree of ambiguity and conflicts. Finally, I offer conclusions and discussion.

6.2. Research Design: Case Study

This chapter uses process tracing to demonstrate how environmental linkage within Japan-EU EPA serves as a mechanism to secure effective implementation of climate change and energy policy in Japan. Process tracing analysis has the benefit of giving inferential leverage. Process tracing enhances descriptive richness in addition to helping to identify and test causal mechanisms. (Kay & Baker 2015).

This research focuses on climate change and energy policy because it is closely associated with trade regimes. Since the 1990s, due to innovative regional trade agreements (RTAs) that include EPs like the NAFTA and WTO case laws on trade measures that were adopted by WTO panels to safeguard the environment, the distinction between trade and environment as unrelated policy sectors has blurred. This study seeks to show how the climate and energy policies were implemented in Japan and the role of the EPA in the implementation. To do so, this chapter analyzed four steps. First, this chapter shows how the linkage took place in FTA negotiations and the outcome of the negotiation. Then, it shows the degree of EP legalization in EU-Japan EPA,

to measure the degree of policy ambiguity. Specifically, this study examines climate- and energy-related provisions in EU-Japan EPA in terms of the three dimensions of legalization—obligation, precision, and delegation. Third, this study traced the conflicts between major actors, to explore how climate/energy policies had been implemented in Japan. Finally, this study shows how the implementation has evolved according to the combination of the degree of conflict and ambiguity.

Following Jinnah and Morin (2020), this study operationalizes the dependent variable as the legislative implementation, which refers to the enactment or amendment of the relevant legislation of domestic implementation. This research does not attempt to evaluate the degree of implementation here. Rather, this study seeks to analyze whether Japan's climate and energy policy have changed as Japan incorporated climate- and energy-related EPs in its EPA. Thus, this research looks at the laws and policies that Japan adopted to implement climate change norms and policy coordination in terms of energy policy.

In explaining how the implementation had evolved, key variables are ambiguity and conflict. Ambiguity refers to the degree of legalization of EPs in EU-Japan EPA; and conflict refers to bureaucratic politics between the Ministry of Economy Trade and Industry (METI), Ministry of Environment (MOE), Ministry of Foreign Affairs (MOFA), and *Keidanren* (the Japanese Business Federation), who are the key players shaping Japan's climate and energy policy.⁴⁶

⁴⁶ Key players shaping Japan's climate and energy policy are Ministry of Economy Trade and Industry (METI), Ministry of Environment (MOE), Ministry of Foreign Affairs (MOFA), and Keidanren (the Japanese Business Federation. To a lesser extent, the MOFA is responsible for international negotiation regarding climate issues while has an influence in Japanese climate and energy policy-making. It seeks to secure Japan's international reputation in global climate politics, pursuing a leading role in global climate negotiations and international cooperation in climate and

Table 5.1. The research approach

Variable	Evidence
Ambiguity:	An analysis of the degree of obligation, precision, and delegation of EU-Japan EPA EPs
Conflict:	A study on the incongruent policy goals in pursuing climate/energy policy between METI- <i>keidanren</i> coalition and MOE (with limited influence of MOFA)
Implementation of climate and energy policy:	Evidence from the legislation that Japan adopted to tackle climate change and whether the laws and policies effectively go along with EPs in the EPA

The source of data in this study are legal texts, the EU and Japanese government reports, news articles, and NGO reports, to trace the movement of climate/energy policies from multilateral agreements, through the FTA, and ultimately into the domestic laws and policies in Japan. The analysis of the EU-Japan EPA legal text highlights the potential for the discretion of parties in interpreting and implementing UNFCCC norms. The analysis of official documents and news articles reveals the trajectory of conflict between the major government agencies involved in the implementation.

6.3. Linking Climate Change to the FTA: Learning Linkage

In this section, I provide the EU and Japan's shared perception of the connection between trade and climate change given their international contribution to global climate politics and domestic policies. I then discuss what kind of linkage mechanism took place in the EU-Japan EPA negotiation as a result of the knowledge symmetry. I argue that the motivation for

energy fields.

incorporating EPs was shared knowledge—reconciling free trade and the environment—as both the EU and Japan have long experience of using trade policy instruments to boost or support the environment, and vice versa, and thus have shared recognition that climate change and international trade are connected. As a result, the EPA contains strong and specific EPs.

the EU and Japan have worked together in many discussions to achieve sustainable economic growth, fulfill the UN millennium goals, and implement environmental commitments. They have shared views about the global economy and have played a leading role in global climate/environmental politics. For example, during the Kyoto Protocol negotiation, Japan played a mediating role between the EU and the US-led group for the successful ratification of the Kyoto Protocol. The Kyoto Protocol was the first attempt to impose “quantified legally-binding objectives for national emissions reduction within specified time-frames for the developed countries (so-called Annex I Parties)”. Because of its highly obligatory commitments, there was a conflict between the EU, who sought a strong climate regime and economic development of the developing countries together, and the US-led coalitions, which demanded an equitable different calculus regarding GHG reduction targets (Andresen & Agrawala 2002: 44-51). Under the situation, Tokyo showed leadership by putting out the concept of “pledge and review,” which would allow states to unilaterally commit to certain steps and have those efforts evaluated by an international authority. (Graham 2002). The Japan’s idea produced momentum towards stricter commitments and kept major climate powers, notably the US and EU, under Kyoto Protocol.

As part of the WTO Committee on Trade and Environment (CTE) sessions, the EU and Japan are also actively involved in discussions regarding the relationship between the WTO and MEAs as well as the liberalization of

environmental goods and services. “In the context of the WTO, the EU and Japan formed the Green Commodities Initiative, which aims principally to reduce tariffs on a comprehensive list of green goods” (WTO 2021). The ongoing EGA (Environmental Goods Agreement) negotiations are expected to facilitate access to environmental goods and technologies and to benefit the environment largely by making high-quality environmental products available to all countries.

At the domestic level, both the EU and Japan have long used trade policy instruments to boost or support the environment, and vice versa. The EU has committed itself to ensuring that its trade policy is not only supportive of the economic development of the Union, but also of broader ‘non-trade’ issues like protection of the environment, and social and human rights. Moreover, its trade policy is to stimulate sustainable development within the EU, in its partner countries, and globally. These commitments were laid down in the Treaty of Lisbon, and thus form the constitutional context within which EU trade policy must operate (Douma 2017).

The Lisbon Treaty made it explicit that EU trade policy is to promote environmental protection and the sustainable development of the EU and its trading partners. The duty to integrate environmental aspects in EU trade policy (and all other policy areas) existed already, since the introduction of the environmental integration principle in the treaties in 1987.⁴⁷ The integration principle was moved from the environmental title to a more prominent position at the start of the treaty in 1997 and was expanded with a reference to the broader concept of sustainable development.⁴⁸

At the bilateral and regional level, The core of EU trade policy is negotiation

⁴⁷ Through the Single European Act (SEA) that entered into force on 1 July 1987. Art. 130 (2) EC Treaty, last sentence reads: “Environmental protection requirements shall be a component of the Community’s other policies.”

⁴⁸ Through the Treaty of Amsterdam that entered into force on 1 May 1999 and moved the inte-

and enforcement of environmental regulations. The EU incorporates the Trade and Sustainable Development (TSD) chapter as part of a trade agreement, including the ratification and enforcement of key MEAs, high levels of environmental protection, specific cooperative mechanisms to pursue sustainable goals, and commitment to sustainable management of natural resources (e.g. wildlife, fisheries, and biodiversity). The EU also establishes joint working groups under the TSD chapter to closely monitor its trading partner's implementation of EPs of the chapter. More recently, the Transatlantic Trade and Investment Partnership (TTIP) between the EU and the US should also include such provisions.

Japan also well recognizes the connection between environmental sustainability and economic growth. In a 1995 official document, the MOE (then Environment Agency) reaffirms the importance of active contribution to the “development of rules that will allow both an appropriate response to environmental problems and the strengthening of the multilateral free trading system” given the Japanese economy's high dependence on trade and foreign natural resources (Environment Agency 1995).⁴⁹ Recognizing this, the document stipulates that “it is important for Japan to firmly establish the idea worldwide that in promoting trade, each country should take sufficient environmental measures, taking into account its respective socio-economic situation” (Environment Agency 1995).⁵⁰

Also, Japan has a long experience in using energy policy to improve industrial

gration principle from the environment title up front to the start of the EC Treaty (Art. 6 EC Treaty).

⁴⁹ Environment Agency of Japan (1995). Harmonizing Environment and Trade Policies. <https://www.env.go.jp/en/earth/iec/hetp/ch1.html>

⁵⁰ In this vein, starting in the 1970s, the government passed a number of standards and laws and put pressure on business to better manage waste and rein in its harmful practices. The "Pollution Diet" passed fourteen anti-pollution laws in 1970. The prevention, monitoring, and repression of all forms of pollution became a substantial commercial market in Japan with a strengthening of the laws and the establishment of the Environmental Agency in 1971 (Pajon 2010: 20).

competitiveness in the international market. The Japanese government particularly has focused on energy efficiency through technological improvements because the government expected that this measure can contribute to both reductions in energy consumption and the technological development of Japanese companies. Japan created a cutting-edge strategy for handling industrial pollution. Due to the need for businesses to anticipate future regulations as well as the development and accessibility of new technologies, a "race to the top" between businesses developed that enabled the application of harsher regulations (Pajon 2010). The outcome was that the Japanese industry had increased its energy intensity by 30% and had taken the lead globally in this field. (Wakabayashi and Sugiyama 2007: 44)

With the consensual perception that trade can boost or support the environment, learning linkage happened with shared knowledge regarding the trade-environment linkage. There was a broad consensus over EPA and SPA incorporating strong and specific EPs, in particular, climate change- and energy-related EPs.

6.4. Low Ambiguity: High Legalization of Environmental Provisions

In this section, I analyze the strength of EPs in the EPA that would apply to climate change mitigation norms. In what follows, I measure the strength by evaluating the degree of legalization (obligation, precision, and delegation) of EPs and discuss that the EPA includes strong and specific EPs although it does not include a 'general DSM' that allows trade retaliation in case of failure of compliance to EPs. Therefore, with the EPA including strong and

specific EPs, the degree of ambiguity is low in the process of implementation. The EPA and SPA are evaluated as a “new generation” free trade agreement as it incorporates a variety of non-trade issues (WTO n.d.⁶). Chapter 16 (Trade and Sustainable Development) is composed of 19 articles (Article 16.1-16.19) with comprehensive environmental obligations. The chapter also contains several MEA-relevant implementation mechanisms and environment-specific dispute settlement mechanisms.

First, the degree of the obligation of EPs is high. The chapter highlights the Parties’ obligation to harmonize the environmental concern and international trade. According to Article 16.1 Context and objectives of the EPA, the EU and Japan recognize “the importance of promoting the development of international trade in a way that contributes to sustainable development” and recognizes the contribution of this Agreement to the promotion of sustainable development.

Further, Most EPs are ‘shall’ clauses. According to Article 16.4 (1), the EU and Japan “stress the importance of archiving mutual supportiveness between trade and environment” and “*shall* exchange views and information on trade-related environmental matters of mutual interest in the meetings of the Committee on Trade and Sustainable Development” that is established under the EPA. In addition, both “*shall* cooperate to promote the positive contribution of trade to the transition to low greenhouse gas emissions and climate-resilient development. The Parties commit to working together to take actions to address climate change towards achieving the ultimate objective of the UNFCCC and the purpose of the Paris Agreement” (Article 16.4 (4)). Moreover, the EU and Japan recognize the importance of enhancing the contribution of trade and investment to achieve the goal of sustainable development. Both “*shall* strive to facilitate and promote trade and

investment in environmental goods and services” (Article 16.5).

Second, the precision level is also high. Chapter 16 specifies environmental requirements as well as instructions on how to carry them out. Several environment-related international documents are mentioned in Article 16.1 (1). These include, inter alia, Agenda 21 which was adopted by the United Nations Conference on Environment and Development on June 14, 1992, the Plan of Implementation adopted by the World Summit on Sustainable Development on September 4, 2002, the outcome document of the United Nations Conference on Sustainable Development on July 27, 2012, and the outcome document of the United Nations summit for the adoption of the 2030 Agenda for Sustainable Development, which is a well-known as SDG (Sustainable Development Goals).

In addition, the chapter stipulates parties’ obligation to concerns about specific environmental issues including biodiversity (Article 16.6)⁵¹, forest and timber products (Article 16.7)⁵², fisheries and aquaculture (Article 16.8)⁵³, and these obligations are stipulated with ‘*shall*’ clauses. For example, according to Article 16.6, “recognizing the importance and the role of trade and investment in ensuring the conservation and sustainable use of biological diversity following relevant international agreements to which it is party, notably the Convention on Biological Diversity, each Party *shall* encourage the use of products which were obtained through sustainable use of natural resources.”

Also, Article 16.12, entitled “Cooperation”, suggests some possible areas for cooperation: evaluation of the impact between trade and the environment, labeling schemes, the promotion of corporate social responsibility, trade-related aspects of multilateral environmental agreements, and the promotion

⁵¹ Article 16.6 (Biological diversity)

⁵² Article 16.7 (Sustainable management of forests and trade in timber and timber products)

⁵³ Article 16.8 (Trade and sustainable use of fisheries resources and sustainable aquaculture)

of various environmental protection related issues. Countries commit to “cooperate to promote the positive contribution of trade” to the low-carbon transition; they “commit to work together in climate action to achieve the objectives of the UNFCCC and the Paris Agreement” (EU-Japan, Article 16.4 (4)).

In Article 16.4 (1) titled “multilateral environmental agreements”, the EU and Japan acknowledge the importance of multilateral environmental accords for multilateral environmental governance, to address global or regional environmental concerns. Because environmental agreements are notoriously difficult to put into action, the execution of those agreements is even more critical. This means that EU and Japan can now reaffirm in their laws, regulations, and practices (Article 16.4 (2)) their commitment to effectively implementing multilateral environmental agreements as a result of the EPA. To that end, Article 16.4 (3) requires both parties to share information on their respective environmental multilateral accords and their implementation status. CITES implementation, as described in Article 16.12 (g), is also open to mutual cooperation through the sharing of ideas and information. Also, Article 16.11 specifies that the EU and Japan “recognize the importance of reviewing, monitoring and assessing, jointly or individually, the impact of the implementation of this agreement on sustainable development”. It means that Article 16.4 entitled “Multilateral environmental agreements” is also included as a subject for review. Additionally, Article 16.14 stipulates “contact points”, so that they facilitate communications between the EU and Japan on any matter relating to Chapter 16.

The chapter on sustainable development provide specific implementation mechanism. As part of this chapter, the parties agree to monitor and evaluate each other's implementation of the agreements in terms of sustainable development. The chapter's implementation is overseen by a Committee or

Board on Trade and Sustainable Development, as well as other institutional arrangements and monitoring procedures. In order to ensure that all relevant interests, such as employers, workers, environmentalists, and business groups, are represented fairly at these meetings, a public session will be held at each gathering of these organizations. As part of the agreement, parties are required to set up domestic advisory committees that reflect a broad range of economic, social, and environmental interests.

Table 6.1. Summary of the degree of legalization

Obligation	<ul style="list-style-type: none"> • <i>Shall</i> clauses • Harmonization of trade rules and the existing multilateral environmental agreements
Precision	<ul style="list-style-type: none"> • Specific issues • Detailed measures and implementation body are specified • Additional agreement (SPA) that specifies cooperation area and activities
Delegation	<ul style="list-style-type: none"> • Panel consultation that only applicable to Chapter 16 (Explicit negation of trade retaliation in case of failure of compliance of EPs)

Finally, the EPA does not place the chapter under the jurisdiction of the dispute settlement mechanism between States. Article 16.17 explicitly negate ‘general DSM’ by stipulating “the provisions of this Chapter shall not be subject to dispute settlement under Chapter 21.” EU RTAs traditionally excluded the chapters on trade and sustainable development from the general dispute settlement provisions of the agreements. Instead, they provide for government consultations followed by an examination of the matter by panels of experts with specialized knowledge. Articles 16.17 and 16.18 lay out the process for resolving environmental disputes under Chapter 16, and civil society are allowed to participate in it. If conciliation fails, a formal settlement

will not be used if one of the parties violates its sustainable development duties. The goal is to foster collaboration and settlement through conversation. (Nakanishi 2020).

In sum, as a result of learning mechanism the degree of legalization of EPs in the EPA is high, whereby it imposes little leeway of interpretation of the agreement. Also this result confirms the hypothesis provided in Chapter 3. This leads to low ambiguity in implementation of the EPA. Table 7.1 present the summary of the degree of legalization.

6.5. Implementation: Political Implementation

After signing the EPA and SPA, Japan has experience three different administrations: Abe (2012-2020), Suga (2020-2021), and Kishida (2021-present). Over the three administrations, Japan's implementation of climate and energy policy was political implementation with low ambiguity and high conflict between domestic actors. During implementation, the degree of conflict between METI and MOE remained high and in favor of METI. In what follows, I provide the implementation, focusing on the conflict between key ministries.

6.5.1. The Abe Administration (2018-September 2020)

Japan has been led by Shinzo Abe since 2012, making him the country's longest-serving prime minister. As mentioned earlier, Abe pursued energy policy that can boost Japan's economic growth and sharpen competitiveness of Japanese firms. As a result, the METI had a dominant influence on Japan's energy and climate policy, which reflected Japanese major industries' interest. After the EU-Japan EPA, Abe administration adhered to the previous policy

principle. However, this does not mean that Abe's climate and energy policy did not comply with EPs in the EPA. Although Abe's energy policy was in favor of heavy industry, his leadership sought to improve energy efficiency and innovate low-carbon technologies, such as solar power and hydrogen, as the EPA stipulated. Key attributes of Japan's energy policy under Abe administration are as follows.

First, the previous administration's nuclear phase-out plan was completely scrapped. Instead, Abe reaffirmed Japan's position and relevance in nuclear energy by including a 20-22 percent nuclear energy share in Japan's energy mix by 2050 as part of its NDCs. According to the International Atomic Energy Agency (IAEA), as of 2019, 7.5 percent of Japan's total power generation is generated by nuclear reactors (IAEA 2020). Before the Fukushima accident, nuclear energy accounted for 30% of all electricity generated in 2011. (METI 2011). The return to nuclear energy came as a surprise, given the public's strong antipathy for it following the 2011 Fukushima nuclear disaster.

Second, Japan's NDC remained underwhelming. Its renewable energy accounted for 23.1% of Japan's total energy generation in 2018, up from 18.6% in 2019, according to the International Energy Agency (Siripala 2020). Despite the fact that the 2020 World Energy Outlook from the International Energy Agency predicts that Japan will meet its current NDC for renewable energy by 2030. Since it was condemned for being underwhelming because it signified a step back from its 2009 vow at the Copenhagen climate conference and did not equal commitments made by other wealthy countries, it has been criticized for its ambitions (Asaoka, 2015; Sofer 2016).⁵⁴ Japan has been criticized by a number of international climate NGOs for failing to

⁵⁴ Japan pledged to reduce GHG by 26% below 2013 levels, by 2030—a 16% reduction from 1990 levels and a 25% reduction from 2005 levels. Japan used 2013 as its base year because that was a year of high emissions for Japan.

meet the expectations of the world community when it comes to its efforts to curb global warming. Climate Action Tracker (CAT) 2020 has even labeled Japan's NDCs as "very insufficient" because they are not stringent enough to keep global warming to 2°C, much less 1.5°C.⁵⁵ Despite this, the MOE said in March 2020 that Japan would neither raise or amend its NDCs, ignoring the criticisms. (Japan Times 2020).

The administration declared in July 2020 that low-efficiency coal-fired facilities will be shut down by 2030 and that export support for coal-fired power plants would end. Nevertheless, over the following five years, plans were being made to build 22 additional coal-fired power plants at 17 different locations (Tabuchi, 2020). Additionally, the government provided assistance to Japanese businesses seeking to construct coal-fired power plants abroad. This power plant export policy sparked a clash between METI and MOE. With energy policy under the control of METI, environmental policy was limited by METI's self-serving interests.⁵⁶

Lastly, the Abe administration produced a number of significant energy policy publications, starting with the 2014 Strategic Energy Plan and 2020 Energy White Paper. The former witnessed the "3E + S" focus of Japanese energy policy, which places an emphasis on energy security while aiming for improved economic efficiency and environmental harmony, with safety as a fundamental tenet. It placed a strong emphasis on "demand-side" energy reduction through enhancing energy efficiency, which included maintaining nuclear power. This strategy was different from that of the EU and the US, which focuses on decreasing emissions by increasing the use of renewable

⁵⁵ Climate Action Network Europe ranked Japan 58 out of 61 countries on its annual Climate Change Performance Index and second to last among OECD member countries (Burk, Jan Franziska, & Christogh 2015)

⁵⁶ Tokyo Review (April 2020). Japan's Ministries Clash over Coal. <https://www.tokyoreview.net/2020/04/japan-ministry-coal-conflict/>

energy sources and limiting the use of coal in the production. Reforms on the demand or supply sides alone are insufficient to keep global warming below 2 degrees Celsius. However, the 2020 white paper acknowledged that while fossil fuels are vital, investing in fossil right now would be risky (METI, 2020). Although it emphasized that the main source of electricity is renewable energy, Abe's leadership has come under fire for failing to specify clear reduction targets, leading to hazy blueprints that have only existed on paper. Additionally, Abe's administration continued to innovate existing renewable energy sources, such as hydrogen technology, where Japan already held a leading position, rather than growing new renewable energy sources, in order to solidify the leading position of the Japanese corporations.⁵⁷ As a result, Abenomics has lost a chance to lead the way toward a low-carbon economy built on self-sufficient renewable energy sources.

Although the Abe administration has consistently aimed to increase the share of renewable energy in its energy mix, strong ties between Japan's climate policy and industrial interests have been established due to bureaucratic politics favoring METI over MOE and the close relationship between METI and Keidanren. The METI is in charge of choosing Japan's energy mix and is in the best position to influence the two main sources of greenhouse gas emissions: heavy industries and electric utility firms. As part of the 2001 Central Government Reform, MOE was transformed from an agency to a cabinet-level ministry, making it a more recent ministry in comparison. The main duty of MOE is to improve the environment in Japan, which includes lowering air and water pollution. Although MOE is nominally in charge of Japan's emissions and climate policies, it does not have exclusive decision-making power over the process because of the multifaceted nature of these

⁵⁷ Because of this reason, some consider the huge investment in hydrogen under Abe administration as an industrial policy rather environmental policy (Incerti and Lipsy 2018).

policies. Despite not having as much political clout as METI, MOE is in charge of important climate and energy policy levers including nuclear energy safety regulation and the environmental evaluation of coal facilities (Sofer 2016). Because of this, METI was a well-established bureaucracy with considerable political capital and power under the Abe administration and had special jurisdiction over energy and climate policy, as opposed to MOE.

In Japan, the energy industry is responsible for 90% of greenhouse gas emissions. Without combining economic and environmental policy, meaningful change cannot occur. The Japanese business federation Keidanren, however, has emerged as a strong supporter of nuclear restarts, stating that "the process of restarting nuclear power plants must be accelerated to a maximum extent" and arguing that restarts are required to maintain economic competitiveness, putting pressure on the Abe administration to lower electricity prices (Keidanren 2018). Furthermore, Japan places more emphasis on feasibility than ambition since it favors a bottom-up approach to governing. Additionally, METI had the final word within the Japanese bureaucracy on what is and is not practicable due to its connections to the business community and its role in regulating the economy (Sofer 2016).

In conclusion, while increasing the share of renewable energy has been a persistent goal of Japan's energy strategy, real political obstacles have hindered on-the-ground implementation. Japan has worked under Abe to strike the ideal balance between maintaining its reliance on imported fossil fuels, rekindling its nuclear energy goals, and growing its renewable energy sector. At best, the subsequent success may be described as restricted. Abenomics has thus significantly lost the chance to utilize the EPA's strong and targeted climate-related EPs for a green transformation in the direction of

a low-carbon economy based on self-sufficient renewable energy sources.

6.5.2. The Suga Administration (October 2020-September 2021)

Yoshihide Suga became prime minister in September 2020 following the stepping down of Abe. As Suga had promised to continue the policies of his predecessor, many expected that his climate and energy policy would follow the principle of Abenomics. Contrary to this expectation and his promise, Suga administration proposed ambitious NDC and green growth schemes. Suga's first address to parliament came as a big surprise as he proposed that Japan would achieve net-zero carbon emissions by 2050 (Harding 2021).⁵⁸ Suga affirmed the goal of achieving net-zero emissions would not impede economic growth but rather be essential for changing the industrial structure and fostering strong growth

Suga also declared on his first day in office that he was determined to eliminate bureaucratic sectionalism and build a cabinet that serves the needs of the people, while noting previous ministerial impasse. The balance of power that METI once held under the previous Suga administration weakened despite the fact that METI Minister Kajiyama and Minister of the Environment Koizumi Shinjiro kept their positions as a result of the cabinet reshuffle (Siripala 2020).

The Diet proclaimed a "climate emergency" in November 2020 as part of a symbolic resolution that attempted to put more pressure on policymakers to take measures to address global warming. "Climate problem" was the first thing MOE Minister Koizumi addressed after the Cabinet members. He directly disputes criticisms of the METI's status quo-oriented policies by

⁵⁸ During the parliament address, he declared "aggressive measures to tackle climate change can transform our industrial structure. We need to change our way of thinking to see cutting carbon emissions as a big source of growth."

emphasizing that the MOE and the METI "are not enemies" (Koppenborg & Hanssen 2021). With the designation of a climate emergency by the Japanese Diet, many lawmakers are likely to embrace the framing of the climate issue in 2021. The MOE and its minister, as well as the nonpartisan group of MPs supporting the Diet of Japan's declaration of a climate emergency, all supported this securitization framework.⁵⁹ The power imbalance between METI and MOE was lessened, which opened the door for a change in Japan's national energy strategy. The following are significant policy changes made during the Suga administration.

First, on December 25, 2020, the Cabinet approved the green growth strategy, an industrial strategy designed to create a positive feedback loop between environmental protection and economic growth in collaboration with the business community. It includes fourteen growth sector action plans as well as five cross-sectoral policy tools. The strategy anticipates a 90 trillion dollar economic benefit by 2030 and a 190 trillion dollar gain by 2050. It also plans to create a significant number of jobs (METI 2020). The Diet passed a revision to the Act on Promotion of Global Warming Countermeasures in May 2021 in accordance with this bold approach; this change gives the initiative a legal foundation and guarantees its continuity. In order to promote decarbonization in corporate management, the revision aims to: i) establish an accreditation system to recognize companies that use locally available renewable resources to contribute to decarbonization; and ii) encourage digitalization and open data regarding companies' GHG emissions information. The Ministry of the Environment considers the full-scale implementation of this tax to be vital for reforming the industry in such a way

⁵⁹ In terms of NGOs and cities, the Japan Climate Initiative, the Kiko Network, and a number of cities approved wording about climate securitization before the MOE in 2020 and the Diet of Japan in 2021. By October 2020, 40 local governments in Japan had declared a climate emergency (Climate Emergency Declaration Campaign, 2020).

as to permit the reduction of CO₂ emissions, hence discussions at the expert level are being undertaken to facilitate the approval of legislation on carbon tax. (European Parliament 2020; Ministry of Foreign Affairs of Japan 2020). Also, Suga revised the former coal plant export policy, making it difficult to export coal power plants without appropriate carbon capture, utilization and storage (CCUS) technology (Nikkei Asia 2021).

Second, an appropriate financial plan for the green growth strategy followed. Suga promised a \$2 trillion fund in December 2020, granting the highest-ever tax credit of up to 10%, to encourage ecological firms and innovation to reach the 2050 goal. The Green Innovation Fund was established by the government in March 2021 and is managed by the NEDO (New Energy and Industrial Technology Development Organization) organization. Additionally, the government anticipates encouraging up to \$15 trillion worth of investment and R&D from the private sector. The Japanese green bond market, which is growing and reached 824 billion in 2019—24 times its size from five years earlier—could provide some of these resources. The 60 trillion yen (US\$1.2 trillion) corporate bond market in Japan may eventually include 20% of green bonds and other ESG assets (METI 2021).

Third, Suga administration set more ambitious NDC than his predecessor. Suga announced a new 2030 GHG emissions reduction target, revising Tokyo's target from a 26 percent GHG reduction below 2013 levels to a 46 percent reduction by 2030, and pledging to keep working toward a 50 percent reduction in April 2021, during the virtual climate summit of 40 world leaders convened by the US President, Joe Biden. Japanese CEOs frequently lose patience with prime ministers who meddle in business choices and have the power to obstruct them politically. When it came to climate change, the former prime minister Abe was reticent to speak out until he first met with business executives (Bartlett 2021). Suga did, nonetheless, set a lofty

objective during the summit discussions.

Lastly, the Suga administration unveiled a new energy mix for 2030 that includes additional renewables, nuclear power that will remain, ammonia, and hydrogen. Renewable energy gained significant significance under Suga's direction and would make up 50% to 60% of Japan's energy mix in 2050. (METI 2021). In order to increase its use of renewable energy, Japan plans to install 10 GW of offshore wind capacity by 2030 and 35 GW to 45 GW by 2040. As a result of the strategy's recognition that it would be impractical to meet all of the world's electricity needs through renewable sources alone, along with the increased importance of renewable energy, a portion of the energy mix—between 30 and 40 percent—was planned to come from nuclear power and thermal power plants with CCUS technology. (European Parliament 2021).

In sum, separating from its predecessor, the Suga administration proposed ambitious green energy policies to tackle climate change. Although some criticized that his green strategy failed to specify concrete measures to achieve the goal, compared to the former administration, it was big progress from 'climate policy to support economic growth' to 'climate policy to transform industrial structure for robust economic growth'. It is undoubted that the weakened tension between METI and MOE and the support from Japanese NGOs and local governments paved the way for a transformation of Japan's national energy policy.

6.5.3. The Kishida Administration (October 2021-present)

Fumio Kishida was allegedly elected as PM because of the influence of *Keidanren*.⁶⁰ As a former policy chief of the LDP, Kishida had close tie with

⁶⁰ In contrast to other more charismatic contenders, Kishida's meeting with the *Keidanren*

Keidanren. Therefore, it is no surprise that Kishida places Japan's business interests at the forefront of climate policy (Bartlett 2021). His policy principle of "new capitalism" resembles traditional redistributive economics as it puts a strong emphasis on wage growth and tax policy (World Economic Forum 2022).

As soon as the election results were confirmed, Kishida participated in the COP 26 UN conference on climate change to advertise Japanese energy technology and announced that Japanese government would strengthen the partnership with Japanese private sector in promoting 'net-zero'. The PM mentioned the technological prowess of Japanese businesses in creating mechanisms to transition from current thermal power sources to renewable sources with zero emissions. He suggested that in order to create green energy opportunities in the Asian region, the government wants to work cooperatively with major businesses and *sogo shosha* (general trading enterprises). As part of a partnership with the Asian Development Bank and other organizations to help the decarbonization of Asia and beyond, Kishida stated that the government would fund "an innovative finance facility for climate" (Ministry of Foreign Affairs of Japan 2021). The Asia Energy Transition Initiative will use cleaner fuel alternatives including ammonia and hydrogen in projects worth \$100 million, he added. Kishida took cautious, nevertheless, to avoid making statements that the business lobby would see as being overly ambitious (Bechtel 2021). Kishida administration have adopted several legislations, which aims to achieve carbon neutrality by the end of 2050. Key attributes of the legislation are as follows.

First, Kishida made the decision to continue relying on fossil fuels. Japan was

chairman was what ultimately led to his election as LDP leader. The business group, which is presently led by Tokura Masakazu from Sumitomo, acknowledges that Kishida's objectives, which are centered on the idea of "a new capitalism," are consistent with their own strategy (Bartlett 2021).

not one of the 46 nations that vowed to phase out coal by the 2040s at the COP26 in Glasgow. Japan, which currently generates roughly 30% of its energy from coal, has no set deadline for reducing this to less than 20% by 2030. In a similar vein, Japanese automakers like Toyota were not represented on the list of automakers who signed a Glasgow statement pledging to stop making fossil-fuel vehicles globally by the year 2040. The 6th Strategic Energy Plan, which was approved by the Kishida administration in October 2021, also demonstrates Japan's continued reliance on coal-fired thermal power generation. The proposal makes it clear that Japan would continue to utilize coal even after 2030 and describes it as "an important energy source that excels in terms of stability and economics" (METI 2021).

Second, A new clean energy policy was developed in January 2022 by PM Kishida and his cabinet as a means of achieving carbon neutrality by the year 2050. 1) Increasing nuclear power is one of the strategy's main policies. 2) Ammonia and hydrogen as emission-free energy sources. One of the primary issues for the METI in achieving its objective is nuclear power. The Kishida administration plans to push next-generation nuclear technology, such as nuclear fusion and small modular reactors (SMR), both of which have been easily created in the United States with assistance from Japanese manufacturers (The Asahi Shimbun 2022). The new approach also aims to alter people's consumption patterns and lifestyles while utilizing hydrogen and ammonia as zero-emission energy sources and strengthening power grids to facilitate the transfer of large volumes of renewable energy. Keidanren, which opposed the Suga administration's rapid switch to renewable energy, publicly supports Kishida's revised energy policy, stating that it will still be challenging to totally replace this with renewable energy (Keidanren 2022). Third, on April 2022, the "Green Transformation (GX)" proposal from *Keidanren*, which aims to attain carbon neutrality by 2050, was recently

released. A "smooth" transition to the social implementation of technology is essential for the GX (Nagai 2022). The business association identifies four crucial factors: industrial competitiveness, innovation, transformation, and investment. Then, it requests that the government release the "GX Policy Package," also known as a grand design. As a result of Keidanren's request, METI created a GX Subcommittee under the Industrial Structure Council and began holding joint meetings with the Advisory Committee for Natural Resources and Energy to discuss the issuance of a clean energy plan. The plan outlines the measures to be implemented, including the "3E+S" policy that the Abe administration adopted, the aggressive promotion of nuclear power, and the development of novel technology particularly on the side of energy demand.

In conclusion, Kishida's energy and climate policies might be seen as a return to the Abe administration's energy policies. Nuclear hawks led by Kishida are threatening Suga's campaign for renewable energy. The MOE has demanded the full implementation of taxation reform for the carbon pricing scheme, which aims to lower greenhouse gas emissions by enterprises, by fiscal 2022. However, the METI and the electric power sector are hesitant to make the change.

Table 6.2 provides the dominant actors and the implementation. In summary, Japan's implementation of energy and climate commitments under EPA has undergone political implementation, where, with low ambiguity, implementation outcomes are decided by the power of one actor or a coalition of actors (Matland 1995). The METI and MOE have clearly defined goals that are difficult to be compromised. Depending on the bureaucratic power is inclined to which ministry, Japan's implementation has swayed between a pro-industry stance and a pro-environment stance.

Table 6.2. The chronology of political implementation

Administration	Dominant Actors	Implementation
Abe administration	METI <i>Keidanren</i>	<ul style="list-style-type: none"> • High dependence on nuclear power • Limited renewable sources • Underwhelming NDC • Coal plant export policy
Suga administration	MOE Diet NGOs	<ul style="list-style-type: none"> • Suga’s declaration of the plan for achieving ‘net-zero’ by 2050 • Climate emergency declared • Green Growth Strategy and financial plan • Legislation for carbon tax • Energy mix with more renewables • Ambitious NDC
Kishida administration	<i>Keidanren</i> METI	<ul style="list-style-type: none"> • 6th Strategic Energy Plan with more nuclear power and remained fossil fuels portion in the energy mix • Close partnership with <i>Keidanren</i> • Green Transformation (GX): a smooth shift to the social implementation of technology

6.6. Conclusion

This chapter focuses on the EU-Japan EPA and how Japan implemented the energy and climate-related provisions in the EPA. Japan has long pursued a leading role and had a lot of experience in related energy and climate policies. The EU also stated trade and environmental links in EU law, and therefore shared perceptions of the two created learning mechanisms in linking trade and the environment, leading to incorporating strong and specific EPs on climate and energy policy in the EPA while including dispute settlement mechanism that limited to environmental chapter.

Although the domestic implementation process of the provisions does not

deviate from the basic principle of the EPA, it has been swinging between pro-business and pro-environment policy according to bureaucratic politics. This is because the METI has more power and resources in making Japan's energy policy, and the close relationship between the METI and Keidanren sways influences the energy policy-making process due to Japan's unique bottom-up decision-making process.

As a result, the Abe administration missed the opportunity to take advantage of the EPA as a tool for transforming the Japanese industry structure. Although the Suga administration pursued a great shift to a renewable and carbon-neutral society, Keidanren's backlash makes it difficult to establish concrete measures to achieve the goal. As the power goes to nuclear hawks and Keidanren under the Kishida administration, Japan's energy and climate policy returned to Abe's area.

The EPA is one reason that makes domestic conflict remain. The EPA includes strong obligations and specific measures for implementation, while it lacks a trade retaliation mechanism that the parties can utilize in order to secure effective compliance of the counterpart with EPs. This gives more leeway to Japan of choosing an optimal policy and implementation of them, as long as the policies do not clearly deviate from the provision of the EPA.

In conclusion, Japan's implementation of energy and climate commitments under EPA has undergone political implementation, where, with low ambiguity, single actor or a group of actors can have a significant impact on the outcome of implementation. A successful political implementation is dependent on either having enough influence or resources to persuade the other parties to reach an agreement on the means, since some of those involved may disagree with the policy aims. (Matland 1980). However, in Japan's climate and energy policy making, the METI has far more power and resources than the MOE has. Also, EU-Japan EPA failed to play a role as an

effective compliance mechanism, as the KORUS FTA does in implementing anti-IUU fishing norms. As a result, Japan's climate and energy policy tend to gravitate toward the preference of the METI and the major industries.

Chapter 7. General Discussion

Countries are increasingly turning to free trade agreements (FTAs) between smaller groups of states as trade negotiations under the World Trade Organization appear to be permanently stuck. Trade agreements often include environmental elements, some of which require the parties to implement new domestic environmental legislation and utilize trade agreements' enforcement mechanisms as weapons for environmental protection. Why and how do countries adopt EPs in FTAs and implement them domestically?

To answer this question, this dissertation explored mechanisms that drive incorporating EPs in FTAs and the role of FTAs in diffusing and implementing multilateral environmental norms into domestic policy chains. Specifically, assuming that the types of linkage vary depending on how countries perceive the linkage between trade and the environment and that as a result, it affects the degree of legalization of EPs in the FTA, this study examined how it affects domestic enforcement. This dissertation has further helped to better understand how, why, and with what implications countries pursue environmental objectives by linking them to their trade agreements. Before discussing theoretical contribution and policy implications, I summarize key findings and core arguments.

7.1. Summary of the Findings

1. How do countries link trade and environmental issues in their FTAs?

In Chapter 2, I used the dataset of 412 FTAs for EPs to trace the evolution of trade-environment linkages. This analysis illuminated a strong trend toward

more prescriptive and far-reaching EPs over time. I demonstrated how EPs in FTAs have evolved with three distinctive features.

First, countries increasingly link more specific environmental issues to trade. With the increasing number of MEA-related provisions and specific environmental issues, more and more FTAs have regulations on endangered species, outpatient invasive species, migrant animals, protected areas, genetic resources, biosafety, and genetically modified organisms. Although climate change is explicitly mentioned in a small number of FTAs, energy-related regulations are frequently incorporated in FTAs. These trends reflect that countries become active in pursuing mutual support and rebalance of sustainability goals related to trade and the environment through FTAs.

Second, despite the overall growing number of FTAs incorporating EPs, the number of EPs related to the enforcement of domestic measures, public participation, and dispute settlement mechanism has slowly increased. This implies that some countries are still reluctant to incorporate substantive EPs which impose the responsibility for implementing the EPs, as adoption of these provisions possibly involves implementation costs, such as the revision or enactment of related domestic laws.

Third, in terms of comparison between major countries, the U.S. on average has more EPs per FTA than do other major players in the global trade regime, such as the EU, Japan, and China. The number of EPs in EU's FTAs varies. Among East Asian countries, South Korea includes many EPs per FTA, while Japan and China tend to be reluctant to incorporate EPs in their FTAs.

2. Why do countries link trade and environmental issues in their trade agreements?

Chapter 4 looked at the linkage politics to better understand why countries might choose to link environmental issues to their trade agreements by

including EPs. One of the key findings is that consensual knowledge between countries has the biggest impact on the level of obligation while market competition is the most influential on the level of precision and delegation. Taken together, consensual knowledge plays a crucial role when countries decide the degree of harmonization of the two different institutions—trade and the environment. However, in terms of the decision of how to implement the commitments and secure effective compliance, consideration of commercial benefit is important. This implies that when countries can enjoy economic benefits from the linkage, countries are willing to make EPs more credible by increasing the compliance costs. This result also gives an understanding of why MEAs are not effectively implemented. In the bilateral setting, countries can incorporate more detailed interests that they cannot in the multilateral setting. This may give countries more incentives to comply with the commitments.

Second, market competition has a strong and consistent impact on trade-environment linkage. This implies that market competition is the most influential factor that leads countries to willingly accept strong trade-environment linkage during trade negotiations. My analysis challenges the conventional view of conflicting trade-environment relationships. This implies that international trade can facilitate a “race-to-the-top” effect by inducing countries to accept stringent environmental protection policies in exchange for economic benefits.

Finally, emulation is found to be lower the level of obligation. Norm diffusion theories argue that emulation is one of the major drive for diffusion international norm across the borders, but my analysis reveals that a copying of the front-runners model is not likely diffuse substantive commitments that cannot guarantee effective compliance of international agreements. However, it might be too ambitious that emulation does not have any impacts on the

trade-environment linkage. This might be because it is relatively rare that environmentally conscious weaker country induces the linkage. In other words, the result might be because of the small number of observations.

3. Can trade agreements enhance the implementation of EPs?

Chapter 5 and Chapter 6, explored various implications of environmental linkages. Looking through the lens of KORUS FTA and Japan-EU EPA, I argue that trade agreements enhance the effectiveness of MEAs. Specifically, I demonstrate that highly legalized trade agreements can enhance MEA effectiveness by reducing the ambiguity of MEA implementation and by strengthening MEA compliance mechanisms.

Through a detailed process-tracing analysis, I demonstrate how the two key environmental norms—anti-IUU fishing norms and climate change policy—have been internalized through incorporation into domestic policy and practice. The case study of KORUS FTA confirms the highly legalized EPs in FTAs guaranteed effective compliance and facilitate the diffusion and implementation of environmental norms in Korea. Highly obligatory, precise, and delegatory international agreements can play a role in reducing conflict between domestic actors by enhancing the knowledge of the linkage and giving normative legitimacy to implement the commitment. From this, it was confirmed that the FTA's EPs can raise the level of domestic environmental protection and play an important role in the spread of multilateral environmental norms. In other words, the strong sanction mechanism and specific and regular cooperative mechanisms included in the FTA can play a role in supplementing the enforcement mechanisms lacking in multilateral environmental norms.

In contrast, EU-Japan EPA is one reason that makes domestic conflict remains. The EPA includes strong obligations and specific measures for

implementation, while it lacks a trade retaliation mechanism that the parties can utilize in order to secure effective compliance of the counterpart with EPs. Thus, the EPA failed to play a role as an effective compliance mechanism, as the KORUS FTA does. As a result, Japan's climate and energy policy tend to gravitate toward the preference of a powerful coalition.

7.2. Contribution and Limitation

7.2.1. Theoretical Contribution

The contributions of this study are as follows.

First, this dissertation contributes to the further understanding of issue-linkage theory. Combining norm diffusion theory and issue-linkage mechanism, this study specifies linkage mechanisms into four categories. Also, in contrast to conventional explanations that do not identify specific outcomes for measurement, my quantitative approach has offered a more fine-tuned operationalization of the varying degree of linkage outcomes. By doing so, this study contributes to a better understanding of why seemingly conflicting issues are linked and how the outcomes occur.

Second, this study also contributes to Matland's ambiguity-conflict model by analyzing the implementation of international agreements. In contrast to the previous studies that explored domestic policies, this study demonstrated that the ambiguity of international agreements also serves as a source of policy ambiguity.

Third, in contrast to the previous studies, this dissertation measures the strength of EPs along the concepts that international relations theory presents—obligation, precision, and delegation. By looking at the EPs in

various dimensions, this study tries to overcome the limitation of previous studies that measure the strength of the EPs with simple categorization, such as the total number of EPs or whether the dispute resolution measures are included.

Finally, this dissertation offers an innovative analytical and methodological approach to the diffusion of environmental norms and policies, by combining international negotiation explanation and domestic implementation. The argument in this dissertation is ingrained in norm diffusion and issue linkage theory as well as in more general literature on global/domestic environmental politics. My linking mechanism's many components and its result are not particularly original. However, the originality in this case is that a skillful combination of crucial analytical elements allowed me to take into account the varied impact of causal factors on the various EPs in FTAs dimensions. Also, competition for the export market is a new, important addition to environment norm diffusion and implementation. This has demonstrated that strategic considerations drive the linkage of trade and environmental clauses. By using the findings reported in this research, we can better understand when great powers compel their trading partners to adhere to political, social, and environmental standards and when they choose not to

7.2.2. Policy Implication

This study also has policy implications.

First, trade agreements can promote diffusing environmental norms by enhancing the compliance effectiveness of MEAs. Looking through the two case studies, I found that when very carefully designed, trade agreements can serve as powerful tools to pursue environmental objectives. Not only do many FTAs already incorporate provisions that require implementation of MEAs,

but also in the last decade, they have begun to link compliance with those MEA-relevant provisions to trade agreement's full dispute resolution mechanism. In complementing MEA's historically managerial mechanisms with FTA's more legalistic ones, FTA can strengthen MEA compliance capacity.

Second, policymakers can utilize international agreements as a tool to catalyze domestic implementation. In particular, when conflict over the policy goals exists, a clearly defined international agreement with a strong compliance mechanism may reduce the conflict. The specific and regular cooperation mechanisms in FTAs can play a role in enhancing the knowledge of domestic actors. Also, its strong sanction mechanism may contribute to converging the policy goals of domestic actors, and lower the level of conflicts.

Third, countries need to develop baseline EPs for FTAs that are secured through domestic legislation to ensure environmental priorities are maintained over time. More and more countries are experiencing that the FTA is an effective enforcement mechanism. For example, in order to effectively enforce the FTA with the United States, Peru established the Ministry of Environment, which previously integrated functions related to environmental protection divided in various ministries (Jinnah and Lindsay 2016). Currently, the US is the only country to invoke the general dispute settlement mechanism to suspend benefits with the excuse of the non-compliance with EPs. However, looking at the Korea-EU labor dispute, which had undergone expert panel procedures until recently, the EU can also turn to sanction-based enforcement from the current position of emphasizing the enforcement of environmental regulations through cooperation and coordination.

7.2.3. Limitation

This study does have potential limitations.

First, there may exist a question about the appropriateness of the measurement of knowledge. I measure the main explanatory variables by using the ‘climate change threat perception’ of Gallup and Lloyd’s. However, the data are only available for two years. Therefore, the data do not exactly represent the periods of analysis from 1995 to 2021, although the average environmental perception of a country does not change frequently. Also, climate change perception may not appropriately reflect the perception of overall environmental issues. This may lead to biased estimation results. Despite this weakness, this study has no choice but to use this data because the Gallup data is the best available data that includes the environmental perception of more than 145 countries. The other data that gauge environmental awareness/knowledge only includes a limited number of countries. Also, I tried to use the EPI index as a proxy of environmental knowledge, the correlation of the two measurements is low ($\text{Corr} = 0.32$), which was found to be not appropriate to measure environmental knowledge of a country. If future research with multiple-year data on environmental perception, I believe I could see more accurate estimation results.

Second, there may exist a question about the appropriateness of the coding of legalization. To minimize random coding error, I performed a crosscheck with a dataset covering similar variables. Referring to Morin, J. F., Dür, A, & Lechner, L. (2018), 18 environmental protection dimensions were cross-checked, and the average Cohen-Kappa was 0.64 as a result (range: 0.44 to 0.88), which is recognized as substantive agreement. In this manner, I tried to minimize random coding mistakes were minimized and the reliability was maximized. However, there remains a question about the coding of

legalization along the three dimensions of obligation, precision, and delegation. Because this study is novel in that it gauges the strength of EPs according to the three dimensions, no other previous studies to perform crosschecking exist. There is no choice but to justify my coding based on a theory of legalization. This can be complimented by future studies.

Third, I caution that evidence is lacking regarding the domestic implementation of EPs because I only analyzed a small number of cases due to data availability. In addition, Korea and Japan's enacting the MEA-relevant domestic laws and regulations was influenced by not only FTAs but also other factors in the implementation process. However, for the purpose of this study, many others factors are excluded. This can be supplemented through follow-up studies.

7.3. Conclusion

Although a part of countries is still reluctant to link trade and environmental issues, these actions are unlikely to weaken environmental protection through trade agreements. For example, although the US has withdrawn from the TPP, the TPP and its environmental agenda continued without the US under another name, and the renegotiated NAFTA has actually resulted in some stronger EPs (Laurens et al. 2019). Also, the scope and the depth of EPs in FTA are getting innovative. Analysis and findings of this dissertation point to that, when very carefully designed trade agreements, can serve as powerful tools to pursue environmental objectives. This is partly because trade agreements have a stronger mechanism for enforcement such as dispute settlement, and are better positioned to secure adequate funds for implementation. In addition, FTAs can bring together like-minded countries,

can use linkage to advance negotiation objectives, and can facilitate regulatory innovation. Further linking trade and environmental policies make sense. This is not only because of the inevitable connection between global economic growth, including through international trade, and increased environmental degradation, but also because of the potential for international trade to enhance environmental protection through, for example, reducing barriers to trade in environmental goods and services. It is not that trade agreements are a panacea for environmental problems, but we recognize that unsustainable consumption patterns are antithetical to solving environmental problems at all. Therefore, when considering the socio-economic system within which we currently operate, trade agreements can and should be considered as part of a multifaceted response to environmental problems.

Bibliography

- Abbott, K. W., & Snidal, D. (1998). Why states act through formal international organizations. *Journal of conflict resolution*, 42(1), 3-32.
- Abbott, K. W., & Snidal, D. (2000). Hard and soft law in international governance. *International organization*, 54(3), 421-456.
- Abbott, K. W., Keohane, R. O., Moravcsik, A., Slaughter, A. M., & Snidal, D. (2000). The concept of legalization. *International Organization*, 54(3), 401-419.
- Adler, E., & Haas, P. M. (1992). Epistemic communities, world-order, and the creation of a reflective research-program-Conclusion. *International organization*, 46(1), 367-390.
- Aggarwal, V. K. (1998). *Institutional designs for a complex world: Bargaining, linkages, and nesting*. Ithaca, NY: Cornell University Press
- Aggarwal, V. K. (2013). U.S. free trade agreements and linkages. *International Negotiation*, 2013(18), 89-110.
- Agreement between the European Union and Japan for an Economic Partnership. (2017). https://trade.ec.europa.eu/doclib/docs/2018/august/tradoc_157228.pdf (accessed May 1, 2022).
- Anders, S. M., & Caswell, J. A. (2009). Standards as barriers versus standards as catalysts: Assessing the impact of HACCP implementation on US seafood imports. *American Journal of Agricultural Economics*, 91(2), 310-321.
- Andresen, S., & Agrawala, S. (2002). Leaders, pushers and laggards in the making of the climate regime. *Global Environmental Change*, 12(1), 41-51.
- Asaoka, M. (2015, June 2). Japan's INDC draft is neither ambitious nor fair. *Kikonetwork*. <https://www.kiconet.org/eng/press-release-en/2015-06-07/japans-indc-draft-is-neither-ambitious-nor-fair> (accessed June 22, 2022).
- Axelrod, M. (2011a). Savings clauses and the chilling effect. In S. Oberthur

and O. S. Stokke (eds.), *Managing Institutional Complexity: Regime Interplay and Global Environmental Change* (pp. 345-369). Cambridge, MA: MIT Press.

Axelrod, M. (2011b). Climate change and global fisheries management: linking issues to protect ecosystems or to save political interests?. *Global Environmental Politics*, 11(3), 64-84.

Axelrod, R., & Keohane, R. O. (1985). Achieving cooperation under anarchy: Strategies and Institutions. *World Politics*, 38(1), 226-254.

Baccini, L., & Urpelainen, J. (2014). International institutions and domestic politics: can preferential trading agreements help leaders promote economic reform?. *The Journal of Politics*, 76(1), 195-214.

Bao, X., & Qiu, L. D. (2012). How do technical barriers to trade influence trade?. *Review of International Economics*, 20(4), 691-706.

Barbieri, K. (1996). Economic interdependence: A path to peace or a source of interstate conflict?. *Journal of Peace Research*, 33(1), 29-49.

Barczak, G, Lassk, F, Mulki, J (2010). Antecedents of team creativity: An examination of team emotional intelligence, team trust and collaborative culture. *Creativity and Innovation Management*, 19, 332–345.

Barthel, F. & Neumayer, E. (2012). Competing for scarce foreign capital: Spatial dependence in the diffusion of double taxation treaties. *International Studies Quarterly*, 56(4), 645-660.

Bartlett, D. (2021, November 15). Kishida places Japan's business interests at the forefront of climate policy. *The Diplomat*. <https://thediplomat.com/2021/11/kishida-places-japans-business-interests-at-the-forefront-of-climate-policy/> (accessed May 10, 2022).

Bastiaens, I. & Postnikov, E. (2017). Greening up: The effects of environmental standards in EU and US trade agreements. *Environmental Politics*, 26(5), 847- 869.

Bättig, M. B., & Bernauer, T. (2009). National institutions and global public goods: are democracies more cooperative in climate change policy?. *International organization*, 63(2), 281-308.

Bechtel, M. M., & Tosun, J. (2009). Changing economic openness for

- environmental policy convergence: When can bilateral trade agreements induce convergence of environmental regulation?. *International Studies Quarterly*, 53(4), 931-953.
- Bechtel, M. M., Bernauer, T. & Meyer, R. (2012). The green side of protectionism: Environmental concerns and three facets of trade policy preferences. *Review of International Political Economy*, 19(5), 837-866.
- Benini, R., & Plummer, M. G. (2008). Regionalism and multilateralism: crucial issues in the debate on RTAs. *Economic Change and Restructuring*, 41(4), 267-287.
- Bennett, G., & Ligthart, S. (2001). The implementation of international nature conservation agreements in Europe: the case of the Netherlands. *European Environment*, 11(3), 140-150.
- Berliner, D., & Prakash, A. (2012). From norms to programs: The United Nations global compact and global governance. *Regulation & Governance*, 6(2), 149-166.
- Bernauer, T. & Nguyen, Q. (2015). Free Trade And/Or Environmental Protection?. *Global Environmental Politics*, 15(4), 105–129.
- Bhagwati, J. (2000). On thinking clearly about the Linkage between trade and the environment. *Environment and Development Economics*, 5(4), 485–496.
- Bhagwati, J. (2003). *Free trade today*. Princeton, NJ: Princeton University Press.
- Bhagwati, J. (2008). *Termites in the trading system: How preferential agreements undermine free trade*. Oxford, UK: Oxford University Press.
- Blümer, D., Morin, J. F., Brandi, C., & Berger, A. (2020). Environmental provisions in trade agreements: defending regulatory space or pursuing offensive interests?. *Environmental Politics*, 29(5), 866-889.
- Braun, D., & Gilardi, F. (2006). Taking ‘Galton's problem’ seriously: Towards a theory of policy diffusion. *Journal of theoretical politics*, 18(3), 298-322.
- Cao, X. (2010). Networks as channels of policy diffusion: Explaining worldwide changes in capital taxation, 1998–2006. *International Studies Quarterly*, 54(3), 823-854.

- Choi, J., & Contractor, F. J. (2016). Choosing an appropriate alliance governance mode: The role of institutional, cultural and geographical distance in international research & development (R&D) collaborations. *Journal of International Business Studies*, 47(2), 210-232.
- Colyer, D. (2012). *Environmental provisions in free trade agreements*. [Conference presentation]. West Virginia University, Department of Agricultural Resources Economics. West Virginia University, United States.
<https://ageconsearch.umn.edu/record/123723/files/ENVIRONMENTAL%20PROVISIONS%20IN%20FREE%20TRADE%20AGREEMENTS.pdf>
- Conca, K. (2000). The WTO and the undermining of global environmental governance. *Review of international political economy*, 7(3), 484-494.
- Copeland, B. R., & Taylor, M. S. (2004). Trade, growth, and the environment. *Journal of Economic literature*, 42(1), 7-71.
- Crivelli, P., & Gröschl, J. (2016). The impact of sanitary and phytosanitary measures on market entry and trade flows. *The World Economy*, 39(3), 444-473.
- Cropper, M. & Griffiths, C. (1994). The interaction of population growth and environmental quality. *The American Economic Review*, 84(2), 250-254.
- Cuyvers, L. (2014). The sustainable development clauses in free trade agreements of the EU with Asian countries: Perspectives for ASEAN? *Journal of Contemporary European Studies*, 22(4), 427-449.
- Dasgupta, S., Mody, A., Roy, S., & Wheeler, D. (2001). Environmental regulation and development: A cross-country empirical analysis. *Oxford development studies*, 29(2), 173-187.
- Davis, C. L. (2004). International institutions and issue linkage: Building support for agricultural trade liberalization. *American Political Science Review*, 98(1), 153- 169.
- De Bièvre, D., Espa, I., & Poletti, A. (2017). No iceberg in sight: on the absence of WTO disputes challenging fossil fuel subsidies. *International Environmental Agreements: Politics, Law and Economics*, 17(3), 411-425.
- Deere, C. L., & Esty, D. C. (2002). Trade and the environment in the Americas:

- Overview of key issues. In C. L. Deere and D.C. Esty (eds.), *Greening the Americas: NAFTA's lessons for hemispheric trade* (pp. 1-27). Cambridge, MA MIT Press.
- DeSombre, E. R., & Barkin, J. S. (2002). Turtles and trade: The WTO's acceptance of environmental trade restrictions. *Global Environmental Politics*, 2(1), 12-18.
- DiMaggio, P. J., & Powell, W. W. (1983). The iron cage revisited: Institutional isomorphism and collective rationality in organizational fields. *American sociological review*, 147-160.
- Distant Waters Fisheries Development Act of South Korea. (2022). <https://www.law.go.kr/%EB%B2%95%EB%A0%B9%EC%9B%90%EC%96%91%EC%82%B0%EC%97%85%EB%B0%9C%EC%A0%84%EB%B2%95> [in Korean].
- Dobbin, F., Simmons, B., & Garrett, G. (2007). The global diffusion of public policies: Social construction, coercion, competition, or learning? *Annual Review of Sociology*, 33, 449-472.
- Douma, W. T. (2017). The promotion of sustainable development through EU trade instruments. *European Business Law Review*, 28(2), 197-216.
- Drezner, D. (2005, September). *Gauging the power of global civil society: Intellectual property and public health*. [Conference presentation]. Annual Meeting of the American Political Science Association, Washington D.C., United States. <http://www.danieldrezner.com/research/gauginggcs.pdf>
- Drezner, D. W. (2005). Globalization, harmonization, and competition: The different pathways to policy convergence. *Journal of European Public Policy*, 12(5), 841– 859.
- Droge, S. and Schenuit, F. (2018). *Mobilising EU trade policy for raising environmental standards: The Example of Climate Action*. Berlin: Stiftung Wissenschaft und Politik.
- Dür, A., Baccini, L.& Elsig, M. (2014). The design of international trade agreements: Introducing a new dataset. *Review of International Organizations*, 9(3), 353-375.
- Durán, G. M. and Morgera, E. (2012). *Environmental integration in the EU's external relations: Beyond multilateral dimensions*. London:

Bloomsbury Publishing.

Ebuchi, T. (2021, June 18). For Japan, kicking the coal habit will be no easy task. *Nikkei Asia*. <https://asia.nikkei.com/Business/Energy/For-Japan-kicking-the-coal-habit-will-be-no-easy-task>

Eckersley, R. (2004). The big chill: The WTO and multilateral environmental agreements. *Global Environmental Politics*, 4(2), 24-50.

Elkins, Z., & Simmons, B. (2005). On waves, clusters, and diffusion: A conceptual framework. *The Annals of the American Academy of Political and Social Science*, 598(1), 33-51.

Elkins, Z., Guzman, A. T., & Simmons, B. A. (2006). Competing for capital: The diffusion of bilateral investment treaties, 1960–2000. *International Organization*, 60(4), 811-846.

Enforcement Decree of the Distant Water Fisheries Development Act of South Korea. (2022). <https://www.law.go.kr/%EB%B2%95%EB%A0%B9%EC%9B%90%EC%96%91%EC%82%B0%EC%97%85%EB%B0%9C%EC%A0%84%EB%B2%95%EC%8B%9C%ED%96%89%EB%A0%B9> (accessed May 10, 2022). [in Korean]

Environment Agency. (1995). *Harmonizing environment and trade policies*. Ministry of the Environment Government of Japan. <https://www.env.go.jp/en/earth/iec/hetp/ch1.html> (accessed May 10, 2022).

Espa, I. & Marín, D. G. (2018). Renewable energy subsidies and WTO Law: Time to rethink the case for reform beyond Canada–Renewable Energy/FIT Program. *Journal of International Economic Law*, 21(3), 621-653.

Esty, D. C. (1994). *Greening the GATT: Trade, environment, and the future*. Washington, DC: Institute for International Economics.

Esty, D. C. (2002). The world trade organization's legitimacy crisis. *World Trade Review*, 1(1), 7-22.

European Commission. (2001, May 16). Commission proposes bold EU strategy for sustainable development. *European Commission Press Release*. http://europa.eu/rapid/press-release_IP-01-710_en.htm (accessed May 1, 2022).

- European Commission. (2017). *Trade and Sustainable Development (TSD) chapters in EU Free Trade Agreements (FTAs)*. EU Parliament Research Service.
https://trade.ec.europa.eu/doclib/docs/2017/july/tradoc_155686.pdf
(accessed May 1, 2022).
- European Parliament. (2021). *Japan's 2050 Goal: A Carbon-neutral Society*. EU Parliament Research Service.
[https://www.europarl.europa.eu/thinktank/en/document/EPRS_BRI\(2021\)698023](https://www.europarl.europa.eu/thinktank/en/document/EPRS_BRI(2021)698023) (accessed May 1, 2022).
- Finnemore, M., & Sikkink, K. (1998). International norm dynamics and political change. *International organization*, 52(4), 887-917.
- Frankel, J. A., & Rose, A. K. (2005). Is trade good or bad for the environment? Sorting out the causality. *The Review of economics and statistics*, 87(1), 85-91.
- Free Trade Agreement between the United States of America and the Republic of Korea (2019). <https://ustr.gov/trade-agreements/free-trade-agreements/korus-fta/final-text> (accessed June 1, 2020).
- Gakou-Kakeu, J., Di Gregorio, M., Paavola, J., & Sonwa, D. J. (2022). REDD+ policy implementation and institutional interplay: Evidence from three pilot projects in Cameroon. *Forest Policy and Economics*, 135, 102-642.
- Gallagher, K. (2004). *Free trade and the environment: Mexico NAFTA, and Beyond*. CA: Stanford University Press.
- Garcia, M., & Masselot, A. (2015). EU-Asia free trade agreements as tools for social norm/legislation transfer. *Asia Europe Journal*, 13(3), 241-252.
- Gasser, L. (1998). *The implementation and effectiveness of international environmental commitments: theory and practice*. Cambridge MA: MIT Press.
- George, C. (2014a). *Development in regional trade agreements and the environment: 2013 Update*. Paris: OECD Publishing.
- George, C. (2014b). *Environment and regional trade agreements: Emerging trends and policy divers*. Paris: OECD Publishing.

- Gilardi, F. (2012). Transnational diffusion: Norms, ideas, and policies. *Handbook of International Relations*, 2, 453-477.
- Graham, E. R., Shipan, C. R., & Volden, C. (2013). The diffusion of policy diffusion research in political science. *British Journal of Political Science*, 43(3), 673-701.
- Graham, J. (2004). Japan's regional environmental leadership. *Asian Studies Review*, 28(3), 283-302.
- Green, A. (2005). Climate change, regulatory policy and the WTO: How constraining are trade rules? *Journal of International Economic Law*, 8(1), 143-189.
- Guzman, A. T. (2002). A compliance-based theory of international law. *California Law Review*, 90(6), 1823-1887.
- Guzman, A. T. (2005). The design of international agreements. *European Journal of International Law*, 16(4), 579-612.
- H. R. 3009 - Trade Act of 2002. (2022). <https://www.congress.gov/bill/107th-congress/house-bill/3009> (accessed June 1, 2021).
- Haas, E. B. (1980). Why collaborate? Issue-linkage and international regimes. *World Politics*, 32(3), 357-405.
- Haas, P. M. (2004) Policy knowledge and epistemic communities. *International Encyclopedia of the Social & Behavioral Sciences*, 11578-11586.
- Haesebrouck, K., Van den Abbeele, A., & Williamson, M. G. (2021). Building trust through knowledge sharing: Implications for incentive system design. *Accounting, Organizations and Society*, 93(c), 101-241.
- Hafner-Burton, E. M. (2009). The power politics of regime complexity: Human rights trade conditionality in Europe. *Perspectives on Politics*, 7(1), 33-37.
- Han, J. H. & Koo, M. G. (2021). Diffusing and internalizing multilateral environmental norms through free trade agreements: The case of KORUS FTA and IUU fishing of South Korea. *Review of International and Area Studies*, 30(3), 131-165. [in Korean]
- Han, J. H. (2021). Competition and coexistence of international trade norms

- and environmental norms: Focusing on the EU carbon border adjustment mechanism. *The Review of International and Area Studies*, 30(1), 141-169. [in Korean]
- Harding, R. (2021, May 3). Japan's ambitious carbon target sparks bureaucratic panic. *The Financial Times*. <https://www.ft.com/content/90eefa81-94fd-49b7-9687-a3155b8b3ea7> (accessed May 10, 2022).
- Hashmi, R., & Alam, K. (2019). Dynamic relationship among environmental regulation, innovation, CO2 emissions, population, and economic growth in OECD countries: A panel investigation. *Journal of Cleaner Production*, 231(4), 1100-1109.
- Higgott, R. (1992). Pacific economic cooperation and Australia: Some questions about the role of knowledge and learning. *Australian International Affairs*, 46(2), 182-197.
- Hirschman, A. O. (1980). *National power and the structure of foreign trade*. California: Univ. of California Press.
- Hoekman, B. M. (1989). Determining the need for issue linkages in multilateral trade negotiations. *International Organization*, 43(4), 693-714.
- Horn, H., and Mavroidis, P. C. 2014. Multilateral environmental agreements in the WTO: Silence speaks volumes. *International Journal of Economic Theory*, 10(1), 147-166.
- Howse, B. (2002). The appellate body rulings in the shrimp/turtle case: A new legal baseline for the trade and environment debate. *Columbia Journal of Environmental Law*, 27(2), 489-519.
- Hufbauer, G. & Schott, J. (2007). *Fitting Asia-Pacific Agreements into the WTO system* [Paper presentation]. Conference on Multilateralising Regionalism Sponsored and organized by WTO-HEI Co-organized by the Centre for Economic Policy Research (CEPR). Geneva, Switzerland. https://www.wto.org/english/tratop_e/region_e/con_sep07_e/hufbauer_scott_e.pdf (accessed June 22, 2022).
- Hufbuer, G. C. (2000). *NAFTA and the environment: Seven years later*. Washington D. C.: Peterson Institute.
- Hwang, Y., Erkens, D. H., & Evans III, J. H. (2009). Knowledge sharing and

- incentive design in production environments: Theory and evidence. *The Accounting Review*, 84(4), 1145-1170.
- IEA (2014). *The way forward*. International Energy Agency. http://www.iea.org/publications/freepublications/publication/The_Way_forward.pdf. (accessed June 1, 2022).
- Incerti, T., & Lipsy, P. Y. (2018). The politics of energy and climate change in Japan under Abe: Abenergonomics. *Asian Survey*, 58(4), 607-634.
- Jänicke, M. (2005). Trend-setters in environmental policy: the character and role of pioneer countries. *European environment*, 15(2), 129-142.
- Jinnah, S. (2010). Overlap management in the World Trade Organization: Secretariat influence on trade-environment politics. *Global Environmental Politics*, 10(2), 54-79.
- Jinnah, S. (2011). Strategic linkages: The evolving role of trade agreements in global environmental governance. *The Journal of Environment & Development*, 20(2), 191-215.
- Jinnah, S. (2011a). Climate change bandwagoning: the impacts of strategic linkages on regime design, maintenance, and death. *Global Environmental Politics*, 11(3), 1-9.
- Jinnah, S. (2011b). Strategic linkages: The evolving role of trade agreements in global environmental governance. *Journal of Environment & Development*, 20(2), 191- 215.
- Jinnah, S. (2014). *Post-treaty politics: Secretariat influence in global environmental governance*. MIT Press.
- Jinnah, S. and Kennedy, J. (2011). A new era of trade-environment politics: Learning from US leadership and its consequences abroad. *Whitehead Journal of Diplomacy & International Relations*, 12(3), 95-110.
- Jinnah, S. and Lindsay, A. (2016). Diffusion through issue linkage: Environmental norms in US trade agreements. *Global Environmental Politics*, 16(3), 41-61.
- Jinnah, S. and Morgera, E. (2013). Environmental provisions in American and EU free trade agreements: A preliminary comparison and research agenda. *Review of European Comparative & International Environmental Law*, 22(3) 324-339.

- Jinnah, S. and Morin, J. F. (2020). *Greening through trade: How American trade policy is linked to environmental protection abroad*. London: MIT Press.
- Jinnah, S., & Lindsay, A. (2016). Diffusion through issue linkage: Environmental norms in US trade agreements. *Global Environmental Politics*, 16(3), 41-61.
- Johnson, T. (2015). Information revelation and structural supremacy: The World Trade Organization's incorporation of environmental policy. *The Review of International Organizations*, 10(2), 207-229.
- Johnson, T., & Urpelainen, J. (2012). A strategic theory of regime integration and separation. *International Organization*, 66(4), 645-677.
- Kay, A., & Baker, P. (2015). What can causal process tracing offer to policy studies? A review of the literature. *Policy Studies Journal*, 43(1), 1-21.
- Keidanren (2013) *A proposal for future energy policy*. Keidanren. <http://www.keidanren.or.jp/en/policy/2013/089.html> (accessed May 1, 2022).
- Keidanren (2022). *Keidanren releases proposal toward achieving CN by 2050*. Keidanren. <https://www.jaif.or.jp/en/news/5876> (accessed May 1, 2022).
- Kim, D. S. (2007). *US's new trade policy: stronger labor and environmental standards in its free trade agreements*. KOTRA. https://dream.kotra.or.kr/kotranews/cms/news/actionKotraBoardDetail.do?SITE_NO=3&MENU_ID=90&CONTENTS_NO=1&bbsSn=244&pNttSn=36353 (accessed September 13, 2021). [in Korean]
- Kim, I. S. (2017). Political cleavages within industry: Firm-level lobbying for trade liberalization. *American Political Science Review*, 111(1), 1-20.
- Kim, J. I. (2013, April 10). U.S. Designated South Korea as Illegal Fishing Country. *Chosun Ilbo*. https://biz.chosun.com/site/data/html_dir/2013/04/10/2013041002199.html (accessed September 13, 2021). [in Korean]
- Kim, J. K., & Keum, H. Y. (2011). *An analysis of environment provisions in free trade agreements and its policy implications*. Seoul: Korea Institute for International Economic Policy. [in Korean]
- Ko, K. (2018). *Categorical Data Analysis*. Seoul: Munwoosa. [in Korean]

- Koizumi, S. (2021). *Japan's transition to become a decarbonized society*. World Economic Forum. <https://www.weforum.org/agenda/2021/01/japan-climate-change-carbon-neutral-2050/> (accessed May 1, 2022).
- Koo, M. G. (2011). US approaches to the trade-security nexus in East Asia: from securitization to resecuritization. *Asian Perspective*, 35(1), 37-57.
- Koo, M. G. (2021). *Political Economy and Law of International trade: Between Free Trade Ideals and Mercantilist Bias*. Seoul: Bakyoungsa. [in Korean]
- Koo, M. G. and Kim, S. Y. (2018). East Asian way of linking the environment to trade in free trade agreements. *The Journal of Environment & Development*, 27(4), 382-414.
- Koppenborg, F., & Hanssen, U. (2021). Japan's Climate Change Discourse: Toward Climate Securitisation? *Politics and Governance*, 9(4), 53-64.
- Korea Overseas Fisheries Association. (2016). *Declining Distant Water Industry*. Korea Overseas Fisheries Association. http://www.kosfa.org/report/view.asp?pageno=1&startpage=1&num=347&list=search&search=sear_subj_cont&word=IUU [in Korean]
- Koremenos, B., Lipson, C., & Snidal, D. (2001). The rational design of international institutions. *International Organization*, 55(4), 761-799.
- Kulovesi, K. (2014). Real or imagined controversies? A climate law perspective on the growing links between the international trade and climate change regimes. *Trade, Law and Development*, 6(1), 56-92.
- Laurens, N., Dove, Z., Morin, J. F., & Jinnah, S. (2019). NAFTA 2.0: The greenest trade agreement ever?. *World Trade Review*, 18(4), 659-677.
- Lechner, L. (2016). The domestic battle over the design of non-trade issues in preferential trade agreements. *Review of International Political Economy*, 23(5), 840-871.
- Lee, C. K., Lee, J. K., Park, H., and Kang, Y. D. (2020). *New high standard for environmental and labour provisions in FTAs: Law and Economic Perspectives*. Sejong: Korea Development Institution. [in Korean]
- Lee, D. H. (2017, December 5). Fisheries ministry's failure to reform distant water fisheries law driving South Korea to illegal fishing country. *The*

- Pressian*. <https://www.pressian.com/pages/articles/178399> (accessed September 13, 2021). [in Korean]
- Lee, J. M. (2014). IUU sanction legislations and extraterritorial application of domestic law - recent U.S. and EU legislations and their legal implications. *Korean Journal of International Economic Law*, 12(3), 27-65. [in Korean]
- Lee, K. H. (2009, September 27). The US congress urges South Korea to accept new trade policy in KORUS FTA. *Donga Ilbo*. <https://www.donga.com/news/article/all/20070518/8443232/1>. (accessed September 13, 2021). [in Korean]
- Lewis, J. (2015). The Rise of Renewable Energy Protectionism. Emerging Trade Conflicts and Implication for Low Carbon Development. *Global Environmental Politics*, 14(4), 10-35.
- Limão, N. (2007). Are preferential trade agreements with non-trade objectives a stumbling block for multilateral liberalization? *The Review of Economic Studies*, 74(3), 821-855.
- Lloyd's Register Foundation. The Risk Poll (climate threat perception). <https://wrp.lrfoundation.org.uk/data-resources/a-world-of-risk-country-overviews/> (accessed in 29 July)
- Long, J. S., & Freese, J. (2006). *Regression models for categorical dependent variables using Stata* (Vol. 7). TX: Stata press.
- Markell, D. L., Knox, J. H. (2003). *Greening NAFTA: The North American Commission for environmental cooperation*. CA: Stanford University press.
- Matland, R. E. (1995). Synthesizing the implementation literature: The ambiguity-conflict model of policy implementation. *Journal of public administration research and theory*, 5(2), 145-174.
- McHugh ML (2012). Interrater reliability: the kappa statistic. *Biochem Med (Zagreb)*, 22(3), 276-282.
- McNeill, J. (2021). Exporting environmental objectives or erecting trade barriers in recent EU free trade agreements. *Australian and New Zealand Journal of European Studies*, 12(1), 40-53.
- Mercurio, B. (2014). The Trans-Pacific Partnership: Suddenly a 'game

- changer'. *The World Economy*, 37(11), 1558-1574.
- METI. (2021). *Overview of Japan's green growth strategy through achieving carbon neutrality in 2050*. Ministry of Economy, Trade, and Industry of Japan. <https://www.mofa.go.jp/files/100153688.pdf#page=10> (accessed April 20, 2022).
- Meyer, U. (2017). Explaining energy dispute at the World Trade Organization. *Institutional Environmental Agreement*, 17(3), 391-410.
- Milewicz, K., Hollway, J., Peacock, C., & Snidal, D. (2016). Beyond trade: The expanding scope of the nontrade agenda in trade agreements. *Journal of Conflict Resolution*, 62(4), 743-773.
- Miller, P., & O'leary, T. (1987). Accounting and the construction of the governable person. *Accounting, organizations and society*, 12(3), 235-265.
- Milner, H. V. (1997). *Interests, institutions, and information: Domestic politics and international relations*. Princeton, NJ: Princeton University Press.
- Milner, H. V., Mansfield, E., & Pevehouse, J. (2007). Vetoing cooperation: The impact of veto players on international trade agreements. *British Journal of Political Science*, 37(3), 403-432.
- Ministry of Fisheries (2011). *National Plan of Action to Prevent, Deter and Eliminate Illegal, Unreported and Unregulated Fishing- Republic of Korea*. Korean Ministry of Ocean and Fisheries. http://www.fao.org/fishery/docs/DOCUMENT/IPOAS/national/Korea_Rep/NPOA_IUU_Korea_RepublicOld.pdf (accessed in 29 July 2021)
- Ministry of Fisheries (2019). *The US designated South Korea as a preliminary IUU fishing country*. Korean Ministry of Ocean and Fisheries. <https://www.mof.go.kr/iframe/article/view.do?articleKey=27380&boardKey=10¤tPageNo=1> (accessed in 29 July 2021) [in Korean]
- Ministry of Fisheries. (2020). *Early termination after 4 months of designation as a prospective IUU fishing country*. Korean Ministry of Ocean and Fisheries. <https://www.mof.go.kr/iframe/article/view.do?articleKey=28655&searchSelect=title&searchValue=IUU&boardKey=10¤tPageNo=1>

(accessed in 29 July 2021) [in Korean]

- Ministry of Foreign Affairs. (2014). *Vice Foreign Minister Cho Tae-yeol calls for EU's cooperation for smooth resolve of the IUU fisheries issue*. Ministry of Foreign Affairs https://www.mofa.go.kr/www/brd/m_4080/view.do?seq=350735&srchFr=&srchTo=&srchWord=&srchTp=&multi_itm_seq=0&itm_seq_1=0&itm_seq_2=0&company_cd=&company_nm= (accessed in 29 July 2021) [in Korean]
- Monteiro, J. A. (2016). *Typology of environment-related provisions in regional trade agreements*. (WTO Working Paper ERSD-2016-13). Geneva: WTO Publishing.
- Morin, J. F. & Jinnah, S. (2018). The untapped potential of preferential trade agreements for climate governance. *Environmental Politics*, 27(3), 541-56.
- Morin, J. F. & Rochette, M. (2017). Transatlantic convergence of PTAs' environmental clauses. *Business and Politics*, 19(4), 621-65.
- Morin, J. F., & Bialais, C. (2018). *Strengthening multilateral environmental governance through bilateral trade deals*. Center for International Governance Innovation. https://www.cigionline.org/sites/default/files/documents/PB%20no.123_0.pdf (accessed in 20 July 2021)
- Morin, J. F., Dür, A., & Lechner, L. (2018). Mapping the trade and environment nexus: Insights from a new data set. *Global Environmental Politics*, 18(1), 122-139.
- Neumayer, E. (2004). The WTO and the environment: its past record is better than critics believe, but the future outlook is bleak. *Global environmental politics*, 4(3), 1-8.
- NOAA. (2019). *Improving international fisheries management-2019 reports to Congress*. NOAA Fisheries. https://media.fisheries.noaa.gov/dam-migration/improvingintlfisheriesmgmt_2019_report_final.pdf (accessed in 20 July 2021).
- OECD. (2007). *Environment and regional trade agreements*. Paris: OECD Publishing.
- OECD. (2008). *Update on environment and regional trade agreements*:

- Developments in 2007*. Paris: OECD Publishing.
- OECD. (2009a). *Environment and regional trade agreements: Developments in 2008. (OECD Trade and Environment Working Paper 2009-1)*. Paris: OECD Publishing.
- OECD. (2009b). *Declaration on green growth adopted at the meeting of the council at ministerial level on 25 June 2009*. Paris: OECD Publishing.
- OECD. (2010). *Environment and regional trade agreements: Developments in 2009. (OECD Trade and Environment Working Paper 2010-1)*. Paris: OECD Publishing.
- OECD. (2011a). *Environment and regional trade agreements: Developments in 2010. (OECD Trade and Environment Working Paper 2011-01)*. Paris: OECD Publishing.
- OECD. (2011b). *Towards green growth. OECD Green Growth Studies*. Paris: OECD Publishing.
- OECD. (2012). *Environment and regional trade agreements: Developments in 2011. (Trade and Environment Working Paper, 2012-01)*. Paris: OECD Publishing.
- OECD. (2013). *Developments in regional trade agreements and the environment: 2012 Update*. Paris: OECD Publishing.
- OECD. (2018). *Assessing implementation of environmental provisions in regional trade agreements*. Paris: OECD Publishing.
- Otsuki, T., Wilson, J. S., & Sewadeh, M. (2001). What price precaution? European harmonisation of aflatoxin regulations and African groundnut exports. *European Review of Agricultural Economics*, 28(3), 263-284.
- Ouyang, X., Shao, Q., Zhu, X., He, Q., Xiang, C., & Wei, G. (2019). Environmental regulation, economic growth and air pollution: Panel threshold analysis for OECD countries. *Science of the Total Environment*, 657, 234-241.
- Panayotou, T. (2016). Economic growth and the environment. In N. Haenn, A. Narnish, & R. Wilk (eds.), *The Environment in anthropology* (pp. 140-148). NY: New York University Press.
- Park, H. J. (2013, April 20) South Korean distant water Industry facing

- reputational risk. *Hangyorea*.
http://h21.hani.co.kr/arti/world/world_general/34348.html (accessed
 September 14, 2021). [in Korean]
- Park, J. M. (2018, December 3). How South Korea was released from the preliminary IUU fishing designation. *Hyundaihaeyang*.
<http://www.hdhy.co.kr/news/articleView.html?idxno=8451> (accessed
 September 14, 2021). [in Korean]
- Park, S. W. & Ko, S. Y. (2007). Alignment of RFMO's transparency requirements and Korean fishery laws to prevent IUU fishing. *Environmental Law and Perspectives*, 27(3), 161-207. [in Korean]
- Pereira, H. (2018). *How the WTO can help tackle climate change through fossil fuel subsidy reform: Lessons from fisheries negotiations*. Geneva: International Center for Trade and Sustainable Development.
- Perkins, R., & Neumayer, E. (2007). Implementing multilateral environmental agreements: An analysis of EU directives. *Global Environmental Politics*, 7(3), 13-41.
- Poast, P. (2012). Does issue linkage work? Evidence from European alliance negotiations, 1860 to 1945. *International Organization*, 66(2), 277-310.
- Postnikov, E. (2018). Environmental instruments in trade agreements: pushing the limits of the dialogue approach. In P. M. Cham (ed.) *European Union External Environmental Policy* (pp. 59-79). New York: Springer.
- Rausiala, K. (2003). Citizen submission and treaty review in the NAAEC. In D. A. Markell & J. H. Knox (eds.), *Greening NAFTA: The North American Commission for Environmental Cooperation* (pp. 265-273). Stanford, CA: Stanford University press.
- Raustiala, K. (2000). Compliance & effectiveness in international regulatory cooperation. *Case W. Res. J. Int'l L.*, 32(3), 387-440.
- Ravenhill, J. (2008). The move to preferential trade on the Western Pacific Rim: some initial conclusions. *Australian Journal of International Affairs*, 62(2), 129-150.
- Restrepo, Y. V. P. (2019). Enforcement practice under preferential trade agreements: Environmental consultations and submissions on environmental enforcement matters in the US-Peru TPA. *Legal Issues*

of Economic Integration, 46(3), 247-262.

- Reuters (2017, November 17). Electric cars not ready for mass production yet: Toyota chairman to Spiegel. *Reuters*. <https://www.reuters.com/article/us-toyota-batteries-idUSKBN1DH28U> (accessed May 1, 2022).
- Robst, J., Polachek, S., & Chang, Y. C. (2007). Geographic proximity, trade, and international conflict/cooperation. *Conflict Management and Peace Science*, 24(1), 1-24.
- Selin, H., & VanDeveer, S. D. (2005). Canadian-US environmental cooperation: Climate change networks and regional action. *American Review of Canadian Studies*, 35(2), 353-378.
- Seo & Koo (2014). The international anti-ocean dumping regime and South Korea: Policy diffusion, policy learning and the ambiguity-conflict matrix. *The Korean Journal for Policy Studies*, 23(2): 145-172. [in Korean]
- Shahin, M. (2002). Trade and environment: How real is the debate. In G. P. Sampson and W. B. Chambers (eds.), *Trade, Environment and the Millennium* (pp. 154-182). NY: United Nations University press.
- Simmons, B. A. (1998). Compliance with international agreements. *Annual Review of Political Science*, 1 (1), 75-93.
- Simmons, B. A., & Elkins, Z. (2004). The globalization of liberalization: Policy diffusion in the international political economy. *American Political Science Review*, 98(1), 171-189.
- Siripala (2020, October 6). Will the Suga administration step up Japan's climate change leadership?. *The Diplomat*. <https://thediplomat.com/2020/10/will-the-suga-administration-step-up-japans-climate-change-leadership/> (accessed May 1, 2022).
- Sofer, K. (2016). *Climate politics in Japan*. Sasakawa Forum. <https://spfusa.org/wp-content/uploads/2016/05/Sofer-Climate-Politics-in-Japan.pdf> (accessed April 23, 2022).
- Sohn, Y. (2019). South Korea under the United States–China rivalry: Dynamics of the economic-security nexus in trade policy making. *The Pacific Review*, 32(6), 1019–1040.

- Sohn, Y. and Koo, M. G. (2011). Securitizing trade: The case of the Korea–US free trade agreement. *International Relations of the Asia-Pacific*, 11(3), 433-460.
- Song, A. Y. (2021). Linking trade and environment in emerging economies: Korea’s ambition for making green free trade agreements. *The Pacific Review*, 34(2), 321-350.
- Sprinkle, G. B., & Williamson, M. G. (2004). The evolution from Taylorism to employee gainsharing: A case study examining John Deere’s continuous improvement pay plan. *Issues in Accounting Education*, 19(4), 487-503.
- Steinberg, R. (1997). Trade-environment negotiations in the EU, NAFTA, and WTO: Regional trajectories of rule development. *American Journal of International Law*, 91(2), 231-267.
- Steinberg, R. (2002). *The Greening of trade law: International organizations and environmental issues*. Boulder: Rowman and Littlefield.
- Subramanian, A. (1992). Trade measures for environment: A nearly empty box?. *World Economy*, 15(1), 135-152.
- Tabuchi, H. (2020, February 3). Japan races to build new coal-burning power plants, despite the climate risks. *The New York Times*. <https://www.nytimes.com/2020/02/03/climate/japan-coal-fukushima.html> (accessed April 10, 2022).
- Tews, K., Busch, P. O., & Jörgens, H. (2003). The diffusion of new environmental policy instruments. *European Journal of Political Research*, 42(4), 569-600.
- The Asahi Shimbun (2022, January 19). Japan’s clean energy strategy to push nuclear technologies. *The Asahi Shimbun*. <https://www.asahi.com/ajw/articles/14525409> (accessed March 20, 2022).
- Tversky, A., & Kahneman, D. (1991). Loss aversion in riskless choice: A reference-dependent model. *The Quarterly Journal of Economics*, 106(4), 1039-1061.
- UNCTAD and WTO. (2012). *A practical guide to trade policy analysis*. World Trade Organization (WTO) and United Nations Conference on Trade and Development (UNCTAD) co-publication.

<https://vi.unctad.org/tpa/web/vol1/vol1home.html>

- USTR. (2007). *Bipartisan agreement on trade policy*. Office of the United States Trade Representative. https://ustr.gov/sites/default/files/uploads/factsheets/2007/asset_upload_file127_11319.pdf (accessed in July 29, 2021).
- USTR. (2011). *Final environmental review United States-Korea free trade agreement*. Office of the United States Trade Representative. <https://ustr.gov/sites/default/files/uploads/Countries%20Regions/africa/agreements/pdfs/FTAs/KOREA%20Final%20Environmental%20Review.pdf> (accessed in July 29, 2021).
- USTR. (2017). *The United States officially withdraws from the Trans-Pacific Partnership*. Office of the United States Trade Representative. <https://ustr.gov/about-us/policy-offices/press-office/press-releases/2017/january/US-Withdraws-From-TPP> (accessed in July 29, 2021).
- USTR. (2019a). *USTR successfully resolves concerns raised in first-ever environment consultations under the U.S.-Peru trade promotion agreement (PTPA)*. Office of the United States Trade Representative. <https://ustr.gov/about-us/policy-offices/press-office/press-releases/2018/april/ustr-successfully-resolves-concerns> (accessed in July 29, 2021)
- USTR. (2019b). *USTR to request first-ever environment consultations under the U.S.-Korea Free Trade Agreement (KORUS) in effort to combat illegal fishing*. Office of the United States Trade Representative. <https://ustr.gov/about-us/policy-offices/press-office/press-releases/2019/september/ustr-request-first-ever> (accessed in July 29, 2021).
- Vaillant, M., & Ons, A. (2002). Preferential trading arrangements between the European Union and South America: The political economy of free trade zones in practice. *World Economy*, 25(10), 1433–1468
- Van Asselt, H. (2014). *The Fragmentation of Global Climate Governance: Consequences and Management of Regime Interactions*. Massachusetts: Edward Elgar Publishing.
- Vogel, D. (2013). Global trade linkages: National security and human security. In Aggarwal, V. K. & Govella, K. (eds.), *Linking Trade and Security* (pp.

23-48). New York: Springer.

- Voigt, C. (2016). The compliance and implementation mechanism of the Paris Agreement. Review of European. *Comparative & International Environmental Law*, 25(2), 161-173.
- Wakabayashi, M and Sugiyama, T. (2007). Japan's keidanren voluntary action plan on the environment. In R. D. Morgenstern and W. A. Pizer (eds.) *Reality Check: The Nature and Performance of Voluntary Environmental Progress in the United States, Europe and Japan*. Washington: RFF Press.
- Wilson, J. (2015). Mega-regional trade deals in the Asia-Pacific: Choosing between the TPP and RCEP?. *Journal of Contemporary Asia*, 45(2), 345-353.
- WTO. (n.d.^a). *Early years: emerging environment debate in GATT/WTO*. World Trade Organization. https://www.wto.org/english/tratop_e/envir_e/hist1_e.htm (accessed in June 20, 2021).
- WTO. (n.d.^b). Regional Trade Agreements (RTA) Database. <https://rtais.wto.org/UI/PublicMaintainRTAHome.aspx> (accessed in July 29, 2020).
- WTO. (n.d.^c). *Trade and climate change information brief: Climate change in regional trade agreements*. World Trade Organization. https://www.wto.org/english/news_e/news21_e/clim_03nov21-2_e.pdf (accessed in July 29, 2021).
- Wu, M., & Salzman, J. (2013). The next generation of trade and environment conflicts: the rise of green industrial policy. *Northwestern University Law Review*, 108, 401-435.
- Xue, L., Weng, L., & Yu, H. (2018). Addressing policy challenges in implementing Sustainable Development Goals through an adaptive governance approach: A view from transitional China. *Sustainable Development*, 26(2), 150-158.
- Yasar, M. (2013). Political influence of exporting and import-competing firms: Evidence from eastern European and central Asian countries. *World Development*, 51, 154-168.
- Yeo, J. (2018). *Policy implementation of international IUU fishing regulation*

in Korea: Policy ambiguity and policy conflict [Master's thesis, Seoul National University]. S-Space. <https://s-space.snu.ac.kr/handle/10371/143942>

Young, O. R. (2002). Institutional interplay: The environmental consequences of cross-scale interactions. In E. Ostrom, T. Dietz, N. Dolsak, P. C. Stern, Susan Stonich, and E.U. Weber (eds.), *The drama of the commons* (pp. 263-292). Washington D.C.: National Academy Press.

Young, O. R. (2013). *Compliance & public authority: A theory with international applications*. Oxfordshire: Routledge.

Young, O. R., & Levy, M. (1998). The effectiveness of international environmental regimes. In O Young & M. Levy (Eds.), *The effectiveness of international environmental agreements* (pp. 1-32). Cambridge MA: MIT Press.

Appendix

Appendix 1. Threat perception score of countries

Country	2008	2019	Country	2008	2019	Country	2008	2019
Afghanistan	18	37	Guatemala	51	61	Nigeria	40	43
Albania	48	53	Guinea	43	52	Niger	21	37
Algeria	46	25	Honduras	57	64	Norway	43	38
Angola	38	38	Hong Kong	54	33	Pakistan	24	33
Argentina	71	72	Hungary	75	66	Palestine	55	28
Armenia	65	37	India	29	35	Panama	61	68
Australia	75	52	Indonesia	33	32	South Korea	80	54
Austria	54	63	Iran	43	40	Paraguay	54	72
Azerbaijan	43	31	Iraq	28	27	Peru	58	70
Bahrain		32	Ireland	60	63	Philippines	42	57
Bangladesh	32	29	Israel	62	38	Poland	54	52
Belarus	30	43	Italy	76	67	Portugal	85	82
Belgium	68	58	Ivory Coast	38	39	Republic of the Congo	31	45
Benin	15	41	Jamaica	54	56	Romania	66	73
Bolivia	51	69	Japan	80	58	Russia	39	40
Bosnia Herzegovina	52	54	Jordan	51	25	Rwanda	22	52
Botswana	30	50	Kazakhstan	35	39	Saudi Arabia	40	22
Brazil	76	72	Kenya	49	58	Senegal	33	45
Bulgaria	38	42	Kosovo	38	49	Serbia	52	53
Burkina Faso	34	54	Kuwait	32	35	Sierra Leone	49	49
Cambodia	65	25	Kyrgyz	39	44	Singapore	59	73
Cameroon	72	42	Laos	49	26	Slovakia	38	45
Canada	74	56	Latvia	37	42	Slovenia	42	50
Central African Republic	37	37	Lebanon	54	35	South Africa	21	59
Chad	38	45	Lesotho	62	78	Spain	69	85
Chile	21	87	Liberia	13	53	Sri Lanka	65	39

China	21	23	Libya	21	24	Sweden	56	40
Czech Republic	39	63	Lithuania	47	28	Switzerland	48	52
Colombia	65	76	Luxembourg	75	54	Taiwan	70	60
Costa Rica	72	82	Macedonia	59	57	Tajikistan	19	52
Croatia	51	51	Madagascar	46	40	Tanzania	38	39
Cyprus	64	77	Malawi	68	75	Thailand	51	36
Denmark	40	38	Malaysia	50	40	Togo	23	42
Djibouti	35	35	Mali	48	52	Tunisia	46	32
Dominican Republic	46	55	Malta	64	60	Turkey	66	52
Ecuador	69	74	Mauritania	35	38	Turkmenistan	33	33
Egypt	21	18	Mauritius	35	51	Uganda	30	54
El Salvador	51	61	Mexico	63	70	Ukraine	52	52
Estonia	32	33	Moldova	42	45	United Arab Emirates	26	26
Eswatini	35	70	Mongolia	30	36	United Kingdom	71	70
Ethiopia	73	17	Montenegro	41	42	United States	63	49
Finland	39	28	Morocco	29	46	Uruguay	68	73
France	75	59	Mozambique	48	40	Uzbekistan	62	22
Gabon	32	50	Myanmar	20	21	Venezuela	38	63
Gambia	37	50	Namibia	35	65	Vietnam	53	62
Georgia	47	57	Nepal	32	33	Yemen	10	13
Germany	60	55	Netherlands	57	41	Zambia	18	64
Ghana	28	44	New Zealand	45	46	Zimbabwe	36	59
Greece	82	82	Nicaragua	49	52			

Source: Lloyd's Register Foundation (<https://wrp.lrfoundation.org.uk/data-resources/a-world-of-risk-country-overviews/>)

Appendix 2. Typologies of EPs in FTAs

	Category	Specific clause
1	Preamble language	Reference to environmental objectives
2	Environmental exceptions	General exceptions for trade in goods
		Services exception
3	State sovereignty	Sovereignty over natural resources
		Regulatory sovereignty
4	Domestic level of protection	Inappropriate to encourage trade by relaxing environmental measures
		Inappropriate to encourage investment by relaxing environmental measures
		Maintain, or not lower, level of protection
		Higher level of protection
		Commitment to enhance strengthen improve levels of environmental protection
		Not for protectionist purposes
5	Enforcement of domestic measures	Commitment to enforce environmental measures
		Specific governmental action for enforcement
		Private access to remedies, procedural guarantees, and appropriate sanctions
		Public submission on enforcement of environmental measures
		Cooperation on enforcement
6	Public participation	Public participation in the implementation of the agreement
		Direct contact between non-state actors of both Parties
		Public participation in the adoption of environmental measures or assessment
7	Environmental cooperation	Promote environmental goods and services
		Joint scientific cooperation
		Exchange of information
		Harmonization of domestic environmental measures
		Negotiation of environmental agreements
		Prohibit the export to the other Party of environmentally harmful goods
		Prohibit the import to the other Party of environmentally harmful goods
		Cooperate in the prevention of deceptive practices
8	Implementation	Contact point on environmental matters

	mechanism	
		Environmental impact assessment of the agreement
		Intergovernmental committee
		International secretariat
		Coherence with domestic trade and/or investment policies
9	Coherence with trade and non-trade issues	Interaction between energy policies and the environment
		Interaction between mining and the environment
		Interaction between tourism and the environment
		Interaction between gender policies and the environment
		Interaction between social issues and the environment
		Interaction between rural development and the environment
		Interaction between urban development and the environment
		Interaction between land-use planning and the environment
		Interaction between construction activities and the environment
		Interaction between agriculture and the environment
		Interaction between traditional knowledge and the environment
		Interaction between human health and the environment
		Interaction between industrial activities and the environment
		Interaction between transport and the environment
		Interaction between other non-environmental issues and the environment
10	Specific environmental issues	Water
		Wetlands
		Contaminated land
		Fisheries
		Forest
		Endangered species and their illegal trade
		Wildlife trafficking as a serious crime

		Whales and seals
		Migratory species
		Invasive alien or exotic species
		Shared species
		Genetic resources
		Protected areas and natural reserves
		Biodiversity
		Climate change, energy
		Ozone layer and CFC
		Air pollution
		Environmental standards on vehicles
		Soil erosion
		Desertification, salinization and acidification
		Biosafety and genetically modified organisms
		Disaster management or prevention
		Domestic waste
		Hazardous waste
		Pesticides, fertilizer or hazardous chemicals
		Organic foods
		Food waste
		Noise pollution
		Scenery preservation
		Other specific environmental issues
		Relationship with MEAs
		Ratification of MEAs
		Implementation of obligations found in MEAs
		Prevalence of environmental agreements in case of I consistency
		Any inconsistency between a trade agreement and any other agreement shall be resolved by consultation
		Prevalence of the trade agreement in case of inconsistency with any other agreement
		Obligation to use or take into account International standards or methods
11	MEA-relevant provisions	Ratification of MEAs
		Implementation of obligations found under MEAs
		Prevalence of MEAs in case of inconsistency
		Any inconsistency between a trade agreement and any other agreement shall be resolved by consultation
12	Dispute settlement	Environmental experts as panelists or mediators
		Specific DSM for environmental provision

	General DSM applying to environmental provisions
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Appendix 3. Examples of EPs coding

Obligation

As discussed in Chapter 2, the degree of *obligation* is distinguished into six categories. The scale is as follows:

1 = explicit negation. If an FTA did not include any environmental comments, it is clear that it means explicit negation of intent to be legally bound.

2 = Mere recognition; norms adopted without law-making authority; recommendations and guidelines. Preamble languages that only recognizes the principle of environmental protection and sustainable development.

Australia-Chile Free Trade Agreement, Preamble: “[the Parties], resolved to: [...] implement this Agreement in a manner consistent with sustainable development and environmental protection and conservation [...]”.

3 = Hortatory commitment, creating at best weak legal obligation. Reiteration of parties’ sovereign rights over their environmental policies and natural resources. This is weak legal obligation because it only reconfirm Parties’ existing rights and does not create new obligations.

Canada-Peru, Agreement on the Environment art. 5(3): “3. The Parties reiterate their sovereign rights over their natural resources and recognize their authority and obligations as established by the Convention on Biological Diversity with respect to access to genetic resources.”

Canada-Chile, Agreement on Environmental Cooperation art. 3: “Recognizing the right of each Party to establish its own levels of domestic environmental protection and environmental development policies and

priorities.”

4 = National reservations on specific obligations; contingent obligations and escape clauses. GATT Art. XX incorporates States “rights” to escape from the obligation of free trade in contingent upon the needs to protect environment, and human and animals’ health. If a FTA includes GATT Art. XX provision, it recognize States rights to escape from the FTA obligation.

Australia-New Zealand FTA, art. 12: “Provided that such measures are not used as a means of arbitrary or unjustifiable discrimination or as a disguised restriction on trade between the Member States, nothing in this Agreement shall prevent the adoption or enforcement by a Member State of measures: (g) necessary to protect its indigenous flora and fauna under Article XX of GATT 1994;”

China-New Zealand, art. 200: “1. For the purposes of this Agreement, Article XX of GATT 1994 and its interpretative notes [...] are incorporated into and made part of this Agreement, mutatis mutandis.”

5 = Harmonization with the existing domestic laws. This concerns policies, laws, standards, policies, decrees or any other rules or measures adopted by public authorities, individually or cooperatively, including via an intergovernmental regulatory organization. Coherence with trade and non-trade issues is a commitment to “mainstream” environmental protection into unrelated activities, as opposed to ‘specific environmental issues’ category of *precision*, which directly involves environmental issues.

Brunei-Japan, art. 93: “Each Party shall endeavour to minimise, [...] harmful environmental impacts of all activities related to energy in its Area. [...] Each Party shall (a) take account of environmental considerations throughout the

process of formulation and implementation of its policy on energy.”

Chile-US, Annex 19.3(2): “Increasing the use of cleaner fuels. The Parties will work to improve the environmental quality of fuels, especially diesel fuel and gasoline, used in their territories by providing joint training and technical assistance on a variety of fuels-related environmental issues.”

6 = Harmonization with the existing international laws. This covers institutions that have environmental protection (or a more specific environmental objective) as one of their objectives. As presented in Appendix 2, MEA-relevant provisions stipulates obligation to adopt and implement the obligations under MEA while enforcing FTA explicitly mandates parties to harmonize trade and environmental institutions.

Korea-US, art. 20.2 and annex 20-A(1)(e): “A Party shall adopt, maintain, and implement laws, regulations, and all other measures to fulfil its obligations under the [...] Convention on the Conservation of Antarctic Marine Living Resources (CCAMLR), done at Canberra, May 20, 1980”

EU-Japan, art. 16.4 (4): “The Parties shall work together to take actions to address climate change towards achieving the ultimate objective of the UNFCCC and the purpose of the Paris Agreement.”

Precision

As discussed in Chapter 2, the degree of *precision* is distinguished into six categories regarding implementation and compliance measures. The scale is as follows:

1 = Impossible to determine whether conduct complies. If an FTA did not include any implementation measures, it is impossible to determine whether

Parties comply with EPs.

2 = Mere standard: only meaningful with reference to specific situations. Domestic level of protection concerns laws, standards, policies, decrees or any other rules adopted domestically by public authorities. This provision concerns the level of protection that the measure itself provides for, rather than the subsequent enforcement of a measure.

Canada-Colombia, art. 1702: “Neither Party shall encourage trade or investment by weakening nor reducing the levels of protection afforded in their respective environmental laws.

Central America-EC, art. 2: “the objectives of this Agreement are to: (g) at least maintain [...] the level of [...] environmental standards.”

3 = Discretionary measures; grants to Parties and the relevant actors wider authority to determine its meaning. Enforcement refers to the identification and sanctioning of persons violating environmental measures at the domestic level. This excludes commitments to implement international agreements and dispute settlement for failure to enforce domestic environmental measures. This only includes ‘domestic’ measures, so Parties have broad areas of discretion.

US-Chile, art. 19.2: “(a) A Party shall not fail to effectively enforce its environmental laws, through a sustained or recurring course of action or inaction, in a manner affecting trade between the Parties [...]”

Brunei-Japan, art. 71: “[...] each Party should not waive or otherwise derogate from such environmental measures as an encouragement for establishment, acquisition or expansion of investments in its Area.”

4 = Substantial issues of interpretation. Cooperation includes norms applying

in general to the environment. Thus, Parties need to determine what to do and how to do.

Canada-Colombia, Agreement on the Environment Annex I: “The priority areas identified by the Republic of Colombia for consideration in the initial Work Program include, inter alia: (f) promotion of the production [...] of environmental-friendly goods and services;”

5= Substantial but limited issues of interpretation. Implementation mechanism refers to norms and policies regarding the environment that could be implemented by each Party individually, jointly, or by an institution created by the Parties. As shown in Appendix 2, it stipulates specific measures that Parties should take.

New Zealand-Taiwan, art. 6: “Each Party shall designate a contact point or contact points to facilitate communication between the Parties and to assist in the implementation of this Chapter, including coordination of environmental cooperation activities pursuant to Article 5.”

EC-Korea, art. 13.10: “Review of sustainability impacts The Parties commit to reviewing, monitoring and assessing the impact of the implementation of this Agreement on sustainable development, including the promotion of decent work, through their respective participative processes and institutions [...]”

6 = Narrow issues of interpretation. Specific environmental issues refers to the title of existing/specific agreements with a substantive obligation.

EC-Egypt, art. 44(2): “Cooperation shall focus, in particular, on: quality of Mediterranean water and the control and prevention of marine pollution”

Canada-Chile, Annex I - Canada: “In general, the Department grants such port privileges [...] only to fishing vessels from a country with which it has

favourable fishery relations, based primarily on adherence by that country to Canadian and international conservation practices and policies.”

Bulgaria-EC, art. 79(2): “2. Cooperation shall include among others technical assistance when appropriate in the following areas: - the promotion of energy saving and energy efficiency,”

Delegation

As discussed in Chapter 2, the degree of *delegation* is distinguished into four categories regarding the involvement of a third-party in implementation and dispute resolution. The scale is as follows:

1= Political bargaining. This means that only Parties of FTA have authority to decide what to do and how to do. This explicit negation of involvement of the third-party.

2 = Third-party participation. Public participation refers to the participation of the public, groups, NGOs, citizens or other stakeholders in the adoption of any environmental measure by their own government.

Korea-EC, art. 13.9: “The Parties, in accordance with their respective domestic laws, agree to develop, introduce and implement any measures aimed at protecting the environment and labour conditions that affect trade between the Parties in a transparent manner, with due notice and public consultation, and with appropriate and timely communication to and consultation of non-state actors including the private sector.”

Canada-Jordan, art. 166(2): “Each Party shall ensure that its environmental assessment procedures provide for the disclosure of information to the public concerning proposed projects subject to assessment and, in accordance with

its law, shall allow for public participation in such procedures.”

3 = Judicial mechanism without sanction. Dispute settlement mechanism limited to environmental issues/environmental chapters (Environmental DSM).

Korea-EU, art. 13.15 & 13.16: Unless the Parties otherwise agree, a Party may, 90 days after the delivery of a request for consultations under Article 13.14.1, request that a Panel of Experts be convened to examine the matter that has not been satisfactorily addressed through government consultations. The Parties can make submissions to the Panel of Experts.[...] For any matter arising under this Chapter (Trade and Sustainable Development), the Parties shall only have recourse to the procedures provided for in Articles 13.14 and 13.15

4 = Sanction or remedies. General DSM that involves trade retaliation and suspension of benefit.

Korea-US, art 20.4.: “The complaining Party may suspend benefits up to the level the panel has determined under paragraph 3 [...]”

국문 초록

1992년 환경과 개발에 관한 리우선언 (Rio Declaration on Environment and Development) 이래, 무역과 환경문제를 연계하려는 국가들의 시도는 계속해서 증가해왔다. 그 최초의 시도는 세계무역기구의 무역환경위원회(Committee on Trade and Environment)를 통한 연계였으나, WTO가 교착상태에 빠지면서 국가들은 양자주의적, 일방주의적 방식을 통해 무역-환경 연계의 외연을 확대해 왔다. 일례로, EU는 유럽 2021년 7월 유럽 기후법(European Climate Law)을 채택하여 탄소국경조정제도를 공식적으로 도입함으로써 무역-환경 연계를 시도하고 있다. EU의 시도가 일방주의의 대표적인 예라면, 양자 또는 소자다자간에 자유무역협정(free trade agreements, FTA)을 통한 연계는 가장 빈번하다. 그 결과, 여러 FTA에 포함된 환경조항은 법적, 제도적 함의 뿐 아니라 협정, 언어, 범위, 깊이 등의 측면에서 상당한 차이를 보인다. 이러한 배경에서, 이 논문은 두 가지 밀접하게 관련된 문제를 연구하는 것을 목표로 한다. 즉, 왜 국가들이 FTA를 통해 일견 충돌하는 두 가지 이슈인 환경과 무역을 연계하는가? 그리고 FTA에 포함된 환경규정이 국내 수준에서 어떻게 집행되는가?

제2장은 FTA 내 환경규정의 확산과 관련된 문헌을 검토한다. 우선, 무역의 증가와 함께 환경문제가 무역과 어떻게 연계되어 왔는지 무역-환경 연계의 역사를 간략히 제시한다. 그 다음, FTA 내 환경규정의 유형과 개별 환경규정이 양적, 질적으로 어떻게 발전해왔는지 보여준다. 다음으로 무역과 환경을 연계하는 국가들의 동기에 관한 연구를 제시한다. 끝으로, 국제협약의 국내 이행에 관한 연구를 살펴 본 후, 기존 연구의 한계에 대해 논의한

다.

제3장은 국가들이 환경규정을 FTA에 포함시키는 메커니즘과 이러한 환경 규범과 정책이 국내에서 어떻게 구현되는지를 설명하는 이론적 틀을 제시한다. 먼저, 국제적 차원에서, FTA 협상에서 환경-무역 연계를 추진하는 세 가지 연계 메커니즘을 이론화한다. 이러한 메커니즘이 환경규정의 법제화(의무, 정확성, 위임) 수준에 어떻게 영향을 미치는지 가설을 제시한다. 다음으로 국내 수준에서, 본 연구는 환경규정의 법제화 수준이 정책의 모호성에 영향을 미치며 모호성과 행위자 간의 갈등 수준이 결합되어 다양한 집행 양상을 만든다고 주장한다.

4장에서는 왜 국가들이 다양한 형태의 환경규정을 FTA에 포함시키는가에 관해 양적분석 결과 및 함의를 제시한다. 순서형 로짓분석을 통해 다음과 같은 결과를 얻을 수 있었다. 첫째, 국가 간 합의된 지식은 법제화 수준이 높은 환경규정을 FTA에 포함시키는 데 중요한 역할을 한다. 둘째, 수출 시장을 확보하기 위한 국가 간 경쟁에 의한 연계는 세 가지 종속 변수—의무, 정확성, 위임—모두에 강력하고 일관된 영향을 미친다. 이는 시장 경쟁이 무역협상 과정에서 각국이 강력한 무역환경 연계를 수용하도록 하는 가장 영향력 있는 요소임을 시사한다. 이러한 결과는 무역을 통한 경제성장을 중시하는 국가들이 환경 문제를 등한시 할 것이라는 기존의 관점과 배치된다. 이는 국제 무역이 경제적 이익의 대가로 각국이 엄격한 환경 보호 정책을 받아들일도록 유도함으로써 환경 규제의 “위를 향한 경쟁 (race-to-the top)”을 촉진할 수 있음을 암시한다. 셋째, 모방에 의한 연계는 FTA 내 환경규정의 의무 수준을 낮추는 것으로 나타났다. 규범 확산 이론은 모방이 국제 규범을 확산시키는 주요 추진력 중 하나라고 주장하지만, 본 연구의 결과 앞선 국가의 모델을 단순히 복제하는 것은 실질적인 환경규정보다는 낮

은 수준의 환경 규정만을 FTA에 포함시킬 가능성이 크다.

제5장과 제6장은 한미 FTA와 일본-EU FTA 사례를 통해 FTA 내 환경규정이 어떻게 국내 정책으로 도입되고 집행되는지 살펴보았다. 한미 FTA 사례연구는 법제화 수준이 높은 FTA 내 환경규정이 효과적인 준수를 보장하고 반-IUU 어업규범의 국내 확산 및 시행을 촉진한다는 것을 확인하였다. 이는 또한 국제 합의가 국내 이행 과정에서 모호성의 원천이 될 수 있음을 확인시켜 준다. 의무의 수준이 높고, 구체적이며, 강력한 분쟁해결 절차를 도입하고 있는 국제 협정은 무역-환경 연계에 대한 이해를 높이고 약속을 이행하기 위한 규범적 정당성을 부여함으로써 국내 행위자 간의 갈등을 줄이는 역할을 할 수 있다. 6장에서는 EU-일본 EPA와 일본이 EPA에서 에너지 및 기후 관련 규정을 어떻게 이행했는지에 초점을 맞추고 있다. EU-일본 EPA는 강력한 의무와 구체적인 이행 조치를 포함하고 있는 반면, EP에 대한 상대방의 효과적인 준수를 확보하기 위해 당사자들이 활용할 수 있는 무역 보복 메커니즘이 부족하다. 그 결과, 한미 FTA와는 달리 EPA가 정책 집행 과정에서 국내 갈등을 줄이는 역할을 효과적으로 하지 못했다. 따라서, 일본의 에너지 및 기후 정책은 경제산업성과 주요 산업의 선호에 끌리는 경향이 있고, 정치적 집행 상태에 머무르게 되었다. 두 가지 사례를 통해 FTA내 환경규정이 국내 환경보호 수준을 높이고 다자간 환경규범 확산에 중요한 역할을 할 수 있음을 확인할 수 있었다. FTA에 포함된 강력한 제재 메커니즘과 구체적이고 정기적인 협력 메커니즘이 다자간 환경규범에 결여된 시행 메커니즘을 보완하는 역할을 할 수 있음을 의미한다.

마지막으로, 7장은 논문의 발견, 기여 및 한계에 대해 서술한다. 본 논문은 국제 협상과 국내 집행을 결합하여 환경 규범과 정책의 확산에 있어 새로운 분석 및 방법론적 접근 방식을 제시했다. 이 논문은 규범 확산과 이슈

연계 이론뿐만 아니라 글로벌/국내 환경 정치에도 시사하는 바가 크다. 본 논문의 연계 메커니즘의 설명 요인들과 그 결과는 완전히 새로운 것은 아니다. 그러나 본 연구는 기존 문헌들에서 환경규범의 확산 원인으로 확인된 주요 요인들의 조합을 통해 FTA 내 환경규정의 확산의 인과적 요인에 대해 다양한 효과를 고려할 수 있게 한다. 또한, 수출 시장을 위한 경쟁은 환경규범 확산과 이행에 중요한 발견이다. 이것은 무역 조항과 환경 조항의 연계가 전략적 이익에 의해 동기 부여된다는 것을 시사한다. 이는 국가들이 언제 상대국에게 정치, 사회, 환경 표준을 준수하도록 강제하도록 하는지에 대한 이해를 제공한다.

본 연구의 한계는 다음과 같다. 첫째, ‘지식’ 변수의 측정의 적절성에 대한 문제이다. 본 연구는 Gallup & Lloyd의 '기후변화 위협 인식'을 활용하였으나, 동 데이터가 1995년부터 2021년까지의 분석 기간을 정확히 나타내지 못하는 문제가 있다. 또한 기후 변화 인식이 전반적인 환경 문제에 대한 인식을 적절히 반영하지 못할 수 있는 바, 이는 편향된 추정 결과를 초래할 수 있다. 이런 약점에도 불구하고 이번 연구는 Gallup의 데이터가 145개국 이상에 대한 환경 인식을 담은 유일한 자료이기 때문에 이 자료를 활용할 수밖에 없었다. 둘째, 환경규정의 법제화의 조작화의 적절성에 대한 의문이 존재할 수 있다. 무작위 코딩 오류를 최소화하기 위해 유사한 변수를 포함하는 데이터 세트를 사용하여 교차 검증을 수행하기는 하였으나, 의무, 정확성, 위임의 3가지 차원을 따르는 법제화의 조작화에 대한 의문은 여전히 존재한다. 본 연구는 3차원에 따라 환경규정의 강도를 측정한다는 점에서 새로운 연구이지만, 관련 실증연구의 부족으로 인해 전적으로 이론에 기초한 조작화를 할 수 밖에 없었다. 향후 연구에 의해 이러한 한계점들이 보완될 수 있을 것이다.

주요어 : 무역-환경 연계, 이슈연계, 정책확산, 정책집행, 자유무역협정, 환경
정치, 관료정치, 지속가능개발

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