

Chapter 4

Towards Greening Trade?

Environmental Provisions in Emerging Markets' Preferential Trade Agreements



Axel Berger, Dominique Blümer, Clara Brandi, and Manjiao Chi

1 Introduction

The recently adopted Sustainable Development Goals (SDGs) of the United Nation's Agenda 2030 underscore the significance of reconciling economic, social and environmental objectives. Transforming our economic activity such that it is consistent with environmental sustainability is dependent not only on global environmental rules, but also hinges on the right regulatory framework for the world economy.

One important forum for regulating global economic activities is the World Trade Organization (WTO), responsible for providing, monitoring and enforcing rules for international trade flows. However, multilateral trade negotiations under the roof of the WTO have been sluggish over the last years and countries increasingly resort to bilateral or regional preferential trade agreements (PTAs) to negotiate trade rules. PTAs have not only become more numerous, they also have become bigger, covering larger volumes of world trade, and they have become deeper as contracting parties go beyond the reduction of tariffs and have started negotiating issues such as services, investment, intellectual property rights and standards. Due to their increasing role in shaping global trade rules, PTAs potentially can be used as leverage for promoting environmental issues as well as other sustainability concerns in the global economy. Moreover, strong environmental provisions in PTAs may provide a context that is conducive to the effective implementation and use of standards and regulations that

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A. Berger (✉) · D. Blümer · C. Brandi
German Development Institute/Deutsches Institut für Entwicklungspolitik (DIE), Bonn, Germany
e-mail: axel.berger@die-gdi.de

M. Chi
Law School, University of International, Business and Economics (UIBE), Beijing, China
Center for Global Cooperation Research, University of Duisburg-Essen, Duisburg, Germany

seek to address sustainability challenges. For instance, environmental provisions in PTAs might boost the uptake of industry—and product-specific public regulation or private standards in a given market, including voluntary sustainability standards (VSS).¹

The EU and the USA already seem to promote ‘high-standard’ PTAs to set a precedent and shape globalization in their interest, presumably also with the aim to avoid ‘unfair’ competition and environmental dumping from emerging markets that can take advantage of lower levels of environmental and labour standards to keep production cost low (Steinberg, 1997). The argument is based on the assumption that emerging markets have less interest in higher environmental and labour standards and would be cautious to promote them through their trade policies. However, there is little systematic evidence about the prevalence of environmental standards in emerging markets’ trade policies and their PTAs in particular. This chapter aims to address this question by assessing environmental provisions in emerging market PTAs and thus contribute to current policy debates about the ‘green’ design of trade policy. We aim to complement the existing literature at the interface of trade and environmental governance and investigate how different countries drive and/or react to the trend of entangling trade and environmental issues. While the EU and USA are seen as pioneers in including environmental matters in PTAs, we will explore whether emerging markets follow this trend and ‘go green’ or whether they refrain from doing so—and what this implies for leveraging environmental standards for the global economy. We thereby seek to contribute to the emerging literature on the design of PTAs and their non-trade dimensions (Baccini, Dür, & Elsig, 2016; Dür, Baccini, & Elsig, 2014; Gray, 2014; Kim, 2012; Kucik, 2012; Postnikov & Bastiaens, 2014) as well as to the growing literature on the role of rising powers like China and other emerging economies in global governance (Gray & Murphy, 2013; Kahler, 2013; Kennedy & Cheng, 2012; Stephen, 2014; Wang & French, 2014).

We conduct our analysis on the basis of our original data set mapping environmental provisions in emerging market PTAs. Our findings show that the PTAs of emerging markets incorporate more and more environmental provisions over time and that they tend to include more environmental content when they have been negotiated and signed with OECD countries, which in turn suggests that OECD countries can still be considered as rule-makers and emerging markets still largely as rules-takers in the context under consideration.

The remainder of the chapter is structured as follows. Section 2 provides an overview of the existing literature on the nexus between trade and the environment, with a focus on environmental provisions in trade agreements. Section 3 outlines the methodology for generating and analysing the data used in this chapter. In Sect. 4, we provide a bird’s eye view of the different dimensions of environmental provisions in emerging market PTAs, as well as their development over time and in relation to partner countries. In Sect. 5, we zoom into specific country cases, namely China, India, Indonesia, Brazil and Mexico, to explore in more detail their stance towards

¹So far, there is not much data available on the uptake of private standards by country, by sector and by year. For first insights, see Marx, Sharma, and Bécault (2015) and the data provided by ITC.

‘green’ trade rules. Section 6 concludes and discusses what our findings might imply for shaping environmental standards for the world economy.

2 Background and Related Literature

The relationship between international trade and the environment has been the subject of debate for a long time (for example, Birdsall & Wheeler, 1993; Cole & Elliot, 2003; Copeland & Taylor, 1995; Levinson & Taylor, 2008). Critics have argued that trade liberalization stands in conflict with environmental objectives while others have pointed to the potential of international trade to contribute to addressing environmental concerns. In general, the literature on trade and the environment distinguishes three effects (Copeland & Taylor, 1994; for empirical results, see Cole & Elliot, 2003; John & Pecchenino, 1994; Managi, Hibiki, & Tsurumi, 2009; Selden & Song, 1994; Stokey, 1998). First, economic integration increases economic activity which results in higher environmental pressure (scale effect). However, if environmental quality is a normal good, then the increased income should lead to a higher demand for high environmental standards and the adoption of new technologies (technique effect). Finally, trade liberalization may affect the distribution of pollution-intensive activities, shifting them where preferences to adopt clean technologies are lowest. As a consequence, pollution intensities in high-income countries may decrease, while developing countries shoulder most of the environmental burden (composition effect). Indeed, recent research unveils that much of the carbon embodied in the developed world’s consumption of goods is imported from the developing world, rather than being produced at home (Peters, 2008; Peters & Hertwich, 2008). Other concerns relate to the impact of invasive species or transportation on the environment (Colyer, 2011). Moreover, there is a discussion on whether trade liberalization provokes a ‘race to the bottom’ where countries keep environmental standards low in order to retain their low-cost competitive advantage over other countries in global value chains (Sheldon, 2006). Irrespective of its direction, the bottom line is that there is a clear link between international trade and the environment—supporting the current trend towards regulating certain components of both areas jointly. But while scholars have long discussed the relationship between international trade and the environment, they have tended to overlook the potential implications of the design of trade policy for achieving environmental protection.

Even though the Marrakesh Agreement establishing the WTO names environmental protection and sustainable development explicitly as objectives of the organization (Johnson, 2015), its main aim remains trade liberalization. As a consequence, environmental issues mostly show up as exceptions to articles concerning liberalization. More precisely, under certain circumstances, it is permitted to restrict trade liberalization in order to avoid adverse effects on the environment. Such clauses are contained already in GATT Article XX, GATS Article XIV, as well as the Agreement on Agriculture (AoA), Agreement on Trade-Related Aspects of Intellectual Property

Rights (TRIPS), Sanitary and Phytosanitary Standards Agreement (SPS) and Agreement on Technical Barriers to Trade (TBT). The idea behind these clauses is that committing to trade liberalization should neither lead to a deterioration of environmental standards nor hinder environmental protection. However, a country applying trade-distorting measures has to prove that a removal would indeed harm the environment. While this might not be easy to do, it is meant to prevent protectionism under the veil of environmental concerns.

Beyond such 'do no harm' clauses, efforts in the WTO include the liberalization of environmental goods and services, the removal of subsidies on fossil fuels and sustainable fisheries, among others. However, as with many other policy areas, the success of reform at the multilateral level is limited (George, 2014). As a consequence, countries aiming to proceed on the agenda fall back upon negotiations at the plurilateral level (as in the case with e-commerce, investment and environmental goods) or at the bilateral/regional level in the form of PTAs.

Since the WTO has not made much progress with respect to environmental issues up to now, looking at developments at the bilateral/regional level is the natural next step. Throughout the last two decades, the number of PTAs that incorporate non-trade issues such as human rights and labour standards has risen notably (Hafner-Burton, 2009; Kim, 2012; Postnikov & Bastiaens, 2014). The same is true for the extent of environmental content included in PTAs (Morin, Dür, & Lechner, 2018). Our research contributes to the emerging literature on the design of PTAs, their implementation and their non-trade implications (Baccini et al., 2016; Dür et al., 2014; Gray, 2014; Kim, 2012; Kucik, 2012; Morin, Blümer, Brandi, & Berger 2019; Postnikov & Bastiaens, 2014).

While the relationship between international trade and the environment has been the subject of scholarly research, until recently, scholars have often disregarded the role of PTA design. The empirical literature on environmental provisions in PTAs is still quite small, but gives important first insights. Jinnah and Morgera (2013) compare environmental provisions in three EU and 11 US trade agreements since the mid-2000s by coding their scope and legal dimension. They find that environmental rules in PTAs have successively moved from reproducing the environmental exemptions stipulated in the GATT to references to Multilateral Environmental Agreements (MEAs) and full stand-alone environmental chapters that address enforcement and implementation issues. Moreover, they classify the EU and US approaches to addressing environmental issues in PTAs as cooperative and confrontational, respectively. This is in line with the overview on PTAs and the environment given by Anuradha (2011) and with the methodology of Bastiaens and Postnikov (2014) who differentiate in their empirical analysis between sanctions (US) and dialogue (EU) as enforcement mechanisms used for environmental provisions in PTAs. Based on a comprehensive and fine-grained dataset, Morin et al. (2018) argue that democracies facing import competition and countries which care about environmental protection are more likely to include environmental provisions in their PTAs. Morin et al. (2019) investigate the diffusion of environmental provisions and show that provisions that have been integrated in intercontinental agreements are more likely to be picked up in future agreements.

Empirical research suggests that the total number of provisions covered in PTAs is highest for PTAs between developed and developing countries (subsequently referred to as ‘North–South’ for convenience) (WTO, 2011). In general, developing countries—among each other—seem to prefer shallow agreements that only cover 1–2 substantive provisions on average, focussing on the elimination of tariffs (Bruhn, 2014). A possible explanation for the greater depth of North–South agreements is the bargaining power of developed countries that offer valuable market access in return for concessions regarding PTA content. If this pattern also holds for environmental rules, this would suggest that developing and emerging countries are reluctant to regulate environmental issues in PTAs among each other, but are more likely to agree to environmental content when negotiating with more developed partners.

Covering environmental issues within the international trading system can entail both advantages and disadvantages for different country groups; compared to the relatively toothless international environmental law, the WTO possesses an enforcement mechanism—namely the dispute settlement body—that it makes use of to settle inter-country conflicts. This dispute settlement body has also been used for disputes on trade-related environmental issues (Johnson, 2015). Equally, many PTAs possess enforcement mechanisms for environmental rules. On the one hand, this can be seen as an advantage since the availability of sanctions requires more commitment to agreements on environmental issues and increases their enforceability. On the other hand, some countries are concerned that the principle of ‘common but differentiated responsibilities’ meant to adapt developing country commitments to their capacities is undermined by drawing on agreements that are based on reciprocity (Jinnah & Morgera, 2013). Moreover, it is far from clear whether developing countries are able to meet high environmental standards. Their inability to do so could then be used by more developed countries to prohibit market access to goods that do not meet these standards (‘green protectionism’).

It is equally uncertain whether incorporating environmental provisions in the WTO and in PTAs actually has positive environmental effects. According to a survey in OECD countries, a main objective of ‘green’ PTAs is to prevent the relaxation of environmental standards which may result in a race to the bottom as a side effect of competition for trade and investment (George, 2014). Overall, the (scarce) empirical evidence is rather inconclusive. Gallagher (2004) states that in Mexico, the environment in terms of soil erosion, municipal solid waste and urban air and water pollution deteriorated after its accession to NAFTA, without claiming a causal relationship between trade liberalization and environmental degradation. Baghdadi, Martinez-Zarzoso, and Zitouna (2013) find a convergence of emissions levels and an overall reduction for country pairs that have signed a PTA with environmental provisions. Bastiaens and Postnikov (2014) show that PTAs including sanctions improve environmental performance measured on the basis of the Environmental Performance Index (EPI),² so do PTAs based on environmental cooperation when paired with a strong

²The EPI is an aggregation of both environmental health and ecosystem vitality measures including air quality, water and sanitation, health, water resources, agriculture, forests, fisheries, biodiversity and habitat, and climate and energy.

civil society in partner states. One could also imagine that countries having agreed to environmental standards at the bilateral/regional level are more inclined to also commit to multilateral environmental agreements. However, much more research is needed to clearly establish the links between trade rules, environmental governance and environmental performance. In the following discussion, we contribute to filling the gaps in the literature and focus on the take-up of environmental content in PTAs in emerging market PTAs.

This chapter puts the spotlight on environmental provisions of emerging markets' PTAs and thereby adds to the emerging research on the content and design of PTAs and their non-trade dimensions. It also contributes to the literature on the implications of rising powers like China and other emerging economies for the future of global governance (Gray & Murphy, 2013; Kahler, 2013; Stephen, 2014), i.e. to what extent emerging economies are rule-makers or rule-takers in the world economy and when and under which conditions they are willing take over global responsibility (Berger, 2013; Kennedy & Cheng, 2012; Wang & French, 2014).

3 Measuring Environmental Provisions in PTAs

PTAs have been largely treated as 'black boxes' in the literature, meaning that most econometric analyses have not taken their contents and thus their heterogeneity into account. This shortcoming is important to address, in particular in light of the fact that PTAs are becoming deeper and are covering more issue areas beyond the mere elimination of tariffs (Horn, Mavroidis, & Sapir, 2010). Some recent studies and projects have tried to remedy this situation by developing comprehensive data sets and providing numerical data measuring the variance of PTA design (Dür et al., 2014; Horn et al., 2010; Kohl, Brakman, & Garretsen, 2013). These databases, however, have the ambition to capture a large number of policy areas and therefore do not go into the details of a specific issue area. Environmental issues are therefore covered in a very general way in these databases ignoring the details on the variation of 'green' provisions.

We developed a new dataset mapping environmental provisions in PTAs to fill this gap in the literature. The dataset comprises detailed data on the design of environmental provisions along nine dimensions:

1. **Reference to environmental goals in the preamble or other chapters:** PTAs that cover environmental aspects in their main text often also include preambular language that highlights the intention of the contracting parties to protect the environment.
2. **Environmental exceptions:** PTAs often include a general exception clause that is modelled on GATT Article XX and specifies that actions by the contracting parties 'necessary to protect human, animal or plant life or health' are not inconsistent with the trade-related obligations of the treaty. In addition to these general

exceptions, some PTAs include specific environmental exceptions in certain chapters, such as the investment chapter.

3. **References to multilateral environmental agreements:** some countries use PTAs to refer to MEAs such as the Montreal Protocol for the Protection of the Ozone Layer or the Washington Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES). References to MEAs include, among others, commitments by the contracting parties to ratify or implement those agreements. At times, the MEAs are even made an integral part of the PTA.
4. **Inclusion of a whole chapter on environment or sustainable development:** some recent PTAs include a dedicated chapter on the environment or sustainable development where the parties specify their commitment to the protection of the environment.
5. **Obligations to uphold environmental law:** some PTAs include clauses that prevent the contracting parties from increasing trade and investment flows by weakening domestic environmental laws and regulations.
6. **Incorporation of the right to regulate in environmental matters:** with this set of provisions, the contracting parties want to preserve their right to go beyond the existing level of environmental protection by introducing new regulation in the area of the environment.
7. **Cooperation in environmental matters:** PTAs at times include provisions that state the objective that the contracting parties cooperate on environmental issues, sometimes creating institutions such as intergovernmental committees.
8. **Transparency in environmental matters:** some PTAs require the contracting parties to provide public access to relevant information on environmental policies and policy-making processes.
9. **Public participation in environmental matters:** often in connection with the prior dimension PTAs include provisions specifying how the public can participate in environmental policy-making processes.

For the purpose of this chapter, we have coded and analysed all full free trade agreements and customs unions established by the emerging markets—China (13), India (10), Indonesia (7), Brazil (4) and Mexico (16). The full list of agreements is provided in Annex. The coding scheme that was used to analyse environmental provisions in emerging market PTAs draws on the broad conceptualization of environmental provisions in PTAs provided by OECD (2007). The codebook has been tested on a smaller set of PTAs signed by various countries (not only emerging markets) to ensure general validity and has been revised accordingly. On the basis of the final version of the codebook, each text of emerging market PTAs was manually coded by two independent persons. In case of differences, a third person coded the respective treaty.

In order to compare the different agreements to each other, we have calculated an additive indicator ranging from 0 to 9, which captures the presence of the nine

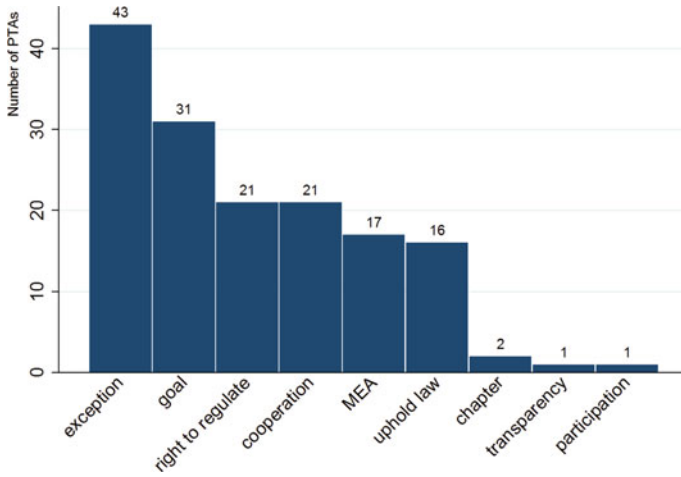


Fig. 1 Distribution of environmental dimensions across emerging markets’ PTAs. *Source* Authors

environmental dimensions in the PTA. The higher the indicator, the more the dimensions covered in the respective agreement.³ In the subsequent section, we use this indicator to analyse 48 emerging market PTAs signed by China, India, Indonesia, Brazil and Mexico.

4 Emerging Markets: A Bird’s Eye View

In what follows, we provide a bird’s eye view of environmental provisions in emerging market PTAs before we zoom into specific country cases in the subsequent section. Figure 1 illustrates how often the nine dimensions specified above occur in the PTAs of emerging markets. Almost all of the agreements coded ($\approx 90\%$) include environmental exceptions. These exceptions, based on GATT Article XX, allow countries to violate the rules of the PTA if this is ‘necessary to protect human, animal or plant life’. However, according to GATT Article XX, measures aimed at protecting human, animal or plant life have to be applied in a non-discriminatory manner and should not be used as ‘disguised restriction’ on trade. This important qualification may be the reason why the dispute settlement body of the WTO has often tended to rule in favour of trade liberalization rather than environmental protection. It remains to be seen which role environmental exceptions play in the context of PTAs.

³We emphasize that this indicator only captures the *quantity* of environmental content, while not taking into account the *quality* and strength of different provisions (e.g. there is no weighting of different dimensions). We acknowledge that this generates only a rough picture of environmental issues in PTAs, but it is nevertheless a good initial instrument to study the environmental content in PTAs over time and across partners.

Importantly, in the context of PTAs, signatories often go beyond the inclusion of exceptions modelled on the rules of the WTO and include other environment-related clauses. Roughly two-thirds of the agreements coded also include references to environmental goals. Most agreements signed by emerging markets (75%) contain provisions that emphasize the countries' commitment to environmental protection and sustainable development already in the preamble. While these provisions are not of substantive nature (i.e. they do not imply any substantive rights or obligations in environmental matters to the parties), they may have an impact on how the PTA is interpreted in dispute settlement. References to MEAs, intended to renew the commitments already made elsewhere, are also frequently found in emerging market PTAs.

An important part of the debate on standards in the international trading system is focused on how international agreements interfere with domestic environmental law. Many critics are concerned about PTAs lowering environmental standards or limiting the right to pass new environmental legislation. As can be seen in Fig. 1, 16 emerging market PTAs oblige the parties to maintain, i.e. not lower, existing standards and 21 even explicitly stress the countries' right to regulate in environmental matters, this amounts to one third and 44% of the PTAs, respectively.

While cooperation in environmental matters is quite commonly encouraged in PTAs, transparency and public participation hardly occur at all. An exception is an agreement between the EU and Mexico of 1997, which includes a provision on public participation, as well as the agreement between Switzerland and China signed in 2013, which includes a whole chapter on environment. Notably, both of these agreements are signed with industrialized/OECD countries. Another PTA that has a full chapter on environment is the one between China and Korea, signed in 2015.

While the indicator can in principle range from 0 to 9, none of the emerging market agreements reaches the highest score. The annex to this chapter lists all PTAs from the lowest to the highest number of environmental dimensions covered. The 'greenest' agreements, achieving an indicator of 7, are the PTAs between China-Switzerland and China-Korea. Three agreements do not mention any environmental matters, namely China-Macao 2003, China-Hong Kong 2003 and India-Bangladesh 2006.

Table 1 gives the summary statistics for the variable of interest. On average, the 48 emerging market agreements score a 3.19, meaning that roughly three of the dimensions stated above are included in their PTAs. However, there is quite some variation between the agreements, as indicated by the standard deviation of 1.89. In the subsequent paragraphs, we use our original data to shed light on where this variation comes from.

Table 1 Descriptive statistics

Variable	Obs.	Mean	Std. dev.	Min	Max
Number of environmental dimensions covered	48	3.19	1.89	0	7

Source Authors

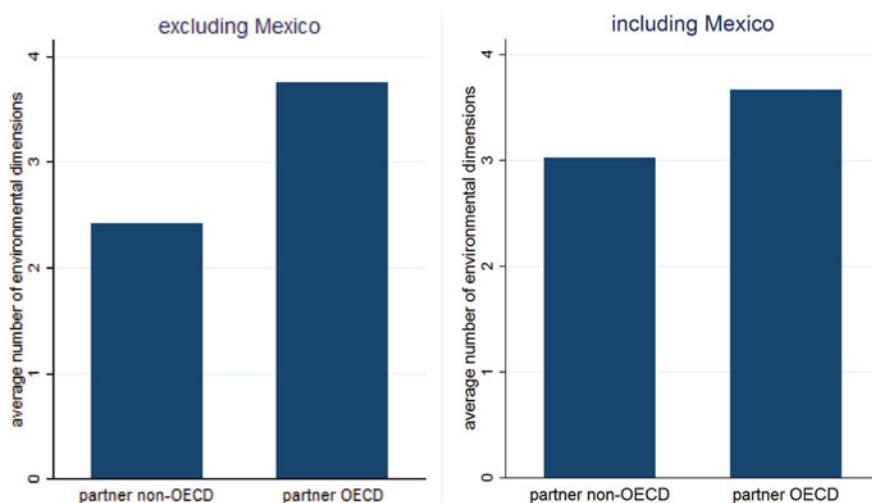


Fig. 3 Average environmental dimensions by status of partner country. *Source* Authors

5 Emerging Markets: Zooming In

5.1 China

China has been a latecomer in negotiating PTAs, starting to negotiate them only after its accession to the WTO (Berger, 2013). While the first two PTAs concluded by China did not include environmental provisions,⁵ all subsequent agreements did include environmental provisions, though to varying degrees. Some PTAs incorporate a stand-alone environmental clause or a chapter; others incorporate environmental provisions of various types, such as the clause of general exceptions.

Two general trends may be identified from the provisions of Chinese PTAs. First, while earlier PTAs contain few or no environmental provisions, more recent PTAs incorporate more. Second, environmental provisions are more frequently seen in Chinese PTAs concluded with more developed partners, since those appear to have stronger policy-making aspirations on environmental protection and sustainable investment. Such trends can be witnessed by the fact that China–Switzerland PTA contains multiple environmental provisions and that the China–Korea PTA includes a chapter on the environment. China experienced rapid economic growth in the past decades. Yet, the environmental pollution in China deteriorated in the meantime.

⁵The absence of environmental provisions in the China-Macao and China-Hong Kong PTAs may be explained by the fact that these PTAs are not truly meant to be ‘international’ agreements. They are aimed at promoting trade liberalization between the different legal jurisdictions of China. Thus, it is understandable that they exclude certain issues, especially sensitive ones such as environmental issues, from the PTAs.

One may conclude that environmental concerns have become an important consideration in China's PTA-making nowadays, partly to help address the environmental challenge. China has sped up its efforts in concluding PTAs recently, and the Belt and Road Initiative (BRI) newly proposed by China would inevitably necessitate the conclusion of more PTAs with the countries involved. It remains to be seen to what extent environmental issues will also feature in China's future South–South PTAs, where China can be expected to be the rule-maker.

5.2 *India*

India embarked on the path of economic liberalization in the early 1990s. While first initiating national reforms, India has subsequently, slowly but steadily, removed barriers to international trade and foreign direct investment throughout the last two decades (UNCTAD, 2012). Even though India is carefully embracing liberalization, the country takes the position that trade and investment agreements, be it under the roof of the WTO or within bilateral and regional PTAs, should not be mingled with issues not directly related to trade, such as human rights or the environment—rather, these topics should be discussed in other international fora (ICTSD, 2010). In a 2001 press release, India voiced concern that ‘environment was being used as some sort of a Trojan horse to provide legitimacy to protectionist trends’ on the part of industrialized countries (Government of India, 2001). Similar concerns remain until today. Besides colliding interests in the strength of intellectual property rights protection, India's reluctance to include environmental provisions in the EU-India PTA was a contentious issue during the negotiations and later one of the reasons for the temporary suspension of the negotiations (Khandekar, 2011; Singh, 2015).

However, experts argue that India, in order to be attractive and credible as a partner in global value chains, may need to rethink its strategy. Recent regional trade deals—the Comprehensive and Progressive Agreement for Trans-Pacific Partnership (CPTPP) being of particular importance in this context—regulate not only trade but also many behind-the-border issue areas such as investment, intellectual property rights and the environment. Indian producers will have to adjust to these new standards if they wish to participate in the production networks governed by these agreements (Meltzer, 2015).

In fact, despite the strong national narrative of separating trade from environmental issues, the data shows that the case of India reflects the global trend of PTAs becoming greener over time, the agreements with the largest environmental content being those with South Korea and Japan, signed in 2009 and 2011, respectively. South Korea and Japan both have a higher level of economic development and play a significant role in Asian and global production networks. However, so far none of India's PTAs includes a whole chapter on trade and the environment or sustainable development. Whether India's stance towards mixing trade and environmental matters has and will become more reconciliatory therefore remains an open question. In any case, the negotiations for the PTA between the EU and India, resumed in January 2016 (Suneja, 2015), will

require a discussion about this topic—the outcome could be an indication on India’s future direction of trade policy.

5.3 *Indonesia*

Indonesia has been a long-standing participant in the multilateral trading regime and is a founding member of the Association of Southeast Asian Nations (ASEAN). In fact, Indonesia concluded all its PTAs—with the exception of the bilateral agreement with Japan in 2007—as a member of ASEAN. The adoption of liberal trade and investment policies at the end of the 1990s in Indonesia and across the South Asian region can be attributed to a variety of factors, most importantly the increasing competitive pressure from China, the Asian economic crisis as well as the conclusion of important regional integration initiatives in North America (NAFTA) and the EU (single market). Liberal economic policies at the national level were accompanied by a wave of PTAs signed at the end of the 2000s.

While negotiated within a rather short period of time, Indonesian PTAs display a relatively high variation in terms of the coverage of environmental issues. The two most comprehensive agreements in this regard are the 2007 bilateral agreement with Japan and the ASEAN Free Trade Area concluded in 2010, covering four environmental dimensions. The ASEAN agreements with Korea, Japan and India, on the other hand, only cover two dimensions. All PTAs concluded by Indonesia include an environmental exception modelled on GATT Art. XX and most PTAs include provisions on cooperation. Compared to North American and European PTAs, none of the Indonesian agreements included an environment chapter or provisions on cooperation and participation in environmental matters. This restraint to include comprehensive environmental provisions is not only characteristic for Indonesian or ASEAN PTAs, but also for other Asian industrialized countries like Japan (Yanai, 2014). Indonesia is currently negotiating a PTA with the EU and has been considering an accession to the CPTPP. It is therefore likely that Indonesia will come under pressure to sign up to more comprehensive environmental provisions in the near future.

5.4 *Brazil*

Brazil considers the WTO to be the main arena where the most pressing issues in international trade should be discussed (Fishlow, 2004; WTO, 2013). Brazil has focused strongly on the multilateral trade liberalization track and has not put much emphasis on PTAs so far. Indeed, Brazil remains among the most closed economies as measured by the share of exports and imports in GDP. One explanation for the country’s limited openness to trade is that Brazil has strongly relied on domestic value chain integration rather than participation in global production networks (Canuto, Fleischhaker, & Schellekens, 2015).

The limited number of PTAs signed by Brazil illustrates the reluctance to open up and the lack of focus on bilateral and regional trade agreements. Brazil, however, is part of Mercosur (Southern Common Market), the Latin American regional bloc established in 1991, which also includes Argentina, Paraguay, Uruguay and Venezuela as full members. Mercosur is Brazil's main preferential agreement in terms of value of trade (WTO, 2013). As member of Mercosur, Brazil has signed a number of PTAs.

Whereas the founding treaty for Mercosur did not include any provisions on labour or environmental rights, the subsequent developments that occurred in Mercosur in the 1990s brought about a recognition of these rights (Giupponi, 2014). Still, analyses of the environmental components in the Mercosur agreement indicate that they are weak (Hochstetler, 2003). At the same time, Mercosur does include rather elaborate provisions on cooperation for the implementation of MEAs (OECD, 2007, p. 5). The PTAs Brazil signed as a member of Mercosur, do not include many environmental provisions, let alone a whole chapter on trade and environment or sustainable development.

It is likely, however, also in light of the possible end of the multilateral Doha Round as well as the proliferation of PTAs around the world and the recent rise of mega-regional trade agreements, that Brazil will review its prevailing trade strategy where efforts have so far focused on multilateral rather than bilateral or regional negotiations (Canuto, 2015). Negotiations with the European Union on a free trade agreement with Mercosur were relaunched and a number of new PTA negotiations have been initiated. It remains an open question which stance Brazil will take towards environmental provisions in its upcoming PTAs, both in the context of Mercosur and beyond.

5.5 Mexico

Mexico's free trade policy has been influenced heavily by its participation in the North American Free Trade Agreement (NAFTA). Subsequently, Mexico has been one of the most active emerging markets with respect to the negotiation of PTAs. The coverage of environmental provisions in Mexican PTAs displays a peculiar pattern distinct from other emerging markets. While environmental provisions got more numerous over time in other emerging economies' PTAs, Mexico experienced a reverse trend. Mexico's early and comprehensive commitment to environmental provisions stems from its membership in the NAFTA which, at the time, was the most comprehensive PTA and covered five of the nine dimensions of our data set. Beyond the environmental provisions included in the main text, the three NAFTA member countries also signed an environmental side agreement on environmental cooperation which triggered a number of legal measures and increased the level of cooperation on environmental matters in North America (Gallagher, 2009).

NAFTA included references to environmental protection in the preamble, a GATT Article XX-type environmental exception, references to MEAs, commitments to

uphold environmental laws and provisions on the right to regulate in environmental matters. Mexico's experience with NAFTA had repercussion for the PTAs it concluded in the years following the landmark agreement. The PTAs Mexico negotiated during the 1990s with other developing countries such as Costa Rica (1994), Bolivia (1995), Colombia and Guatemala (1995), Nicaragua (1997) and Chile (1998) included similar commitments on the environment as NAFTA and in some cases even incorporated provisions on cooperation in the main text. In other words, towards other developing countries Mexico acted as a rule-maker transferring its experience gained in negotiations with the USA. The PTA Mexico signed with the EU in 1997, on the other hand, included less comprehensive commitments on environmental protection than Mexico's agreements with its NAFTA partners and other developing countries. The same is true for two subsequent PTAs Mexico concluded with industrialized countries. The PTAs with the countries of the European Free Trade Association (EFTA) and Israel included even fewer environmental provisions than the agreement with the EU.

While Mexico's treaty-making practice during the 1990s was to a large extent influenced by NAFTA, the influence of this landmark deal decreased after the turn of the century. The environmental commitments in Mexican PTAs negotiated with industrialized and developing countries after 2000 were more diverse and less ambitious compared to those of the 1990s. The atypical development with regard to the inclusion of environmental provisions in Mexican PTAs can, therefore, be mainly attributed to the impact of NAFTA.

6 Conclusion

The coverage of non-economic commitments in PTAs has received comparatively little attention in the academic literature. In this chapter, we have addressed this gap by making use of a novel dataset including nine dimensions of environmental commitments in PTAs: reference to environmental goals in the preamble or other chapters, environmental exceptions, references to MEAs, inclusion of a whole chapter on environment or sustainable development, obligations to uphold environmental law, incorporation of the right to regulate in environmental matters, cooperation in environmental matters, transparency in environmental matters and public participation in environmental matters.

With regard to the PTAs of emerging markets, there are two main conclusions. First, in the aggregate, the PTAs of emerging markets have become greener over time. Second, their PTAs tend to include more environmental content when signed with OECD countries. This, in turn, indicates that OECD countries are still rule-makers and emerging markets still largely rules-takers with regard to environmental provisions in trade agreements.

However, the general patterns mask some heterogeneity at the country level. China's recent PTAs indicate that the country is already embarking on a path towards agreements with more environmental content. India is still very reluctant to combine

trade and non-trade issues in the same agreement, but things seem to have started moving as well. Indonesia is mostly negotiating PTAs with weak environmental content as a member of ASEAN, but has signed a ‘greener’ agreement with Japan. Brazil is not very active in the conclusion of PTAs in general and the agreements signed through its membership in Mercosur are rather weak in terms of environmental content. Mexico, as a consequence of NAFTA, signed relatively ‘green’ agreements early on, but its PTAs show more variation in recent years. Both the rise of comprehensive mega-regional agreements and the expansion of global value chains are likely to further shape the future of the trend towards incorporating environmental provisions in trade agreements.

Our findings show that environmental considerations play an increasingly important role in trade—both the spread of voluntary sustainability standards (e.g. Brandi, 2016; Fiorini et al., 2018; Marx et al., 2015) and public regulation that seeks to address sustainability concerns for a specific sector or product, as discussed in other chapters in this book, are an expression of this. More research is needed in order to provide a more detailed picture of the interlinkages between international trade and the environment, both in emerging economies and beyond. More particularly, there is a need for more research on the diffusion of environmental provisions in PTAs, the relation between environmental provisions in PTAs and the uptake and effective implementation of public regulation as well as private standards that contribute to tackling environmental concerns and types of sustainability challenges.

Acknowledgements This paper was developed as part of the DIE research project “Research for a Climate Smart and Just Transformation (Klimalog)” funded by the German Federal Ministry for Economic Cooperation and Development (BMZ) and has previously been published as a DIE discussion paper. We cordially thank our research assistants Martina Holzer, David Schuhler and Janina Sturm for their excellent support.

Annex

Name of agreement	Year of signature	Year of entry into force	Partner country ^a	Number of environmental dimensions covered
China-Hong Kong	2003	2003	Non-OECD	0
India-Bangladesh	2006	2006	Non-OECD	0
China-Macao	2003	2003	Non-OECD	0
MERCOSUR	1991	1991	Non-OECD	1
South Asian Free Trade Agreement (SAFTA)	2004	2006	Non-OECD	1
India-Sri Lanka	1998	2000	Non-OECD	1

(continued)

(continued)

Name of agreement	Year of signature	Year of entry into force	Partner country ^a	Number of environmental dimensions covered
India-Bhutan	2006	2006	Non-OECD	1
MERCOSUR-SACU	2009	2008	Non-OECD	1
MERCOSUR-Chile	1996	1996	Non-OECD	1
Mexico-Israel	2000	2000	Non-OECD	1
India-Thailand	2003	2003	Non-OECD	2
China-Pakistan	2006	2007	Non-OECD	2
EFTA-Mexico	2000	2001	OECD	2
ASEAN-Korea	2007	2006	Non-OECD	2
ASEAN-India	2010	2009	Non-OECD	2
MERCOSUR-Israel	2007	2010	Non-OECD	2
Mexico-Uruguay	2003	2004	Non-OECD	2
ASEAN-Japan	2008	2009	OECD	2
China-Australia	2015	2015	OECD	2
China-Iceland	2013	2014	OECD	3
India-Singapore	2005	2005	Non-OECD	3
China-New Zealand	2008	2008	OECD	3
Mexico-Peru	2011	2012	Non-OECD	3
ASEAN-China	2005	2004	Non-OECD	3
EC-Mexico	1997	2000	OECD	3
India-Malaysia	2011	2011	Non-OECD	3
Mexico-Bolivia	1994	1995	Non-OECD	3
ASEAN-Australia-New Zealand	2009	2009	OECD	3
China-Singapore	2008	2009	Non-OECD	4
China-Costa Rica	2010	2011	Non-OECD	4
Mexico-Panama II	2014	2015	Non-OECD	4
Mexico-Central America	2011	2013	Non-OECD	4
Indonesia-Japan	2007	2008	OECD	4
Mexico-Japan	2004	2005	OECD	4
ASEAN	2009	2010	Non-OECD	4
China-Peru	2009	2009	Non-OECD	4
NAFTA	1992	1994	OECD	5
China-Chile	2005	2006	Non-OECD	5
Mexico-Colombia-Guatemala (G3)	1995	1994	Non-OECD	5

(continued)

(continued)

Name of agreement	Year of signature	Year of entry into force	Partner country ^a	Number of environmental dimensions covered
Mexico-Chile	1998	1999	Non-OECD	5
India-South Korea	2009	2010	Non-OECD	5
Mexico-Nicaragua	1997	1998	Non-OECD	6
Mexico-Northern Triangle	2000	2001	Non-OECD	6
Mexico-Bolivia	1995	1994	Non-OECD	6
India-Japan	2011	2011	OECD	6
Mexico-Costa Rica	1994	1995	Non-OECD	6
China-Switzerland	2013	2013	OECD	7
China-Korea	2015	2015	Non-OECD	7

^aOECD status at year of signature

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