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Mainstreaming Sustainability in Free Trade Agreements: Issues and Options

PhD in	**International Law and Economics**
Cycle	**28°**
Student's Tutor	**Professor Claudio Dordi**
Year of thesis defence	**2017**

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Date ___**31 January 2017**_____

To Ginevra Meliadò,
for all the times you prompted me to turn my head
towards the beauty and magic of this world.

Abstract

This thesis argues that countries, and in particular those who are capacity-constrained, have economic, social and environmental gains to reap from taking ownership of the intersection between free trade and sustainable development.

The title of the thesis, "mainstreaming sustainability in free trade agreements", is deliberately ambiguous: "sustainability" has become a word of common use, and can apply to a variety of contexts, generally meaning that something – such as a process, a project, a purchasing decision – can last for long, on its own legs, and can possibly bring incremental benefits to the parties concerned, directly or indirectly, with its implementation; "free trade agreements", on the other hand, may refer to a typology of international commercial treaties that are generally aimed at lowering or eliminating barriers to trade between their signatory countries, be them two, a small club, or the 164 members of the World Trade Organization.

This ambiguity is justified by the precise objective, and sincere hope, that the scholars and the practitioners addressing the subject matters of "sustainability" and "free trade agreements", whether in conjunction or separately, keep a critical and creative mind while performing their work. Still, in the context of this thesis, sustainability refers to the concept of Sustainable Development, while free trade agreements are the aforementioned commercial treaties, yet with a flexible focus on those that are signed by only two or a small club of parties.

The thesis is entirely based on qualitative observations of the phenomena it purports to investigate, and is divided in three parts. Part I first clarifies why bilateral or small-club free trade agreements are the main focus of the analysis: essentially, because this has been the geometry through which free trade agreements have proliferated the most over the past 20 years. Secondly, it provides an overview of the relationship between trade and Sustainable Development, which shows two parallel evolutionary paths: 1) a multiplication of policy linkages, from trade and environmental policies only, to the inclusion of social and economic policies at a later stage; and 2) an emerging tendency to build synergies (and avert conflicts) between all these policies, undeniably proved by the important role bestowed on trade by the 2015 Sustainable Development Goals.

Part II then presents a comparative literature review on the evolution of environmental, social, and economic sustainability norms in the texts of the agreements. In so doing, it confirms the evolutionary paths identified in Part I, finding: 1) that norms and provisions related to Sustainable Development have expanded in both scope and reach; and 2) that the analytical exercises that in some instances are run in parallel with the negotiation of free trade agreements – the so-called sustainability impact assessments and the like – also have become more sophisticated. More importantly, Part II shows first, that the meaning of economic sustainability in particular has yet to find a definition in free trade agreements, and second, that the complex policy linkages set out by the

modern interplay between trade and Sustainable Development need policy consistency across the whole legal framework set out by a free trade agreement.

This leads to the analysis carried out in Part III, which concentrates on three specific subject areas: regulatory cooperation, climate change, and small and medium-sized enterprises. By providing a comparative overview of norms and mechanisms in each of these subject areas, Part III tries to capture current trends in norm-setting, as well as instances that are particularly suitable for improvement, further research, and further work.

Acknowledgments

This thesis marks the end of a long and stimulating journey, as well as the interim result of a learning and knowledge-sharing process. Both the PhD journey and the on-going learning process could not have been possible, and would not have been so fascinating, without the interaction and the discussions I have entertained with the following mentors, friends and colleagues from the Bocconi University, A. Sraffa Department of Legal Studies, the Economics and Trade Branch of the United Nations Environment Programme (UNEP-ETB), the UN Economic Commissions for Europe (UNECE), the World Trade Organization (WTO), and the World Trade Institute (WTI) of the University of Bern.

From Bocconi, I wish to thank my mentor and thesis supervisor professor Claudio Dordi, for his great generosity in sharing comments and ideas, building *inter alia* on his unique, hands-on experience in the negotiation of FTAs. In addition, my special gratitude goes to Professor Giorgio Sacerdoti for being constantly so close to all of us PhD candidates. While the rest of the PhD Faculty also deserves a giant thank you, I wish to stress that Elena, Carlo, Enok, Tulio, Nicolò, and Guendalina have simply been the perfect journey mates, sharp-minded and sympathetic in every possible instance. Thanks also to Paola and Mario, for their invaluable contribution to the smooth functioning of the PhD Programme, and also for being so warm and nice.

From UNEP-ETB, I would like to thank my mentor, the Chief of Branch Dr. Steven Stone, a great academic with whom I have had the most challenging and stimulating discussions on the relationship between trade, natural capital valuation, and economic growth. At UNEP-ETB, my most sincere thank you goes also to Giles, Krystin, Kavita, Simon, Moussa, Claudia, Asad, Ronal and Andrea, with whom I have had the honour of interacting, co-writing, and shaping together the role of trade in the framework of a Green Economy; in so doing, we were animated by a magic feeling: that of conducting a quest for a new and better economic model, a sort of real-life application of the core tenets of Sustainable Development.

From UNECE, I would like to thank Mika, Virginia, Lorenza, Maria Teresa and Tom, for their patience and proactive attitude in applied research on the important role of international standards and regulatory cooperation in international trade agreements. It would not have been possible to do such a great work together, though, had my friends and colleagues Elina, Gianguglielmo, Salehin and Wanlin not been there, too.

From the WTO and the WTI, respectively, I would like to thank my mentors Serafino Marchese (WTO), Thomas Cottier and Pierre Sauvé. Their continued support has been the source of great strength and perseverance before, during, and doubtless even after the PhD years. It would really be impossible to name here all the friends and peers I have had the honour to meet during the PhD journey; to all of them, once again, goes my most sincere gratitude.

Abbreviations

AA	Association Agreement
AB	Appellate Body
ACP	Africa, Caribbean and Pacific
ADB	Asian Development Bank
AFAS	ASEAN Framework Agreement on Services
AfT	Aid for Trade
APEC	Asia-Pacific Economic Cooperation
ASEAN	Association of Southeast Asian Nations
CGE	Computable General Equilibrium
CITES	Convention on International Trade in Endangered Species
CSR	Corporate Social Responsibility
CU	Customs Union
DDA	Doha Development Agenda
DFAIT	Department of Foreign Affairs and International Trade
ECOWAS	Economic Community of West African States
EC	European Commission
EEC	European Economic Community
EFTA	European Free Trade Association
EGA	Environmental Goods Agreement
EIA	Environmental Impact Assessment
EPA	Economic Partnership Agreement
ESV	Ecosystem Services Valuation
EU	European Union
FAO	Food and Agriculture Organization of the United Nations
FOEE	Friends Of the Earth Europe
FTA	Free Trade Agreement
GATT	General Agreement on Tariffs and Trade
GATS	General Agreement on Trade in Services
GCF	Green Climate Fund
GSP	Generalised System of Preferences
GVC	Global Value Chains
IARC	Impact Assessment Research Centre
IEA	International Energy Agency
IEC	International Electrotechnical Commission
ILO	International Labour Office/Organization
IMF	International Monetary Fund
IPCC	Intergovernmental Panel on Climate Change
IPPC	International Plant Protection Convention
ISO	International Organization for Standardization
LDC	Least-Developed Countries
MDGs	Millennium Development Goals
MEA	Multilateral Environmental Agreement
MFI	Microfinance Institutions

MFN	Most Favoured Nation
MRA	Mutual Recognition Agreement
MSME	Micro, Small and Medium-sizes Enterprises
NAFTA	North American Free Trade Agreement
NGOs	Non-Governmental Organizations
NSB	National Standardisation Bodies
NTB	Non Tariff Barriers
NTM	Non Tariff Measures
OECD	Organization for Economic Cooperation and Development
OIE	World Organization for Animal Health
PES	Payments for Ecosystem Services
PPMs	Processes and Production Methods
PPP	Public-Private Partnership
RCC	US-Canada Regulatory Cooperation Council
REDD	Reduction of Emissions from Deforestation …
RoO	Rules of Origin
SADC	South-African Development Community
SCM	Subsidies and Countervailing Measures
SDGs	Sustainable Development Goals
SD	Sustainable Development
SEA	Single European Act
SIA	Sustainability Impact Assessment
SME	Small and Medium-sized Enterprise
SPS	Sanitary and Phytosanitary
SUSTRA	Research Network on Sustainable Trade
TBT	Technical Barriers to Trade
TEEB	The Economics of Ecosystems and Biodiversity
TPP	Trans-Pacific Partnership
TRIMS	Trade-Related Investment Measures
TRIPS	Trade-Relates aspects of Intellectual Property Rights
TTIP	Transatlantic Trade and Investment Partnership
UNCTAD	United Nations Conference on Trade and Development
UNEP	United Nations Environment Programme
UNFCCC	United Nations Framework Convention on Climate Change
UNIDO	United Nations Industrial Development Organization
US	United States of America
USTR	United States Trade Representative
WIDE	Network of Women in Development Europe
WTO	World Trade Organization
WWF	World Wildlife Fund

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Introduction

Part I

With the global adoption of the Sustainable Development Goals (SDGs) in 2015, the role of international trade *vis à vis* economic, environmental and social sustainability concerns has been officially reframed: from a prevailing vision of trade as a potential source of measures hindering the achievement of more sustainable economies, typical of the mid-nineties (see e.g. Barkin, 2015), to the Agenda 2030 vision of trade as a front-line "financial and non-financial" means of implementation to achieve the concrete policy targets substantiating the SDGs (UNCTAD, 2015).

Concurrently, both the liberalization of merchandise and services trade, and the flanking efforts to approximate and streamline regulation affecting trade across sovereign entities, have experienced their own paradigm shift: from talks held (mostly) by the rules of the open multilateral arena – the World Trade Organization (WTO) – to the ostensible preference of countries to negotiate free trade agreements (FTAs), either bilaterally or within small groups (see e.g. Yeon Kim, 2015).

This parallel shift – in the role of trade and in the move towards bilateral or "small-club" FTAs – has visibly converged upon the practice of including sustainable development (SD) chapters, or dedicated SD sections, in FTAs. Indeed, certain major global players such as Canada, the European Union (EU), and the United States (US) have included SD chapters and the like in their FTAs over the last decade, thus consolidating the strong policy linkages between FTAs and some of the sustainability concerns addressed by the SDGs. Contextually, modern FTA talks are often informed by various forms of *ex-ante* impact assessments: from quantitative projections of economic costs and benefits connected with the enactment of the given FTA, to broader sustainability impact assessments (SIAs) that embrace both quantitative and qualitative considerations.

The complex nexus between trade and SD, in fact, has evolved significantly over the period 1995-2015: from the birth of the WTO trough to the approval of the SDGs (Table 1).

Table 1 – Evolution of the official narrative on the trade and SD nexus, 1995-2015

How trade looked at SD in 1995	How SD looked at trade in 2000	How SD looked at trade in 2015
From the Preamble to the Agreement Establishing the WTO, 1995: WTO members recognize that "their relations in the field of trade and economic endeavour should be conducted with a view to raising standards of	Direct references to trade in the Millennium Development Goals (MDGs), 2000: Goal 8: Develop a global partnership for development. Target A: Develop further an open, rule-based, predictable, non-discriminatory trading and	Direct references to trade in the SDGs, 2015: Goal 2: End hunger, achieve food security and improved nutrition and promote sustainable agriculture. 2.b: Correct and prevent trade restrictions and distortions in world

living, ensuring full employment and a large and steadily growing volume of real income and effective demand, and expanding the production of and trade in goods and services, while allowing for the optimal use of the world's resources in accordance with the objective of sustainable development, seeking both to protect and preserve the environment and to enhance the means for doing so in a manner consistent with their respective needs and concerns at different levels of economic development."	financial system Target B: Address the special needs of the least developed countries Target C: Address the special needs of landlocked developing countries and small island developing States Target D: Deal comprehensively with the debt problems of developing countries Target E: In cooperation with pharmaceutical companies, provide access to affordable essential drugs in developing countries Target F: In cooperation with the private sector, make available the benefits of new technologies, especially information and communication	agricultural markets, including through the parallel elimination of all forms of agricultural export subsidies and all export measures with equivalent effect, in accordance with the mandate of the Doha Development Round. Goal 3: Ensure healthy lives and promote well-being for all at all ages. 3.b: Support the research and development of vaccines and medicines for communicable and non-communicable diseases that primarily affect developing countries, provide access to affordable essential medicines and vaccines, in accordance with the Doha Declaration on the Trade Related Aspects of Intellectual Property Rights (TRIPS) Agreement and Public Health, which affirms the right of developing countries to use to the full the provisions in the TRIPS agreement regarding flexibilities to protect public health, and, in particular, provide access to medicines for all. Goal 8: Promote sustained, inclusive and sustainable economic growth, full and productive employment, and decent work for all. 8.a: Increase Aid for Trade support for developing countries, in particular least developed countries, including through the Enhanced Integrated Framework for Trade-related Technical Assistance to Least Developed Countries. Goal 9: Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation 9.3: Increase the access of small-scale industrial and other enterprises, in particular in developing countries, to financial services, including affordable credit, and their integration into value chains and markets. Goal 10: Reduce inequality within and among countries 10.a: Implement the principle of special and differential treatment for developing countries, in particular least developed countries, in accordance with WTO agreements. Goal 14: Conserve and sustainably

		use the oceans, seas and marine resources for sustainable development 14.6: By 2020, prohibit certain forms of fisheries subsidies which contribute to overcapacity and overfishing, eliminate subsidies that contribute to illegal, unreported and unregulated fishing and refrain from introducing new such subsidies, recognizing that appropriate and effective special and differential treatment for developing and least developed countries should be an integral part of the WTO fisheries subsidies negotiation Goal 17: Strengthen the means of implementation and revitalize the Global Partnership for Sustainable Development. 17.10: Promote a universal, rules-based, open, non-discriminatory and equitable multilateral trading system under the WTO, including through the conclusion of negotiations under its Doha Development Agenda (DDA) 17.11: Significantly increase the exports of developing countries, in particular with a view to doubling the least developed countries' share of global exports by 2020. 17.12: Realize timely implementation of duty-free and quota-free market access on a lasting basis for all least developed countries, consistent with WTO decisions, including by ensuring that preferential rules of origin applicable to imports from least developed countries are transparent and simple, and contribute to facilitating market access.

This evolution, presented in Table 1, is not only the proof of a quantitative increase in officially recognized trade-SD linkages. It is also linked to an evolution from conflicts to synergies, with the trade-related SDGs tilting the balance towards the side of the latter, at least in term of policy guidelines.

With the SDGs, articulated around 169 Targets, sustainability concerns have been put at the forefront of the international agenda. As reported in Table 1, there is widespread recognition that a powerful mechanism through which some of the SDGs and their respective targets can be achieved is through international trade (see e.g. UNCTAD, 2015; Hoekam, 2016; UNCTAD, 2016). This includes notably Goal 17, which highlights the necessity to ensure policy coherence for SD while respecting each country's policy space and leadership in order to establish and implement policies to eradicate poverty.

For instance, on the Post-2015 Agenda, the UN (2014) stated that:

> "*Sustainable development must be an integrated agenda for economic, environmental and social solutions. Its strength lies in the interweaving of its dimensions. This integration provides the basis for economic models that benefit people and the environment; for environmental solutions that contribute to progress; for social approaches that add to economic dynamism and allow for the preservation and sustainable use of the environmental common; and for reinforcing human rights, equality, and sustainability. Responding to all goals as a cohesive and integrated whole will be critical to ensuring the transformation needed at scale.*"
> (Paragraph 82 of the UN Secretary-General's Synthesis Report on the Post-2015 Agenda).

This alleged paradigm shift in the relationship between trade and SD has been heavily informed by research, analysis, and advocacy in fields as diverse as environmental, behavioural and development economics, law, international political economy, natural sciences, philosophy and history, to name a few. In other words, the breadth of the debate underpinning the trade-SD nexus is at least as wide as the scope of the modern SDGs (see e.g. IISD and UNEP, 2014). However, as discussed in Part I, the move from conflicts to synergies is a complex, on-going process, somehow connected to the re-definition of the concept of SD, too, and to the expansion from a prevailing focus on environmental issues, to a more holistic take on the inter-linkages between the three pillars.[1]

Such move towards a full uptake of SD as a holistic approach to trade policymaking can be read, for instance, in the evolution from the practice of adding environmental exceptions in FTAs, to that of including more comprehensive SD chapters or sections in the texts of the agreements. This, in turn, represents the crux of the analysis presented in Part II.

Part II

As noted in the literature reviewed in Part II, SD chapters included in FTAs represent in the first place a milestone political achievement. They have been helpful in pushing SD considerations to the centre of the political discourse surrounding FTAs, which arguably makes a substantial contribution to the progressive development of SD norms and guidelines, particularly as they relate to the trading world (see e.g. Marín Durán, 2013).

SD chapters also serve a more immediate purpose: they set forth or reinforce parties'

[1] To recall here, the 2002 Johannesburg Declaration on Sustainable Development articulated more clearly the concept of SD around three interconnected pillars: the well-known economic, social and environmental pillars (Kates et al. 2005). The Declaration calls for attention on: "…a collective responsibility to advance and strengthen the interdependent and mutually reinforcing pillars of sustainable development – economic development, social development and environmental protection – at local, national, regional and global levels" (Chapter 1.5). Scholars have argued that, while differing from these three dimensions, human rights too were closely intertwined with the notion of sustainability as the extent of the rights covered went beyond principles of sustainability (Bilal and Ramdoo, 2016).

obligation in matters covered by selected multilateral environmental agreements (MEAs) and various fundamental International Labour Organization (ILO) treaties and standards. As presented in Table 1, which builds on a sample of the practice of the European Union (EU), their coverage presents typical norms as well as variations and evolutions over time and across trade negotiations.

Table 2 – Examples of subjects covered by EU SD chapters

EU-South African Development Community, 2015	CETA (EU-Canada), 2016	EU-Singapore, 2015
Chapter II: Trade and Sustainable Development Art. 6: Context and objectives Art. 7: Sustainable development Art. 8: Multilateral environmental and labour standards and agreements Art. 9: Right to regulate and levels of protection Art. 10: Trade and investment favouring sustainable development Art. 11: Working together on sustainable development	Chapter XXII: Trade and Sustainable Development Art. 22.1: Context and objectives Art. 22.2: Transparency Art. 22.3: Cooperation and promotion of trade supporting sustainable development Art. 22.4: Institutional mechanisms Art. 22.5: Civil society forum Chapter XXIII: Trade and Labour Art. 23.1: Context and objectives Art. 23.2: Right to regulate and levels of protection Art. 23.3: Multilateral labour standards and agreements Art. 23.4: Upholding levels of protection Art. 23.5: Enforcement procedures, administrative proceedings and review of administrative action Art. 23.6: Public information and awareness Art. 23.7: Cooperative activities Art. 23.8: Institutional mechanisms Art. 23.9: Consultations Art. 23.10: Panel of experts Art. 23.11: Dispute resolution Chapter XXIV: Trade and Environment Art. 24.1: Definition Art. 24.2: Context and objectives Art. 24.3: Right to regulate and levels of protection Art. 24.4: Multilateral environmental agreements Art. 24.5: Upholding levels of protection Art. 24.6: Access to remedies and procedural guarantees Art. 24.7: Public information and awareness Art. 24.8: Scientific and technical information Art. 24.9: Trade favouring environmental protection Art. 24.10: Trade in forest products Art. 24.11: Trade in fisheries and aquaculture products Art. 24.12: Cooperation on environment issues Art. 24.13: Institutional mechanisms Art. 24.14: Consultations Art. 24.15: Panel of experts Art. 24.16: Dispute resolution Chapter XXV: Bilateral Dialogues and Cooperation Art. 25.1: Objectives and principles Art. 25.2: Dialogue on Biotech Market Access Issues Art. 25.3: Bilateral Dialogue on Forest Products	Chapter XIII: Trade and Sustainable Development SECTION A: Introductory provisions Art. 13.1: Context and objectives Art. 13.2: Right to regulate and levels of protection SECTION B: Labour aspects Art. 13.3: Multilateral labour standards and agreements Art. 13.4: Labour cooperation in the context of trade and sustainable development Art. 13.5: Scientific information SECTION B: Environmental aspects Art. 13.6: Multilateral environmental standards and agreements Art. 7: Sustainable forest management and trade in forest products Art. 8: Trade and sustainable management of living marine resources and aquaculture products Art. 9: Trade and investment favouring sustainable development Art. 10: Upholding levels of protection Art. 11: Scientific information Art. 12: Transparency Art. 13: Review of sustainability impacts Art. 14: Working together on trade and sustainable development Art. 15: Institutional set-up and overseeing mechanism Art. 16: Government consultations Art. 17: Panel of experts

	Art. 25.4: Bilateral Dialogue on Raw Materials Art. 25.5: Enhanced cooperation on science, technology, research and innovation	

Table 2 shows that, whenever the constitutive pillars of SD are broken down into provisions within or in the proximity of SD chapters, only the environmental and social subject areas are considered. The question then arises as to the fate of the economic sustainability pillar. While economic sustainability as such is frequently cited in SD chapters and in FTAs' preambles, specific economic sustainability sub-sections are generally not included in the text of the agreements.

This omission could be explained by arguing that the core objectives of FTAs are about economic issues in the first place, hence dispensing the parties from the need to address the specifics of economic sustainability. Nonetheless, economic sustainability is widely regarded as something different from concepts such as economic growth or efficiency, and it is not less important than environmental or social sustainability. Why? Because the economic viability of any policy promoting environmental and social objectives is arguably key to creating incentives for businesses to uphold SD considerations.

On top of this rather pragmatic consideration, it is also clear, and hot off the press, that the concerns related to the economic sustainability of an FTA – including a balanced, long-term distribution of costs and benefits deriving from new market opening, as well as the setting-up of appropriate social safety nets and compensation mechanisms – are at the core of both technical discussions and civil society's concerns before and during FTA negotiations.

How to give meaning, then, to economic sustainability in the context of an FTA? For instance, under SDG 9 entitled "Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation", the 2030 Agenda aims to: "9.b Support domestic technology development, research and innovation in developing countries, including by ensuring a conducive policy environment for, inter alia, industrial diversification and value addition to commodities" and to " 9.c Significantly increase access to information and communications technology and strive to provide universal and affordable access to the Internet in least developed countries by 2020".

Yet, a more immediate answer is perhaps provided by the public consultations and technical work leading to the preparation of the so-called trade sustainability impact assessments (SIAa). An SIA is: "(…) an approach for exploring the combined economic, environmental and social impacts of a range of proposed policies, programmes, strategies and action plans" (OECD, 2010).

With regard to economic sustainability considerations, and sticking to the EU example, the 2016 EC guidelines to conduct SIAs state the following: "…economic modelling should be used to assess the likely consequences of the policy changes on variables such as output, trade flows, prices, fiscal revenues (including revenues foregone), income and welfare. Attention should also be paid to expected impacts on competitiveness and impact on small and medium-sized enterprises (SMEs), making use of the respective Commission guidance…" (EC, 2016).

The EU Commission then stresses that the result of such models should be read in conjunction with flanking qualitative analyses. Still, Computable General Equilibrium (CGE) simulations are the quantitative modeling exercises at the basis of these analyses, and it has been noted by many that their objective limitations – deriving mostly from the assumptions upon which they are constructed – should be spelled out upfront when publishing their results (see e.g. De Ville and Siles-Brugge, 2014). All in all, CGE simulations represent just one additional, useful data source on potential effects of policy changes, but as Piermartini and Teh (2005) put it: "…the tail should not wag the dog".

Finally, and in broader terms, a comparative reading of selected SIAs and their outcomes in FTAs reveals that SIA recommendations are only partly transposed into the final texts of the agreements. As the detailed negotiating history of FTAs is generally not accessible, how SIA recommendations become legal obligations, best endeavour provisions, other mechanisms, or plain omissions, often remains obscure. Scholarship suggests that it remains unclear how and why the specific policy guidelines and substantive legal obligations included in SD chapters are selected to be included in the final text of an FTA (see e.g. Jinnah and Morgera, 2013). While concerns have also been voiced as to the potential for FTA provisions to limit the autonomy of the parties to enact, for instance, climate-friendly legislation (EC, 2016), doubts linger in relation to SD chapters as an effective approach to tackle the most important sustainability implications of FTAs.

Part III

Against all the considerations made in Parts I and II, it can be concluded that even in FTAs where an SD chapter is included, several substantive provisions including on regulatory cooperation, climate change and climate-change finance, green subsidies, SMEs, access to trade finance, and e-commerce, could be more effective in addressing SD issues.

Introduced in Part I.3, and analysed in the status quo observation provided by Part II, the FTA policy areas of regulatory cooperation, climate change, and support to SMEs' internationalization (including through inclusive trade finance and e-Commerce) have then been taken as examples of areas where FTA norms can become more effective in advancing towards triple-win SD objectives.

This is, admittedly, an exacting task: read in the context of the 2015 Paris Agreement[2] and what it entails in terms of national policy formulation (Granoff, 2016), the design of SD-sound FTAs becomes even more complex and more demanding on national policymakers in terms of policy coordination and consistency. As highlighted in Part III there are, however, various margins for implementing low-cost and relatively simple improvements to norms and implementation mechanisms.

[2] Adoption of the *Paris Agreement*, Proposal by the President *FCCC/CP/2015/L.9/Rev.1,* COP 21, United Nations Framework Convention on Climate Change [UNFCCC], UN Doc. A/AC.237/18, May 15, 1992, *reprinted in* 31 I.L.M. 849.

PART I: From conflicts to synergies? Trade, sustainability, and FTAs

Introduction

After introducing stylized facts on FTAs and explaining why bilateral or small-club FTAs are particularly suitable for the present analysis, Part I provides the essential legal and economic background information to analyse the FTAs-SD nexus. It then concludes by focusing on regulatory cooperation, climate change, and small and medium-sized enterprises as three examples of subject-specific normative areas where synergies between trade and SD could be made more effective in FTAs.

1. Why a focus on bilateral or small-club FTAs?

Several considerations support the suitability of bilateral or small-club FTAs for a comparative analysis of the evolution of the trade and SD nexus. Certain structural characteristics of FTAs, including for instance their media power, limited number of parties, ad-hoc contract-like nature, and focused coverage, make FTAs more responsive to social and economic changes than the multilateral agreements of the WTO. In addition, as discussed below, the political economy of FTAs is relatively simpler, and their conclusion generally quicker, than the political economy and timeframe for conclusion of their multilateral equivalents; these two considerations reveal helpful when investigating change dynamics, as is the case with the trade and SD nexus.

FTAs are generally considered one typology of 'regional trade agreements' (RTAs). RTAs are subdivided in custom unions (CUs) and free trade areas, or agreements (FTAs). The main difference between the two is that CUs have a common external tariff, while free trade areas, which are the main subject matter under observation in the present analysis, liberalize trade within the countries covered, and allow them to retain their independence in designing trade policy with third countries. Moreover, the negotiation of an FTA is in principle easier, because it does not require the parties to remit matters of trade policy, and customs regulation in particular, to common *ad-hoc* established institutions. It is not surprising, then, that FTAs that do not foresee the creation of a CU between their parties are the vast majority of the 265 RTAs notified to the WTO Secretariat and in force on 15 October 2015.[3]

Table I.1: RTAs notified to the WTO as CUs or FTAs

	Accessions	New RTAs	Grand total
GATT Art. XXIV (FTA)	2	223	225
GATT Art. XXIV (CU)	9	11	20

Source: WTO – RTAs Gateway: <http://rtais.wto.org/UI/publicsummarytable.aspx>, accessed June 2016

After the Second World War, as recalled by Carpenter (2009), the so-called phenomenon of 'regionalism' – the practice of liberalising trade on a bilateral or small-club scale – has

[3] WTO – RTAs Gateway: <http://rtais.wto.org/UI/publicsummarytable.aspx>, accessed June 2016.

experienced various peaks: a first peak materialized with the creation of the European Economic Community (EEC), and covered the period 1950-1986. On the European territory, regionalism was motivated at its inception by the desire to safeguard peace and security. The subsequent expansions of the membership of the EEC and of the scope of its founding treaties slowly consolidated the vision that European countries should actually form a functioning single market to their mutual advantage. At the same time, developing countries also started a process of economic integration on a preferential basis, particularly in Asia and Latin America.

The other period in history that stands out for the number of RTAs concluded runs from the beginning of the Uruguay Round of multilateral trade negotiations, in 1986, to 2010: data collected by the WTO Secretariat for this period reports, on average, about 20 FTAs notified per year. Meanwhile, during the GATT[4] years – i.e. from 1947 to 1994 – fewer than three were notified per annum. The same dataset confirms the increasing tendency to form FTAs rather than CUs, the increase in cross-regional FTAs, and the overwhelming prevalence of bilateral arrangements (WTO, 2011).

As to their substantive coverage, FTAs are generally about merchandise and/or services trade liberalization, but as discussed extensively in Parts II and III, they showcase an increasing trend of inclusion of other SD-related chapters, such as joint programmes on health and education, environmental regulation, institution building initiatives, provisions on the protection of human and labour rights and, ever more frequently, provisions related to the general improvement of the business environment, including for SMEs.

The increasing presence of these SD-related provisions motivates, *ratione materiae,* the present analysis and its focus on FTAs. Yet, beyond the provisions related, in one way or the other, to socio-economic, health, or environmental sustainability concerns, FTAs have also progressively widened the scope of their substantive coverage, comprising nowadays of specific provisions applying to trade in goods such as on market access, rules of origin, anti-dumping, safeguards and TBT and SPS measures, as well as of provisions applying to trade in services, issues of intellectual property protection, competition law and policy, and dispute settlement. Table I.2 below summarizes the main findings of Acharya (2016) with regard to RTA provisions on the aforementioned areas.

Table I.2 – Summary of findings on mapping of selected RTA provisions

Provisions applying to trade in goods		
Type of provision	**Explanation**	**Examples and comments**
Preferential market access	'Negative' vs. 'positive' list approaches for trade liberalization, or a mix of the two approaches. Tariff cuts happen according to varying timeframes	Negative list: EC-CARIFORUM EPA Positive list: US-Singpore FTA

[4] General Agreement on Tariffs and Trade, Oct. 30, 1947, 61 Stat. A-11, T.I.A.S. 1700, 55 U.N.T.S. 194, [GATT].

	(e.g. "big bang", linear reductions, front- or back-loading, asymmetric transition periods)	Mix: EFTA-Egypt FTA
Rules of Origin	Combination of methods used, including 'change in tariff heading' (most common), 'alternative'/co-equal, and absorption principle.	
Anti-dumping	90.5 per cent of RTAs reflect the WTO framework. 7.9 per cent of RTAs prohibit the used of anti-dumping duties. 1.6 per cent of RTAs restrict or limit the right to use anti-dumping measures.	CUs generally prohibit the use of anti-dumping duties (competition rules apply). FTAs prohibiting these measures include EFTA, Australia-New Zealand FTA, Canada-Chile FTA.
Safeguards	84 per cent of RTAs contain bilateral rules on the use of safeguard measures. They generally appear to be more flexible than the WTO framework.	No evidence on actual use.
Technical Barriers to Trade (TBT)	72 per cent contain a section/chapter on TBT, of which 44 per cent simply affirm the WTO framework. Harmonization provisions vary from commitments, to a call for compatibility, to encouragement to harmonize. Only 6 per cent of RTAs contain references to the harmonization of conformity assessment procedures.	Commitment to harmonize: e.g. CUs and EU RTAs with countries in accession. Call for compatibility (if possible) e.g. in NAFTA. Encouragement: e.g. EU-Asia-Pacific FTAs.
Sanitary and Phytosanitary (SPS)	Around 70 per cent of RTAs with SPS provisions, most of which do not go beyond the WTO framework.	
Provisions applying to trade in services		
Liberalization commitments	Two approaches: positive and negative listing. Also, hybrid approach.	Positive: e.g. EFTA agreements; Japan-Singapore FTA and most ASEAN FTAs. Negative: NAFTA and NAFTA parties with third countries.
Typical structure	• Cross-border trade in services. • Investment provisions. • Temporary entry of business persons (GATS Mode 4). • Sectoral chapters (financial services, telecommunication services, e-commerce).	

Provisions on intellectual property (IP)
• RTAs mostly affirm WTO framework or refer to IP treaties referred to by WTO. • Three-quarters include commitments on technical assistance or other forms of cooperation. • 60 per cent contain provisions on enforcement procedures, and 50 per cent on specific border measures (ex officio action, cooperation). • IP promotion "hubs" in RTAs have been created by countries such as the EU, the US, Japan, Mexico, Chile and EFTA.
Provisions on competition law and policy
• 60 per cent include provisions on competition in the form of sections or chapters. • The rate goes up to 80 per cent when provisions on state-owned enterprises and designated monopolies are included. • Typical provisions include: o General obligation to encourage competition; o Commitments to condemn anti-competitive practices; o Requirement to set-up/modernize legal framework; o Regulation of monopolies and state-owned enterprises; o Regulation of subsidies and state aid; o Cooperation and technical assistance; o Dispute resolution.
Provisions on dispute settlement (DS)
• Most RTAs contain specific DS provisions; • Most have forum selection and 'fork in road' clauses; • Legal architecture: o Political model: 30 per cent (63 per cent before 1995) o Adjudicative (quasi judicial): 65 per cent (20 per cent before 1995) o Judicial: 5 per cent (17 per cent before 1995) • Generally carved out from the adjudicative DS model are: o Competition (46 per cent of RTAs); o Services (38 per cent); o SPS (33 per cent); o Anti-dumping and similar safeguards (20 per cent); o Environment (19 per cent); o TBT (18 per cent); o Labour (12 per cent); o Government procurement (9 per cent); o Investment-related and IP (8 per cent).

Source: Acharya (2016).

The economic rationale for signing FTAs

Economics offers the essential starting point for understanding why a Country may want to liberalise its trade regime by granting preferences to one or more trading partners. The proposed assumptions and predictions share a number of analogies with a liberalisation on a most-favoured nation (MFN) or non-discriminatory basis, which is the key characteristic of the WTO.

Following the standard Ricardian and the Hecktscher-Ohlin models, when an economy is closed to international trade, or in 'autarky', domestic consumers have little choice when buying goods and services, while domestic producers face little competition, which allows them to keep on selling their produce irrespective of their level of productive efficiency. When this economy opens to international trade, the prevailing conditions under autarky are reversed: after the reduction or elimination of tariffs and other border measures, new products of foreign origin are sold on the domestic market – potentially in direct competition with those produced locally – so as to provide consumers with a wider choice of better products at a lower price. At the same time, efficient domestic producers benefit from the opportunity to exploit a larger international market, while those who are not efficient make way for imported products. Paul Krugman (1980) adds significantly to the classical models by arguing that the most efficient producers will be able to increase their production further and drive prices down by benefiting from increasing returns to scale in imperfectly competitive markets. Finally, the empirical applications of the 'gravity equation' suggest that countries' economic interactions are proportional to their having attained a similarly high level of economic development, as well as to their geographical proximity.

While the above applies to both preferential and MFN trade liberalization, in Jacob Viner (1950) posited the basic economic concepts that differentiate, or characterise, a preferential commercial liberalization from a non-discriminatory one in terms of its possible 'trade-creating' or 'trade-diverting' effects. The focus is indeed on discriminatory aspects: 'trade creation' means that, after the entry into force of the given agreement, consumers will be able to buy foreign products at a price lower than in autarky, provided that the trading partner is also the most efficient producer 'in the world'. 'Trade diversion', meanwhile, means that the newly created international market within the two countries does not grant consumers the best-priced products, because MFN liberalisation could let cheaper imports from a third country enter the domestic market.

Intuitively, a trade-diverting FTA would help less efficient producers continue their economic activity under the shield of the tariff protection granted by their government against competitors from third countries. Indeed, this insight drives the present analysis to a quick review of the multifaceted political reasons for undertaking preferential trade reforms, which are the subject of the next sub-section.

Adding to these classical explanations, Krishna (2015) recalls that positive efficiency outcomes are expected from 'deep integration', through the harmonisation or at least coordination of policies on 'non-trade issues' in FTAs – which refer for instance to social, environmental, competition or product standards issues. This, the author suggests, is what the economists supporting trade liberalisation achieved through 'deep integration' FTAs argue. Yet, Krishna (2015) also highlights that through FTAs, under the promise of deep integration, larger countries may impose harmonisation options that are not necessarily welfare enhancing for all the parties involved.

The political economy of FTAs

The first and perhaps most obvious political economy hypothesis which may explain the formation of FTAs is that countries may want to seek market access opportunities with their new trading partners while being able to protect some of their domestic producers, following the previously discussed 'trade diversion' argument. Why should a country protect its home industry to the disadvantage of the majority of its citizens? As Gawande and Krishna (2003) put it, endogenous factors play a crucial role in determining public policies in such a context: a government may want to follow this path after being successfully lobbied by the potentially affected domestic industry, or in order to secure the political support of the industry with the larger number of workers (i.e. voters), or even to avoid 'large adjustment costs' in terms of unemployment benefits and problems related to workers' mobility.

Turning to exogenous factors that may lead a country to undertake a bilateral process of trade liberalisation we find, in the first instance and as Mansfield and Reinhardt suggest (2003), that the pace of multilateral negotiations can be extremely slow and the coverage of a global trade agreement relatively limited, so that while looking at or participating in multilateral talks, countries may want to pursue their immediate objectives by signing FTAs. The same authors put in a related hypothesis, namely that by negotiating simultaneously at the bilateral and multilateral levels, countries increase their bargaining power, 'learn' how to negotiate effectively and eventually develop 'templates' of agreements under the hope to induce multilateral talks to follow similar highways.

Second, Baldwin (1993) suggests that countries that are left out of bilateral talks find themselves losing market access opportunities and aim at emulating the negotiating partners, or at joining the relevant FTA. This is the so-called 'domino effect' that Baldwin depicts, inter alia, through the example of the requests of bilateral FTAs by Latin American Countries to the United States after the Mexican accession to the North American Free Trade Agreement (NAFTA), back in 1995.

Another theory suggests that the willingness of countries to sign FTAs originates in their respective political leaders' aim to obtain the largest media coverage possible, so as to transmit a clear signal to the nation and to the world regarding a specific political orientation, even though the agreement in question might not have significant effects on trade flows.[5]

Elaborating on these and other potential explanations for the formation of FTAs, Cattaneo (2015) concludes that the political economy of FTAs is better explained by political rather than economic reasons. This author places great emphasis on the increase in distance between the global MFN 'mentality' of the GATT/WTO system, and the preferential settings created through FTAs. This, it is argued, is made even more complex by the emphasis on regulation affecting trade that characterises most of the modern FTAs, where the FTAs-SD nexus is arguably a case in point.

[5] This theory is generally attributed to the economist Jadish Bhagwati under the nomenclature "CNN effect".

What is it that makes the FTAs-SD nexus worth being explored?

A lively body of literature is emerging to analyse the FTAs-SD nexus. Studies concentrate, for instance, on the importance of FTAs for monitoring progress in the implementation of trade-related SDG targets, how and why SD consideration are transposed in the final legal architecture of FTAs, legal commentaries on SD or environmental chapters and relevant provisions, policy analyses on specific FTAs and their implementation challenges, or comparative analyses on critical subject areas – including subsidies, investment, and intellectual property rights, as they relate to SD considerations.

The three core areas of SD, namely environmental, social, and economic sustainability, are increasingly reflected in FTAs. They are included as clauses or provisions relating to various subsections of the FTA (such as the preamble, for example), or, as it tends to be more often the case with recent FTAs, as whole chapters specifically dedicated to sustainability (Table I.3).

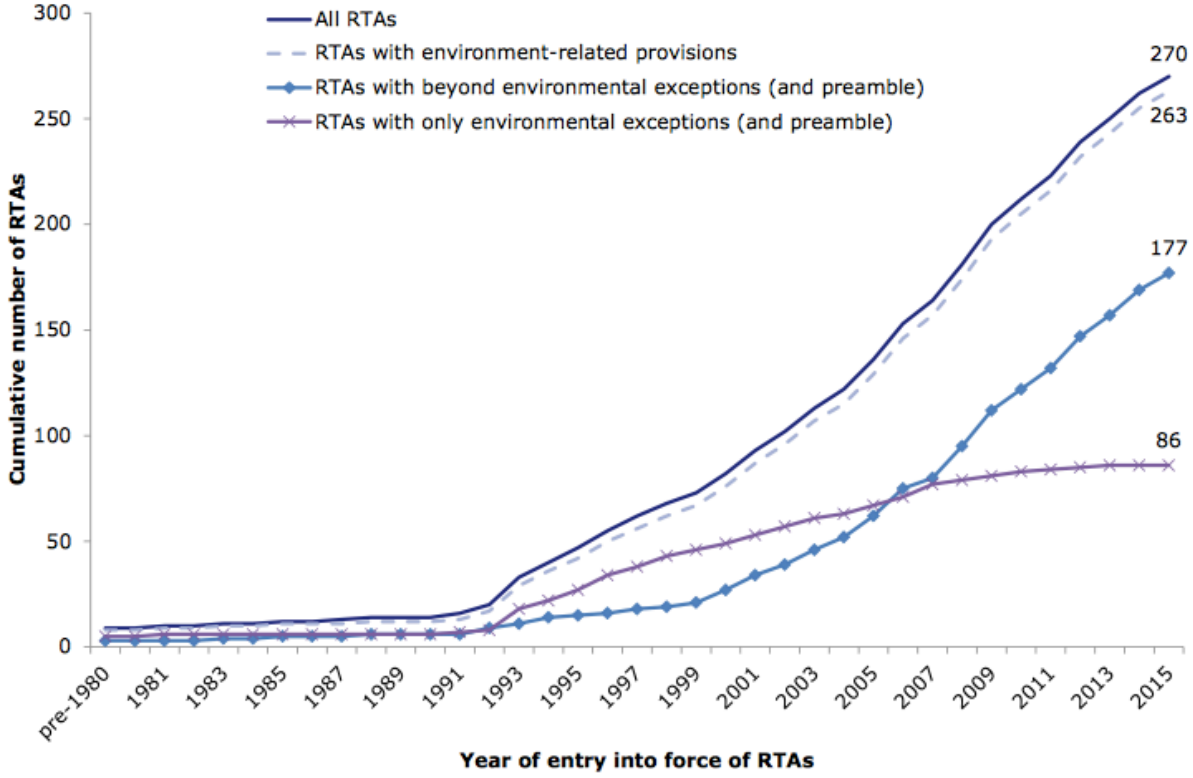
Table I.3 – Provision on environment in RTAs

Provisions on environment
○ About one-third of RTAs contain relevant provisions; ○ 47 per cent of RTAs require to follow international standards; ○ Public participation in implementation of RTA, as well as CSR (mainly EU, Canada and US); ○ Anti-race to the bottom provision; ○ More than one half of RTAs exclude environment provisions from the application of FTA dispute settlement rules. ○

Source: Acharya (2016).

For instance, environmental sustainability clauses generally aim at ensuring that the signatories of the FTA abide by international commitments and conventions, while promoting the sustainable management of natural resources. They fall into two broad categories: those that seek to protect or enhance the environment, and those whose goal is to increase and strengthen environmental cooperation among parties (Bilal and Ramdoo, 2016) (Figure I.1).

Figure I.1: Evolution of RTAs with provisions explicitly mentioning 'environment'



Source: Monteiro (2016a)

Clauses about social issues and labour rights aim at promoting the adoption or ensuring the respect of international social and labour standards, while trying to ensure that trade does not undermine working and social conditions (EC, 2016a) (Table I.4).

Table I.4 – Social issues in RTAs

Provisions on labour
○ Around ¼ of RTAs contain labour provisions; ○ Anti race to the bottom provision; ○ RTAs refer to ILO standards; ○ Labour commitments generally not subject to dispute resolution mechanism (US is an exception).

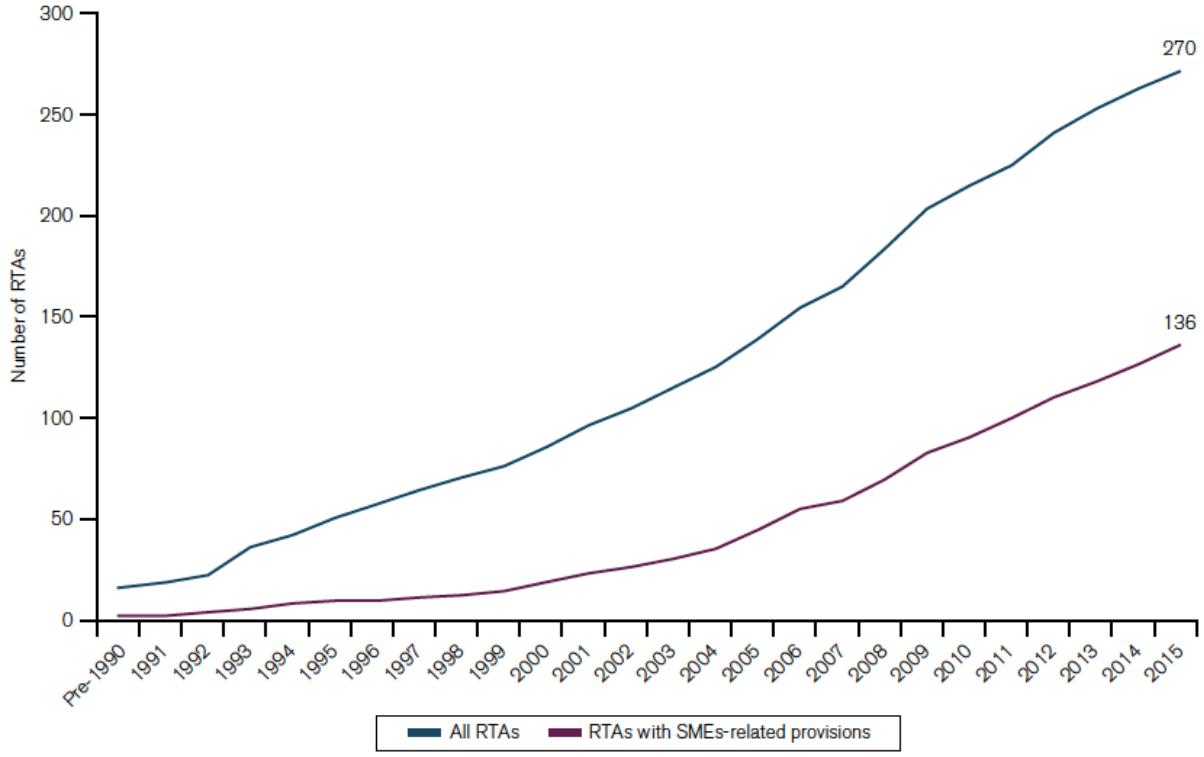
Source: Acharya (2016).

With regard to the economic sustainability pillar, the definition of relevant provisions is not clear-cut. This justifies the focus of Parts II and III on the quest for a meaning for 'economic sustainability. Yet, in more general terms, it can be argued that some trade agreements tend to become "development agreements", with objectives of growth enhancement, poverty alleviation, and inequality reduction.

This could be, for example, the case of the EU Economic Partnership Agreements (EPAs), negotiated by the EU and the African, Caribbean and Pacific States (ACP), which have been officially framed as development agreements (Bilal and Ramdoo, 2016). To keep it within the EU practice, human rights clauses, also called 'essential elements', have increasingly been included in FTAs. For instance, Article 21 of the Treaty on European

Union (TEU)[6] clearly establishes human rights and the three pillars of sustainable development as the guiding principles for the EU's external action (Brady, 2010). In an attempt to strive for pragmatism in the definition of economic sustainability, Figure I.xxx for instance shows the evolution of norms explicitly mentioning SMEs included in RTAs according to a 2016 mapping exercise (Figure I.2).

Figure I.2 – Evolution of RTAs containing provisions explicitly mentioning SMEs



Source: WTO, 2016.

2. From trade *vs.* environment to trade *&* sustainable development

To understand the dynamics of the interplay between the modern concept of Sustainable Development and international trade, it is imperative to investigate the origins of such interplay: the debate on trade and environment (see e.g. Sampson, 2005). The essence of the debate on trade and environment lies in potential conflicts between measures taken in pursuance of environmental protection objectives, and obligations contained in trade agreements. Yet, at the root of these legal conflicts there are important economic considerations on the role of regulators and other market players in correcting situations where free markets do not necessarily yield welfare-increasing results. As a consequence, the debate can be summarized in legal aspects (Section 2.1) and economic aspects (Section 2.2).

[6] Consolidated Version of the Treaty on European Union, 2010 O.J. C 83/01, [TEU].

2.1 Legal aspects

Introduction

The principle of "sustainable development" is rooted in Chapter 2 of the 1987 Report of the World Commission on Environment and Development, also referred to as the Brundtland Report (UN, 1987). This seminal document gives a broad definition of sustainable development, meaning "development that meets the needs of the present without compromising the ability of future generations to meet their own needs." It also highlights the two key concepts of needs, especially those of the world poor, and limitations, posed by technology, social organisation, and environmental capacities.

The Brundtland Report makes several explicit references to trade as an essential tool to enhance sustainable development. For example: " If economic power and the benefits of trade were more equally distributed, common interests would be generally recognized." (article 23). On the other hand, since the WTO was established in 1995, its involvement in environmental issues has been the subject of debates revolving around questions on the role and legitimacy of the institution (Sampson, 2005; Kelemen, 2001; Weiler, 2001; Dunoff, 2002).

Much of the academic literature on the subject has focused on the general dissatisfaction regarding the WTO's ability to address environmental issues (DeSombre and Barkin, 2002). Criticism has revolved around the WTO's legitimacy crisis (Bodansky, 1999; Esty, 2002; Weiler 2001; Keohane and Nye, 2001) and the chilling effect that WTO policies have possibly had on domestic environmental policy making (Conca, 2000; Eckersley, 2004). As a result, FTAs have not only become more numerous, they have become substantially broader and deeper (Berger, Brandi, and Bruhn, 2016), and include environmental provisions that have become increasingly far reaching over time (Jonnah and Kennedy, 2011).

Whereas the broad historical context provided by the SD movement and the role of the WTO in environmental issues would not warrant, at first sight, the grounds for conflicts, what emerged in the nineties of the past century as the “debate on trade and environment” became multifaceted (Esty, 1994), and can today be condensed in two main variations: the first falls within the so-called ‘linkages’ debate, while the second relates to relevant GATT/WTO litigation on various legal issues.

With regard to the first variation, the debate on trade and environment can be inscribed into the broader picture of the ‘trade *and* …’ debate, where what is traditionally considered as ‘pure’ trade policy is associated with themes that are not of immediate assonance with trade issues. Besides environmental protection policies, examples of ‘linkages’ include trade and competition law, human rights, migration issues and labour standards. In this respect, some commentators espouse a social constructivist perspective, where the concept of trade itself is in continuous change: accordingly, and depending on changes in institutional and/or societal values, environmental concerns may well become inherent to the definition of trade (see e.g. Lang, 2007; Strauss, 1998; Driesen, 2000; Leebron, 2002).

Modern history also provides examples of potential synergies between trade and environment. As early as the 1920s, the Convention for the Abolition of Import and Export Prohibitions and Restrictions[7] allowed the application of trade restrictions in cases where animals or plants were threatened with extinction. The Havana Charter,[8] some years later, also contained general exceptions allowing the members of the (forthcoming, but never-to-be-established) International Trade Organization to enter into bilateral or MEAs relating 'solely to the conservation of fisheries resources, migratory birds or wild animals', with the proviso for such agreements to be promptly published and implemented in good faith (Charnovitz, 2007).

In the GATT as a *de facto* international organization, however, a Group on Environmental Measures and International Trade was established only in 1972, and convened for the first time in 1991.[9] The agenda of the Group was limited to 'defensive analyses', i.e. potential breaches of GATT provisions arising from the implementation of MEAs by GATT parties. This defensive position arguably originated in the coming into being of MEAs with potential trade-restricting effects, like the 1973 Convention on International Trade in Endangered Species (CITES).[10] Furthermore, international environmental law became more 'visible' as of the 1970s, with the creation of UNEP in 1972 after the UN Stockholm Declaration on the Human Environment.[11]

This crescendo of potential conflicts ultimately materialised with the 1991 *US – Tuna I* decision (unadopted),[12] where a GATT panel found a US trade ban on tuna products from tuna caught in a dolphin-unfriendly manner in breach of Article XI:1 of the GATT, and not justifiable under Article XX thereof. What did this decision imply for the trade and environment debate? In the context of this and subsequent disputes, of which some will be discussed below, various commentators highlight that litigation involving trade, investment, and environmental regulation, both in the past and in the present, appear to be particularly amenable to high media coverage, thus cementing the public perception of a stark conflict of policy objectives; however, while this conflict has been manifest in some instances, it has also been exaggerated or misreported (see e.g. Barkin 2015).

There is little doubt that certain regulatory areas at the intersection between trade and public policy objectives have been particularly problematic in the past, as well as in the

[7] Convention for the Abolition of Import and Export Prohibitions and Restrictions, 8 November 1927, 97 League of Nation Treaty Series 391, Ad Article 4, not in force.
[8] Havana Charter for an International Trade Organization, Havana, 24 March 1948, United Nations Conference on Trade and Employment, Final Act and Related Documents, E/CONF.2/78, United Nations publication, Sales No. 1948.II.D.4, not in force.
[9] Respectively, GATT Documents L/3622/Rev.1, 14 January 1972 and TRE/1, 17 December 1991. As cited by Lang (2007).
[10] Convention on International Trade in Endangered Species of Wild Fauna and Flora, done at Washington, 3 March 1973, 993 U.N.T.S. 243, 12 International Legal Materials 1085 [CITES].
[11] Declaration of the United Nations Conference on the Human Environment, Stockholm, 9-16 June 1972, available at <http://www.unep.org/Law/PDF/Stockholm_Declaration.pdf>. On the basic principles of international environmental law see e.g. Shelton and Kiss (2005).
[12] GATT Panel Report, *United States – Restrictions on Imports of Tuna*, DS21/R, DS21/R, 3 September 1991, unadopted, BISD 39S/155, [*US – Tuna I*].

present; this may happen, for instance, when a regulator has to calibrate regulatory metrics based on the methods by which two identical products, possibly one domestic and one imported, are produced: the so-called processes and production methods (PPMs) issue.

In the FTA-SD context, this discussion is important because, as analysed in Parts II and III, modern FTAs mostly use references to MEAs as the main means to overcome potential conflicts of this nature. To understand why this is the case, it is therefore necessary to make the point on some of the legal details of the environmental PPMs debate.

2.1.1 Environmental measures and WTO law

Introduction

One of the most contentious issues in the interplay between trade regulation and environmental protection is the so-called PPM debate. In a nutshell, the latter relates to the legitimacy of environmental regulation, such as a higher tax applied to products which have been produced under lax environmental standards, as opposed to a less burdensome tax applied to identical products produced according to more stringent environmental standards. Is it legitimate, from a general international law perspective as much as form a narrower trade law perspective, for a sovereign jurisdiction to dictate the environmental standards according to which products should be produced in another sovereign territory?

Barbara Cooreman (2016) has comprehensively reviewed literature and provided suggestions to solve this delicate question, reaching the conclusion that WTO law leaves enough room for asserting the legitimacy of environmental measures with an extra-territorial reach and a trade effect, under certain conditions.

Definition of PPMs

PPMs have been defined by the OECD (1997) as 'the way in which products are manufactured or processed and natural resources extracted or harvested'. The basic distinction is between PPMs that are detectable from the physical characteristics of the final product and those that are not, therefore commonly referred to as non-product-related or 'unincorporated' PPMs.[13]

It is also useful to classify PPMs further according to their design and their trade effects when implemented in pursuance of environmental policy objectives. In so doing, Table I.5 below draws from a classification of environmental PPMs proposed by Charnovitz (2002).

[13] Fish harvesting methods, for example, may easily fall within the latter category. There can be cases, however, where this distinction cannot be easily drawn, or where certain physical characteristics of a final product are influenced by or depend on the production method employed. This sub-section refers to PPMs or environmental PPMs solely as non-product-related, unless otherwise specified

Table I.5: Classification of PPMs

Type of PPM	Example	Comments
'How-produced' standard	A national regulation that bans the importation of fish caught with destructive fishing practices	Less trade-restrictive but difficult and costly to implement
'Government policy' standard	A national regulation that bans the importation of fish from countries that do not prohibit destructive fishing practices	Can be coercive and unnecessarily burdensome on complying producers within the targeted country, but easy to implement
'Producer characteristics' standard	A national regulation that permits imports only from producers having certain characteristics (e.g. boat size not exceeding ten meters)	Can be particularly burdensome for developing countries

Source: Table elaborated by the author using as a basis Charnovitz (2002).

In broad terms, environmental protection and fair competition are the main policy objectives behind governmental regulation aimed at disciplining environmental PPMs (OECD, 1997). The 'fair competition' objective refers, for example, to the case of the so-called environmental dumping, where lax environmental regulation in one country may allow producers of that country to be more competitive at home or in foreign markets, where firms face costly environmental requirements (Sterner, 2009).[14]

The furthering of the environmental protection objective may come about (1) by the enforcement of binding laws and regulations or (2) by the employment of market-based mechanisms aimed at, for example, informing consumers about the production methods and life cycle of the targeted product. Both categories can have effects on international trade. The OECD (1997) suggests that within the first category it is possible to find, for example, quantitative restrictions and bans, retaliatory measures, countervailing duties, mandatory eco-labels and border tax adjustments. A typical example of the second category of measures, meanwhile, is provided by voluntary labelling schemes, sometimes referred to as eco-labels: those producers who aspire to qualify for the label have to comply with or abstain from using certain PPMs; consumers – on the basis of the new information provided by the eco-label – would have the final say as to which product to purchase between the labelled and the unlabelled one, ultimately demonstrating the real market power of environmental labelling schemes.

2.1.2 WTO case law

The legal standards employed for the assessment of PPM-based measures under WTO law constitute a highly problematic chapter of the debate on trade and environment. In fact, whereas WTO treaty norms do not explicitly regulate the issue and have not been

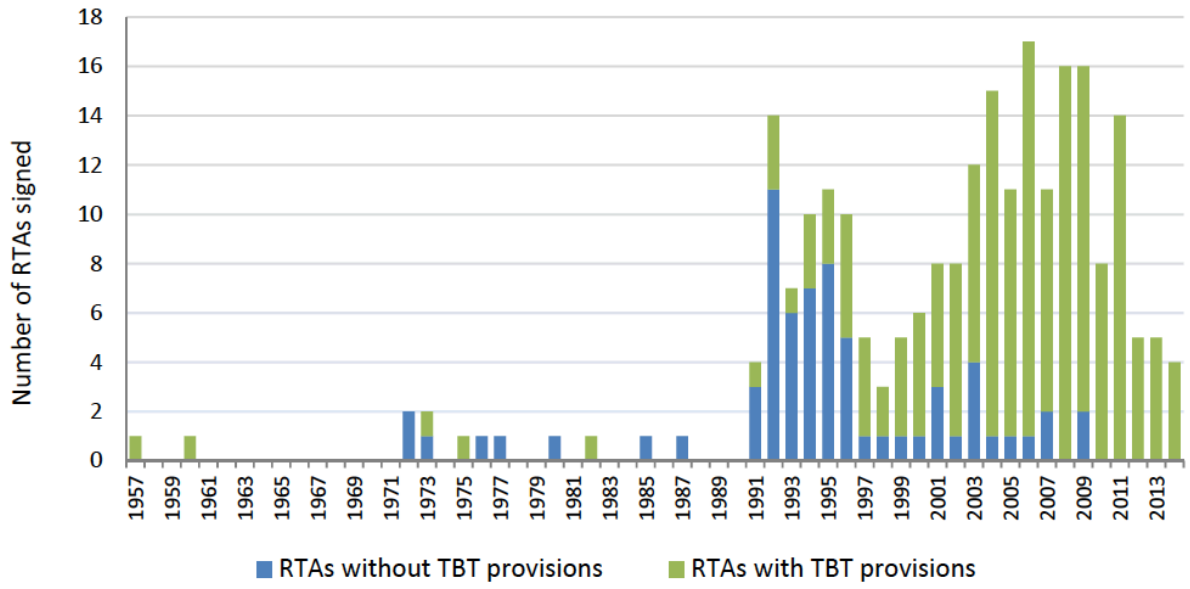
[14] Note that lax environmental regulation can also be seen as revenue foregone in subsidies-related terms, but the question is debatable given the sovereignty countries have in determining the level of environmental regulation they may be able to enforce on their national territory. See in this latter respect Principle 11 of the Rio Declaration on Environment and Development, Report of the UN Conference on Environment and Development, Annex I, 12 August 1992, UN Doc. A/Conf. 151/26 (Volume I), ['Rio Declaration'].

amended since the establishment of the organisation in 1995, there have been developments in the interpretation and application of those norms by WTO tribunals.

The decisions that resulted from this hermeneutic effort, however, present antinomies and tend to rely on case-by-case approaches. The main legal issues at stake have referred to norms and principles of Article I (most favoured nation), III (national treatment), XI (general elimination of quantitative restrictions) and XX (general exceptions) of the GATT.

In addition, and arguably even more importantly in the FTAs-SD context, certain key provisions of the WTO Agreement on Technical Barriers to Trade (TBT) have also been interpreted in relation to PPM-based measures, for instance in the 2012 *US – Tuna III* case, [15] and also indirectly, in other cases of the so-called "TBT trilogy" (see e.g. Houston-McMillan, 2016).
Based on the quantitative analysis proposed by Molina and Khoroshavina (2015), 171 out of 238 FTAs that were in force and notified to the WTO until December 2014 contained, imported, or referred to various provisions of the TBT Agreement, or to that agreement as a whole, also showing a remarkable evolution over time (Figure I.1).

Figure I.3 – FTAs signed and in force with and without TBT provisions



Source: Molina and Khoroshavina (2015).

[15] See e.g. Appellate Body Report, *United States – Measures Concerning the Importation, Marketing and Sale of Tuna and Tuna Products*, WT/DS381/AB/R, adopted 13 June 2012, DSR 2012:IV, p. 1837, [*US – Tuna III*].

Applicability of the TBT Agreement

The TBT Agreement applies to technical regulations and standards[16] adopted in pursuance of policy objectives such as the prevention of deceptive practices and the protection of the environment. The definition of these measures set forth by the TBT Agreement is, however, particularly ambiguous, because it states that technical regulations and standards specify in various ways product characteristics or their related PPMs, but additional language states that technical regulations and standards '[m]ay also include or deal exclusively with … labelling requirements as they apply to a product, process or production method' (Annex 1.1). Nothing in the whole text of the TBT Agreement, including the stated purpose in the preamble, seems to point to the exclusion of PPMs from the scope of the Agreement. The relevant negotiating history, meanwhile, provides evidence of an unsolved debate on the desirability of covering PPMs under TBT rules (Van den Bossche, 2008).[17]

Indeed, technical regulations that fall within the scope of the TBT Agreement are mandatory in nature, and are subject to the stricter set of rules set forth under Article 2. Whereas Article 2.1 of the TBT Agreement reflects the core GATT relative standards of non discrimination for trade in goods—that is, foreign goods should not receive worse treatment than that accorded to domestic goods, or to goods from third countries—Article 2.2 of the TBT Agreement goes further to require certain proportionality-based standards of treatment, namely that technical regulations are not prepared, adopted or applied with a view to or with the effect of creating unnecessary obstacles to international trade.

Article 2.2 requires further that technical regulations be not more trade-restrictive than necessary to fulfil a legitimate objective, taking account of the risks non-fulfilment would create (in assessing such risks, relevant elements of consideration include: available scientific and technical information, related processing technology or intended end-uses of products). The provision then lists some of those "legitimate objectives", which include: national security requirements; the prevention of deceptive practices; protection of human health or safety, animal or plant life or health, or the environment. In so doing, the TBT Agreement constitutes an extension of Article XX of the GATT.

The presence of these strict standards has perhaps contributed to the development of a quite elaborated test for establishing whether a measure is a technical regulation subject to the TBT Agreement. However, this situation has changed with the 2012 *US - Tuna III* ruling, where a voluntary labeling scheme has been scrutinized against Article 2 of the TBT Agrement.

The measure at issue in this case was a law of the US containing a set of criteria to characterize tuna and tuna products as dolphin-safe. Even though they did not mandate a specific production method for tuna products, these criteria related largely to the

[16] The TBT Agreement differentiates between the two categories by stating that compliance with technical regulations is mandatory whereas compliance with standards is voluntary. Standards are, at least theoretically, less trade-restrictive than technical regulations.
[17] See WTO Document G/TBT/W/11, 29 August 1995, Section III, cited in Van den Bossche (2008).

phishing technics employed to catch tuna, hence the "production method" for tuna products that would not leave any sign on the physical characteristics of those products.

With regard to the scope of the TBT Agreement, the AB has endorsed the Panel's majority decision that the mandatory conditions established by the US to obtain a dolphin-safe label, enforced through sanctions, made the measure mandatory in nature, in line with the definition of technical regulation contained in the TBT Agreement. This has been a real breakthrough in TBT jurisprudence, opening the door for the screening of labeling schemes under the strict rules of Article 2 of the TBT Agreement.

Mexico, the complainant, tried to argue at the panel level that the US measures at issue were too coercive and discriminatory, as they tried to exert pressure on production methods outside the US national territory. In reply to this point, the panel in *US - Tuna III* recalled the AB reasoning on similar issues in *US – Shrimp*,[18] and went further to state that:

> "[Although *US - Shrimp* related to GATT Article XX]…the measures at issue reflect a certain choice of policy or standard [that] is not in itself a reason to assume that a measure is WTO-inconsistent. The same considerations are pertinent, in our view, in the context of Article 2.1 of the TBT Agreement. We also note that the US dolphin-safe labelling provisions do not require the importing Member to comply with any particular fishing method (these measures do not state, for example, that no tuna may be imported if it originates in a country where tuna is caught by setting on dolphins). Rather, it is the products themselves that need to comply with the requirements of the labelling scheme, if they wish to benefit from the label and make dolphin-safe claims on the US market." (*US – Tuna III*, Para. 7.371)

The panel also rejected an argument advanced by the US that the measure at issue did not lay down product characteristics as required by the TBT Agreement to characterize a measure as a technical regulation. But what is probably more interesting is that, on appeal, neither the US nor Mexico addressed the above findings of the panel, trying to argue an exclusion of the measure at issue from the scope of the TBT Agreement, or the measure's inherent coerciveness for the fact that it regulated a behavior outside the US national territory. The panel found that the measure at issue sets out the conditions under which tuna products may be labelled "dolphin-safe" and that it thus establishes "labelling requirements, as they apply to a product, process or production method" within the meaning of Annex 1.1 to the TBT Agreement. The Appellate body upheld this reading of Annex 1.1, and no party on appeal contested the fact that the PPM-based measures at issue applied to labeling requirements as defined in the text of the TBT Agreement.

The likeness test under the GATT and the TBT Agreement

Another crucial step of analysis of environmental measures under both the GATT and the TBT Agreement is the so-called 'likeness test'. The test comes as the second step of

[18] Appellate Body Report, *United States – Import Prohibition of Certain Shrimp and Shrimp Products*, WT/DS58/AB/R, adopted 6 November 1998, DSR 1998:VII, p. 2755 [*US – Shrimp*].

legal analysis under e.g. Article I.1 and III.4 of the GATT and 2.1 of the TBT Agreement, and the basic question it aims to answer is whether two products – the imported and the domestic or two imported products – are 'like' for purposes of detecting discriminatory treatment of the imported products.

There is no agreed, static framework for detecting likeness under GATT/WTO jurisprudence.[19] After having determined which products should be compared, the parameters that are frequently referred to are '[t]he products' end use in a given market; consumers' tastes and habits; the products' properties, nature and quality'[20] and their tariff classification.[21]

The WTO's AB ruling in the *EC – Asbestos* case[22] contributed to a better understanding of the way the "likeness test" functions in WTO dispute settlement. A product that presents intrinsic environmental and/or health risks might be consider different from identical products not posing those same health risks, therefore not subject to non-discrimination obligations. The case concerned a ban imposed by France on the importation of asbestos and certain products containing asbestos. In the late nineties, within the framework of a general policy to regulate the presence and use of asbestos on its territory, France had collected scientific evidence to prove that those products posed risks to human health and had to be removed from the market. The protection of public health provided the justification for the trade ban.

It is in this context that the AB stated its landmark line of reasoning in relation to the likeness test, as clearly re-affirmed by the AB in 2012 in *US – Clove Cigarettes*[23] (par. 118):

> "In *EC – Asbestos*, the Appellate Body found that, in examining whether products are like, panels must evaluate all relevant evidence, including evidence relating to the health risks associated with a product, which was the underlying concern of the challenged measure in that dispute. The Appellate Body found that such evidence would not be examined as a separate criterion but, rather, under the traditional "likeness" criteria. In particular, the Appellate Body stated that a product's health risks are relevant to the determination of the competitive relationship between products, and addressed health risks as part of the products' physical characteristics and of the tastes and habits of consumers. In respect of physical characteristics, the Appellate Body considered that a panel should examine fully the physical properties of products, in particular, those

[19] As clarified by the Appellate Body in *Japan – Taxes on Alcoholic Beverages*, WT/DS8/AB/R, WT/DS10/AB/R, WT/DS11/AB/R, adopted 1 November 1996, DSR 1996:I, 97, [*Japan – Alcoholic Beverages II*], pp. 19-20.
[20] As suggested by the Report by the Working Party on Border Tax Adjustment, GATT Document L/3464, 30 November 1970, para. 18.
[21] This fourth parameter resulted from GATT panels' practice. See e.g. the Appellate Body Report in *Japan – Alcoholic Beverages II*, pp. 20-21.
[22] Appellate Body Report, *European Communities – Measures Affecting Asbestos and Asbestos-Containing Products*, WT/DS135/AB/R, adopted 5 April 2001, DSR 2001:VII, p. 3243, [*EC – Asbestos*].
[23] Appellate Body Report, *United States – Measures Affecting the Production and Sale of Clove Cigarettes*, WT/DS406/AB/R, adopted 24 April 2012, DSR 2012: XI, p. 5751, [*US – Clove Cigarettes*].

> physical properties that are likely to influence the competitive relationship between products in the marketplace. These include those physical properties that make a product toxic or otherwise dangerous to health. In respect of consumer tastes and habits, the Appellate Body found that the health risks associated with a product could influence the preference of consumers."

In the context of Articles I and III of the GATT, or 2.1 of the TBT Agreement, the likeness test is in a way part of the scope of those provisions. It constitutes a bridge, or a filter, between the scope *per se*, and the standard of differential treatment against which the given measure is tested if two products are deemed 'like' by the tribunal. Evidence under the consumers' tastes and habits parameter, which as recalled by the Appellate Body in *Philippines – Spirits*[24] constitutes a key element of the likeness analysis under Article III of the GATT, can arguably support the argument that two products are not in a competitive relationship, because the relevant product market is divided between consumers who care for a given environmental objective, and those who do not.

Quantitative restrictions on imports and exports

Article XI of GATT imposes another type of limit on measures that a member can take to restrict trade. It prohibits the use of import or export bans or quotas, whether through simple bans or limitations or through import and export licensing schemes that amount to a quantitative restriction. This prohibition stems from the fact that such volume-based measures are more trade distorting than price-based measures, such as tariffs and taxes. Article XI, however, does not prohibit the use of market-based export limitations taken for environmental conservation purposes.

A typical example of such market-based export limitations is provided by export taxes. WTO members may, for instance, discourage exports of raw materials through the imposition of additional levies. Some WTO members, however, have given up this right in their WTO Accession Protocols, and this has led to new conflicts between trade law and national sustainable development-related policies. As WTO Accession Protocol are very similar to FTAs in the way they are negotiated and concluded, as well as in the fact that their obligations frequently go beyond the obligations existing in WTO Agreements, they deserve special attention in the present analysis.

In this connection, the WTO AB ruling in the *China – Raw Materials* case[25] has sent an important message to WTO-acceding members: any SD-related exception to the obligations contained in accession protocols, which form integral part of the WTO Agreement once accession has been finalized, should be explicitly mentioned in the text of the relevant provision of the accession protocol.

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[24] Appellate Body Report, *Philippines – Taxes on Distilled Spirits*, WT/DS/396/AB/R and WT/DS/403/AB/R, adopted 20 January 2012, DSR 2011:VI, 6766, paras. 119-120, [*Philippines – Spirits*].

[25] Appellate Body Reports, *China – Measures Related to the Exportation of Various Raw Materials*, WT/DS394/AB/R / WT/DS395/AB/R / WT/DS398/AB/R, adopted 22 February 2012, DSR 2012:VII, p. 3295, [*China – Raw Materials*].

In 2009, in fact, China had imposed export restrictions through taxes, licenses and quotas on certain forms of bauxite, coke, fluorspar, magnesium, manganese, silicon carbide, silicon metal, yellow phosphorous, and zinc. Part of these measures could be consistent with WTO law, to the extent that they do not impose quantitative restrictions on exports. However, pursuant to a specific commitment undertaken by China upon its accession to the WTO, Chinese non-quantitative export restrictions can be challenged by other WTO members. China tried to defend the challenged measures by arguing the applicability of the environmental exceptions included in Article XX of the GATT, but the AB did not uphold those arguments. The AB clarified that, for the general exception clause to be applicable, a textual reference to Article XX of the GATT would be necessary.

This case also provides an important example of the endorsement of SD as an interpretative principle of WTO law. The panel report makes various references to the relevant SD language in the preamble of the WTO Agreement, and no party contested the fact that WTO provisions should be interpreted in harmony with the principle of sustainable development.

The necessity requirement of trade restrictions

As introduced above, FTAs frequently include references to Article XX of the GATT, as interpreted by WTO tribunals. What does it imply? The defence available for environmental measures under WTO law is the compliance with the proportionality test enshrined in two key provisions: Article XX of the GATT, and Article 2.2 of the TBT Agreement. However, whereas Article XX is an exception clause, Article 2.2 is a positive obligation. Hence, the application of the proportionality test under these two provisions, though being similar, might lead to different results.

In the sixth recital of the preamble of the TBT Agreement, WTO members expressed the purpose 'to ensure that technical regulations and standards […] do not create unnecessary obstacles to international trade', while recognising a number of flexibilities. Article 2.2 of the TBT Agreement translates that expression of intent into a legally binding obligation, providing that 'technical regulations are not prepared, adopted or applied with a view to or with the effect of creating unnecessary obstacles to international trade'. This language captures both intent and effect of the measures being scrutinized. The standard 'more trade-restrictive than necessary…', thereafter, tells which measures can create 'unnecessary obstacles to international trade' (Tamiotti, 2007).

In relation to the TBT Agreement, as further clarified by the AB in *US – COOL*,[26] in order to carry out a necessity test, a two-tier test should be applied: a technical regulation should pursue (1) a 'legitimate objective', and (2) must not be 'more trade restrictive than necessary', considering also 'the risks non-fulfilment would create'. Given that the existence of a legitimate objective serves as a benchmark to evaluate the necessity of the measure, it is appropriate to analyse firstly the legitimacy of the objectives pursued by

[26] Appellate Body Reports, *United States – Certain Country of Origin Labelling (COOL) Requirements,* WT/DS384/AB/R / WT/DS386/AB/R, adopted 23 July 2012, DSR 2012:V, p. 2449 [*US – COOL*].

the measures at issue, and secondly to carry out a 'necessity test' in the light of relevant jurisprudence, provided chiefly by the interpretation of Article XX of the GATT.

In the context of Article XX GATT, the 'necessity test' has been developed by the Appellate Body, *inter alia*, in *Korea – Beef*,[27] *US – Gambling*[28] and *Brazil – Tyres.*[29] Accordingly, the relevant factors to be 'weighed and balanced'[30] to conduct the test include: (1) the 'relative importance of the interests or values furthered by the measure.[31]' This is a point that can be juxtaposed to the language 'taking into account the risks non-fulfilment would create', found in Article 2.2 TBT; (2) the extent to which the measure contributes to the achievement of the stated policy objective, considering that what counts is the fact that the measure be apt to make a 'material contribution'[32] to that objective, and not its actual contribution to the achievement of that objective[33]; (3) the degree of trade restrictiveness of the measure at issue, which in turn means that a member must prove to have exhausted all 'reasonably available alternatives'[34] and that the measure is less trade-restrictive (and not the least trade-restrictive) than other measures. In other words, GATT-consistent alternatives that would achieve the same level of protection should be unavailable,[35] and it is up to the complainant to prove that the respondent has viable less-trade restrictive alternatives.

The geographical reach of environmental protection

The regulation of environmental standards may raise issues of legitimacy where it addresses the methods of production employed beyond national borders, given that in public international law states enjoy internal sovereignty.[36] These issues of legitimacy are commonly referred to as issues of 'extraterritorial jurisdiction'. In the contemporary FTA context, as discussed in detail in Parts II and III, it is common to find full sections dedicated to the affirmation of the parties obligations under selected MEAs and ILO

[27] Appellate Body Report, *Korea – Measures Affecting Imports of Fresh, Chilled and Frozen Beef*, WT/DS161/AB/R, WT/DS169/AB/R, adopted 10 January 2001, DSR 2001:I, p. 5, [*Korea – Beef*].
[28] Appellate Body Report, *United States – Measures Affecting the Cross-Border Supply of Gambling and Betting Services*, WT/DS285/AB/R, adopted 20 April 2005, DSR 2005:XII, p. 5663 (Corr.1, DSR 2006:XII, p. 5475) ,[*US – Gambling]*.
[29] Appellate Body Report, *Brazil – Measures Affecting Imports of Retreaded Tyres*, WT/DS332/AB/R, adopted 17 December 2007, DSR 2007:IV, p. 1527 [*Brazil – Tyres]*.
[30] *Korea – Beef* (AB Report), WT/DS161/AB/R, WT/DS169/AB/R, para. 163.
[31] This is the factor from which the analysis should start, according to the Appellate Body in *US – Gambling*, (AB Report), WT/DS285/AB/R, para. 306.
[32] *Brazil – Tyres* (AB Report), WT/DS332/AB/R, paras. 150-151; Appellate Body Report, *China – Measures Affecting Trading Rights and Distribution Services for Certain Publications and Audiovisual Entertainment Products*, WT/DS363/AB/R, adopted 19 January 2010, DSR 2010:I, p. 3, [*China – Publications],* para. 253.
[33] *Korea – Beef* (AB Report), WT/DS161/AB/R, WT/DS169/AB/R, para. 161.
[34] This language has been introduced by the Appellate Body in *Korea – Beef*, para. 166, and has been later clarified as meaning that a measure would not be 'reasonably available' if, for example, '[i]t is merely theoretical in nature, for instance, where the responding Member is not capable of taking it, or where the measure imposes an undue burden on that Member, such as prohibitive costs or substantial technical difficulties…'. See Appellate Body report in *US – Gambling*, para. 308.
[35] *US – Gambling* (AB Report), WT/DS285/AB/R, para. 308.
[36] Limited only by the international treaties and customs the State is bound to respect, as well as by the so-called norms of *jus cogens*.

treaties; why is it the case? One plausible answer comes from relevant WTO jurisprudence.

The concept of extraterritorial jurisdiction refers to the fact that most environmental or social protection measures are likely to be taken to counter effects of environmentally unfriendly behaviours of producers outside the territory of competence of the implementing member, because those effects have a direct or indirect repercussion in the jurisdiction of the implementing member.[37] The leverage of those measures is therefore the economic importance of exports to the targeted foreign producers (and their territories of residence).

The *US – Tuna* saga provides a case-study to understand the evolution of the issue of extraterritorial jurisdiction applying to environmental measures affecting trade flows. In *US – Tuna I/II*, the Panels held that the measures at issue did not qualify for the exceptions under letters (b) and (g) of Article XX, inter alia, because: (1) the measures were based on evidence of negative effects for dolphin conservation, deriving from the fishing of tuna with a certain dolphin-unfriendly technique employed in the national territory of GATT parties other than the US, and the panel's endorsement of such measures would have jeopardised the rights conferred under the GATT provisions; and (2) the condition they posed for tuna products to qualify as dolphin-safe, i.e. to equate US rates of incidental catch of dolphins in tuna fishing in a variable reference period, was coercive and unpredictable and disqualified the measures with respect to the 'necessity' and 'relating to' requirements of letters (b) and (g) of Article XX.[38] This approach has been extensively criticised in the literature (Charnovitz, 1992; Hudec, 1996)[39].

The discussion was reopened in *US – Tuna III*. Mexico, the complainant, argued that the measures at issue were '…intended to extraterritorially pressure the Mexican tuna fleet to change where it fishes for tuna and/or to change its fishing method…'.[40] Mexico added also that 'it is not "legitimate" for the US to use this means to get foreign tuna fleets to change their fishing methods'.[41] Yet, Mexico acknowledged that, provided they are not coercive or discriminatory, measures pursuing one of the policy objectives spelled out under Article XX of the GATT can legitimately regulate a matter beyond national borders.[42] In its analysis of these claims, the panel relied on the Appellate Body's jurisprudence in *US – Shrimp* to rule that a non-discriminatory measure that regulates producers', and not a State's, behaviours beyond national borders is not ipso jure illegal.[43] As discussed by Cooreman (2016), the AB then did not react to these claims

[37] According to Professor Shaw, the 'effects' doctrine has been initiated by US courts and subsequently practiced also in other countries and by international tribunals, yet its status of customary international law is still debated. See Shaw (2008), pp. 688-696.
[38] See *US – Tuna I*, paras. 5.22-5.34; and *US – Tuna II*, paras. 5.11-5.39.
[39] Hudec argues that in order to avoid coerciveness, restrictions should *inter alia* be limited to trade in the product actually associated with the claimed environmental harm, whereas the *US – Tuna I* import restrictions at issue could be extended to all fish products, under certain circumstances. See Hudec (1996).
[40] Panel Report, *US Tuna III*, para. 4.214.
[41] Ibid., para. 4.349.
[42] Ibid., para. 7.370.
[43] Ibid., paras. 7.371-7.373, citing the Appellate Body report in *US – Shrimp*, para. 121.

made by Mexico, which in turn did not raise again those claims in the subsequent compliance proceedings; [44] this, together with the WTO jurisprudence in *EC – Seal*[45] and *EC – Tariff Preferences*,[46] could imply that trade measures having has an objective that of regulating a behaviour that as a territorial link (effect) on the territory of the implementing jurisdiction would be more resistant to claims of breach on the basis of extraterritoriality.

In essence, then, the *US – Shrimp* jurisprudence still appears to be the most relevant for solving claims of allegedly undue extraterritorial regulation of public policy matters, including environmental protection. In *US – Shrimp*, however, the Appellate Body has discussed the scope of application of letter (g) of Article XX GATT. Letter (g) covers measures 'relating to the conservation of exhaustible natural resources if such measures are made effective in conjunction with restrictions on domestic production or consumption'. The stated policy objective has been interpreted by the Appellate Body so as to include both living and non-living natural resources, provided they are exhaustible,47 and irrespective of their being potentially renewable.48 The 'relating to' requirement has been interpreted more broadly than 'necessary' under letter (b), meaning that the range of measures that may fall within the scope of letter (g) is broader than for letter (b). This interpretation was based on *effet utile* grounds, i.e. considering that the varying introductory language used in the letters of Article XX had to lead to differences in the scope of each sub-paragraph.49 The second requirement of letter (g), that the measure be made effective 'in conjunction with' restrictions to production or consumption in the domestic market, has been interpreted as requiring that measures be applied even-handedly on imported and domestic goods.50 This further proviso may mean that the language of Article XX explicitly contemplates measures regulating the production of goods, and that this regulation may cover production methods beyond national borders, provided it also applies to national producers. The AB then went on to explain that the US measure complied with Article XX (g) because the US had made serious, good faith efforts to negotiate an international agreement with the affected trading partners. This then might add elements to explain why, in FTAs, it is possible to find extensive references to MEAs and ILO treaties.

[44] Panel Report, *United States – Measures Concerning the Importation, Marketing and Sale of Tuna and Tuna Products – Recourse to Article 21.5 of the DSU by Mexico*, WT/DS381/RW, Add.1 and Corr.1, adopted 3 December 2015, as modified by Appellate Body Report WT/DS381/AB/RW.

[45] Appellate Body Reports, *European Communities – Measures Prohibiting the Importation and Marketing of Seal Products*, WT/DS400/AB/R / WT/DS401/AB/R, adopted 18 June 2014, DSR 2014:I, p. 7, [*EC – Seal*].

[46] Appellate Body Report, *European Communities – Conditions for the Granting of Tariff Preferences to Developing Countries*, WT/DS246/AB/R, adopted 20 April 2004, DSR 2004:III, p. 925, [*EC – Tariff Preferences*].

[47] Appellate Body Report, *US – Shrimp*, paras. 130-132.

[48] See Panel Report in *US – Gasoline*, para. 6.37. In the appeal, however, Venezuela and Brazil had questioned the validity if this analysis of the panel, but the matter has not been addressed by the Appellate Body because the two appellants did not meet certain procedural requirements for the presentation of the appeal.

[49] See the Appellate Body Report in *US – Gasoline*, pp. 17-19.

[50] Ibid., pp. 19-21.

Precaution, scientific uncertainty, and international standards

Another agreement to which FTAs make frequent reference is the WTO Agreement on Sanitary and Phytosanitary Measures (SPS Agreement). This agreement deals with regulation aimed at protecting humans, animals and plants from certain hazards associated with the movement of plants, animals, and foodstuffs including feeds in international trade. Unlike the TBT Agreement, the SPS Agreement requires that SPS measures be based on scientific evidence and that a risk assessment be undertaken before their enactment. A special derogation, time-bound, is the one provided for measures enacted when current scientific evidence (of a risk) is still uncertain, making the SPS Agreement the only WTO Agreement to explicitly incorporate the concept of precaution. This specific issue has been raised in the context of a much controversial case, *EC – Biotech*.[51]

EC – Biotech is relevant to the FTAs-SD nexus for two main reasons: the discussion on the precautionary principle; and a statement on SPS measures taken in relation to environmental risks potentially arising from the presence of genetically modified organisms (GMOs) in a given territory.

This 2006 WTO panel was faced with the difficult question of assessing the legality of certain market access prohibitions, conditions and delays, that the EC was applying to imports of specific agricultural GMOs from Argentina, Canada and the US. More precisely, the case concerned a *de facto* ban on approvals of biotech products, and safeguard measures put in place by individual EC member States prohibiting importation and marketing of specific biotech products within their national territories, justified by scientific uncertainty on the environmental and health effects of those products.

The panel in *EC – Biotech* addressed the delicate question of the status of the precautionary principle in WTO law, but did not reach any conclusion. The EC, after having unsuccessfully tried to categorize its measures as falling under the scope of the TBT Agreement (where a science-based risk assessment is not mandatory), made a sequence of arguments in support of the fact that the precautionary principle had reached the status of customary international law. In support of this argument, the EC mentioned a number of international legal instruments, from Principle 15 of the 1992 Rio Declaration, to the then recently concluded the Cartagena Protocol on Biosafety.[52] However, the panel was not convinced by these arguments, and decided to leave the question on the status of the precautionary principle open.

On environmental risks connected to GMOs and their status in the SPS Agreement, instead, the panel went one step farther: a review of the negotiating history of the SPS Agreement proved that no explicit inclusion/exclusion of measures taken to protect the

[51] Panel Reports, *European Communities – Measures Affecting the Approval and Marketing of Biotech Products*, WT/DS291/R, Add.1 to Add.9 and Corr.1 / WT/DS292/R, Add.1 to Add.9 and Corr.1 / WT/DS293/R, Add.1 to Add.9 and Corr.1, adopted 21 November 2006, DSR 2006:III, p. 847, [*EC – Biotech*].

[52] Cartagena Protocol on Biosafety to the Convention on Biological Diversity; signed on 29 January 2000, in force, 2226 U.N.T.S. 208; 39 ILM 1027 (2000); UN Doc. UNEP/CBD/ExCOP/1/3, at 42 (2000).

environment or for the welfare of animals was sought for by WTO negotiators, so the panel did not exclude those measures from the scope of application of the SPS Agreement.

Another important set of provisions in the SPS Agreement relates to the harmonization to international SPS standards (Article 3). The conformity with international standards gives SPS measures a presumption of conformity with both the GATT 1994 and the SPS Agreement. In particular, Article 3.3 deserves attention because it affirms the relative right of WTO members to adopt measures that grant a level of SPS protection that is higher than the level set forth in international standards.
The AB ruling in the *EC – Hormones*[53] case shed some light on both the status of the precautionary principle under WTO law, and the relationship of SPS measures with international standards. As discussed, the precautionary principle is recognized in Article 5.7 of the SPS Agreement. The EC, in arguing its defence of measures banning the import of beef treated with certain types of synthetic hormones, tried to convince the panel that the principle should inform the interpretation of the whole SPS Agreement, in particular the provisions on science-based risk assessment under Articles 5.1 and 5.2.

Yet, the AB did not fully agree with the EC, acknowledging that the precautionary principle is reflected also in other parts of the SPS Agreement, such as the sixth paragraph of the preamble and Article 3.3, but still concurring with the panel that the precautionary principle is not yet a customary principle of general international law.
In relation to the obligation to base SPS measures on international standards, the AB made clear that such obligation does not affect the right of members to take different standards as reference points, or even to go beyond the recommendations contained in international standards. In this respect, the AB in *EC – Hormones* stated that:

> "Under Article 3.3 of the SPS Agreement, a Member may decide to set for itself a level of protection different from that implicit in the international standard, and to implement or embody that level of protection in a measure not "based on" the international standard. The Member's appropriate level of protection may be higher than that implied in the international standard. The right of a Member to determine its own appropriate level of sanitary protection is an important right…" (para. 172).

Subsidies, green subsidies, and local content requirements

As reported by Borlini, Dordi, and Horlick (2015),[54] certain FTAs include a variety of norms regulating subsidies and state aid. In some instances, FTA norms extend beyond the WTO framework, for example by covering subsidies to the services sector, or by exempting from the relevant rules subsidies granted in pursuance of public policy objectives not related to trade, as is arguably the case of green subsidies. It is therefore necessary to understand why subsidy regulation finds a reflection in FTA norms, and the

[53] Appellate Body Report, *EC Measures Concerning Meat and Meat Products (Hormones)*, WT/DS26/AB/R, WT/DS48/AB/R, adopted 13 February 1998, DSR 1998:I, p. 135, [*EC – Hormones*].
[54] Separate presentations made on 12 November 2015 by Professors Borlini, Dordi and Horlick at the event "The week on PTAs", Bocconi University, Milan, Italy.

answer may come, once again, from the multilateral legal framework provided by the WTO.

Subsidies are transfers from public revenues to selected groups of economic actors, such as consumers or producers. These transfers can take so many different forms that it is practically impossible, and perhaps not desirable, to capture them in a static definition. The WTO Agreement on Subsidies and Countervailing Measures (SCM Agreement), for example, establishes a complex list of cumulative parameters that a measure must satisfy to be regarded as a subsidy falling within its scope, which is limited to merchandise trade. The SCM Agreement also disciplines countervailing duties, which are import duties additional to normal tariffs, charged on imported products that are found to be subsidized at the point of production/export, and that cause adverse effects to the domestic producers of like products.

Subsidies are a widespread way through which governments encourage efforts to, for instance, reduce GHG emissions (Low et al., 2011; Espa and Rolland 2015); these are one typology of subsidies that is generally considered as "green". Such interventions include lowering the price of energy for consumers (consumption subsidies), or raising the price for energy production (production subsidies), or lowering the costs to produce energy (IEA, 2011). Subsidies can also take the form of tax expenditures and concessionary financial support (concessional loans and loan guarantees), focusing on one or several sectors (Low et al., 2011; Espa and Rolland, 2015). They can also choose to apply dual pricing policies, such as price controls or ceiling, or export taxes and other restrictions. Governments can also grant funds for research and development to support research in key areas (Espa and Rolland, 2015).

In terms of WTO law, however, green subsidies have become problematic when associated with a certain typology of performance requirements: local content requirements. These requirements have appeared in legislation and national policies aimed at fostering the development of a domestic productive capacity for renewable energy supply products. In general, they take the form of conditionalities for accessing a subsidy program, for example a feed-in tariff scheme, or public tenders (Kuntze and Moerenhout 2012).

From a legal perspective, local content requirements can violate various provisions under WTO agreements, such as for example national treatment obligations under Article III of the GATT, Article 2 of the Agreement on Trade-related Investment Measures (TRIMs Agreement), as well as the SCM Agreement itself. In fact, particularly in recent years, the WTO dispute settlement system has received various requests for consultations containing challenges to local content requirements inscribed in national renewable energy promotion plans, and in some cases WTO tribunals have found those requirements in breach of WTO rules.

One such instance has been the *Canada – Feed-in-Tariff* [55] case. In this case, WTO tribunals had to interpret the SCM Agreement in relation to allegations of illegality of a feed-in-tariff (FIT) programme put in place by the Canadian province of Ontario. A FIT is a support scheme for the production of electricity from renewable resources. The scheme serves to support investments in clean energy, in particular by granting a fair price to producers.

The reasoning of the panel hearing this case, and later of the AB, coupled with the way similar claims have been handled by the parties in subsequent cases (Asmelash, 2015), would suggest that the WTO adjudicatory has created a safe heaven for green energy subsidies, provided they are not associated with local content requirements. Remarkably, when addressing market distortions in the broader legal assessment of the measures at issue, the AB stated that:

> "Where a government creates a market, it cannot be said that the government intervention distorts the market, as there would not be a market if the government had not created it. While the creation of markets by a government does not in and of itself give rise to subsidies within the meaning of the SCM Agreement, government interventions in existing markets may amount to subsidies when they take the form of a financial contribution, or income or price support, and confer a benefit to specific enterprises or industries.
>
> We further note that a comparison between renewable energy electricity generators and conventional energy electricity generators requires consideration of the full costs associated with the generation of electricity. In this respect, if, on the one hand, higher prices for renewable electricity have certain positive externalities, such as guaranteeing long-term supply and addressing environmental concerns, on the other hand, lower prices for non-renewable electricity generation have certain negative externalities, such as the adverse impact on human health and the environment of fossil fuel energy emissions and nuclear waste disposal. Considerations related to these externalities will often underlie a government definition of the energy supply-mix and thus be the reason why governments intervene to create markets for renewable electricity generation. On this point, we agree with the Panel's statement that, where government intervention that internalizes social costs and benefits is limited to defining the broad parameters of the market, "significant scope will remain for private actors to operate within those parameters on the basis of commercial considerations"." (paras. 5.188-5.190).

As a consequence, the subsidy programme at issue in *Canada - FIT* as such has been found not to breach WTO law by the panel and the AB. The associated local content requirement, instead, was found to run afoul of the TRIMS Agreement and the GATT, which prohibit the use of such instruments by both developed and developing countries.

[55] Appellate Body Reports, *Canada – Certain Measures Affecting the Renewable Energy Generation Sector / Canada – Measures Relating to the Feed-in Tariff Program*, WT/DS412/AB/R / WT/DS426/AB/R, adopted 24 May 2013, DSR 2013:I, p. 7, [*Canada – Feed-in-Tariff*].

Why, then, are local content requirements so problematic? From an economic perspective, local content requirements may force national buyers to source renewable energy parts, components, or finished products from local manufacturers. The latter, in turn, may not necessarily be the most efficient producers of those goods, as imported products may be superior in terms of both price and quality. As a result, in some cases, sourcing locally may result in an allocation of resources that is less than optimal, with sub-optimal consequences in terms of investment decisions and technological advancements in the sector (Tomsik and Kubicek 2006).

Moreover, it can be argued that incentives or obligations to source renewable energy products domestically may be at odds with parallel national policies aimed at promoting south-south trade.

Nevertheless, various considerations can also be made in defense of local content requirements, particularly for renewable energy supply products, that can mitigate the economic and legal arguments against them. First, the fact that these incentives help create employment at the national level, at least in the short term. Local content requirements have also attracted foreign direct investments in developing countries, fostering the substitution of imports with the establishment of industry plants (see e.g. Lewis 2006 on the Chinese experience). As a consequence, a human-rights based approach to national development plans would support the existence of local content requirements, at least for a defined period of time, as a way to fully realise the opportunities to eradicate poverty through economic development (Moon 2009).

Second, the effects of local content requirements on investment and innovation may be ambiguous, as some hold the view that a "learing-by-doing" argument would support the existence of these mechanisms in order to create national industries that would be able to compete on international markets at a later stage. In addition, it is recognised that creating national renewable energy-related productive capacity can be an important tool in climate change mitigation strategies (Kuntze and Moerenhout 2012).

Given the complexities of the interplay between local content requirements for renewable energy products, considerations of economic efficiency, and legitimate national development plans and poverty reduction strategies, further research would be highly desirable.

2.2 Economic Aspects

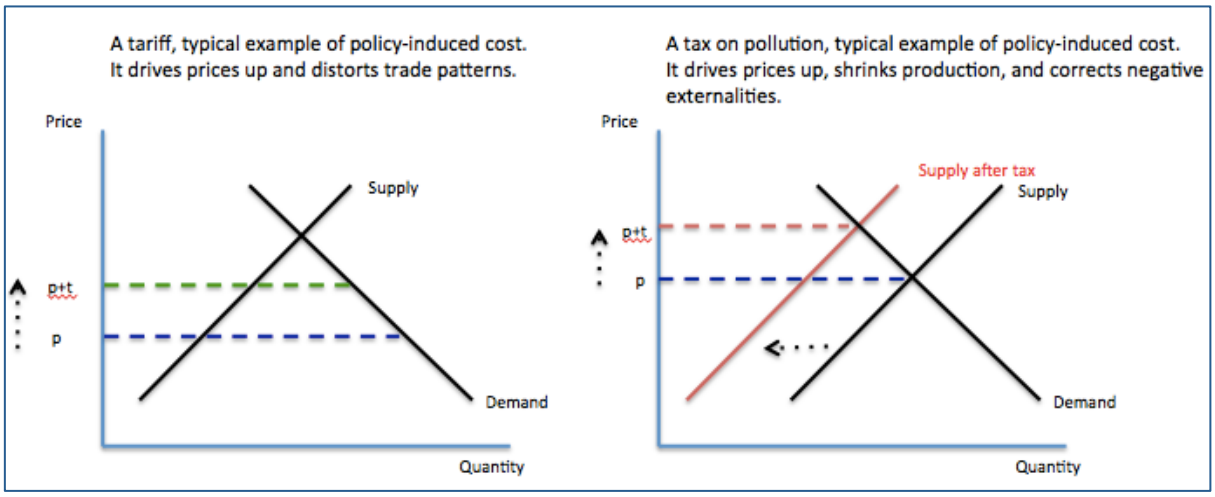
Introduction

Besides the legal case for conflicts between trade-related environmental regulation and trade liberalizing policies, there is also a fundamental difference in the economic foundations supporting trade liberalization, on the one hand, and environmental protection, on the other: the role of policy-induced costs.

Policy-induced costs are any costs that modify the ideal, and perhaps utopian, situation of a free-trade equilibrium. In such hypothetical scenario, national borders and national regulation disappear, to give way to the free exchange of goods and services among sellers, providers, and buyers. For instance, the economic model of comparative advantage, theorized by David Ricardo more than two centuries ago, and still considered as the foundation of free trade as a value in and of itself, is based on this hypothetical scenario.

What are, on the other hand, the theoretical foundations of environmental economics? If the theoretical foundations of free trade do not want policy-induced costs to affect the production/delivery and movement of goods and services, policy-induced costs are one fundamental tool of environmental regulation (Figure I.4).

Figure I.4 Free trade wants no policy-induced costs; environmental policymaking wants more policy-induced costs



Source: Author's own.

From an economic perspective, environmental problems such as climate change or pollution arising from industrialization are considered 'externalities'. Externalities are the positive or negative effects of a transaction felt by the non-parties to such transaction. For example, a soap factory pollutes a river as a consequence of using cheap or out-dated machines in its production process; soap buyers will arguably enjoy a price that is lower than the price that should be paid for soap produced by using environmentally-friendly machines, but the society as a whole will bear the real cost of the cheap production method, because the river in question is a public good.

Negative externalities are a typology of market failure. The market fails to allocate the available resources in the most efficient manner – taking the soap factory example mentioned above – because there are no clearly defined and enforceable property rights on the river. This creates an incentive to pollute, because neither the soap factory nor the soap buyers have to compensate the society as a whole for the damage caused to the users of the public river (see e.g. Cowen, 1988).

So far, taxing the polluter has been the typical policy response to the problem outlined above. More in detail, the so-called environmental taxes generally penalize producers, in accordance with the polluter pays principle, or similarly, the users of natural resources, who engage for example in extractive activities (right-hand side of Figure I.2). Doubtless, these taxes create an incentive for mitigating pollution as well as for a more efficient use of natural resources. In addition, the OECD (2010) has presented evidence of the fact that such taxes also foster innovation (the so-called dynamic efficiency).

In an ideal world, the new revenue streams generated by these taxes should be directed towards mitigation initiatives aimed at correcting negative environmental externalities. In the real world, however, the flow of such new financial resources hardly goes to mitigation initiatives directly related to the concerned public goods, or for the compensation of the negatively affected parties. Moreover, environmental taxes should be designed so as to substitute for other incentive-distorting fiscal measures, therefore not resulting in increased fiscal pressure (GFC, 2009).

Where such taxes are aimed at reducing GHG emissions, in fact, they also risk to give rise to the so-called phenomenon of carbon leakage. The Intergovernmental Panel on Climate Change (IPCC, 2007) defines carbon leakage as “the increase in CO2 emissions outside the countries taking domestic mitigation action divided by the reduction in the emissions of these countries.” Building on various institutional definitions of carbon leakage, Marcu et al. (2013) broadly define it as "the displacement of economic activities and/or changes in investment patterns, that directly or indirectly cause GHG emissions to be displaced from a jurisdiction with GHG constraints, to another jurisdiction, with no or less GHG constraints."

The different mitigation policies in place in countries around the world provide an incentive for producers to settle under jurisdictions where production costs are least affected by emission constraints, therefore potentially leading to carbon leakage which raises issues about the efficiency of climate change policies (Low et al., 2011). To overcome asymmetries in climate change mitigation policies, countries are progressively introducing cap-and-trade systems. However, differentiated Emission Trading Schemes (ETS) across countries lead to issues of competitiveness, which can act as a powerful barrier to trade, especially for carbon-constrained sectors (Reinaud, 2009; Low et al., 2011).

As discussed in Part III, this is one major reason why some FTAs include commitments related to the development of carbon market mechanisms, which in turn warrants the need for taking a closer look at the analysis of costs and benefits of environmental regulation: first, through the case of the so-called Coase Theorem; and second, to through the application of the Coase Theorem to the Kyoto Protocol[56] system for international coordination of emission reduction commitments.

[56] Kyoto Protocol to the United Nations Framework Convention on Climate Change (Kyoto, 11 December 1997; in force 16 February 2005).

2.2.1 The Coase Theorem and the FTAs-SD nexus

The Coase Theorem states that where transaction costs are absent or irrelevant, two parties disputing over liabilities for damages will reach an agreement that maximizes their individual welfare regardless of the law regulating their relationship (Coase, 1960).[57] In line with the neo-classical economic theories that see perfectly competitive markets capable of achieving an optimal allocation of resources, so as to reach a Pareto optimum,[58] the Coase Theorem suggests that the free bargaining of the parties will allocate legal entitlements in the most efficient manner, irrespective of the liabilities established by law (Parisi, 2007).

The key insight of the Coase Theorem is that environmental taxes may not always represent the best solution to achieve Pareto efficient outcomes. Environmental taxes follow the rationale introduced by the British economist Pigou, namely that public intervention is necessary to rebalance the equilibrium broken by the open access to a public resource (be it a river or the air we breath) (see e.g. Dragun, 1985).

As introduced above, however, the design of environmental taxes poses real challenges to the achievement of efficient outcomes. Establishing correct tax-rates, for example, implies the existence of a mechanism overseeing the presence of externalities, as well as non-discriminatory parameters to estimate their social cost. Given the complexity of this exercise, and its implied transaction costs, it can frequently happen that rates are higher than necessary, resulting in a sub-optimal outcome that unduly penalizes the liable party and may, for example, negatively affect employment levels. Moreover, as suggested by Roy in the case of motor vehicle taxes, these fiscal tools may not always be graduated according to the actual amount of environmental damage caused by different economic actors (Roy, 2009).

Economic activities based on open access to public goods generate both benefits and losses, and the novelty of the Coase Theorem rests precisely in the consideration of both benefits and losses in terms of overall economic efficiency. This is, arguably, of key relevance to the FTAs-SD debate, where all the three dimensions of SD should be considered in the design and application of policy solutions.

Coase is helpful to shift from conflicts to synergies in the trade-SD discussion because he posits, inter alia, that the benefits arising from environmental tax revenues will not be enjoyed solely by the affected parties. In addition, the Theorem suggests that not always eliminating negative externalities represents the optimal solution. In other words, Coase puts the accent on the reciprocal effects arising from a given solution to a negative externality, thus expanding the number of policy variables that should be considered to

[57] More in detail, Coase considers also the case of the existence of transaction costs, and argues that "[the] [welfare-maximising] … re-arrangement of rights will only be undertaken when the increase in the value of production consequent upon the re-arrangement is greater than the costs which would be involved in bringing it about…", see Coase (1960). at pp. 15-19.

[58] An outcome is said to represent a Pareto optimum when no participating party can be made better off without making any other participating party worse off.

arrive at the best SD compromise. Accordingly, the tax should be paid by both parties, following negotiations that will necessarily lead to a solution that will ultimately advantage the party that produces the highest benefit for the society as a whole.

Coase's proposition is of a predominantly economic nature, and it constitutes a private solution to the problem of externalities. The thrust of the proposition rests with the idea that negotiations will lead to an optimal solution that maximizes social welfare, and that pre-established liabilities are not relevant to the achievement of that optimal solution. This theory, however, requires that transaction costs for negotiations be practically irrelevant, or that the value produced by the negotiated outcome be larger than the transaction costs; another key assumption is that the negative effects of the externality must be felt by both parties (i.e. that also the party generating the externality suffers from its negative impact).

These discussions, being abstract in nature, strongly call for a real life test. It is under this token, and considering the relevance of emission trading schemes as a complement of a number of FTAs, that the next section proposes an application of the Coase Theorem to the Kyoto cap and trade system.

Case study: the Kyoto cap and trade system

The so-called cap and trade scheme, introduced with the Kyoto Protocol to the UNFCCC, provides a unique case study for the application of the Coase Theorem to a process of international bargaining. This sub-section will critically review the functioning of the market-based mechanisms under the UNFCCC in the light of the Coase Theorem, in particular by highlighting both advantages and limitations of the Coase Theorem in respect of the actual functioning of those mechanisms.

The Kyoto Protocol defines bound levels for CO2 emissions to be achieved within a defined period of time, with a global objective of cutting emissions in signatory countries by 20 per cent by the year 2020 (Leal-Arcas, 2011). To achieve this objective, participating countries have the choice to transfer legal entitlements in a way that fully reflects the rationale of the Coase Theorem.

Application to market-based mechanisms

To try and solve, or at least mitigate, the problem of excessive global CO2 emissions giving rise to anthropogenic climate change, the international community is increasingly relying upon market-based instruments, in particular tradable permits.

Tradable permit schemes, such as the International Emission Trading (IET) scheme set up with the Kyoto Protocol, consist of a "cap and trade" mechanism based on fixing an overall amount of emissions, and then on allotting tradable permits to pollute to participating countries in accordance with established timeframes and other substantive criteria. In 2009, for instance, the IET led to 8.7 billion tonnes of carbon exchanged for an equivalent value of USD 144 billion (World Bank, 2010).

Cap and trade is a market-based tool for environmental protection. In the case of the system set up under the Kyoto Protocol, object of the trade are permits to pollute. The trade of permits, if free between the participating countries, is regulated by the principle that at the end of a specific time lapse those countries will hand back a number of permits equivalent to the quantity of emissions registered during that period of time. If those permits were not sufficient to cover the registered emissions, there would be economic sanctions; in the opposite, with permits exceeding the actual level of emissions for that given period of time, the exceeding permits can be sold to other countries. Finally, at the end of each period of time, the authority in charge of handing out the permits can decide to cut the overall amount of available permits, so as to achieve a more ambitious target of environmental protection.

In other words, tradable permits are intangible and transferable goods whose market value can be negotiated, and thus become a key market-based environmental policy tool by creating a market for externalities. Every polluter can choose its own strategy: reducing emissions (by reducing production levels, which is obviously unlikely), buying or selling permits, or adopting cleaner technologies. The regulator has no role in the choice of such strategy.

This system presents the advantage of letting the free choice of economic operators determine their strategy, so as to allow a proportional sharing of risks and opportunities. However, in certain cases, it could not be appropriate: for example, when emissions are particularly noxious, or when monitoring cannot be performed, or when emissions remain at a fairly high level. In all these cases, a regulatory intervention might be necessary, or a mix of regulatory and market-bases approaches, as this reflects the limitation of the Coase Theorem in relation to the calculation of the real cost of pollution (see e.g. Cooper, 2001).

Of course, for the smooth functioning of the trade of permits, a regulatory framework is still necessary. Notably, and in full assonance with Coase, the Kyoto rules specify that traded permits do not constitute property rights. Arguably, this specification serves also the purpose of avoiding claims of expropriations by the private actors participating in the trade of permits in cases where governments decide to reduce the total number of available permits or the cap for emissions (see e.g. Ellerman, 2005).

Cap and trade vs. environmental taxes in the light of the Coase Theorem

The most common criticism for cap and trade schemes moves along the lines of immorality, ineffectiveness in terms of environmental protection and unfairness for the small players in the market. Environmental taxes too are market-based instruments. The main difference between these taxes and cap and trade schemes is the fact that the latter establish an absolute limit to the permitted levels of pollution, leaving the market fix the price of pollution permits on the basis of demand and supply. The former, instead, establish a price for e.g. a ton of CO_2 emissions, and allow the total quantity of emissions to be fixed at the point where the gains from reductions equal the cost of the tax. In this system, the inclusion of new actors in the market would simply result in increased total emission volumes, which does not happen in a cap and trade system.

On the other hand, one of the main criticisms to the cap and trade systems introduced with the Kyoto Protocol is that the parties thereto would have too much leeway not to cut their emissions, in particular by recognizing a right to pollute. The Marrakesh agreements of 2002 reacted to these arguments by making clear that the Protocol has not created any rights in relation to the emissions. Accordingly, the concerned parties have an obligation to provide evidence of their use of the Kyoto system as a complement to their national policies to cut emissions.[59]

To conclude, it can be argued that even if the Kyoto cap and trade system per se has demonstrated to be able to achieve efficient outcomes in Pareto terms – as firms from participating countries have traded permits without transaction costs and in a free-market regime – it has not been able to achieve the overall outcome of environmental protection and climate change mitigation it sought to attain. In other words, the case of tradable pollution permits under the Kyoto protocols shows one possible limitation of the Coase Theorem, which is, its being based on the theory of rational choice (as most economic models are), that does not provide enough flexibility to analyse complex problems such as global environmental protection.

3. From conflicts to synergies?

The move from conflicts to synergies in the trade-SD nexus is an on-going phenomenon. It is visible, for instance, in bolder international narrative (Table 1), and in the cross-pollination of work programmes of international institutions specializing in economic, financial, environmental, or social/human rights matters, which all contributed to crafting the 2030 Development Agenda.[60]

As foreseen by Sampson (2005),the scope of the trade-SD nexus has broadened significantly. This, however, makes the analysis of the relevant dynamics particularly challenging, and requires narrowing down the focus of the investigation.

To this end, and taking into account the literature reviewed in Part II, the present analysis concentrates on regulatory cooperation, climate change, and issues related to SMEs. These three normative areas will be introduced below, while the specifics of their reflections in FTAs will emerge from Part II, and will be discussed in detail in Part III.

3.1 Regulatory cooperation on sustainability standards, technical regulations and conformity assessment procedures

Standards, in general terms, can be defines as “documents, established by consensus and approved by a recognized body, that provide, for common and repeated use, rules,

[59] Decision 15/CP.7, Preamble.

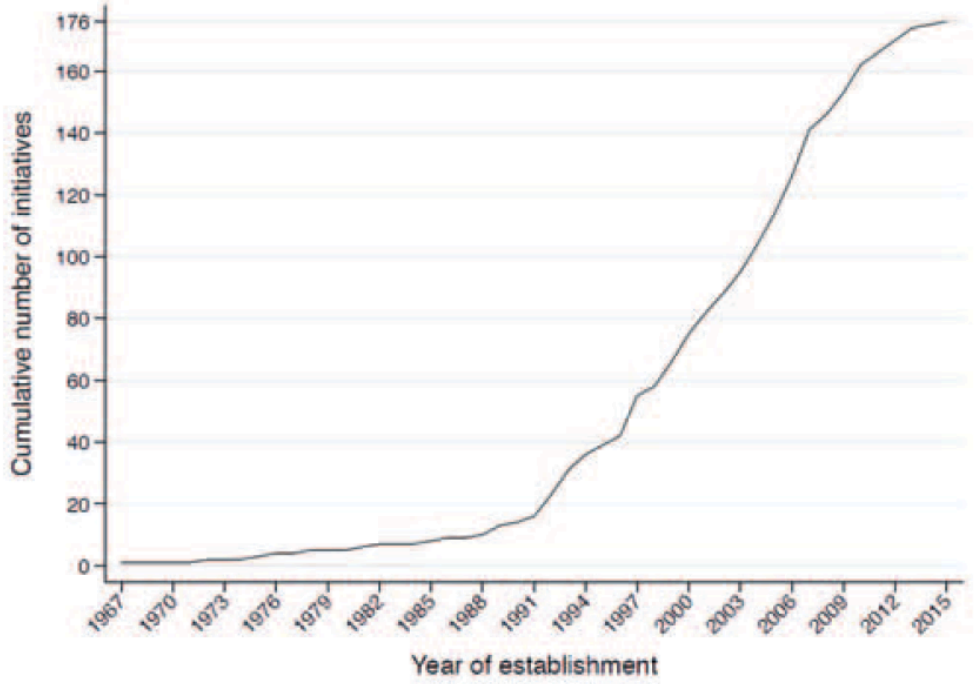
[60] See ‘Transforming our world: the 2030 Agenda for Sustainable Development’, Resolution of the General Assembly of the United Nations, Document A/RES/70/1.

guidelines or characteristics for activities or their results, aimed at the achievement of the optimum degree of order in a given context" (UNECE, 2009).

Standards facilitate trade for the fact that trough their implementation, traders and regulatory bodies speak a common language. Moreover, standards contribute to improving the quality of traded goods, while increasing productivity and efficiency of manufacturing by specifying product characteristics and by favouring technology transfer. However, standardisation is a long and costly process, that presents clear challenges to the participation of developing countries, both in terms of financial and human resources (UNECE, 2009).

Over the last 25 years, economic, social and technological advances have resulted in higher consumer demand for food and product safety. Sustainability standards have emerged in the marketplace as a response to this trend, in particular in the sectors of food, textiles and consumer goods and services. These standards are often referred to as voluntary sustainability standards (VSSs), and offer specifications for products as well as guidelines for the sustainable management of all types of organisations (Figure I.5) (ITC and EUI, 2016).

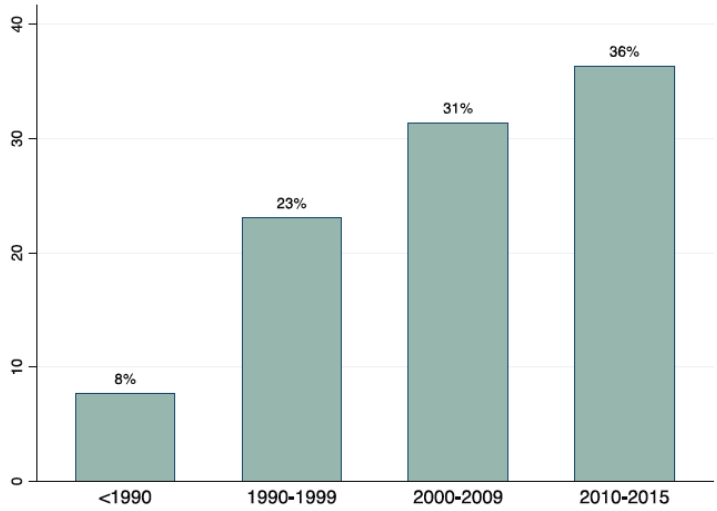
Figure I.5: historical trends of establishment of VSS initiatives



Source: ITC and EUI (2016).

The role of VSS continues to grow in importance, particularly in emerging markets and other developing countries (Figure I.6).

Figure I.6: Percentage share of new VSS initiatives based in non-OECD countries



Source: ITC and EUI (2016)
Note in the original: 'The bars show the percentage share of standards initiatives with headquarters in non-OECD countries in the total number of new initiatives, by period. The statistics are based on 178 standards."

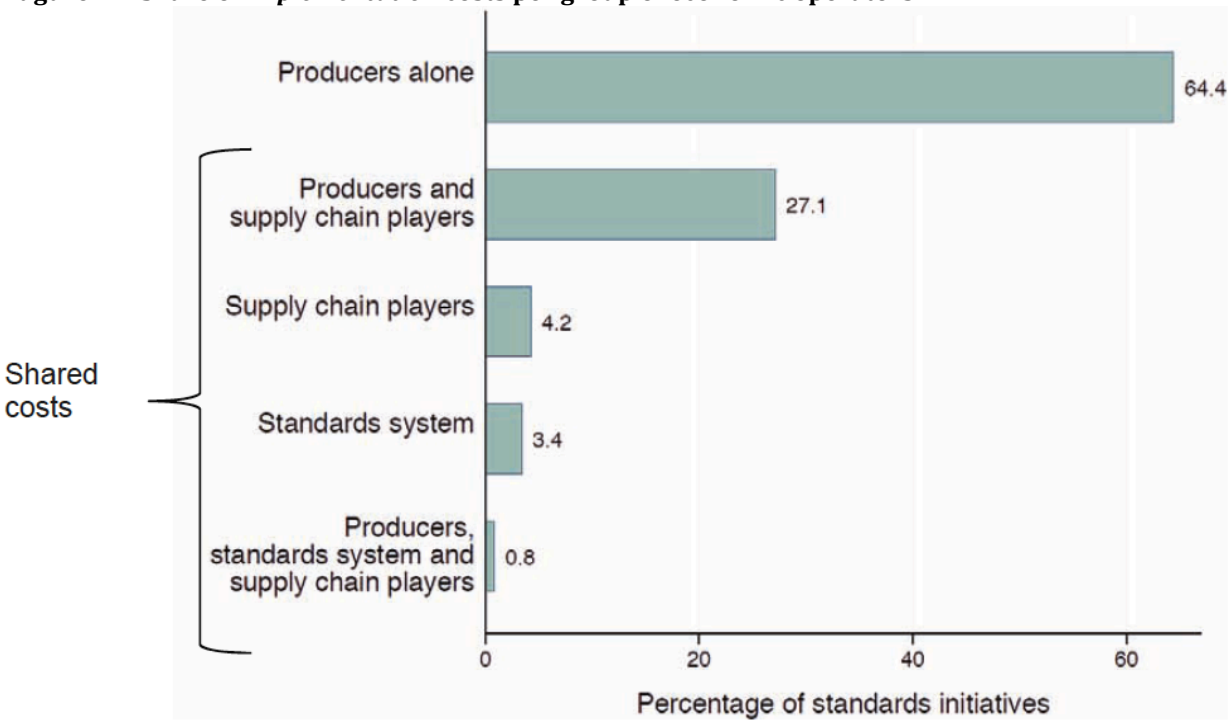
Sustainability standards are frequently process standards: they regulate the impact of production on social, environmental or other variables, and so help build value into certified goods and services through an increase in consumers' trust. They are usually formulated by independent, third party organisations, be international non-governmental bodies, governments or specialised private bodies.[61]

Standards are by their very definition voluntary. However, as seen above in the *US – Tuna III* case, they may become *"de facto"* mandatory, when governments transpose them into technical regulations applying to products, processes and services, so that they become binding legal obligations on producers, in order to gain access to the market for the goods or services in question. Compliance with a voluntary standard may also be a requirement to get access to a specific distribution channel or product market.

The proliferation of sustainability standards worldwide has created both opportunities and constraints on the ability of developing countries to integrate in international supply chains. For developing countries' products and services, in fact, conforming to standards helps secure market opportunities and achieve sustainable development objectives, but can be costly to adopt, particularly for small producers and SMEs (Figures I.7 and I.8).

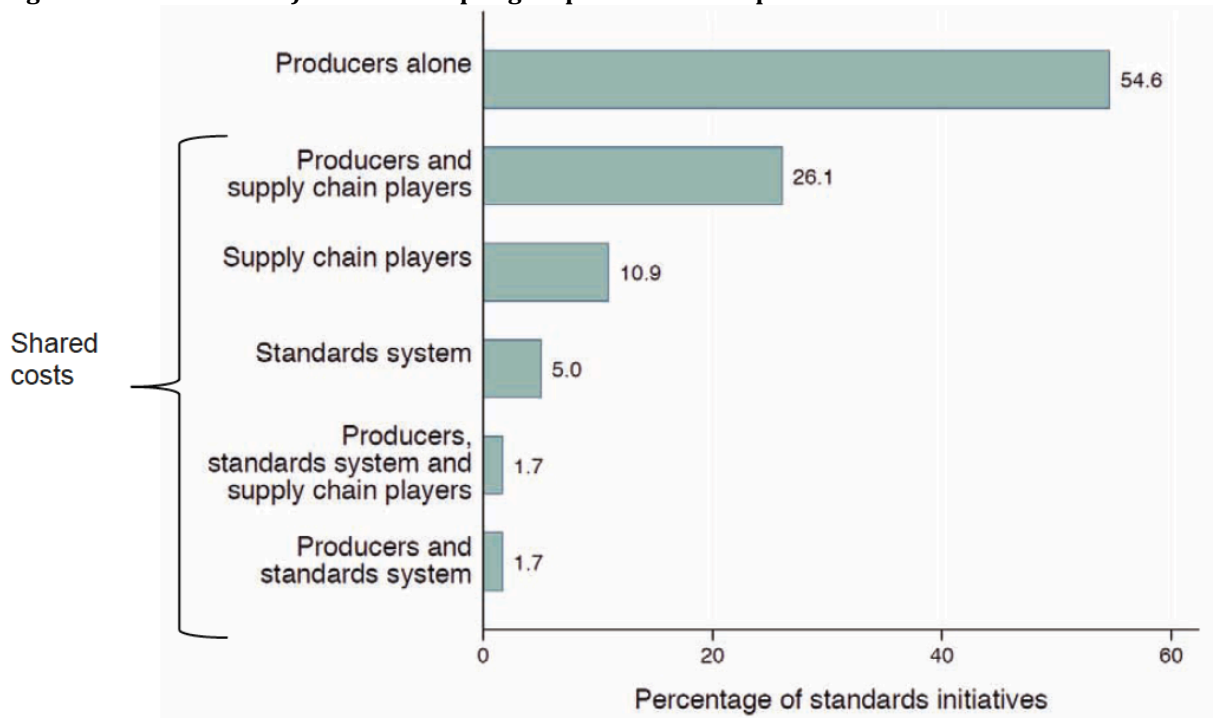
[61] A typical example is provided by the International Organization for Standardization (ISO), which is a non-governmental federation of national standardisation bodies (NSBs) from 164 countries.

Fugure I.7: Share of *implementation* costs per group of economic operators



Source: ITC and EUI (2016)

Figure I.8: Share of *certification* costs per group of economic operators



Source: ITC and EUI (2016).

For this reason, developing countries need to receive adequate assistance for the development of quality infrastructure and institutional capacity. A more systematic

approach to the mitigation of possible trade frictions, such as harmonisation of sustainability standards, regulatory cooperation, recognition of equivalence and commitment to respect a pre-determined set of rules, are another important area where FTA norms can make a contribution.

Conformity assessment, accreditation, certification and labelling schemes

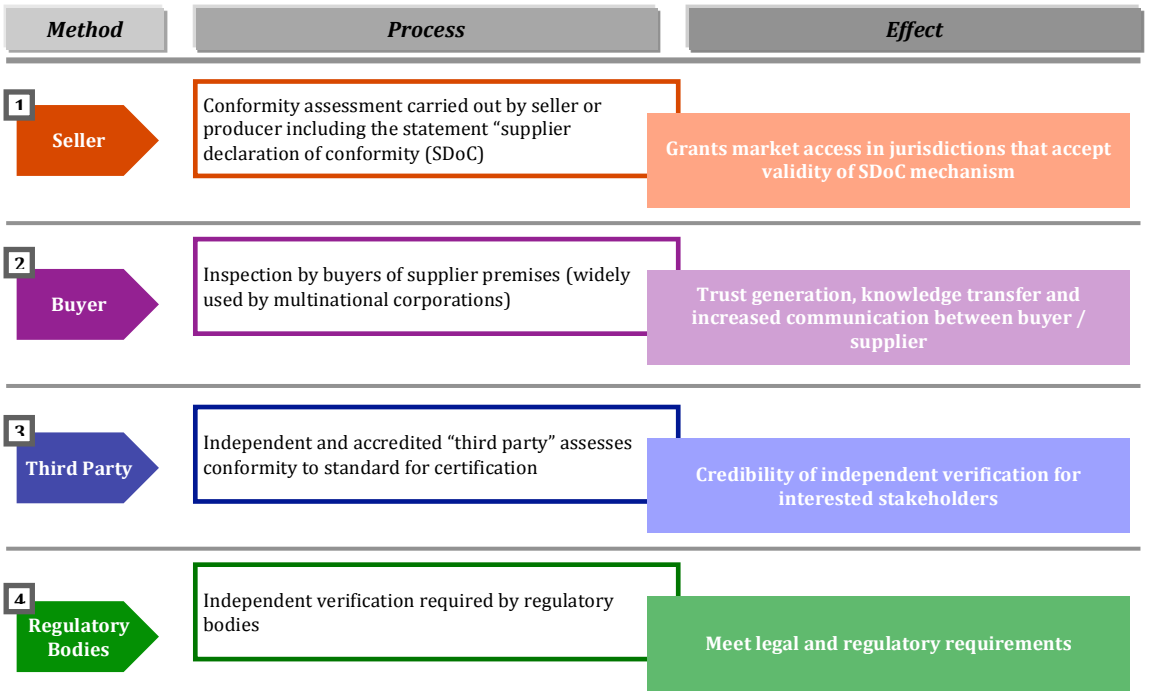
Sustainability standards - like any other standards – are only effective in changing consumers and producers' behaviours and choices if they are implemented. Many times, consumers and producers look at labels and certificates as a proof of implementation. To understand what "implementing a standard" or "conforming to a regulation" actually means, and more importantly, to understand why this is a subject addressed in regulatory cooperation discussions related to FTAs, it is necessary to present the concepts of "conformity assessment", "accreditation" and "certification", which are the basic steps needed to obtain a label or a certificate.

For products in general, the assessment of conformity to the requirements of a given standard can be carried out in three main ways (Figure I.8): first, conformity assessment can be carried out by the seller or producer itself, usually through a written statement containing a "supplier's declaration of conformity". This statement means that the producer assesses its own products or processes and takes responsibility for their conformity to the standards. In some legal frameworks, including that of the EU, this declaration is necessary for the placement of products on the market; second, conformity assessment can be carried out by the buyer; this methodology appears to be widely used by several transnational corporations and large retailers conducting inspections in their suppliers' premises. This methodology allows trust-creation and the transfer of knowledge and expertise, due to the direct communication established across various units of the production and distribution chain; and third, an independent body or testing service entrusted or recognised by the parties to a given transaction can be in charge of assessing conformity; this is the case of "third party certification" (UNECE, 2009).

An additional, delicate step in this process is the accreditation of conformity assessment bodies, which is frequently a mandatory requirement. The key principle is that accreditation bodies, which are in many cases entities entrusted by the government to carry out their functions, be independent from the conformity assessment body being accredited.[62]

[62] See e.g. Regulation (EC) No 765/2008 of the European Parliament and of the Council of 9 July 2008 setting out the requirements for accreditation and market surveillance relating to the marketing of products and repealing Regulation (EEC) No 339/93, OJ L 218, 13.8.2008, p. 30–47.

Figure I.8 - Conformity assessment methods



Source: Elaborated by author on the basis of UNECE (2009).

3.1.1 Standards and traceability: the case of health and environmental sustainability claims in textile value chains

Traceability in the supply chain can be defined as the ability to identify and track the path of a product or material component from raw material to finished good. This is a useful tool to understand and relay information about the transformation of products, parts, and materials throughout the value chain. As several labelling and/or certification schemes may include traceability requirements, it is important to understand the implications of such transparency-enhancing schemes. Textile value chains offer useful elements to investigate such implications.

Textile value chains: environmental and health impacts

Two major categories of environmental impacts of textile production and processing are: discharge of pollutants; and consumption of water and energy (UNEP, 1994).

With regard to the discharge of pollutants, these can result in air, water and land pollution, and are mostly linked to the use of chemicals. However, while air emissions are a minor but not negligible source of pollution, most of the chemicals and auxiliaries are released to waste water. Concerning the organic load, 20 – 100 g organic carbon/kg processed textiles are emitted, which is 15-250 times higher than emissions to air. Thus, emissions to water are predominant (OECD, 2004a).

A number of studies and research initiatives undertaken by various stakeholders support the view that, besides the obvious potential to create occupational illnesses due

to direct contact during handling of chemicals, certain chemicals incorporated in garments have direct negative consequences for their final users (UNEP, 1994). A report by the Swedish Chemical Agency revealed that 10 per cent of textile-related substances are of potential concern to human health (Kemi, 2014).

Approximately 25 per cent of chemicals manufactured globally are applied in the textile industry. For instance China's textile industry, which represents over 40 per cent of global manufacturing, reportedly uses about 42 per cent of the world's textile chemicals (Greenpeace 2013).

Workers in the textile industry are exposed to chemicals that are linked to several kinds of cancers, including brain cancer, lung cancer and stomach cancer. Chemical contact to skin and inhalation can lead to other serious health effects, while exposure to noise is also a serious risk to workers (oecotextiles, 2013).

The Textile and Health Association, based in Italy, reports that harmful substances such as carcinogenic aromatic amines and heavy metals were present in garments put on the market in Italy in 2012. In the same year, surveyed hospitals and clinics reported that, at the national level, 7 to 8 per cent of dermatological diseases was caused by textiles and footwear (Associazione Tessile e Salute, 2012).

Notes on consumers' behaviour towards sustainability

Consumers are most of the times not aware of the potentially negative environmental impacts of their purchasing choices. The factors shaping consumers' behavior and attitudes towards sustainability have a direct relationship with issues related to enhancing transparency in textile supply chains. As highlighted in the studies reviewed in this sub-section, such factors can become drivers of policy decisions from both the public and private sectors as to whether or not invest in supply chain transparency.

A 2011 survey that collected information from more than 12,000 households in Australia, Canada, Chile, France, Israel, Japan, Korea, the Netherlands, Spain, Sweden and Switzerland revealed that environmental attitudes matter and governments can have a role in forging them. A complex set of factors underpin people's decisions, including knowledge, the availability of information, trust, the concerns of neighbours, levels of environmental activism, as well as education levels, income and ownership status. Well-designed information campaigns and educational programmes to raise people's environmental awareness can change behaviour. While the survey confirmed that prices and costs can be hugely influential in household decisions, it also revealed an overall willingness to be green and to pay more for environmentally-friendly choices (OECD 2014).

More selective studies demonstrate that some corporate social responsibility (CSR) initiatives, such as companies' environmental commitments, along with some corporate abilities (CA), such as product quality, significantly explain a trade-off effect on consumers' willingness to pay for a product (Feldmand and Vasquez-Parraga 2014).

Research on consumer awareness trends confirmed that while some consumers are informed and aware of the issues, others show little interest in sustainability aspects of fashion. Industry research indicated the potential for promoting sustainability in the fashion supply chain, but found that little communication has been made to consumers (Saicheua et al. 2011).

A study on US consumers revealed that, in the U.S. market, consumers' knowledge of environmental issues in the apparel industry, moral norms, expectations of ethical behavior, attitudes towards patronizing apparel retail brands engaged in CSR were all important predictors of U.S. consumers' intentions to patronize socially responsible apparel retail brands. Knowledge of environmental issues in the apparel industry and universalism values were found to influence consumers' expectations of retail brands ethical behavior (Diddi 2014).

Clothing consumer behaviour appears to be particularly complex and influenced by many different factors. Hiller Connell and Kozar (2014) report that in the most recent research on consumers' environmentally sustainable clothing behavior, the emphasis has been on the knowledge and attitudinal variables in encouraging the consumption of environmentally sustainable clothing.

Transparency and traceability in textile value chains

Textile GVCs appear also to be particularly complex. As Lam and Postle (2006) put it, the typical problems facing with textile and apparel supply chain are short product cycle for fashion articles, long production lead-time and forecasting errors for fashion items. They further report on the case of the Hong Kong textile and apparel supply chain, which faces additional problems of distance from customers in the U.S. and European markets, long production lead-times and minimum batch sizes for production, and the elimination of quota restriction in the U.S market, all of which force supply chain managers to improve efficiency and enhance competitiveness. In addition, the textile sector represents the first stage of value added manufacturing for low-income countries (OECD, WTO and IDE-JETRO 2013).

As suggested by Linich (2014), "transparency goes beyond gaining visibility into the extended supply chain. It is the process by which a company takes action on the insights gained through greater visibility in order to manage risks more effectively".

Traceability schemes or initiatives appear to be important tools to move towards more transparency in the management of GVCs and to facilitate the flow of information. Traceability in the supply chain can be defined as the ability to identify and track the path of a product or material component from raw material to finished good. This is a useful tool to understand and relay information about the transformation of products, parts, and materials throughout the value chain.

Traceability fits into a certification scheme by serving as a link between production and consumption in the market place. "A Guide to Traceability" was developed in 2014 in collaboration between UN Global Compact (UNGC) and The Business of a Better World.

The Guide provides an overview of the importance of traceability for sustainability objectives across various industries. Accordingly, two models were identified that define the process of traceability in the textile industry are product segregation and mass balance.

Product segregation implies that certified materials and components are physically separated from non-certified materials and components at each stage through the supply chain.

Mass balance allows certified and non-certified materials to be mixed. The identified volume of certified material entering the value chain must be monitored and controlled and the same volume of certified product leaving the value chain can be sold as certified (UNGC 2014).

Sustainable sourcing, which is also highly related to the concept of transparency in supply chain management, mostly relates to the procurement policies put in place by firms in the selection of their suppliers (SAI 2013).

These and other initiatives to enhance transparency in textile value chains can bring several economic, social and environmental benefits. However, implementation efforts are often very demanding in terms of economic investments and technical knowledge needed to put them in place.

Opportunities and challenges

The investments being made in sustainability allow companies to use fewer resources for a greater output. Manufacturers that are early adopters on carbon efficiency, water conservation, energy savings, etc. will not only add to their bottom line but also have an opportunity to differentiate themselves with the buyers in the near term (cKinetics 2010). This sub-section summarizes case studies on “greening” initiatives that brought economic gains to businesses in the textile sector in both developed and developing countries.

The case of Nudie jeans Co., a medium sized Swedish clothing company, suggests that supply chain transparency is a useful corporate tool. Consumers exposed to traceable supply chains were more willing to buy, while at the same time they were not interacting more or differently with Nudie representatives. The author argues that transparency improves comprehensibility and comparability; however it is far from certain if in practice this is enough to empower consumers to pressure the disclosing firm (Egels-Zandén and Hansson 2015).

In 2005, Nike and Levi-Strauss published lists of their suppliers. Steps taken in this connection included developing new information systems to enable the two companies to better track information about labour practices and introducing code monitoring systems, using both internal and external auditors (Doorey 2011).

The Cleaner Production Regional Activity Centre (CPRAC) reports about several successful firm-level initiatives, of which two examples are set forth below:

1) First Textile, a company based in Turkey and engaged in the production of knitted textile, yarn, fabric-dyed textile and printed textile, realized the following gains from implementing cleaner production processes:

Environmental Benefits	Cost (Investment+Operational)	Annual saving	Payback period
• Reduction of water, energy and chemical consumption	USD0	USD58,340-32,370	immediate
• Reduction of water and salt consumption	USD20,000	USD57,680	3 months
• Reduction of steam and energy consumption • Air pollution control	USD328,820	USD513,000	1 year

2) A large public-sector textile factory in Egypt, producing 8,000 tonnes of raw fabric a year, realized the following gains:

COST - BENEFIT RELATIONSHIP

Factory Department	Action	Capital & operation costs (€)	Yearly savings (€)	Payback period (months)
Measures already implemented				
All	Steam condensate recovery	13,203.0	39,638.3	< 4
	Upgrade insulation of steam and hot water networks	14,083.2	39,646.0	< 5
	Improve storage facilities	0	6,689.5	Immediate
	Optimise chemical usage	0	10,269.0	Immediate
Fabric Pre-treatment	Counter current flow in Kyoto range	12,909.6	65,064.4	< 3
Subtotal		40,195.8	161,307.2	< 3
Additional measures to be implemented				
Fabric Pre-treatment	Install automatic shut-off valves, Gaston County range	10,709.1	13,159.0	< 10
	Recycling final wash water	8,802.0	41,442.8	< 3
Yarn Dyeing	Heat recovery from hot liquors	23,472.0	31,443.7	< 9
Subtotal		42,983.1	86,045.4	< 6
OVERALL COST - BENEFIT RELATIONSHIP		83,178.9	247,352.6	4

As can be seen in these two examples, savings from optimization of water consumption appear to be predominant. Combining the existence of these economic gains with the previous review of consumers' attitudes in key export markets leads to the preliminary conclusion that, on the side of the firm, beyond ethical considerations, it would also be economically meaningful to convey such information about improvements in its environmental performance to the final consumer.

Yet, conveying complex information along complex supply chains can be expensive and can imply investments in infrastructure, human capital and technological knowledge. In addition, abiding by new firm-level standards in the context of a traceability scheme can be particularly burdensome on the side of smaller suppliers. However, the present paper is limited to considerations related to transparency in supply chain management, hence abstracting from the typical challenges related to compliance with the substantive requirements of private and "public" standards as such (ITC 2011), for instance on environmental performance.

The WTO and the OECD (2013) provide an analysis of ways forward to overcome broader supply chain costs in the textile sector in the context of Aid for Trade initiatives. Their study identifies four drivers for aid-for trade assistance: encouraging overall development of the textile sector, promoting preferential utilization, supporting social upgrading in the global supply chain and supporting vertical integration between apparel and textile sectors.

Finally, while technology can help cut the costs involved in enhancing supply chain transparency, some authors contend that the expectations associated with transparency policies are often unrealistically high. Accordingly, transparency schemes can help to cope but not solve social and environmental problems that are associated with production and consumption trends of advanced industrial societies (Dingwerth and Eichinger 2010).

3.1.2 Challenges for developing countries

In developing countries, consumers, businesses, and government officials largely began embracing voluntary market-based approaches to products and sustainability objectives only in the last decade, as resource constraints, global climate change, and other pressing environmental issues became part of national development strategies and international competitiveness considerations.

Despite the weaker framework conditions, developing countries have begun putting in place robust national environmental policies, including initiatives to create and use domestic and regional eco-labelling schemes. Even though eco-labels may be harder to create in the context of developing countries, these types of market-based and voluntary approaches can be helpful in encouraging and improving compliance with statutory or mandatory approaches.

Developing countries, however, often have higher percentages of SMEs and less robust regulatory and social pressures. The process of economic globalisation and trade liberalisation has transferred trading partners' labelling schemes to developing countries and encouraged their uptake as a prevalent and credible way of communicating environmental and social performances, but present many challenges.

A first category of challenges relates to standards-setting processes and modalities. In several fora, and for many years, developing countries' representatives have expressed the view that achieving effective participation in international standard-setting is too costly for them, or requires human resources that they have not yet developed. In the food sector, for example, a specific constrain in developing countries has been the lack of coordination and reporting on their participation in the process, even though there are also examples of regional groupings that manage to increase their participation by joining efforts and expertise. Finally, as re-affirmed in 2011 in a decision of the WTO TBT Committee, the development of international standards should in the first place be informed by the principles of transparency, openness, impartiality and consensus, effectiveness and relevance, and coherence, while taking into account the very fact that developing countries face challenges to participate in the development process.[63]

A second category of challenges relates to market access. Compliance with standards requires know-how, skills, equipment and investments that are frequently lacking in smaller and less sophisticated producers and thus marginalise these groups. In many instances, producers cannot meet the costs of implementing a sustainability standard. Also, certified produce cannot always be sold as such, meaning that the producer takes a risk in complying with a standard without having a buyer and a guaranteed price premium. Standards gradually become a de facto market access condition. That also means that price premiums are eventually eroded in the market place.

In addition, the lack of harmonisation and recognition of equivalence between standards is increasing the potential for them to become non-tariff barriers (NTBs) to trade. Regulatory cooperation arrangements – including between private actors – are being explored more frequently than in the past and, as discussed in Part III, FTAs offer opportunities to enhance them.[64]

3.2 Climate change

Climate change can have a considerably detrimental impact on developing countries, which lack the resources and ability to adapt to it. It therefore poses serious threats to human rights considerations of developing countries are they are more prone to suffer from extreme weather conditions, crop failures, and other climate change-related occurrences which limit their opportunities for economic growth and human rights promotion, hence the importance of establishing international norms for developed and developing countries alike to prevent human rights violations (Wewerinke and Yu, 2010). As a response, a renewed engagement on countering anthropogenic climate change came, in 2015, with the adoption of the Paris Agreement.[65]

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[63] For an overview of the concrete requirements connected to these principles see WTO Document G/TBT/1/Rev.10, revised in 2011, p. 46.

[64] See e.g. the proceedings of the 2011 WTO Workshop on regulatory cooperation, available at <http://www.wto.org/english/tratop_e/tbt_e/wkshop_nov11_e.htm>, accessed in August 2016.

[65] Adoption of the *Paris Agreement*, Proposal by the President *FCCC/CP/2015/L.9/Rev.1,* COP 21, United Nations Framework Convention on Climate Change [UNFCCC], UN Doc. A/AC.237/18, May 15, 1992, *reprinted in* 31 I.L.M. 849.

Trade can be a powerful tool to reduce greenhouse gas emissions, but there are areas of potential conflict between trade law and international law on climate change regulation, hence the need for international cooperation to design trade and environmental regulations that will be mutually supportive (Cottier et al., 2009). The SDGs, for instance, do not address the linkage between trade and climate change directly, and various commentators stress that the carbon footprint of traded goods tends to increase with productive capacity moving from developed to developing countries (Peters et al. 2010), and that the net impact of trade over climate change tends to be ambiguous, as it depends on many parallel but not interdependent variables (Onder, 2012). While some authors maintain that there can only be conflicts between trade deals and climate-friendly actions (see e.g. Lilliston, 2016), there are also authoritative voices that highlight the existence of synergies, for instance in the contributions that trade can make to the transfer and diffusion of carbon-capturing and clean energy technologies (see e.g. Cosbey, 2016).

In this context, many opportunities arise for an environmentally sustainable type of trade and for producers who will comply with international standards in that respect. However, some argue that while having increased in both numbers and scope, the inclusion of environmental provisions in FTAs remains insufficient to reach climate change objectives, highlighting the need for even greener FTAs (Coyler, 2011).

Heterogeneous policies to reduce GHG emissions can lead to inefficiencies. Indeed, if one country incurs additional costs to reduce GHG emissions due to domestic regulations but another country does not, in the presence of trade agreements, this may shift production and economic activity to less carbon-constrained jurisdictions, therefore invalidating the environmental efforts of the first country (Low et al., 2011).

This shift of polluting activities can have a negative impact on developing countries and hamper their growth, especially as they seek development through industrialisation (Gen et al., 2016). This is why cooperation on international trade norms is of paramount importance as it allows to regulate on this loss of competiveness. However, as seen with the Kyoto Protocol, many difficulties hamper the elaboration of international climate agreements due to the nature of climate change as global public good, which is therefore prone to free-riding (Nordhaus, 2015). Trade policies therefore have the potential to widen "the narrow agenda which the Kyoto process has enforced" (Mathews and Tan, 2014).

Moreover, with the new shape of the global economy influenced by the economic growth and industrialisation of China, East Asia, India, and Brazil, and with other developing countries expected to follow, there is an increasing phenomenon of "shifting wealth" (Drysdale and Amstrong, 2010; OECD Development Centre, 2010), posing new concerns to international climate and economic governance.

Climate change and FTAs

With the signature of the Paris Agreement on climate change and the UN's 2030 Agenda, SD concerns are at the forefront of the public debate on international trade deals. The

debate has been particularly fuelled by the negotiations of so-called "mega-regional" trade agreements like CETA, the TPP and the TTIP. For instance, regarding environmental issues and climate change-related objectives, Frey (2015) argues that now is the time to harness the momentum to make trade policy part of the "enabling environment" for emission reductions. In order to achieve the intended goals, this would necessitate a shift of focus from regulatory space to common regulation and targeted trade-liberalisation of climate-friendly goods and services. If mega-regional trade deals are designed in a way that minimizes the contradictions between an ambitious climate policy and free trade, they have the potential to become vehicles for the advancement of more ambitious climate-friendly policies in both developed and developing countries.

The so-called Namur Declaration,[66] a sort of manifesto of academics, politicians and civil society on the principles that should guide both negotiations and objectives of EU FTAs, was issued in the aftermath of the attempt by the Wallonia region in Belgium to block the signature and entry into force of CETA. For instance, in relevant part the Namur Declaration states that:

> "…To ensure that the so-called "new generation" economic and trade treaties do not weaken the laws protecting the socio-economic, sanitary and environmental model of the EU and its Member States in any way, and that they contribute to sustainable development, reduction of poverty and inequalities and the fight against climate change,
>
> - The ratification of the key instruments for the defence of human rights, the core ILO conventions, the recommendations of the BEPS project (base erosion and profit shifting) and the Paris climate agreement shall be obligatory for the parties;
>
> - Quantified fiscal and climate requirements, such as minimum corporate tax rates and verifiable targets for the reduction of greenhouse gas emissions should be included in such treaties;
>
> ...
>
> - Independent and regular socio-economic, sanitary and environmental evaluation mechanisms of such treaties should be established. The treaties should allow for their suspension (in the event of provisional application) and their periodic review in order to ensure they contribute to sustainable development, the reduction of poverty and inequality and the fight against climate change;"

From a business perspective, in the wake of the 2015 Paris agreement, it is clear that private investments will be key to reach the relevant mitigation targets (Wei et al., 2016). Considering the enhanced role of the private sector as both a donor and a recipient of climate-friendly investments (Cosbey, 2016), the negotiation of FTAs

[66] Namur Declaration, December 5th 2016, retrievable from: http://declarationdenamur.eu, accessed December 2016.

provides future parties with an opportunity to be creative when discussing climate change-specific clauses, as they relate to trade in goods, services, as well as to investment flows. This creativity could mean, for instance, going beyond coordination of carbon pricing policies and endorsement of emission trading schemes, so as to embrace specific pledges into private sector development, public-private partnerships (PPP), training, funding for R&D, and measures to bind concrete pledges for financial and technical cooperation with the overall commercial objectives of the given FTA. These challenging considerations then motivate a specific focus on climate change-related norms in FTAs, as reflected in Part III.

3.3 SMEs

The UN 2030 Agenda and the SDGs highlight the importance to support SMEs and adopt measures to promote their economic growth and inclusion in the global market. SMEs are included in the SDG in goal 8, whose goal is to "Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all", under target 8.3, whose goal is to " Promote development-oriented policies that support productive activities, decent job creation, entrepreneurship, creativity and innovation, and encourage the formalization and growth of micro-, small- and medium-sized enterprises, including through access to financial services".

SMEs can be a powerful tool to achieve sustainable development objectives such as reduction of inequalities, poverty alleviation, and environmental sustainability. Furthermore, as they suffer from a number of market failures, policy intervention and cooperation can be used as palliative measures. As a result, FTAs increasingly contain SME-related provisions, which vary in terms of language, shape, scope, and place in the agreement. Furthermore in the current context, two areas are of particular importance and relevance to the development of SMEs: access to finance and e-commerce.

Provisions about SMEs are increasingly included in FTAs. This stems from the idea that supporting SMEs is a way to reduce income distribution inequalities (WTO, 2016b). They are of paramount importance in transition and developing countries as they account for around 90 per cent of all firms outside the agricultural sector (OECD, 2004b). It is worth noting, however, that in spite of a strong positive association between the development of SMEs and economic growth, some researchers find no substantial evidence that merely supporting SMEs helps alleviating poverty and reducing inequalities (Beck et al., 2005).

In addition, as discussed in depth in Part III, SMEs are key economic actors (providing up to 70 per cent of global employment), and leading players in e-commerce, emphasising their importance to reach the SDGs as the creation of an inclusive digital economy is deemed vital in order to achieve them (Zhao, 2016). Klapper et al. (2016) further emphasise the importance of financial inclusion to achieve the SDGs. However, some scholars point out the lack of tools to effectively link the SDGs to SMEs and their business processes (Verboven and Vanherck, 2016).

SMEs are also linked to climate change objectives discussed above. For instance, initiatives to promote trade in environmental goods can provide opportunities for SMEs in developing countries to enter global supply chains, as stated by Hamwey (2005): "Appropriately designed, trade liberalisation could allow some developing countries to significantly expand their production and export of such dynamic environmental goods and thus promote increased industrial diversification of their economies. For many others, trade liberalisation of environmentally preferable industrial and consumer goods may provide immediate gains needed to support rural economies and facilitate the integration of their small and medium sized enterprises into global supply chains.".

As discussed in Part III, an important channel through which FTAs have the potential to alleviate poverty is by increasing access to finance, which is a vehicle for long-term growth (King and Levine, 1993; Rousseau and Wachtel, 1998; Levine, Loayza and Beck, 2000). Indeed, as countries gain access to international financing through FTAs, firms and industries can increase their production to the point of becoming exporters (Beck, 2002; D'Onofrio and Rousseau, 2016). However, the distribution of the benefits of increased investments through trade openness appears to mirror the general pattern of inequalities. Indeed, since the 1980s, most of the benefits of trade seem to go to the richer economies (Dowrick and Golley, 2004), while only a small portion of productivity growth in developing economies can be attributed to increased investments. Under the same token, Freeman (2010) puts in that the increase in foreign direct investment (FDI) and portfolio flows lead to greater income inequalities both in advanced and emerging market economies.

Another way through which economic growth in emerging markets is created, therefore leading to possible poverty alleviation, is through the increased productivity that firms benefit from as a result of an FTA. The World Bank and other institutions provide aid and assistance to support small and medium-sized enterprises (SMEs) with a view to alleviate poverty (World Bank, 1994, 2002). The 2015 Small Business Act of the EU Commission also aims at protecting SMEs in its policy making. The 2016 SIA Handbook (EC, 2016) points out that SIAs should respect the commitment to protect SMEs and assess the impact of future trade legislation on them.

SMEs do not benefit from economies of scale as much as larger firms do (Ciuriak and Melin, 2014), and are also more affected by regulatory costs (EC, 2016): for example, each FTA contains different rules of origin (RoO) requirements, and complying with them gives access to the market opened by the FTA for exports. Depending on how liberal or restrictive RoO may be, smaller firms may have a more limited ability (in terms of costs and technical capacities) than larger firms to comply with their requirements, meaning that they are often excluded from international trade (Ciuriak, 2015). This arguably deprives SMEs of the benefit of "learning by exporting" (Ciuriak, 2013) derived from knowledge spillovers, notably from the use of technology tools to trade.

PART II: SD chapters and sustainability impact assessments: arrival or departure?

Introduction

As the number of FTAs concluded over the world increased, their scope and architecture too have considerably evolved. The provisions dedicated to environmental and social issues, in particular, have gained in terms of depth, breadth, and scope, to become full chapters, which not only address environmental concerns, as was initially the case, but also labour and social standards, as well as human rights. Still, issues of economic sustainability have remained vague or absent from the dedicated SD sections of modern FTAs; for this reason, after making the point as to the main normative trends of reflection of SD considerations in modern FTAs in force, Part II is dedicated to the review of literature that could shed light on the apparent omission of norms that are specific to economic sustainability concerns.

1. How did the practice of including SD chapters in FTAs evolve over time?

1.1 Evolution of the practice in the US

The first FTA concluded by the US was with Israël in 1985, and did not contain any environmental provisions. Although quite weak, the first environmental provisions were introduced in 1994 by the US, Mexico, and Canada, who signed the North American Free Trade Agreement (NAFTA), along with its North American Agreement on Environmental Cooperation, commonly called the NAFTA "side agreement" (Raustiala, 1995). NAFTA reproduces the environmental exceptions of the GATT and includes a list of MEAs whose provisions would supersede its own in the event of conflict (article 104). The NAFTA side agreement introduces a mechanism for citizens to ensure the enforcement of environmental laws by their governments. These points of non-derogation and public complaint mechanism were subsequently introduced in several FTAs, in the US and the EU alike.

"Joint statements on environmental cooperation" or other similar mechanisms which delimited specific areas of cooperation between parties on environmental issues through the development of work programmes, appeared progressively as substitutes to side agreements in FTAs. This is for example the case of the 2001 US-Jordan FTA (Rosen, 2004). This FTA also introduces a specific article on environmental governance (article 5), which extends the provisions of a previous side agreement by prohibiting parties from weakening existing environmental laws while also asking them to "strive" to strengthen these laws. This approach was further expanded by the 2004 FTAs with Chile (article 19), and with Singapore (article 18), which also include full environment chapters introducing new environmental provisions, for instance making references to the importance of MEAs for achieving domestic objectives (article 19.9 for Chile, and article 18.8 for Singapore).

Subsequent FTAs with Australia (2005), Morocco (2006), Dominican Republic-Central America (CAFTA) (2006), Bahrain (2006), and Oman (2009) replicate such provisions. The several innovating provisions included in these FTAs cover the establishment of environmental consultation processes for dispute resolution, the creation of Environmental Affairs Councils to oversee implementation, strengthened requirements for public participation, and the establishment of rosters of environmental experts to serve as panelists in legal proceedings.

A new momentum in FTA negotiations occurred when the Democrats regained control of the US Congress in 2006, leading to the renegotiation of FTAs with Colombia, South Korea, and Panama. These renegotiated FTAs go beyond general support of environmental protection, as they include concrete provisions that link FTA compliance to improve environmental management, as well as MEA enforcement (Jinnah and Morgera, 2013). They go as far as identifying a list of MEAs covered by the agreement (Peru: annex 18.2; Colombia: annex 18.2; Panama: annex 17.2; Korea: annex 20-a). Moreover, some of the agreements strengthen the link between the environmental provisions contained in the FTA, and its dispute settlement process (Peru: article 18.12; Colombia: article 18.12). The 2009 US-Peru Trade Promotion Agreement (TPA) introduces other linkages, with a specialized environment article on biodiversity (article 18.11) and an Annex on Forest Governance (annex 18.3.4). In addition, this TPA requires the development of new domestic environmental law and institutions, while also leveraging trade sanctions to enforce the implementation of covered MEAs.

Advocacy for the inclusion of labour standards in FTAs started in the US during the 1980s, following the increase of cheap foreign imports entering the US economy and the subsequent decrease in manufacturing activities in the country (Tsogas, 1999). This marked the discovery of the working conditions enabling such cheap exports to reach the US. These waves of advocacy then spread throughout the world during the 1990s. Part of the reasoning behind the wish to include labour standards in FTAs is that it will benefit unorganised workers in developed countries. One interesting argument is that the only way to safeguard the rights of workers in developed countries is to harmonize international governance and protect the rights of workers in less developed countries (Faux, 1990).

1.2 Evolution of the practice in the EU

The EU has followed a comparable pattern to the US regarding the inclusion of SD chapters in FTAs, moving from linking trade and the environment only through general exception clauses, to more extensive environmental provisions, and then fully-fledged SD chapters. The 2007 Treaty on the Functioning of the European Union (TFEU)[67] reiterates the obligation to integrate environmental concerns in all policies and activities, including trade policy (Article 11). Both articles 21 and 11 of the TFEU confirm the EU's approach to its external environmental agenda, whose purpose is to promote the environmental pillar of SD in developing countries, with the overarching

[67] Consolidated Version of the Treaty on the Functioning of the European Union, 2008 O.J. C 115/47, [TFEU].

goal to eradicate poverty, to help develop international measures to preserve and improve the quality of the environment and achieve sustainable management of global natural resources, and to foster the reinforcement of multilateral environmental cooperation and sound global environmental governance in the international system (Morgera, 2014).

The first FTA concluded by the EU with a reference to "sustainable development" is the 1993 EU-Hungary Europe Agreement. A further reference to "sustainable development" appears in Article 9 of the 2000 Cotonou Agreement, which broadly frames the concept and presents it as an objective of the EU external policy by stating in article 9(1) that:

> "…respect for all human rights and fundamental freedoms, including respect for fundamental social rights, democracy based on the rule of law and transparent and accountable governance are an integral part of sustainable development."

Early FTAs concluded in the 1990s make references to general environmental clauses by either identifying environmental issues for cooperation, or by mandating the incorporation of environmental concerns into other cooperation areas such as fisheries, transport, and agriculture (Jinnah and Morgera, 2013). They were general exception clauses that allowed parties to pursue environmental protection objectives through trade-affecting measures (e.g. EU-Chile AA, Article 91.1; EU-South Africa TDCA, Article 27). Nonetheless, regarding the obligations created by the inclusion of SD chapters in EU FTAs, Bartels (2012) points out that no agreement considers the possibility that SD could be "violated", therefore not creating any concrete obligation.

Jinnah and Morgera (2013) make a further distinction between the agreements concluded by the EU before and after its 2006 communication "Global Europe: Competing in the World", which streamlined a new strategy launching negotiations of "competitivity-driven" FTAs, that would include *inter alia* "cooperative provisions on environmental protection".[68]

Environmental provisions in EU FTAs concluded prior to 2006 vary in legal force, environmental standards, priority, cooperation, and areas covered for environmental integration. Jinnah and Morgera (2013) observe that candidate and potential candidate countries to enter the EU were parties to FTAs with stronger environmental provisions, as they needed to approximate their legal standards to those of the EU. Stronger environmental provisions are also found in the 2000 Cotonou Agreement concluded with African and ACP countries, which can be explained by their reliance on EU aid. The Cotonou Agreement was at the time the only instance where explicit linkages with MEAs were included. It also stressed the necessity to promote general poverty alleviation, SD, and human rights objectives (Flint, 2008).

Furthermore, agreements concluded with neighbouring countries without any immediate prospects of EU membership (such as the Euro-Mediterranean Association)

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[68] European Commission. (2006), *Communication from the Commission to the Council, the European Parliament, the European Economic and Social Committee and the Committee of the Regions: Global Europe: Competing in the world : A contribution to the EU's Growth and Jobs Strategy*, Luxembourg: EC.

put a more varied emphasis on environmental protection and a hybrid form of mandatory and best endeavour environmental clauses. This is for example the case of the 2005 agreement with Algeria, whose article 52.1 states that:

> "The Parties shall encourage cooperation in preventing deterioration of the environment, controlling pollution and ensuring the rational use of natural resources, with a view to ensuring sustainable development and guaranteeing the quality of the environment and the protection of public health."

A more generic approach to environmental protection can be observed in agreements concluded with distant emerging economies. For example, article 28 of the EU-Chile Agreement states that:

> "The aim of cooperation shall be to encourage conservation and improvement of the environment, prevention of contamination and degradation of natural resources and ecosystems, and rational use of the latter in the interests of sustainable development".

Generally, no institution was created to monitor or implement these provisions, neither was a specific dispute resolution mechanism created. Instead, open-ended clauses were adopted on a number of environmental issues, purportedly favouring policy dialogue as a way to reassess environmental cooperation during the implementation stage.

After the Global Europe communication, whole chapters were devoted to trade and SD, with a focus on the domestic implementation of MEAs. The first of such “new generation” FTAs was the FTA concluded with South Korea in 2010, which is considered as a "deep FTA" (Das, 2012), meaning that its provisions go way beyond classic trade liberalization areas.

This approach, which would set a standard for subsequent FTAs, is more coherent and includes more explicit linkages with MEAs, with very comprehensive chapters wholly devoted to trade and SD. Moreover, multilateral environmental standards started to be used to benchmark domestic environmental performance, and an increased emphasis was put on questions related to the implementation and enforcement of MEAs, either through open ended references, or through a closed list of MEAs. For example, most post Global Europe FTAs contain a whole provision on climate change (see e.g. article 275 of the 2008 EU-COPE FTA), or provide relatively detailed language on cooperation on trade and SD issues.

Remarkably, these new FTAs showcase important institutional innovations in their SD chapters. This comprises the establishment of specialised committees to oversee the implementation of such chapters, special procedures for dispute settlement, and a more systematic public participation mechanism (to some extent). Consultation is favoured over litigation if a dispute should occur, in line with the EU's cooperative approach, which contrasts with the US' adversarial approach which, unlike the EU, includes the possibility of punitive sanctions as a response to non-compliance. Yet, as reported by

Morin and Beaumier (2016) in relation to the TPP negotiation, the two approaches are converging.

On the other hand, the EU inclusion of labour rights and other social protection standards in FTAs is relatively more recent, starting in the 1990s. An evolutionary pattern of norm setting can be observed also in this case, with commitments and provisions increasing both in depth and breadth. Two stages can be distinguished regarding the inclusion of labour and social standards in the EU's FTAs (Bilal and Ramdoo, 2016). The first one begins with the agreements concluded within the Euro-Mediterranean Free Trade Area (EMFTA) in the 1990s, and ends with the agreement with Chile in 2003, which showed a limited but gradually increasing interest in labour rights and social standards. The beginning of the second period is marked by the 2008 CARIFORUM Agreement, which constituted a turning point regarding the level of ambition in linking trade with social protection in EU practice. Indeed, this is the first agreement that adds conditionality to promotional aspects that were present in previous agreements. In terms of labour standards, this agreement is one of the most far-reaching agreements concluded by the EU (Van den Putte, 2016) and paves the road for FTAs containing significantly deeper and wider labour and social provisions.

The EU's emphasis on the importance of human rights in its economic relationships with other countries, on the other hand, dates back to 1962, with its reluctance to let Spain become part of the EU as it was under a dictatorial regime (Powell, 2015; Bartels, 2015). The EU then first introduced human rights clauses as a response to the Ugandan genocide in the 1970s following the lack of legal mechanism allowing for a suspension of obligation towards Uganda in the 1975 Lomé Convention (Bartels, 2014). The EU, thereafter, included human rights clauses in the Lomé Convention in 1989, and in subsequent agreements, such as its successor, the Cotonou Agreement, so as to enable the suspension or termination of the agreement in case of human rights violations by either party. The 2000 Cotonou agreement with ACP countries provides the possibility to take punitive measures should a country fail to abide by its human rights and good governance commitments (Mackie and Zinke, 2005; Bagoyoko and Gibert, 2009; Bossuyt et al., 2011).

Human rights clauses were then progressively and increasingly included in the EU external trade policy regime, notably through its generalized system of preferences (GSP) and its FTAs (Bartels, 2015; Beke et al., 2014). In practice, it has been observed that in the case of breach of human rights, the EU chooses to suspend its development cooperation rather than its trade policy as a response (Vanheukelhom, 2012). Today, the EU's commitment to human rights along with SD is also shown in its 2015 "Trade for All" Strategy. Moreover, its commitment to protect human rights in its trade policy and in FTAs is highlighted in Article 21 of the TEU and in article 207 of the TFEU.

2. How do SD chapters vary in terms of structure and coverage?

SD chapters included in FTAs have not only increased in number and depth, they have also considerably evolved in terms of structure and coverage. While the approaches of

the EU and the US differ in that one is cooperative whereas the other is adversarial, and while this may yield different results, the content and evolution of their SD chapters tend to converge, and so do the SD chapters concluded between emerging market economies. With an increased focus on labour rights and social standards, as well as on broader human rights, the negotiation of large FTAs, such as the Transatlantic Trade and Investment Partnership (TTIP) between the EU and the US, raises questions of scope and legal architecture of SD chapters.

In their comparison of EU and US approaches to environmental issues in FTAs, Jinnah and Morgera (2013) highlight that one key difference is the breadth and depth of the engagement with MEAs. They argue that the breadth is larger in the EU, especially in the post-Global Europe period, as a larger number of MEAs are included in the lists of covered agreements in FTAs. Nevertheless, the specifics of implementation are left up to the trading partners while the EU offers capacity building support. In comparison, the depth of American environmental provisions has drastically increased in recent years by creating much deeper links between MEAs and domestic environmental policy abroad. For example, eight pages of specific provisions that Peru must implement are outlined in the US-Peru TPA's Forest Annex, which are subject to the FTA's dispute settlement and compliance procedures. By contrast, EU FTAs include intricate provisions about climate change, as well as articles on the precautionary approach, which have not been found in American FTAs. Still, provisions that call for foreign investors to behave in an environmentally responsible way are included in American FTAs but not in the EU FTAs coded by Jinnah and Morgera (2013).

Some American FTAs also include comparatively deeper public participation mechanisms complemented by transparency requirements for the public to have access to the decision-making processes of the FTA, which can also be found in some EU FTAs. Citizen enforcement provisions for environmental issues as well as social and labour issues are also found in US FTAs, as they were first introduced by the NAFTA side agreement regarding the environment, and are seen by some as a "vital tool" to be included in FTAs (Kirby, 2009). However, they appear to be relatively weak regarding their enforcement due to the administrative complexity and length one would need to go through to use the only available remedy of obtaining the publication of a factual record (Jinnah and Morgera, 2013; Vogt, 2015). Such citizen enforcement provisions can be found in American FTAs as of 2006, with their incorporation into CAFTA, and subsequently into FTAs with Peru, Panama, and Colombia. American FTAs also frequently include provisions that require the counterpart to establish a mechanism, whether they are judicial, quasi-judicial, or administrative, aiming at sanctioning environmental law violations at the national level. The reach of this provision is particularly deep when considering public rights and corporations that violate domestic environmental laws (Jinnah and Morgera, 2013). However, the policy response to ensure compliance with such laws is often not sufficient due to the complexity of monitoring and assessment processes (Vogt, 2015).

As introduced above, Jinnah and Morgera (2013) draw attention to the fact that the underlying difference between the EU and US approaches lies, respectively, on cooperation vs. confrontation. This is coherent with the Anuradha's (2011) overview on

PTAs and the environment, 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. The US confrontational approach is embodied in SD provisions that are explicitly linked to sanction-based dispute settlement mechanisms. However, these scholars also argue that they are rather unlikely to occur in practice, as they are subject to the previous exhaustion of several consultative avenues.

Berger, Brandi, and Bruhn (2016) compared the EU "environmentally friendly" approach in FTAs with the emerging market's approach, which has so far been rather neglected in the literature. They found that the FTAs concluded by emerging market economies follow the same pattern as the EU approach to environmental sustainability. Their research shows that 75 per cent of the agreements signed by emerging markets contain provisions in the preamble that emphasize their commitment to environmental protection and sustainable development. While these provisions might not necessarily create enforceable legal obligations, their impact lies in the potential interpretation of the agreement. Many south-south FTAs also include references to MEAs. In addition, the findings show that the FTAs tend to be more environmentally friendly when signed with OECD countries. The data shows this to be true for all emerging markets except Mexico. The same dataset indicates that Brazil has only signed PTAs with non-OECD countries so far and is therefore not included in the previous observations. In terms of approaches, the emerging markets approach tends to converge towards that of the EU and the US, which are considered as pioneers in the area. This leads to the authors' conclusion that OECD countries are still largely those who set the rules that the other countries will follow in the context of trade linkages with the environment and SD.

The leadership of the US and the EU is increasingly being challenged by the emergence of new trading powers, which has been noted to have been reflected in the EU agenda, in particular where the latter seeks to conclude agreements that influence the making of domestic rules (Young and Peterson, 2006).

Bilal and Ramdoo (2016) compare the coverage of social standards and labour rights in the EU Economic Partnership Agreements (EPAs). They conclude that the most extensive in terms of coverage (goods, services, and investment), obligations, and cooperation is the EU-Caribbean agreement (CARIFORUM). It contrasts with the EU agreements with the East African Community (EAC) and with the Economic Community of West African States (ECOWAS). Indeed, instead of making any reference to international standards, these two FTAs handle labour rights and social standards under the global notion of "sustainable development", therefore omitting implementation mechanisms in this regard. In terms of language and coverage, Bilal and Ramdoo (2016) also note that the CARIFORUM agreement is deeper, with explicit references to the commitment to international labour conventions:

> "*The Parties reaffirm their commitment to the internationally recognised core labour standards, as defined by the relevant ILO Conventions*" (Art.191.1), as well as "*to the 2006 Ministerial declaration of the UN Economic and Social Council on Full Employment and Decent Work* (Art. 191.2).

The CARIFORUM agreement covers labour issues such as industrial relations, equal treatment of men and women, unemployment, vocational training, and work safety. It also aims at preventing abuse by stating that:

> "*labour standards should never be invoked or otherwise used for protectionist trade purposes and … the comparative advantage of any Party should not be questioned*" (article 286).

Bartels (2012) suggests that in some cases, as with the CARIFORUM agreement, such a clause will only concern labour standards, while in other agreements, such as the Korea agreement, a similar clause also exists for environmental standards. Other EU FTAs that are not EPAs, such as the 2000 EU-Israël agreement, go even further and include chapters on labour standards encompassing disabled people.

As labour standards are considered human rights (the economic and social side of human rights), they are also mixed up in other "essential elements" clauses. These clauses are core human rights clauses embracing also the civil and political side of human rights. An example can be found, again, in the EU CARIFORUM agreement, which states, in article 1, that:

> "*Respect for democratic principles and fundamental human rights, as laid down in the Universal Declaration of Human Rights, and for the principle of the rule of law, underpins the internal and international policies of both Parties and constitutes an essential element of this Agreement*".

Some EU FTAs concluded prior to the 2009 Lisbon Treaty, which explicitly requires the inclusion of "essential elements", as well as of "non-execution" clauses (blocking the effects of the treaty in case of material breach by either party), do not contain such clauses as they have not been renegotiated since that Treaty entered into force. This is for example the case of the cooperation agreements with Brazil (1992), Mongolia (1992), India (1993), and Sri lanka (1993) (Bilal and Ramdoo, 2016).

More recent human rights clauses now include an implementation clause, requiring parties to take necessary measures to ensure that they fulfil the obligations created by the agreement (for example see Article 355 of the EU-CARIFORUM agreement). While no specific institution has been created by FTAs containing human rights clauses, some agreements foresee the establishment of subcommittees on human rights and democratic principles on an *ad-hoc* basis, as is the case with the EU-Morocco Association Agreement (Bartels, 2015).

In the realm of the so-called mega-regionals, the negotiation of the TTIP between the US and the EU is at the core of SD- and human rights-related debates, thus deserving some attention. Doubts are being expressed by civil society representatives as to the ability of governments to implement policies in line with the objectives of environment, health, and consumer protection. The EU Parliament has suggested the exclusion of public health care services from the negotiations due to the different approaches of the EU and

the US (Delimatsis, 2016). The main counter-argument raised by TTIP supporters is that such an agreement would allow the US and the EU to convince developing countries and emerging economies to raise their respective standards in these areas. If the TTIP has the power of setting the bar for enhanced SD standards, the question remains on what kind of standards they will be (Frey, 2015; Burger and Matthey, 2015).

3. Have SD chapters been effective in advancing SD priorities in signatory countries?

In theory, SD chapters constitute a powerful tool to promote SD goals and achieve more robust results, as they link areas in which international law has limited enforcement power to a higher-stakes area: trade. In addition, trade can be a powerful engine for economic growth and poverty alleviation, in line with the SDGs. In practice however, SD chapters often seem insufficient to counter the negative impacts of an FTA, which in spite of them, may wind up being detrimental to various SD policy goals. Moreover, as discussed below, issues of implementation and enforcement arise when assessing the effectiveness of such chapters.

While the introduction of SD chapters and FTAs can be perceived as a commitment to a more sustainable global trade agenda, various stakeholders question their implementation, added value, and impact on the partner country with regard to the three dimensions of SD (see e.g. Cosbey, 2014). In addition, a wide array of scholars, NGOs and even some institutions have been advocating for more stringent rules on trade and SD, especially regarding the monitoring and enforcement of relevant chapters and provisions.

Voicing the opinion of stakeholders consulted on both sides of the EU-Colombia agreement, Brecht and Brando (2016) point out in their analysis of labour rights that the language used by the EU in the agreement is too broad to be meaningful or credible. Vogt (2015) also highlights the absence of monitoring and enforcement power, often due to limited capacities in developing countries, in the case of labour and social rights. The lack of adequate monitoring and enforcement framework in the formulation of labour provisions can therefore give way to interpretation and/or bogus reporting.

Focusing on the impact of environmental provisions contained in North-South FTAs, Bastiaens and Postnikov (2014) argue that they will be effective in implementing positive changes in partner countries, but that the timing and effect will differ significantly depending on various elements. Their main argument takes its roots in the different approaches of the US and the EU mentioned earlier. According to their study, the American threat of sanctions will encourage environmental reform to occur during the negotiation process, whereas the EU's cooperative approach will induce change during the implementation of the agreement, thanks to enhanced dialogue between the parties.

Indeed, Kim (2012) demonstrates the effectiveness of labour provisions in US preferential trade agreements, which is justified by the fear of sanctions encouraging trading partners to upgrade their standards prior to the signature of the agreement so

as to avoid sanctions (Postnikov and Bastiaens, 2014). Vogt (2015) makes the same observation about the pre-ratification pressure that leads to legislative reforms in countries signing an FTA with the US, and notes that the pressure exerted by EU FTAs is much less effective. The example of Peru can be used to show this type of *ex ante* improvement in the case of environmental policy, as Peru established a Ministry of Environment before their FTA with the US was to be ratified by Congress. This has been praised by the Peruvian President, at the time Alan Garcìa, who declared that "*the free trade agreement has brought a fundamental call to attention, that we owe to our Democrat friends in the US Congress, to strengthen labor rights and the defense of the environment*."[69]

However, while the FTA signed between the US and Peru might have brought positive environmental initiatives, studies about poor protection of labour rights as a result of trade liberalisation have also been published. Indeed, in the case of the EU-Peru trade agreement, the results of the study of labour rights by Orbie and Van den Putte (2016) concludes that Peru has failed to comply in a number of areas, notably in upholding ILO core labour standards of non-lowering domestic labour law and promoting civil society dialogue.

On the other hand, European FTAs demonstrate a stronger chance of bringing *ex-post* positive results to advance sustainable development priorities in signatory countries. As discussed, in the case of environmental and sustainable development issues, they rely on consultative and cooperative mechanisms, such as dialogue with the civil society, to gather governmental officials and civil society members from both sides to work collectively on the effective implementation of FTAs and their SD chapters. The EU aims for this approach to be inclusive and to represent all key stakeholders. Postnikov and Bastiaens (2014) find these dialogues to be favourable to the implementation of labour standards as they enable the creation of a positive learning environment. This should create an institutional channel for communication among stakeholders to encourage sharing and learning, including in regulatory frameworks, as argued by various scholars (Holzinger et al., 2008; Rudra, 2011). However, Brecht and Brando's (2016) findings on the effectiveness of the EU FTA with Colombia to enhance labour rights are quite pessimistic and deeply question the agreement's credibility to bring about improvements to labour rights. This adds to Orbie and Van Den Putte's (2016) conclusions about the EU FTA with Peru, and to Vogt's (2015) general observations about non-compliance with labour laws introduced pursuant to a new FTA.

These negative results find one possible explanation in the argument that the success of SD provisions strongly depends on the strength of civil society in the signatory country (Bastiaens and Postnikov, 2014). In line with previous results, it is expected that EU FTAs will only be effective in countries that already have a strong and well-organised civil society, which therefore shows a strong potential for learning. In the absence of coercion and negative consequences in the future, governments might not necessarily implement changes, especially as they might also lack the administrative capacity required for domestic reforms. This is also illustrated by the implementation of the EU-

[69] Peruvian Times, *Peru President Proposes Creation of Environment Ministry*. December 21, 2007.

Chile 2002 Agreement, which did not lead to significant improvements in terms of environmental protection and promotion in Chile. The Chilean Ministry of Environment, created only in 2010 largely due to pressure from the OECD, appears to have limited administrative and enforcement capacities (Government Accountability Office, 2009).

Studying labour rights included in FTAs, on the other hand, Vogt (2015) points out that in most countries that have signed FTAs with the US or the EU, the subsequent legislative reforms have not been successfully implemented so as to substantially improve worker's conditions. Given the high number of FTAs and other trade programs in which countries usually take part, it is extremely difficult and costly for a country to effectively monitor the enforcement of labour commitments. Furthermore, the lack of sanctions does not encourage enterprises to comply with the legislation or with the agreement, meaning that violation on their part will likely continue. If workers were to act to see their rights improved, they are likely to be discouraged by the complexity, heaviness, and length of the process, which will yield uncertain results in an uncertain amount of time. Vogt therefore concludes that "agreements will only be as useful as politicians desire them to be".

Scholars have also voiced concerns that mega-trading blocs will potentially exclude capacity-constrained countries from benefitting from trade gains (Keane and Razzaque, 2016). Indeed, particularly when their coverage extends to investment-related issues, it has been argued that these agreements can cause investment diversions and hamper the development of excluded countries (Kher, 2015). As rules and provisions contained in new frameworks gain in breadth and complexity, countries lacking adequate capacity could witness obstacles in their compliance (Palit, 2014).

Other commentators stress that mega-regional trade agreements should be negotiated while keeping in mind their important role in the trade of natural resources, so that they effectively result in transformative development and inclusive growth, while providing fair market opportunities to countries relying on such resources (Bellman, 2016). Their impact on the environment through the increased use and therefore depletion of natural resources will undoubtedly shape the development capacities of countries relying on extractive industries as a source of income. Bilal and Ramdoo (2016) conclude that while necessary, FTAs are not sufficient to address and foster sustainable development in developing countries. Sustainable development should be approached and achieved through policy coherence among all parties (Holzer and Cottier, 2015; ECDPM 2016; OECD, 2015, Vogt, 2015).

In order to evaluate the potential impacts of FTAs, many negotiating countries now carry out SIAs, that aim to paint a picture as complete and accurate as possible of how the FTA will affect each party in each of the classical SD pillars, and sometimes also in terms of broader human rights effects. Their results aim at informing the negotiators of what should be included in the FTA and how, in order to minimize the negative impacts of trade liberalization and to ensure that the FTA contributes to the promotion of SD objectives. SIAs are thus inextricably linked with modern trade negotiations, and deserve the utmost attention in the present analysis on mainstreaming SD in FTAs. As a consequence, the following subsections take a closer look at trade SIA practice, with

emphasis on the implications for the economic sustainability pillar of SD, as reflected in, or omitted from, FTAs.

4. What are trade sustainability impact assessments?

The European Commission (EC) has carried out trade SIAs since 1999. These assessments take place during the negotiation of trade agreements, and are meant to feed into the work of the negotiators (EC, 2006). In the literature, there has been an exponential growth in the publication of papers containing the phrase "sustainability assessment" over the last decade, with around 150 such papers published in the year 2011 alone (Bond et al., 2012).

The US introduced environmental review or environmental impact assessments (EIAs) in 1999 (Executive Order 13141),[70] and Canada did the same through a cabinet directive in 2010. Their role is to identify the impact of a trade agreement on the environment and on man's health, in order to convey this information to trade negotiators (Munn, 1979). Glasson, Therivel, and Chadwick (2013) provide useful and extensive information about EIAs. Their primary focus is on domestic environmental impacts, whereas European SIAs are much more comprehensive. According to Reynaud (2012), EU SIAs benefit largely from a more rigorous methodology that enhances their capacity to identify impacts and opportunities, enabling them to have a greater influence on trade negotiations and their outcomes. In addition, the EU identifies environmental, social, and economic impacts of FTAs not only domestically but also in the negotiating partner.

SIAs can be defined as a means of identifying the likelihood and scale of the economic, social, and environmental impacts of a policy change (George and Kirkpatrick, 2003). Their goal is to provide the most complete information possible to policy-makers. They constitute "a process that directs decision-making towards sustainability" (Bond and Morrison-Saunders 2011, Bond et al., 2012; derived from Hacking and Guthrie 2008). For example, environmental integration into FTAs has been facilitated by the conduct of SIAs during negotiations since the year 2000, as they helped the identification of trade-offs between the trade and environmental issues in the EU and its partner countries (Jinnah and Morgera, 2013). They are wide-ranging consultations that involve relevant stakeholders in partner countries and in the EU, complementing the initial impact assessment carried out by the EC prior to the start of the trade negotiations. The EC's second edition of its Handbook for Trade Sustainability Impact Assessment (2016) indicates that since 1999, 22 SIAs have been carried out in support of major EU trade negotiations, and that another six were on-going as of March 2016.

The procedure, tools, and content of SIAs is fully described in the EU Commission's handbooks (EC, 2006; EC, 2016). SIAs are carried out by independent consultants, selected through a competitive tendering procedure, so as to ensure their impartiality. The main stakeholders involved in the SIA process, who will be consulted for their

[70] Executive Order 13141—Environmental Review of Trade Agreements, November 16, 1999, available at: < http://www.presidency.ucsb.edu/ws/?pid=56947>, accessed June 2015.

views, experience, and expertise, are NGOs, businesses, social partners, academia, national administrations, and stakeholders in developing countries when relevant. Indeed, SIAs aim at being as comprehensive as possible when gathering information. In addition, the EU Commission provides relevant information and useful guidance throughout the whole process of conducting the SIA. In order to be as extensive, inclusive, and evidence-based as possible, the EC's general approach to SIAs includes a number of tools, such as a causal chain analysis and a baseline scenario to assess the effects of a trade policy and the economic, social, human rights, and environmental impacts of a trade agreement. Then quantitative and qualitative analyses are conducted to assess the impacts in both the EU and in relevant partner countries. Empirical material is gathered through case studies, while stakeholder inputs complement the whole SIA. These elements are meant to feed into the study of the different sectors covered: the three pillars of sustainable development and human rights.

Trade SIAs, therefore, provide information on the FTA's economic, social, environmental, and human rights impacts. In addition, they provide sectoral analyses of the prospective impacts of an FTA. The combination of these studies allows for the consultant to make various recommendations.

The economic analysis uses economic tools to provide aggregated effects and a general overview of the sectors impacted by the agreement under negotiation in the EU, as well as in the partner country and other relevant countries, especially in least-developed countries (LDCs). Economic models are used to study the consequences of policy changes on variables such as output, trade flows, prices, fiscal revenues, income, and welfare. The impacts on competitiveness and on SMEs are also assessed.

The social analysis aims at assessing the social impacts of the negotiated trade agreement. It focuses on the segments of the society that are expected to be affected the most in terms of employment (job creation or losses, skill levels) and working conditions (wage, work standards, health and safety issues, social dialogue). Particular attention is paid to distributional impacts of the trade policy and its effects on poverty, income inequalities, disposable income, vulnerable consumer groups. This analysis also considers corporate social responsibility (CSR) and the impact on women and vulnerable groups. Benchmarks and indicators are given, for the most part, by the ILO and other UN bodies.

The environmental analysis sheds light on the considerable impacts that trade can have on the environment. This includes climate change, greenhouse gas emissions, air quality, use of energy, water equality and resources, land use, soil quality, waste and waste management, biodiversity, ecosystem services, and protected areas.

Finally, the human rights analysis focuses on the potential impacts of the trade agreement under negotiation on human rights by using extensive stakeholder consultation, quantitative and qualitative analyses, economic modelling, and case studies. This does not constitute a judgment on the current human rights situation in a given country, but is aimed at pointing out certain elements to be considered by the negotiators.

Key economic sectors are identified during the preliminary phases to be the subject of a further detailed analysis to assess the economic, social, environmental and human rights impacts of the FTA. Finally, SIAs provide conclusions and recommendations to guide the conduct of trade negotiations.

4.1 How did the trade SIAs practice evolve over time?

SIAs were initially created by the US and Canadian governments for NAFTA. Their evolution follows that of SD chapters in FTAs described earlier, in that SIAs also progressively shifted from a sole focus on the environment through strategic environmental assessments (SEAs), to a more encompassing stance on all areas of SD.

Unlike current SIAs, those conducted at the time were primarily focused on environmental impacts and were mostly concerned with their own countries (Government of Canada 1992, USTR 1993). In November 1999, US President Bill Clinton issued Executive Order 12141 requiring the United States Trade Representative (USTR) to conduct an environmental review of all American Trade Agreements. A set of guidelines can be found in the 2002 Trade Act passed by Congress. Their purpose is to encourage FTA negotiating partners to establish consultative processes to reach more ambitious environmental protection goals and to "promote consideration of MEAs regarding the consistency of any such agreement that includes trade measures with existing environmental exceptions under article XX of the 1994 GATT" (Trade Act, Section 2102).

On the Canadian side, a directive issued in 1999 sets out requirements for strategic environmental assessments of government proposals (Government of Canada, 1999). This was taken as a foundation for the development of a specific framework by the Department of Foreign Affairs and International Trade to conduct SIAs of trade negotiations (DFAIT, 2001; Sadler and Dalal-Clayton, 2012).

The focus of impact assessments of trade agreements in North America was on gaining a better understanding of potential environmental impacts in their own country, so that negotiators could couple them with economic and social considerations on which trade negotiations have traditionally been based. Their increased understanding of environmental issues would enable negotiators to make more reliable trade-offs when the effects foreseen in the impact assessment were not favourable enough to national economic, social, and environmental concerns (George and Kirkpatrick, 2003).

The methodology for SIAs of trade agreements was developed and then refined by experts from the University of Manchester in 1999 (Kirkpatrick et al., 1999; Lee and Kirkpatrick, 2001; Kirkpatrick and Lee, 2002; Kirkpatrick and George, 2006), who capitalised on US and Canadian experiences and approaches to trade SIAs (Government of Canada, 1992; USTR, 1993; OECD, 1994; CEC, 1999). One of the earliest assessments concerned the Seattle agenda, in preparation for the WTO Ministerial Meeting in November 1999 (Kirkpatrick and Lee, 1999).

As the practice spread, much criticism had also been voiced around SIAs (WWF, 2002; SUSTRA, 2003). Learning from findings from several studies, the methodology was subsequently further developed (Kirkpatrick and Lee, 2002; Kirkpatrick and Mosedale, 2002; George et al., 2003; Kirkpatrick and George, 2006). The European Commission then issued its first handbook for trade SIAs in 2006, and released a second edition in 2016.

The European Commission's approach goes beyond the impact assessment of trade agreements with regard to the environment, as it encompasses impacts in all three spheres of sustainable development (environmental, social, and economic). It goes even further as it does not limit the assessment to the impacts incurred within the EU, but instead looks at all aspects of SD for all trading partners. While the general principles remain relatively unchanged between the first and the second edition of the Handbook, time and experience has enabled the improvement of methods and analyses.

One of the most notable innovations is that since 2012, EU SIAs systematically include an assessment of the potential human rights impacts of the trade agreement under negotiation. This probably reflects the EU intention to be consistent with Article 21 of the TEU, as well as with the 2030 Agenda and its SDGs. Furthermore, the 2016 EU Handbook does not limit its guidance to the *ex-ante* evaluation of the impacts of trade; rather, once the negotiations are concluded but the agreement is not yet signed, the Commission, the European Parliament, and the Council, prepare an economic analysis of the agreement to assess the impact of the reduction of trade barriers. Once the trade agreement is signed, an *ex-post* evaluation is conducted after a sufficient amount of time to assess the economic, social, human rights and environmental impacts through a robust body of data and evidence.

4.2 What are SIAs' advantages and shortfalls?

SIAs embody the EU's cooperative and consultative approach to trade policy, and are a useful tool to provide an evidence-based assessment of future impacts of an FTA on a whole economy. However, studies show that the conclusions drawn by SIAs largely depend on the tools used to conduct them, which are subject to a number of methodological issues.

Advantages of trade SIAs

The 2015 EU "Trade for All" communication mentions SIAs as a key instrument in the formulation of sound, transparent, and evidence-based trade policies. SIAs are instrumental in their contribution to the fulfillment of the Commission's commitments to ensure transparent trade negotiations and a better regulation, as embodied in the "Better Regulation" agenda adopted in May 2015, which provides guidance as well as a toolbox aimed at enhancing transparency and scrutiny to improve the EU's law-making.[71]

[71] See e.g. Commission Staff Working Paper, *Better Regulation Guidelines*, COMM(2015) 215 Final, available at <http://ec.europa.eu/smart-regulation/guidelines/docs/swd_br_guidelines_en.pdf>, accessed July 2016.

SIAs embody the EU's cooperative approach mentioned earlier with regard to trade negotiations. They are designed to allow all stakeholders to share their views with negotiators on the perceived environmental, social, economic, and human rights consequences of current trade negotiations. SIAs then support the view that trade policies should be designed in a way that reflects their role as a tool to achieve sustainable global development, meaning that they are a means towards an end, not an end in itself (George and Kirkpatrick, 2003).

One of the main advantages of SIAs is that they provide evidence-based recommendations on measures to be put in place in an agreement, so as to maximise likely benefits or mitigate possible negative impacts (EC, 2016). Moreover, SIAs enable to strengthen the ongoing debate on the complex linkages between trade and SD, within the negotiating parties but also in many other fora (George and Kirkpatrick, 2003).

Gibson (2006) argues that, if designed as an integrative process through which SIAs become a framework for better decision-making, they have the potential to impact sustainability in a lasting and significant way. In fact, much has been written about how to make sustainability assessments integrative (Eggenberger and Partidario, 2000; Scrace and Sheate, 2002; Dovers 2005; Gibson 2006). Accordingly, SIAs can increase connections between global and local concerns, encourage connections between strategic and project level assessments, improve links between assessment methodologies, let disadvantaged voices be heard, combine more efficiently formal and traditional sources of data and insight, and provide improved combinations of anticipation and adaptation.

However, as discussed below, the relevance and usefulness of SIAs is also limited by a number of structural and technical drawbacks.

Shortfalls of trade SIAs

The task of conducting SIAs at a global level and across the various dimensions of SD entails difficulties and challenges when put in practice. George and Kirkpatrick (2003) have detailed the difficulties encountered in several areas of the SIA process.

First, the consultation process, which is inevitably carried out within time and resource restrictions, shows several limitations: the breadth of consultation and the depth of stakeholder engagement are seldom optimal and face many human and technical obstacles.

Second, one of the key challenges is dealing with uncertainty in the analytical assessment of potential impacts; uncertainties in this type of assessment are understandably and inevitably high (Partidario 2000). In many areas and cases, SIAs cannot make firm predictions on potential impacts.

Third, the predictions of an SIA are often dependent on governments' response at the national level, which can vary considerably depending on the regulatory capacity of said government, which is often quite weak in the case of developing countries.

Fourth, the type of case studies and modelling used in SIAs can fail to identify certain causal links, while overestimating or underestimating the importance of others.

Fifth, a major challenge for the SIA process and trade negotiations alike is to achieve a thorough understanding of growth and development processes, the relationship between economic, social, and environmental factors, and the relevant influence of trade rules and policies.

Finally, as each precise dimension of SIAs is to be considered with respect to every other dimension, cumulating the effects of every SIA results is a real challenge.

George and Kirpatrick (2006), who are among the developers of the initial methodology for SIAs of trade agreements, have refined and developed it while pointing out several methodological issues. These include, for example, the choice of appropriate indicators, which has been at the core of many debates and criticism throughout the years. Furthermore, economic models often fail to reflect the dynamic nature of an economy, therefore neglecting effects that may occur following the impact of a change. This includes for example a potential rise in unemployment as production moves among sectors, positive and negative influences on wage rates for different types of work, differential gender effects, internal and external migration, rate changes, and a loss of government revenues as a result of tariff reductions. All these potentially have substantial social and environmental impacts, which might be further emphasised should governments and their domestic policies provide an inadequate response. What is more, trade liberalisation significantly impacts economic, social, and environmental change in the long term, thus contributing to increase the level of uncertainty of SIA predictions.

4.3 On what grounds do scholars criticize or praise SIAs?

Even though the usefulness of European trade SIAs in comparison with their American and Canadian counterparts is acknowledged (Reynaud, 2012), many scholars express their criticism towards SIAs for a number of reasons. While some criticise the foundations of SIAs, which contain the three pillars of sustainable development, others argue that the confidentiality of negotiations, which is maintained in order to preserve the negotiating power of each, limits the usefulness of SIAs and hampers their inclusion in the process. In addition, much has been written about the use of Computable General Equilibrium (CGE) Models in SIAs. This leads to questions and studies on whether SIAs can help negotiating partners to mitigate the impacts of FTAs on poverty and inequalities.

As mentioned earlier, integration is one of the main challenges facing SIAs. Gibson (2006) argues that while the three pillars approach to sustainability (economic, social, and environmental pillars) is well-suited to the exercise of assessing their application, as

they are in line with the training of experts in each field and with the usual division in place at the official level, they are in fact rather ill-suited to provide an integrated assessment of sustainability. The interdependency of each dimension of sustainability is likely to constitute an obstacle to their integration due to the different and separate training of experts in each area.

George (2010) makes the same point, arguing that the difficulties encountered to achieve sustainable development reflect the problems of this approach, which by separating the economic from the social pillar masks the linkages between them, therefore hiding the fact that the "purpose of one is to achieve the other". In addition, data in each category is usually collected separately and by different authorities. The problem is that issues of sustainability do not usually fit in only one of the pillars. They usually also do not quite fit with the concerns voiced by citizens, who are the intended beneficiaries of strategic and project level undertakings. Nevertheless, in spite of these inadequacies, some SIA advocates have argued in favour of approaches that maintain the three pillars separate, arguing for integration as a trade-off decision that would be reserved for the approval (or rejection) decision (Jenkins et al., 2003). The justification for this argument is to ensure that the political character of trade-off decisions is recognised, accountability is increased, and ecological concerns are not put aside.

Despite the usefulness of SIAs to provide consistent analyses to negotiators of trade agreements, scholars have focused on key methodological limitations, and given recommendations on how to improve them (George and Kirkpatrick, 2006). This includes criticism over the implementation of the SIA recommendations into the negotiating process itself. Indeed, whereas SIAs aim to be impartial, trade policies and negotiations are, by definition, partial, as each party will try to make its own interests prevail, transforming the negotiations into a process of trade-offs. Although SIAs are publicly conducted, impact assessments (IA) for policy proposals that are conducted, for instance, for EU procedures, do not provide full access the parts of these reports dealing with trade policy. Since 2003, the EC has implemented an IA process for all major initiatives that are presented in the Annual Policy Strategy of the Work Programme of the Commission (European Commission, 2002). While full access of their assessment is provided for the most part, assessments of trade policies are conducted internally with restricted access to the report (European Commission, 2006).

The goal of this secrecy is to avoid weakening the position of negotiators by revealing their strategy; nonetheless, this considerably limits the influential power of SIAs, as they can only inform the negotiations, but not substantially shape them. The Commission has stated that SIAs must refrain from "*calling into question the confidentiality principle of our negotiation strategy*", and must use scenarios that are "*established within a sufficiently broad universe as not to reveal our positions to our partners*" (European Commission, 2002). Moreover, while SIAs are meant to assess the impacts of trade policies on sustainable development, the agreements they assess are not sustainable development but trade agreements. In this connection, other scholars have also highlight that the technical tools used in SIAs can be used to promote the interests and views of one of the negotiators (De Ville and Siles-Brügge, 2014).

Criticism of the use of CGE modelling

In order to assess the impact of policy changes on a whole economy, SIAs use CGE Models. However, critics have argued that such models introduced a huge amount of biases, enabling them to be manipulated in a way that did not necessarily reflect reality or that was made to fit the particular interests of selected negotiators.

The main advantage of CGE models, and the reason why they are so widely used in SIAs, is that their flexibility and breadth allows for a comprehensive and economy-wide analysis of the impacts of a trade policy. They allow to study the impact of any type of trade liberalisation, whether they are bilateral, regional, or global. They can model changes in international prices, domestic taxes, or external shocks, as long as data is available. Furthermore, they provide the possibility to modify bilateral tariffs, making them particularly suitable for the analysis of FTAs, where tariffs are reduced or eliminated only with some specific trading partners (Dukongkaveroj and Parisotto, 2015).

However, despite their usefulness, they present many disadvantages, which might hamper the relevance of their results. The first disadvantage comes from their heavy requirements in terms of data (De Ville and Siles-Brügge, 2014), and the fact that the accuracy of their calibration requires data from Social Accounting Matrices (SAM) for each country, which are difficult to construct and maintain. This might particularly be problematic in developing countries, whose statistical offices may not regularly update such data.

The most notable and criticised aspect of CGEs is that their results are largely dependent on the assumptions made during the construction of the model, which might lack realism and be easily manipulated. Moreover, the construction of the model does not allow for the study of distributional concerns, which are of particular relevance when assessing the economic impact of a trade policy. Another issue is that the model expresses prices in real terms, leaving out dimensions of paramount importance such as financial markets and monetary policy. Furthermore, Durongkaverok and Parisotto (2015) point out that the background required to build such models might not be readily available to all economists, especially in developing countries lacking postgraduate programmes with a sufficiently good technical knowledge.

De Ville and Siles-Brügge (2014) argue that, despite the uncertainty of these models, they are used as a tool to "*manage fictional expectations*". They derive this notion of "fictional expectations" from the economic sociologist Jens Beckert (2013a,b), meaning that these models tend to make overly optimistic predictions about the ability of the EU and the US to liberalise trade. They argue that GCE models are used to serve the agenda of the EU Commission and other partisans of the TTIP by presenting their results as reliable predictions and evidence in favour of the agreement. Furthermore they fear that, by encouraging the Commission's mutual recognition agenda, it will lead to a potential "downgrading" of standards to the detriment of those who did not initially ask for deregulation.

The results of GCE models can in fact be highly influenced by functional form and parameter values (McKitrick, 1998). The economic analyst therefore has the power to "manage fictional expectations" to convince stakeholders that a given FTA will benefit both parties to a chosen extent. This enables policymakers to tailor their messages to specific audiences, as is the case with the EU Commission and the TTIP (De Ville and Siles-Brügge, 2014). Results of GCE modelling therefore provide scientific and seemingly reliable evidence to a specific policy agenda or negotiating position. For example, the EU and the US used GCE results to support their different views in the WTO debate on the potential impact of the liberalisation of agriculture on developing countries (Kirkpatrick and Scrieciu, 2007).

Ciuriak (2007) also argues in this sense: "*the GCE model can tell a well-rounded story of the impact of a policy change, such as bilateral trade liberalisation, on an economy. The problem is that, within limits, it can tell almost any story the practitioner wants to tell*". This issue gains in importance as GCE models can be used to assess the impact of FTAs on poverty, meaning that their manipulability could lead to negative or unpredicted impacts on poverty and inequality.

5. Economic sustainability in FTAs

When focusing on the economic pillar of trade SIAs, GCE models have been increasingly used to assess poverty impacts. A growing number of CGE modellings estimating the impact of trade liberalisation on poverty have been carried out and quoted in the WTO Doha negotiations (Anderson et al., 2006; Polaski, 2006). Studies show that CGE modelling in the context of trade liberalisation tend to be pro-poor and positively biased, leading to misleading predictions that have often been (mis)used and quoted in the WTO's Doha Round debate (Taylor and von Arnim, 2007). Indeed, studies show that these models tend to be overly optimistic about the link between trade, growth, and poverty (World Bank, 2004; Cline, 2004; Anderson et al, 2006).

Günter, Taylor, Yeldan (2005) justify this by explaining that "*price and quantity changes emerging from the simulation are assumed to modify household income flows in well-determined ways*". Kirkpatrick and Scrieciu (2007) therefore argue that in spite of their usefulness in providing *ex-ante* estimates of the impact of trade liberalisation on poverty, the estimates they provide will unlikely be adequate or reliable evidential foundation for trade negotiators and decision-makers. They recommend that poverty be analysed based on a systematic comparison of evidence that were obtained through different research methods. There is indeed an emerging consensus that combined approaches and "mixed methods" have the potential to inform decision makers more adequately and more effectively (Kirkpatrick and George, 2006).

5.1 Effects on poverty and income distribution inequalities

Much has also been written about the potential impacts of trade liberalisation through FTAs, and of globalisation as a whole, on poverty and on income distribution inequalities (IDI) (see for example OECD, 2012; UNCTAD, 2012; IMF, 2015). Alongside the increase

of trade linkages at the bilateral, regional, and multilateral scales, income inequalities have also increased over the last decades (OECD, 2015). However, as UNCTAD (2012) points out, the results of empirical studies are conflicting, depending on the methodology they use: some observe that poverty rates have experienced a notable decline over the past decades (Sala-i-Martin, 2006; Atkinson and Brandolini, 2010; Dhondge and Minoiu, 2011), while others show that poverty rates have evolved in the opposite direction (Kanbur, 2001, 2004; Karshenas, 2010).

The same pattern of contradiction emerges from studies on the evolution of the income distribution effects of trade liberalization: for instance, Sala-i-Martin (2006) observes a reduction in global inequalities, while Atkinson and Brandolini (2010) point out that inequality has remained excessive over the years. Nevertheless, regardless of its evolution, IDIs seem to remain high (Basu, 2006). As many scholars consider economic growth to be "*the key to permanent poverty alleviation*" (Jeong-Soo and Kyophilavong, 2015), studies show that the impact of globalisation on poverty reduction through economic growth depends on the position of the poverty line in the income distribution (Deaton, 2005). Indeed, the effects of globalisation on income distribution appear to depend on case- and time-specific mechanisms. Goldberg and Pavnick (2007) conducted a survey showing that the global trend was an increase in globalisation and inequalities in most developing countries.

IMF studies have found that inequalities negatively affect growth (Ostry, Berg,and Tsangarides 2014; Berg and Ostry 2011). In that context, many believe that the signature of FTAs only leads to growth in developed countries, therefore widening inequalities between developed and developing countries.

A number of factors explain the increase in income distribution inequalities, which can be mitigated by appropriate domestic responses. Globalisation and FTAs widen inequality through offshoring, by shifting production from rich to poor countries, making labour demand skill intensive in both groups of countries, as the relocated tasks may appear to be skill-intensive to developing countries, but not to the developed country, which will require a new standard of skills (Feenstra and Hanson, 1996). Moreover, increased competition due to increased trade can lead to increased labour income inequality (Feenstra and Hanson, 1996). Technological change is another vector through which labour inequalities are rising. Furthermore, it reinforces the effects of globalisation as competition forces companies to innovate, therefore increasing inequalities even more. Indeed, since research and development is skill intensive, the OECD (2012) points out that innovation may lead to a temporary rise in labour inequality (Dinopoulos and Segerstrom, 1999; Neary, 2003) as well as to a permanent rise (Acemoglu, 2002).

Domestic structural policies also influence IDI, as they influence the employment rate and the dispersion of earnings (Koske et al., 2012). This is particularly true of policies in the areas of education, labour, and trade. Income distribution is also heavily influenced by fiscal and transfer policies (IMF, 2014). Indeed, pensions, unemployment and child benefits account for more than three quarters of the overall redistributive impact, and taxes for one quarter (OECD, 2012). The growth of tax expenditures, such as tax breaks

for health and child care, tertiary education, owner occupied housing and retirement savings, which for the most part benefits high-income groups, also contribute to widen inequalities (OECD, 2010).

As empirical analyses show that the drivers of inequalities differ across countries and income groups, the nature of appropriate policy responses varies across countries (IMF, 2015). This is also highlighted by Wacziang and Horn Welch (2008), who show that growth stemming from trade liberalisation varies across countries due to their own particular circumstances. The World Bank (2015) points at the importance of adopting a psychological and social perspective on policymaking and its implementation. Work by the IMF (Ostry, Berg, and Tsangarides 2014) shows that lowering income inequalities does not need to imply a trade-off between efficiency and equity.

As mentioned above, fiscal policies are a key element that can help reduce inequalities. Moreover, the way in which education policies are designed is of particular relevance to the reduction of inequalities. Indeed, as increases in trade linkages are linked with technological advances, raising skill levels is of paramount importance to reduce labour and earning inequalities. This includes notably an improvement of education quality, the elimination of financial barriers to higher education, and providing support for programmes such as apprenticeships. Trade agreements open the road to increased investment opportunities, meaning that a greater financial inclusion is key to foster a type of growth that is coupled with equality. To do so, governments can create appropriate legal and regulatory framework, support the information environment, while educating and protecting consumers (IMF, 2015).

Governments have a major role to play in the design of labour market policies and institutions so as to reduce inequalities while at the same time do not hamper efficiency. Indeed, increased spending in such policies can help poor and middle-income workers by for example raising minimum wages, supporting job search and skill matching, reducing gaps in employment protection between permanent and temporary workers, improving market outcomes for women.

The IMF points out that there needs to be a proper balance between excessive regulations and extreme disregard for labour conditions (IMF, 2015). Weak labour policies can penalise the poor and the middle class by not addressing problems of poor information, unequal power, and inadequate risk management (World Bank, 2012). Furthermore, the IMF (2015) argues that in order to minimise the negative impacts of trade liberalisation, domestic agendas should include policies to encourage innovation, reduce unnecessary market regulations, improve the value chain, and ensure a rise of benefits for all, so as to be part of a "*race to the top instead of a race to the bottom*". In developing countries, raising agricultural productivity, rapid accumulation of capital and technology diffusion are also key ingredients to a more inclusive and equal growth (Dabla-Norris et al., 2013; 2015).

5.2 How are SIA recommendations reflected in the final FTA?

As they take into account the impacts of an FTA on growth, inequality and poverty mitigation, the expected goal of SIAs is to make recommendations that will be incorporated in the final FTA. As discussed, some argue that their impact and integration into the negotiations has been rather limited. However, even though not many studies have focused on how the recommendations made in SIAs are then reflected in the final FTA, a study on the EU-Korea agreement provides an encouraging view showing that these recommendations were generally taken into account by the negotiators.

One of the main concerns about SIAs is how they will impact the negotiations and its outcomes in terms of what will be included in the trade agreement, and how this will be translated into public policies. Indeed, George and Kirkpatrick (2008) point out that their goal is not to significantly influence negotiating positions, but rather to inform civil society and fuel the public dialogue about the potential consequences of a trade agreement in terms of sustainable development. As mentioned above, negotiations are informed by confidential Impact Assessments carried out *ex-ante*. The role of SIAs is therefore not to directly influence policy making, but to do so through their contribution to the public debate. However, as highlighted by Kirkpatrick and George (2006), the lack of adequate policy response to handle the negative impacts brought up by SIAs has led members of civil society to repeatedly express their discontent (WWF, 2002; SUSTRA, 2003; RSP Band Birdlife International, 2003; WIDE, 2004; Solidar, 2005; CRBM, FOEE, Greenpeace and WIDE, 2006).

George and Kirkpatrick (2008) have examined the consequences of the EC's SIA programme at the global level for WTO negotiations, and regionally, for the EMFTA. Their goal was to assess whether the translation of the SIA recommendations into agreements and public policies goes beyond the mere promotion of European preferences to contribute to stronger international governance by promoting sustainable development. Accordingly, they identify two types of economic effects emerging from a trade agreement: first, a static equilibrium effect by which a change in prices or other incentives affects the balance of trade between countries, causing domestic production to increase in some areas and decrease in others, subsequently bringing changes to the overall economy; second, a dynamic development effect which can occur by accelerating or decelerating changes in opportunities and incentives for structural change and development, therefore affecting a country's rate of economic growth. Both of these affects will have a potentially substantial economic, social, and environmental impact.

In the case of the EMFTA SIA, George and Kirkpatrick (2008) point out that there is no evidence indicating whether the SIA influenced the outcomes of the 2005 Ministerial Conference of the Euro-Mediterranean Partnership directly, but that the action plan resulting from it reflected several of the preliminary SIA recommendations (IARC, 2006). They conclude that, at this regional level, the SIA recommendations may have had some influence on negotiations via representations from civil society groups and some EU parliamentarians, rather than through any change of the EU's negotiating position. Regarding the global impact of the WTO Doha agreement, they argue that the reason

why the negotiating positions have moved towards less ambitious proposals is due to the stalling negotiation process rather than the SIA recommendations.

This shows that trade reforms can have a considerable impact on improving global governance and creating sustainable development opportunities. However, this has proven quite difficult to achieve in so far as the goal of every negotiating country is to maximise economic competitiveness (George and Kirkpatrick, 2008). In order to achieve sustainable development goals, there would have to be stronger international regulation in non-trade areas, so as to prevent trade policy from negatively affecting these areas. Until then, SIAs can only play a limited role (George, 2007).

Reynaud (2012) argues that compared to impact assessments carried out by the US and Canada prior to an FTA, the specific recommendations made by EU SIAs facilitate their incorporation in the negotiations. Nevertheless, Vogt (2015) sheds light on the general lack of improvements in labour conditions following the signature of an FTA due to weak enforcement and lack of incentives for compliance. Other recent studies reviewed above support this argument (Brecht and Brando, 2016; Orbie, 2016) and show the insufficiencies of the results of expected improvements in labour rights following the EU-Colombia and EU-Peru trade agreements. Indeed, whereas SIAs show that the expected economic benefits derived from trade liberalisation may be small, and significant adverse impacts can occur in the absence of adequate policy responses, their findings have generally not influenced negotiations in a compelling way, particularly in relation to economic sustainability considerations.

When drawing a comparison between impact assessments in the US, Canada, and in the EU, Reynaud (2012) concludes that European SIAs are more complete and will have a stronger impact on the negotiation process and its outcome than the US and Canadian impact assessments. Economic and social issues as well as their impact on counterpart states are nevertheless sometimes included in US and Canadian FTAs. The procedure of employing independent consultants rather than government officials, as is the case in the US and Canada, also contributes to improve the quality of EU SIAs.

Reynaud (2012) compares the impact assessments carried out within the context of the negotiation of agreements between South Korea with Canada (CKFTA), with the US (KORUS), and with the EU. In the case of CKFTA, he points out that the EIA and current Canadian practice suggest that social and environmental issues will only have a limited impact on the FTA. Indeed, Canadian EIAs, such as those conducted for the Canada-Colombia and Canada-Peru FTAs tend to be brief and fail to promote heightened environmental concerns in the negotiations. The American agreement with Korea does not seem to fully reflect the EIA recommendations either. Indeed, no reference to preferential tariff reductions for environmental goods and services is made. Despite some provisions aimed at enhancing sustainable development in trade practices, such as article 5.5 which aims to prevent unethical business practices in the pharmaceutical sector, or Chapter 5 on pharmaceutical and medical devices which asks parties to facilitate access to high-quality health care, their number and significance remains relatively low, which therefore limits their capacity to promote sustainable development through trade. Furthermore, whereas the EIA points out negative impacts of the FTA on

elements such as marine fisheries, or opportunities of liberalisation in the trade of environmental goods and services, the final FTA does not address them directly.

The SIA conducted prior to the EU-Korea FTA points out that its overall economic impacts are relatively modest as both parties are already part of other FTAs. The largest highlighted impacts are the economic impacts on key sectors, namely the automobile and financial sectors, which have to adjust to the opening of trade linkages between the two parties. One of the recommendations made in the EU-Korea SIA pertains to the phasing of reductions in barriers, which for example should be slower in the case of automobiles, and faster in the case of trade in environmental goods and services and pharmaceutical products. These recommendations are included in the final FTA, through a longer phasing schedule for liberalisation in the automobile industry, aiming at mitigating job loss. Reynaud (2012) suggests that the EU-Korea FTA modulates tariff barriers or sets up cooperation and consultation mechanisms in order to address the detrimental impacts the FTA can have on vulnerable sectors. As an example, various specialised committees are established under Article 15.2 of the agreement, such as a committee on SPS measures, and on committee on trade and sustainable development.

The EC responds to SIAs through a position paper, which in the case of the EU-Korea FTA, agreed with most of the recommendations made by the SIA. The EC for example took note of the recommendation to enforce intellectual property rights and enhance FDI. Indeed, the FTA expresses the objective to "*raise living standards, promote economic growth and stability, create new employment opportunities and improve the general welfare by liberalising and expanding mutual trade and investment*". The EC, however, expressed some reservations relative to the degree of precision of some recommendations, and also disagreed with the SIA on the recommendation to adopt a punitive and negative-list approach for financial services, noting that "the Commission services do not consider a sanction-based enforcement system as an effective tool in the sustainable development arena", which is in line with the EU's external policy's cooperative approach. In addition, with regards to rules of origin, the SIA recommends stricter RoOs in sectors such as automobiles and textiles and apparels, and more liberal RoOs in other sectors, such as information and communication technology. The FTA reflects these concerns by stating that: "*The Commission confirms the exceptional nature of the derogations for some textile products and for surimi contained in the Protocol of Origin.*" Regarding sustainable development issues highlighted in the SIA, the preamble of the FTA reaffirms the commitment to sustainable development, as is the case with all EU FTAs. This is emphasised by article 1.2 which states that the signatories agree to "*commit, in the recognition that sustainable development is an overarching objective, to the development of international trade in such a way as to contribute to the objective of sustainable development and strive to ensure that this objective is integrated and reflected at every level of the parties' trade relationship.*" In addition, the FTA includes a full chapter (Chapter 13) on trade and sustainable development, which takes heed of the recommendations formulated in the SIA. This includes for example cooperative measures to promote the ratification of ILO conventions on labour standards and the decent work agenda, as well as multilateral environmental agreements. The EU-Korea FTA is considered to be a "ground-breaking" agreement, which embodies the first concrete shift of the EU's approach to sustainable development issues in its external

trade policy (Marin-Duran, 2013). It provides a useful model for the trade and sustainable development chapters of other FTAs, such as the agreement concluded with Colombia and Peru in 2011.

Still, the question remains as to whether the SIA of the TTIP will effectively impact the final agreement, if the parties reach one. The interim SIA that is published does not yet include policy recommendations. If, as argued by De Ville and Siles-Brügge (2014), the findings of the SIA result from studies and models that prioritise and put forward the interests of the EU Commission, the conclusions of the SIA will potentially be biased. The debate around this FTA is still on-going (see for example Ackerman, 2015).

Part III: How may FTA norms better respond to selected SD policy needs?

Introduction

In a new world order marked by increasingly numerous and deep linkages among countries, the GATT and the WTO have been, and still are, laboratories to seek solutions to increase international regulatory cooperation. On the other hand, as they are continuously and increasingly proliferating, FTAs represent another opportunity to do so. While regulatory cooperation through FTAs mostly occurs among like-minded countries, instances of cooperation can nevertheless be found among heterogeneous trading partners. Trade regulatory cooperation involves standards such as TBT and SPS measures, mutual recognition of conformity assessment of such standards, and cooperation on scientific matters. Another area where countries undertake, or try to, cooperation in regulatory matters is trade in services. In the quickly evolving universe of FTAs, the negotiation of new large FTAs has the potential to provide new opportunities and set new norms for international regulatory cooperation. It is then obvious that regulatory cooperation, being an approach to norm setting rather than a sectoral policy formulation area, deserves to be treated upfront in this concluding section of the thesis. This allows for a discussion of the subsequent two policy areas, namely climate change and SMEs, fully informed by regulatory cooperation as an approach.

Environmental and climate change concerns, in fact, occupy the centre of the international stage. In light of the increasing number of scientific sources highlighting the pressing need to combat climate change and reduce greenhouse gas emissions, unprecedented levels of international cooperation in this area are required to achieve global and sustainable results. The effects of globalisation and trade liberalisation are sources of conflict with environmental and climate change endeavours. As a result, efforts to cater to these issues in the context of cross-border trade take, for instance, the form of negotiations around the elaboration of an Environmental Goods Agreement, and the inclusion of climate change concerns in FTAs, as their proliferation over the last years makes them undeniable strategic tools to address such issues. Climate change concerns therefore appear in FTAs through provisions aimed at enhancing and promoting environmental cooperation, technology transfers and clean-energy technologies, and cooperation on environmental standards. For this reasons, they have been selected for a dedicated discussion.

Part III concludes with a dedicated analysis of SMEs-related norms in FTAs. The increasing number of SME-related provisions in FTAs takes its roots in the belief that public intervention to support SMEs will help overcome a number of market failures which have an adverse impact on SMEs as a result of increased trade liberalisation. This for example includes access to external finance, in which asymmetries of information in the credit market lead to adverse selection, which in turn leads SMEs to struggle to find sources of financing. In addition, smaller firms have a more limited capacity to

comprehend and adapt to innovations in the market due to lack of public information available to them.

1. Regulatory cooperation

1.1 The multilateral framework for regulatory cooperation

The continual expansion of trade linkages, including through FTAs, attests to the world's growing interconnectedness. However, different parts of the world are subject to country-specific norms, which in the modern context can hamper coordinated policy action (Kauffman and Malyshev, 2015), hence the potential power of FTAs to promote regulatory cooperation at the international level. However, the acknowledgment that international cooperation can lead to welfare gains does not automatically translate into cooperative behaviours in norm setting (Bollyky and Mavroidis, 2016).

The rationale behind the creation of the GATT, for instance, was that in a multilateral trading system negative externalities due to uncoordinated actions could be curbed by reciprocal liberalisation (Bagwell and Staiger, 2002). Under the GATT, the basic principle to address non-tariff barriers was non-discrimination, and the overarching goal was to impose disciplines on regulatory barriers so as to ensure that policy instruments would not be used as a substitute to tariff reductions (Mavroidis, 2016).

Non-discrimination, however, does not address issues of regulatory intervention. This is why the WTO aims to go beyond non-discrimination. Indeed, the WTO introduced new types of agreements: the SPS and TBT agreements (Marceau and Trachtman, 2014). One important innovation the WTO brings with these agreements is that they allow to address the quality of regulatory intervention, hence going beyond the mere scrutiny of measures on the basis of their discriminatory impacts (Mavroidis, 2016). Nevertheless, scholars argue that the time has come for the WTO to evolve in terms of corporate governance, so as to adapt to the current challenges of the new trade order and regulatory cooperation, in a global economy that is marked by the advent of global value chains (GVCs) (Bollyky and Mavroidis, 2016).

Others argue that, in spite of the WTO's potential to provide a legal framework for regulatory cooperation and harmonisation (Howse, 2015) and a transparent arena for information sharing and debates (Mavroidis, 2016), the WTO does not leave much room for an all-inclusive type of cooperation, because the WTO members that are outside bilateral or regional free trade areas are generally subject to higher regulatory barriers to market access (Howse, 2015).

1.2 Bilateral or small-club regulatory cooperation

There has been a huge growth of trade agreements over the world in the past years, with around 500 active free trade agreements or preferential trade agreements today (Limão, 2016). About 60 of these FTAs go beyond the WTO's TBT commitments, and 50

go beyond the WTO's SPS commitments (WTO, 2011). Scholars highlight the fact that FTAs conducive to cooperation and harmonisation are more often concluded between homogeneous, "like-minded" countries (Bollyky and Mavroidis, 2016; Mavroidis, 2016); this is for instance the case of the EU and its member states.

Regulatory cooperation councils exist between the US, Canada, and Mexico (Steger, 2012). Accounts about the US-Canada Regulatory Cooperation Council (RCC) remain positive, showing the effectiveness of the RCC through the discussion of standards and the reduction or elimination of friction due to regulatory divergence (Wolfe, 2014).

There is also a long history of regulatory cooperation between the US and the EU: the Transatlantic Economic Partnership (1998); the EU/US Positive Economic Agenda (2002); the EU/US Economic Initiative (2005); and the Framework for Enhancing Transatlantic Economic Integration (2007) (Mavroidis, 2016). These initiatives have helped reduce trade frictions.

Turning to instances of regulatory cooperation among heterogeneous trading partners, one example is provided by the EU-China Regulatory Cooperation Framework, which focuses on product safety. However, homogeneous trade partners tend to agree to more binding regulations compared to heterogeneous trade partners (Horn et al., 2010). This is for instance the case of the Cotonou Agreement, between the EU and the ACP, which mostly involved best endeavours clauses without any binding obligations; Regulatory cooperation in mentioned in article 21 of this agreement, stating that:

> "4. Cooperation shall support microenterprise development through better access to financial and non-financial services; an appropriate policy and regulatory framework for their development; and provide training and information services on best practices in microfinance."

And in article 33 on institutional development and capacity building, which states that:

> "4. Cooperation shall also assist to restore and/or enhance critical public sector capacity and to support institutions needed to underpin a market economy, especially support for: (a) developing legal and regulatory capabilities needed to cope with the operation of a market economy, including competition policy and consumer policy;".

Bollyky and Mavroidis (2016) further highlight the benefits brought by regulatory cooperation in like-minded trade partners. Hoekman (2015) highlights the importance of regulatory cooperation to limit spillovers and sectoral and market segmentation in an economy that involves global value chains. For instance, some argue that ASEAN countries have become a GVC hub thanks to mutual recognition agreements, cooperation on standards, technical regulations, and harmonization of conformity assessment procedures (WTO, 2011).

This is also true about the European Union itself: for the EU in its years of economic integration as a CU, harmonizing regulations has arguably been the breakthrough,

brought again with the implementation of the Single European Act.[72] In the European experience, the level of "trust" in each other's standards made the difference: to avoid being stuck in complicated political debates, Europe has chosen mutual recognition as a valid regulatory alternative to seeking common standards in every field of production as well as in the services sector, therefore avoiding costly adjustments.

The case of mega-regional FTAs

The negotiation of mega-regional trade agreements provides renewed opportunities to promote and shape international regulatory cooperation and regulatory convergence. Indeed, regulatory cooperation and convergence are on the agenda of the TPP and the TTIP negotiations (Hoekman and Mavroidis, 2015). These two terms have been defined as follows during the TTIP negotiations: " 'Regulatory coherence' is about good regulatory practices, transparency, and stakeholder engagement in a domestic regulatory process", and " 'regulatory cooperation' is the process of interaction between US and EU regulators, founded on the benefits regulators can achieve through closer partnership and greater regulatory interoperability." (US Chamber of Commerce, 2015).

The five regulatory components at the core of the TTIP negotiations are to do with TBT, SPS, sector-specific regulatory arrangements, regulatory coherence, and regulatory cooperation (US Chamber of Commerce, 2015). Alemanno (2015) highlights the potential of the TTIP to "pave the way to a new form of global economic governance based on international regulatory cooperation" as it represents a "historic opportunity" to eliminate regulatory divergence.

Indeed, regulatory divergences are seen as a significant impediment to trade between the EU, the US, and Canada (Kristic, 2012). Chase and Pelkmans (2015) outline the conditions that would enable the TTIP to become more ambitious than other trade agreements in terms of regulatory cooperation, so as to meet the needs and concerns of politicians and citizens while fostering economic growth and job creation.

The text of the TPP, on the other hand, defines regulatory coherence as "the use of good regulatory practices in the process of planning, designing, issuing, implementing and reviewing regulatory measures in order to facilitate achievement of domestic policy objectives, and in efforts across governments to enhance regulatory cooperation in order to further those objectives and promote international trade and investment, economic growth and employment."

Mitchell and Sheargold (2016) show that in the TPP, one of the most significant components of the chapter on regulatory coherence is the focus on intra-governmental reforms of regulatory processes, and the promotion of "good regulatory practices". They examine whether this will encourage states to protect non-economic interests such as environmental or public health concerns in line with obligations derived from international trade and investment law and in accordance with good regulatory

[72] Single European Act, 1987 O.J. L 169/1,[SEA] (amending Treaty Establishing the European Economic Community, Mar. 25, 1957, 298 U.N.T.S. 11.

practices enunciated in the agreement. They conclude that measures in full compliance with the TPP's good regulatory practices could still be inconsistent with other provisions of the TPP, hence the need for countries to evaluate the reasons undermining the inclusion of good regulatory practices in their FTA.

The inclusion of provisions on regulatory cooperation and coherence in mega-regional FTAs raises many concerns about the potential consequences for countries which are not part of the negotiations or have no influence over them (Hoekman and Mavroidis, 2016). Other fears emerge regarding the inclusion of regulatory convergence in mega-regionals which suggests that an increasingly important underlying goal of these FTAs is to promote "a certain conception of good governance" (Mitchell and Sheargold, 2016).

1.3 Mutual recognition and conformity assessment

One of the goals of regulatory cooperation is to reduce the impact of non-tariff measures (NTMs) acting as unnecessary barriers to trade. Mutual recognition of conformity assessment procedures, in particular, can help avoid a "race to the bottom" stemming from competition in standards across countries. In order to cooperate on this issue, governments can use mutual recognition agreements (MRAs), often in connection with FTAs.

Negotiations are still on-going within the WTO about the Environmental Goods Agreement (EGA), which would liberalise trade by eliminating tariffs on a list of environmental goods. However in addition to tariffs, NTMs can have a considerable impact and act as barriers to trade in goods which can be used to serve protectionist purposes (Sugathan, 2016). Many scholars point out that such technical barriers to trade can be excessively burdensome for developing countries due to the higher costs they incur for them to be able to remain exporters, therefore hampering their economic growth and poverty reduction capacities (Otsuki et al., 2000; Stephenson, 1999; Maskus and Wilson, 2001; Maertens and Swinnen, 2006).

Hence the potential of the EGA to provide a framework for negotiating this type of NTM as a cooperative solution. Furthermore, it has been argued that increased competition in standards could lead to a "race to the bottom" (Porter, 1999; Pelkmans, 2007; Poiares Maduro, 2007). Conformity assessment is defined by the International Organisation for Standardisation (ISO) and the International Electrotechnical Commission (IEC) as a "demonstration that specified requirements relating to a product, process, system, person, or body are fulfilled" (ISO and UNIDO, 2010).[73] This includes health, safety, and performance requirements that are assessed through processes such as certification, testing, and inspection relative to standards.

Different types of regulatory cooperation can be used to overcome obstacles related to conformity assessments. They range from information exchange and trust-building to

[73] See in particular the standard ISO/IEC 17000:2004, 'Conformity assessment – Vocabulary and general principles', preview available at : < http://www.iso.org/iso/catalogue_detail.htm?csnumber=29316>, accessed August 2016.

more intricate mutual recognition of conformity assessment procedures. These are the subject of MRAs, increasingly used by governments as a cooperative tool enabling accredited test and inspection reports and certificates of compliance to be accepted by member accreditation authorities throughout the world (Sugathan, 2016).

MRAs range from mutual recognition of conformity assessments, to mutual recognition of standards equivalence, to full harmonisation of standards and conformity assessment procedures. They are encouraged by the WTO's TBT Agreement mentioned earlier in its article entitled " Recognition of Conformity Assessment by Central Government Bodies" (article 6), and more specifically in article 6.1 which notably states that:

> " 6.1 Without prejudice to the provisions of paragraphs 3 and 4, Members shall ensure, whenever possible, that results of conformity assessment procedures in other Members are accepted, even when those procedures differ from their own, provided they are satisfied that those procedures offer an assurance of conformity with applicable technical regulations or standards equivalent to their own procedures.".

Moreover, under this agreement, members commit to use "relevant international standards" as the basis for technical regulations (article 2.4) and for conformity assessment measures (article 5.4) unless deemed inappropriate.

Correira de Brito et al. (2016) study provisions related to mutual recognition in a sample of 99 FTAs concluded by Australia, Canada, the EU, Korea, Japan, Mexico, New Zealand, and the US as of May 2014). They find that 78 of these FTAs contain at least provisions or a whole chapter related to TBTs. This can take the form of acceptance of equivalence and mutual recognition of technical regulations, as encouraged by article 2.7 of the WTO's TBT agreement. They note that a third of the FTAs surveyed include provisions to accept equivalent technical regulations even if they are different between the two parties. This is mainly the case of RTAs concluded by Australia and New Zealand. Other FTAs concluded by Canada with Panama and with Peru contain provisions about the necessity to cooperate to facilitate recognition of equivalence. Indeed, the Canada-Peru FTA aims at improving the implementation of the TBT agreement, with regards to the preparation, adoption and application of all standards, technical regulations, and conformity assessment procedures (FAO, 2012). This agreement states under its chapter on joint cooperation that:

> "The Parties shall strengthen their joint cooperation in the areas of standards, technical regulations, conformity assessment and metrology with a view to facilitating the conduct of trade between the Parties." (article 604.1).

However, equivalence of technical regulations to reduce TBTs is rarely found in FTAs concluded by Japan, Korea, and the EU, with the exception of the EU-Chile and EU-Colombia and Peru FTAs. Most agreements covering mutual recognition require an explanation if a party refuses to recognise equivalences, implying a higher level of commitment, with the exception of the FTAs concluded between Singapore and

Australia, Thailand and Australia, the EU and Chile, the EU and Colombia and Peru, Mexico and Uruguay, and New Zealand and Singapore (Correira de Brito et al., 2016).

FTAs also include commitments from parties to recognise the results of conformity assessment procedures, which can be found in 41.4 per cent of the 99 FTAs surveyed by Correira de Brito et al. (2016). While not containing provisions to encourage parties to accept the results of conformity assessments, some FTAs nevertheless include requirements to provide explanations for such a refusal, as is the case in the Australia-Chile, Australia-US, Canada-Peru, and Japan Peru FTAs.

According to the TBT agreement (article 6.1.1), parties may consult on the technical competences of the other party's conformity assessment body before accepting the results. Relevant provisions can be found the Australia-Thailand FTA, NAFTA, the Japan-Switzerland agreement, and the Japan-Malaysia agreement. The Japan-ASEAN FTA encourages cooperation among parties towards the establishment of a programme aimed at facilitating the acceptance of conformity assessment results.

FTAs such as the US-Morocco and the US-Peru TPA include language stating that the importing party "may recognise" the results of conformity assessments and may enter into a voluntary arrangement. Similar provisions can be found in the FTAs concluded between Canada and Costa Rica, and between Australia and Chile. In the case of NAFTA, it is mentioned that a technical regulation adopted by an exporting party should be treated as equivalent to its own by the other party upon satisfaction of certain criteria (FAO, 2012).

Moreover, the FAO (2012) points out that the US and Canada signed the Canada-US Organic Equivalence Import and Export Agreement, which recognises national organic systems as equivalent, but did so without including the third party to NAFTA: Mexico.

Correira de Brito et al. (2016) show that a majority of the FTA they survey promote the use of mechanisms to facilitate acceptance of conformity assessments and the exchange of information to determine the most appropriate mechanism for different sectors, while being consistent with the list of approaches provided by the TBT Committee. This includes inter alia the conclusion of MRAs, supplier's declaration of conformity, voluntary arrangements to accept conformity assessments, adoption of accreditation procedures.

FTAs also encourage parties to conclude MRAs. This is the case of 56 per cent of FTAs surveyed by Correira de Brito et al. (2016), even though they point out that this is only mentioned as one of the mechanisms aimed at promoting acceptance of equivalence. The main trading powers promoting the conclusion of MRAs are the US, New Zealand, Korea, and Australia. For instance, the US-Singapore FTA mentions in chapter 6 that each party shall work towards the implementation of the APEC Mutual Recognition Arrangement for Conformity Assessment of the Telecommunications Equipment (Banda and Whalley, 2005). The same scholars report that the commitments to promote MRAs that are included in six FTAs concluded by Japan are stronger than those in other FTAs, including for instance a timeline for the conclusion of MRAs in specific sectors.

Except for the EU-Colombia and Peru, the EU-Korea, and the EU-Chile FTAs, the EU Economic Partnership Agreements in force at the time of writing do not appear to promote the conclusion of MRAs. FTAs such as the Japan-India FTA or the Korea-India FTA for instance, also include a strong commitment to establish a timeline for the conclusion of an MRA in specific sectors. Furthermore, parties of an FTA can also conclude separate MRAs on specific sectors, as is the case of Australia-Singapore, Canada-Israël, Canada-EFTA, Canada-Mexico, US-Mexico, Canada-Switzerland, EU-Israël.

The sectors covered include for instance telecommunication equipment, pharmaceuticals, medicinal equipment, electrical safety, and good manufacturing practices. FTAs can also incorporate an MRA in their annexes, as is the case with the Japan-Philippines, Japan-Singapore, Japan-Thailand, Korea-Singapore, New-Zealand China and New-Zealand Singapore FTAs.

1.4 Regulatory cooperation in TBT and SPS matters

TBT

Molina and Khoroshavina (2015) provide and extensive study of TBT provisions included in FTAs, and compare them to the WTO TBT agreement. They cover 238 FTAs, and find that 171 of these include at least one provision related to TBT, with a focus on technical regulations, conformity assessment procedures, transparency, dispute settlement, marking and labelling, and sector-specific commitments.

TBT have indeed been at the heart of modern concerns in trade negotiations, with all FTAs signed since 2010 containing such provisions. They point out that since 2003, on average 72 per cent of the agreements signed which include TBT provisions choose to organise these under a chapter or a section rather than under a single article, therefore showing the growing importance that has been given to TBTs over the past years.

TBT provisions in FTAs have not only grown in number, but also in their level of precision and commitment. As a result, TBT provisions in FTAs have been the focus of many academic studies (e.g. Lesser, 2007; Piermartini and Budetta, 2009; Ti Ting, 2012; Molina and Khoroshavina, 2015). One of their findings is that TBT provisions in FTAs tend to converge towards and complement the multilateral system set out by the WTO TBT Agreement (Lesser, 2007; Ti Ting, 2012). Indeed, most FTAs build on the TBT Agreement, while only 7 per cent of the FTAs studied by Molina and Khoroshavina (2015) involve a narrower coverage of TBT issues than the TBT Agreement.

Most TBT provisions in FTAs make a reference to the TBT Agreement, showing the intention of parties to preserve a level of multilateral coherence. This applies also to FTAs between WTO members and non-members, such as the FTA between the EFTA States and Serbia, which states in its article 13 on technical cooperation that:

> " 1. The rights and obligations of the Parties in respect of technical regulations, standards and conformity assessment shall be governed by the WTO Agreement on Technical Barriers to Trade."

By contrast, other agreements between WTO members and non-members do not make any reference to the TBT Agreement, such as the EU-Algeria FTA.

Molina and Khoroshavina (2015) distinguish three types of formulation regarding the harmonisation of technical regulations: first, some agreements mention that the parties "commit" to harmonise their technical regulations. This is for instance the case of the FTAs concluded by the EU with Georgia, Moldova, Ukraine, Serbia, but also the COMESA, EAC, and CARICOM-EC treaty. For instance, the EU-Ukraine Agreement states in its article on technical cooperation under the chapter on technical barriers to trade (chapter 3) that:

> "The Parties shall strengthen their cooperation in the field of technical regulations, standards, metrology, market surveillance, accreditation and conformity assessment procedures with a view to increasing mutual understanding of their respective systems and facilitating access to their respective markets. To this end, they may establish regulatory dialogues at both horizontal and sectoral levels." (article 55.1).

Second, the language in other agreements is less firm, with countries committing "when possible" to cooperate towards technical harmonisation. This is includes for example the EU-Korea FTA, Panama-Central America FTA, FTAs concluded by Chinese Taipei with Honduras and El Salvador, Nicaragua, Guatemala, Panama, the FTAs concluded by Chile with the EC, Central America, Mexico, the FTAs concluded by Colombia with Mexico and with the Northern Triangle, and NAFTA. The EU-Korea FTA, for instance, states in its article 4.3 on joint cooperation that:

> "In their bilateral cooperation, the Parties shall seek to identify, develop and promote trade facilitating initiatives which may include, but are not limited to: (a) reinforcing regulatory cooperation through, for example, the exchange of information, experiences and data and scientific and technical cooperation with a view to improving the quality and level of their technical regulations and making efficient use of regulatory resources; (b) where appropriate, simplifying technical regulations, standards and conformity assessment procedures; (c) where the Parties agree, and where appropriate, for example where no international standard exists, avoiding unnecessary divergence in approach to regulations and conformity assessment procedures, and working towards the possibility of converging or aligning technical requirements".

Third, and more frequently, FTA norms "encourage" parties to harmonise their technical regulations. For instance, the EU-Colombia and Peru FTA states that:

> "in areas of interest, the signatory Andean Countries will make their best efforts to foster the gradual harmonisation of standards, technical regulations and conformity assessment procedures" (article 105.2 (b)).

Recognition of equivalence and transparency in TBT matters

Molina and Khoroshavina (2015) point out that only 5 per cent of the FTAs they surveyed go beyond the WTO TBT Agreement regarding issues of equivalence of technical regulations, as enunciated in article 2.7 of the Agreement, which reads as follows:

> "Members shall give positive consideration to accepting as equivalent technical regulations of other Members, even if these regulations differ from their own, provided they are satisfied that these regulations adequately fulfil the objectives of their own regulations."

They do so by using a stricter formulation, such as the EU-Korea FTA which states in its article on technical regulations that:

> "The Parties agree to make best use of good regulatory practice, as provided for in the TBT Agreement. In particular, the Parties agree (a) to fulfil the transparency obligations of the Parties as indicated in the TBT Agreement; (b) to use relevant international standards as a basis for technical regulations including conformity assessment procedures, except when such international standards would be an ineffective or inappropriate means for the fulfilment of the legitimate objectives pursued, and where international standards have not been used as a basis, to explain on request to the other Party the reasons why such standards have been judged inappropriate or ineffective for the aim pursued" (article 4.4).

Another key element of the TBT Agreement to enhance regulatory cooperation and coherence is transparency, mainly through its notification system. Half of the FTAs in Molina and Khoroshavina's study (2015) contain a provision on transparency. They identify five types of provisions to such effect: sixteen per cent of FTAs contain a provision which specifies the relationship between the notification under the TBT Agreement and the FTA, indicating that parties must be notified of a measure at the same time as the WTO. This type of provision is mostly found in FTAs signed after 2004 by Chile, Peru, and the US. Indeed, under Chapter 7 on technical barriers to trade of the US-Peru FTA, the article on transparency specifies that:

> “In order to enhance the opportunity for persons to be aware of, and to understand, proposed technical regulations and conformity assessment procedures, and to be able to provide meaningful comments on such regulations and procedures, a Party publishing a notice and filing a notification under Article 2.9, 3.2, 5.6 or 7.2 of the TBT Agreement, shall: (a) include in the notice a statement describing the objective of the proposed technical regulation or conformity assessment procedure and the rationale for the approach the Party is

> proposing; and (b) transmit the proposal electronically to the other Parties through the inquiry points each Party has established under Article 10 of the TBT Agreement at the same time as it notifies other WTO Members of the proposal pursuant to the TBT Agreement. " (article 7.6).

Secondly, provisions can relate to the type of measures that must be notified under the FTA; this concerns 5 percent of the FTAs surveyed, mainly involving Colombia, Peru, and the US. Thirdly, in 21 percent of FTAs, a deadline is set for submitting comments on the drafts of proposed technical regulations and conformity assessment procedures. Fourthly, provisions can require the publication of the answers to comments from third parties. Such provisions are found in 11 per cent of FTAs. Finally, as the TBT Agreement gives little detail as to the timeline of the publication and adoption of technical regulations and conformity assessment procedures and their entry into force (articles 2.12 and 5.9 refer to "a reasonable interval"), some, although very few, FTAs include provisions relating to this timeline. TBT provisions can also address dispute settlement. However, only 22 of the 238 FTAs surveyed include a provision on dispute settlement that is specific to TBTs. In other cases, the general clause on dispute settlement will therefore apply to TBTs.

SPS

The WTO SPS Agreement is another attempt at enhanced international regulatory cooperation. Too stringent SPS norms have been identified as significant barriers to trade and obstacles to developing countries' economic growth and sustainable development. The variety of SPS norms and measures across countries has led to a number of trade frictions, hence the inclusion of an article on recognition of equivalence in the SPS Agreement, which is being reflected in some FTAs. However, there is a debate on the capacity of this article to facilitate trade and provide concrete and substantial opportunities for developing countries.

As discussed in Part I, the WTO has introduced the SPS Agreement to recognises the rights of governments to protect human, animal, or plant life or health on the basis of scientific evidence in a non-discriminatory way. In SD parlance, scholars argue that SPS measures that are too strict can represent a significant barrier to trade for developing countries and therefore hamper their economic growth and their ability to reach sustainable development goals (Henson and Loader, 1999; Henson and Loader, 2001; Liu and Yue, 2009).

Studies have shown the detrimental effects of the costs associated with the implementation of the SPS Agreement in developing countries, for instance the loss of earnings from trade in developing countries due to European public health regulations on pesticide residues, therefore constituting a loss of opportunities to trade and benefit from subsequent development opportunities (Deacon et al., 2003).

Possibly by means of reacting to these preoccupations, some FTAs include provisions on SPS measures; this is for instance the case of the Cotonou Agreement, which is thought in principle as a development agreement targeted at poverty alleviation (Flint, 2008),

and which contains an article on SPS measures (article 48) which merely reaffirms the WTO SPS Agreement, as follows:

> "The Parties recognise the right of each Party to adopt or to enforce sanitary and phytosanitary measures necessary to protect human, animal or plant life or health, subject to the requirement that these measures do not constitute a means of arbitrary discrimination or a disguised restriction to trade, generally. To this end, they reaffirm their commitments under the Agreement on the Application of Sanitary and Phytosanitary Measures, annexed to the WTO Agreement (SPS Agreement), taking account of their respective level of development."

Comparable language has been included in the EC-CARIFORUM EPA, which states, in article 52, that:

> "The Parties affirm their commitment to the rights and obligations provided for in the WTO Agreement on Sanitary and Phytosanitary Measures (hereinafter referred to as the WTO SPS Agreement). The Parties also reaffirm their rights and obligations under the International Plant Protection Convention (IPPC), the CODEX Alimentarius and the World Organisation for Animal Health (OIE)."

Recognition of equivalence in SPS matters

Disdier et al. (2008) report data about the negative impact of SPS and TBT measures on agricultural trade, as these measures affect developing countries more severely. It has been argued that this agreement led to reduced standards regarding consumer's health (Silverglade, 2000; Perrings et al., 2005; Peel, 2006). This agreement has also led to a variety of international disputes (McNeil, 1998; Pauwelyn, 1999; Victor, 1999). However, despite a growth in WTO disputes, it is worth pointing out that as of 2012, only 11 per cent of disputes cited the SPS Agreement, and 12 per cent cited the TBT Agreement (Sugathan, 2016).

Furthermore, in the context of North-South regulatory cooperation, Disdier et al. (2015) point out that harmonisation of SPS measures have been a prominent item in the agenda of Economic Integration Agreements, which have been increasing in number over the past years. As stated above, the SPS Agreement contains an article about the recognition of equivalence which reads as follows:

> "1. Members shall accept the sanitary or phytosanitary measures of other Members as equivalent, even if these measures differ from their own or from those used by other Members trading in the same product, if the exporting Member objectively demonstrates to the importing Member that its measures achieve the importing Member's appropriate level of sanitary or phytosanitary protection. For this purpose, reasonable access shall be given, upon request, to the importing Member for inspection, testing and other relevant procedures.
> 2. Members shall, upon request, enter into consultations with the aim of achieving bilateral and multilateral agreements on recognition of the equivalence

> of specified sanitary or phytosanitary measures." (article 4, of the WTO SPS Agreement).

While Bollyky and Mavroidis (2016) argue that this provision merely established best-endeavour norms, it should be also noted that the SPS Committee adopted a decision in 2001 to "make operational the provisions of Article 4 of the Agreement on the Application of Sanitary and Phytosanitary Measures",[74] which creates the possibility for states to serve as "regulatory laboratories" to provide alternatives to achieve similar regulatory goals and imposes the obligation to explain SPS measure should such a request be formulated by the exporting country (Marceau and Trachtman, 2014). This decision notably stipulates that:

> "In the context of facilitating the implementation of Article 4, on request of the exporting Member, the importing Member should explain the objective and rationale of the sanitary or phytosanitary measure and identify clearly the risks that the relevant measure is intended to address. The importing Member should indicate the appropriate level of protection which its sanitary or phytosanitary measure is designed to achieve." and that " An importing Member shall respond in a timely manner to any request from an exporting Member for consideration of the equivalence of its measures, normally within a six-month period of time." (paras. 2-3).

However, the complexity and high demands associated with the negotiation of equivalence agreements have considerably hampered the possibilities provided by Article 4 (Echols, 2013), as countries have found these negotiations to be so costly and time consuming that it appears easier for the exporting country to adopt and apply the same measure as the importing country (Das, 2009). Echols (2013) argues that this therefore negates the use of equivalence as a trade facilitation tool.

Some FTAs include provisions pertaining to recognition of equivalence regarding SPS standards. For instance, in CETA's chapter on sanitary and phytosanitary measures (Chapter 5), there is an article on equivalence (article 5.6) which states that:

> "The importing Party shall accept the SPS measure of the exporting Party as equivalent to its own if the exporting Party objectively demonstrates to the importing Party that its measure achieves the importing Party's appropriate level of SPS protection." (article 5.6.1).

CETA also includes a Protocol on the Mutual Recognition of the Compliance and Enforcement Programme regarding Good Manufacturing Practices for Pharmaceutical products, which contains provisions related to the equivalence of regulatory authorities certifying compliance with good manufacturing practices. The EU-CARIFORUM EPA also includes in its chapter on SPS measures (chapter 7) a provision to promote the recognition of equivalence of SPS measures by stating that one of the goals of this chapter is to "assist CARIFORUM States in establishing harmonised intraregional

[74] Decision on the Implementation of Article 4 of the Agreement on the Application of Sanitary and Phytosanitary Measures, WTO Document G/SPS/19/Rev.2, 26 October 2001.

sanitary and phytosanitary (hereinafter SPS) measures also with a view to facilitating the recognition of equivalence of such measures with those existing in the EC Party" (article 53c).

The difficulties that developed countries encounter when it comes to agreeing on equivalence raise concerns as to the ability of article 4 to provide real opportunities for compliance to developing countries.[75] Yet, Unnevehr and Roberts (2003) highlight the potential benefits that recognition of equivalence of SPS standards can yield in terms of food safety, for products such as cheese, meat, fresh produce, and seafood as process standards enable to manage microbial risks.

Scientific collaboration

Many FTAs also encourage information and best practice exchanges for scientific collaboration. For instance, the EU-CARIFORUM FTA mentions cooperation in the scientific sector in several parts of the main document, such as in its chapter on agriculture and fisheries (Chapter 5), which points to the need of "Building or strengthening the scientific and technical human and institutional capability at regional level for sustainable trade in fisheries products, including aquaculture;" in the article enunciating areas of cooperation (article 43). Furthermore, one the goals of the chapter on innovation and intellectual property is "encourage, develop and facilitate cooperative research and development activities in science and technology between the Parties, as well as to develop lasting relations between the Parties' scientific communities"(article 132), which includes projects such as "joint scientific meetings to foster exchanges of information and interaction and to identify areas for joint research" and "policy dialogue and exchanges of scientific and technological information and experience at regional level" (article 136).

The report entitled "Monitoring the implementation and results of the EU-CARIFORUM EPA Agreement mentions programmes to enhance collaboration related to SPS and TBT measures", which are also linked to climate change issues, states that: "reflecting the importance of SPS and TBT issues, the EU has also supported programmes at the national level. In Jamaica, funding under the EPA Capacity-Building programmes has focused in part on SPS and TBT issues. This includes support for the Bureau of Standards, the Ministry of Agriculture for standards development, certification of exports and support for laboratories to meet international food safety requirements and standards.".

The EU-Korea FTA includes more straight-forward provisions related to collaboration for laboratories. This includes for instance conformity assessment and accreditation, with a dedicated provision on this topic, whereby the parties undertake:

> "to exchange information on accreditation policy, and to consider how to make best use of international standards for accreditation, and international

[75] See e.g. Note by the Secretariat, 'The WTO SPS Agreement and Developing Countries', Committee on Sanitary and Phytosanitary Measures, WTO Document G/SPS/W/93, 5 November 1998.

> agreements involving the Parties' accreditation bodies, for example, through the mechanisms of the International Laboratory Accreditation Cooperation and the International Accreditation Forum" (article 4.6, b).

In the same FTA, Chapter 6 on customs and trade facilitation sets out the commitment to "intensifying cooperation between their customs laboratories and scientific departments and to working towards the harmonisation of customs laboratories methods" (article 6.13).

Laboratory equipment is included in the tariff schedules of both the EU-CARIFORUM and the EU-Korea FTAs. The FTA concluded between the EU and Colombia and Peru highlights the parties' commitment to scientific cooperation in its chapter on cooperation and trade facilitation by stating that this commitment includes:

> "(b) identifying, developing and promoting initiatives that facilitate trade taking their respective experience into consideration. These initiatives may include, among others: (i) the exchange of information, experience and data, scientific and technological cooperation and the use of good regulatory practices" (article 75).

Furthermore, this FTA includes a whole chapter on technology transfers (chapter 5) stating that:

> "Particular attention shall be paid to the conditions necessary to create an adequate enabling environment for the promotion of lasting relations between the scientific communities of the Parties, the intensification of activities to promote linkage, innovation and technology transfer between the Parties, including issues such as the relevant legal framework and development of human capital." (article 255).

FTAs concluded by the US also contain provisions for scientific collaboration. For instance, the US-CAFTA-DR states that voluntary mechanisms to enhance environmental performance may include: "partnerships involving businesses, local communities, non-governmental organizations, government agencies, or scientific organizations" (article 17.4). Annex 19.3 (on environmental cooperation) of Chapter 19 of the US-Chile FTA on the environment mentions that cooperative activities that may be implemented under the Cooperation Agreement include:

> "facilitating linkages among representatives from academia, industry, and government to promote exchange of scientific and technical information and best practices, and the development and implementation of cooperative projects".

The US-Peru FTA includes scientific cooperation in its chapter on intellectual property rights, stating that:

> "1. The Parties recognize the importance of promoting technological innovation, disseminating technological information, and building technological capacity, including, as appropriate, through collaborative scientific research projects

> between or among the Parties. Accordingly, the Parties will seek and encourage opportunities for science and technology cooperation and identify areas for such cooperation and, as appropriate, engage in collaborative scientific research projects." (article 16.12).

Some FTAs negotiated by China also include provisions for scientific collaboration. This is for instance the case of the China-Australia FTA, which foresees possible cooperation between the parties by "conducting possible joint research projects on diseases and pest prevention, surveillance and control strategies and on other scientific issues, including in the area of food safety, relating to SPS measures." (article 5.6). The China-Chile FTA contains an article on research, science, and technology, which states that:

> "1. The aims of cooperation in research, science and technology, carried out in the mutual interest of the Parties and in compliance with their policies, particularly as regards the rules for use of intellectual property resulting from research, will be: (a) to build on existing agreements already in place for cooperation on research, science and technology and the follow up done by the existing Joint Commission for Scientific and Technical Cooperation between the Parties" (article 106).

This topic is also covered in a similar article of the China-Peru FTA which encourages the "exchange of technical and scientific personnel with the purpose of training and improvement in scientific and technical institutes, universities, factories, government agencies and other institutions of each Party"(article 152).

The China-Korea FTA is more straightforward on collaboration regarding laboratories, as its chapter on SPS measures (Chapter 5) contains an article on technical cooperation which states that such cooperation includes "(b) strengthening cooperation with respect to, inter alia, risk analysis methodology, disease/pest control methods, laboratory testing techniques, and exchange of information on domestic regulations" (article 5.4). A relatively similar provision can be found in the China-Costa Rica FTA SPS chapter (Chapter 6), which states in its article on technical cooperation that:

> "The Parties agree to strengthen bilateral technical cooperation on sanitary and phytosanitary issues, with a view to enhancing the mutual understanding of the regulatory systems of the Parties and facilitating access to each other's markets, with respect to, inter alia, laboratory testing techniques, disease/pest control methods and risk analysis methodology. The Parties agree to explore cooperation programs on technical assistance and capacity building, including but not limited to training programs and exchange visits." (article 66).

Recognition of equivalence in services

Another area of regulatory cooperation which can be addressed through FTAs is the recognition of equivalence in services, within the meaning set forth in Article VII of the

General Agreement on Trade in Services (GATS)[76] of the WTO, which covers recognition of education, experience, and licenses, as follows:

> "1. For the purposes of the fulfilment, in whole or in part, of its standards or criteria for the authorization, licensing or certification of services suppliers, and subject to the requirements of paragraph 3, a Member may recognize the education or experience obtained, requirements met, or licenses or certifications granted in a particular country. Such recognition, which may be achieved through harmonization or otherwise, may be based upon an agreement or arrangement with the country concerned or may be accorded autonomously.".

Laurenza and Mathis (2013) notice that the US-Korea FTA (KORUS) uses a relatively soft approach to recognition of equivalence in services in its chapter on cross-border trade in services (Chapter 12), as recognition is outlined as a voluntary mechanism. Article 12.9 of this agreement states that:

> "1. For purposes of the fulfilment, in whole or in part, of its standards or criteria for the authorization, licensing, or certification of services suppliers, and subject to the requirements of paragraph 5, a Party may recognize the education or experience obtained, requirements met, or licenses or certifications granted in a particular country. Such recognition, which may be achieved through harmonization or otherwise, may be based upon an agreement or arrangement with the country concerned or may be accorded autonomously.
>
> 2. Where a Party recognizes, autonomously or by agreement or arrangement, the education or experience obtained, requirements met, or licenses or certifications granted in the territory of a non Party, nothing in Article 12.3 shall be construed to require the Party to accord such recognition to the education or experience obtained, requirements met, or licenses or certifications granted in the territory of the other Party."

Annex 12-A on professional services further details this by stating that:

> "2. Where the Parties agree, each Party shall encourage the relevant bodies in its territory to develop mutually acceptable standards and criteria for licensing and certification, to provide recommendations to the Joint Committee on mutual recognition, and to develop procedures for the temporary licensing arrangements of professional service suppliers of the other Party with respect to professional services sectors or subsectors mutually agreed by the Parties. These sectors or subsectors may include those listed in Appendix 12-A-1. 3. The Parties hereby establish a Professional Services Working Group, comprising representatives of each Party, to facilitate the activities set out in paragraphs 1 and 2. The Working Group shall meet within one year after the date this Agreement enters into force unless the Parties otherwise agree."

[76] General Agreement on Trade in Services, 1869 U.N.T.S. 183; 33 I.L.M. 1167 (1994), [GATS].

Appendix A-I lists three sectors for mutual recognition and temporary licensing: engineering services, architectural services, and veterinary services. Recognition can be done autonomously, through harmonisation, or through an agreement or an arrangement. Laurenza and Mathis (2013) argue that in spite of the softness of these provisions, the institutional arrangements they include enable to foresee positive outcomes.
Article 7.21 of the EU-Korea FTA also addresses mutual recognition in the area of services. It states that:

> "2. The Parties shall encourage the relevant representative professional bodies in their respective territories to jointly develop and provide recommendations on mutual recognition to the Trade Committee, for the purpose of the fulfilment, in whole or in part, by service suppliers and investors in services sectors, of the criteria applied by each Party for the authorisation, licensing, operation and certification of service suppliers and investors in services sectors and, in particular, professional services, including temporary licensing."

According to this article, the parties ought to negotiate an agreement on mutual recognition and "…Any such agreement shall be in conformity with the relevant provisions of the WTO Agreement and, in particular, Article VII of GATS." (article 7.21 (5)). However, there is no clear indication of the sectors covered, the agreement only states that:

> "(a) The Working Group should consider, for services generally, and as appropriate for individual services, the following matters: (i) procedures for encouraging the relevant representative bodies in their respective territories to consider their interest in mutual recognition; and (ii) procedures for fostering the development of recommendations on mutual recognition by the relevant representative bodies." (article 7.21).

Laurenza and Mathis (2013) point out that this relatively soft approach is balanced by the obligations for parties to "encourage" such bodies to develop joint processes for mutual recognition.

Gootiz and Mattoo (2015) provide an analysis of regionalism in services in the ASEAN, assessing the impact of the ASEAN Framework Agreemet on Services (AFAS) and the ASEAN Economic Blueprint. They observe that AFAS did not result in more liberalised services, and sometimes even did the opposite. However, they also highlight exceptions.
Indeed, MRAs have been negotiated between ASEAN countries with regard to professional services, and some steps have been taken in the field of air transport. MRAs for professional services include engineering services, nursing, architecture, medical practitioners, dental practitioners, and a framework agreement on accountancy (Gootiz and Mattoo, 2015).

Multilateral air transport agreements have been signed by ASEAN countries with the goal to work towards a more integrated air market. These include the Multilateral Agreement on Air Services (MAAS), the Multilateral Agreement for Full liberalisation of

Passenger Air Services, the Multilateral Agreement for Full Liberalization of Air Freight Services, and their Implementing Protocols. These agreements include provisions for recognition of equivalence, for instance, article 5 on safety of the MAAS states that:

> "Each Contracting Party shall recognise as valid, for the purpose of operating the air services provided for in this Agreement, certificates of airworthiness, certificates of competency, and licences issued, or validated by the Contracting Party that designates that said airline and still in force, provided that the requirements for such certificates or licenses are at least equal to minimum standards which may be established pursuant to the Convention. Each Contracting Party reserves the right, however, to refuse to recognise as valid for the purpose of flight above its territory, certificates of competency and licences granted to or validated for its own nationals by another Contracting Party".

FTAs often contain provisions for recognition of equivalence in services in their chapter on cross-border trade in services. This is for instance the case of the Canada-Peru FTA in Chapter, 9, which contains a provision in the article on recognition stating that:

> "1. For the purposes of fulfilment, in whole or in part, of its standards or criteria for the authorization, licensing or certification of services suppliers, and subject to the requirements of paragraph 4, a Party may recognize the education or experience obtained, requirements met, or licenses or certifications granted in a particular country. Such recognition, which may be achieved through harmonization or otherwise, may be based on an agreement or arrangement with the country concerned or may be accorded autonomously." (article 910).

This agreement also contains an article on temporary licensing, which includes the creation of a working group for this purpose and notably states that:

> " 1. Where the Parties agree, each Party shall encourage the relevant bodies in its territory to develop procedures for the temporary licensing of professional services suppliers of the other Party.
>
> 2. Each Party shall consider establishing a work program to provide for the temporary licensing in its territory of nationals of the other Party who are licensed as engineers in the territory of the other Party. To this end, each Party shall coordinate with the relevant professional bodies of its territory as appropriate." (article 911).

The EU-Colombia-Peru FTA also foresees the creation of a special body for mutual recognition in services. This is addressed in the chapter entitled “Regulatory Framework”, stating that:

> "The Parties shall encourage the relevant professional bodies in their respective territories to jointly develop and provide the Trade Committee with recommendations on mutual recognition for the purpose of the fulfilment, in whole or in part, by investors and service suppliers of the criteria applied by each

> Party for the authorisation, licensing, operation and certification of investors and service suppliers and, in particular, of professional services." (article 129).

In the same FTA, the chapter on e-commerce (Chapter 6) also includes a provision for "the recognition of certificates of electronic signatures issued to the public and the facilitation of cross-border certification services" (article 163).
The EU-CARIFORUM EPA contains provision similar to those of the EU-Colombia-Peru FTA, also in the chapter on a regulatory frameworks, stating in the article on mutual recognition that:

> "2. The Parties shall encourage the relevant professional bodies in their respective territories to jointly develop and provide recommendations on mutual recognition to the CARIFORUM-EC Trade and Development Committee, for the purpose of the fulfilment, in whole or in part, by investors and service suppliers of the criteria applied by the EC Party and by the Signatory CARIFORUM States for the authorisation, licensing, operation and certification of investors and service suppliers and, in particular, in the professional services sector."(article 183).

This EPA also includes a provision and process similar to that of the EU-Korea FTA, by outlining that the parties shall negotiate "…an agreement on mutual recognition of requirements, qualifications, licences and other regulations" and that "…any such agreement shall be in conformity with the relevant provisions of the WTO Agreement and, in particular, Article VII of the GATS." (article 183).

Similar provisions can be found in the EU-Chile FTA. The US-CAFTA-DR, US-Chile, and US-Peru FTAs contain very similar provisions on mutual recognition in services in their chapters on cross-border trade in services. This provision in the US-CAFTA-DR FTA stipulates that:

> "1. For the purposes of the fulfilment, in whole or in part, of its standards or criteria for the authorization, licensing, or certification of services suppliers, and subject to the requirements of paragraph 4, a Party may recognize the education or experience obtained, requirements met, or licenses or certifications granted in a particular country, including another Party and a non-Party. Such recognition, which may be achieved through harmonization or otherwise, may be based upon an agreement or arrangement with the country concerned or may be accorded autonomously." (article 11.9).

Annex 11.9 on professional services then states that:

> "1. The Parties shall encourage the relevant bodies in their respective territories to develop mutually acceptable standards and criteria for licensing and certification of professional service suppliers and to provide recommendations on mutual recognition to the Commission." and includes a provision for temporary licensing.

FTAs concluded by China frequently include a provision on cooperation for the recognition of qualifications. This is for instance the case of the China-Australia FTA, which states that:

> "The Parties agree to encourage, where possible, the relevant bodies in their respective territories responsible for issuance and recognition of professional and vocational qualifications to strengthen cooperation and to explore possibilities for mutual recognition of respective professional and vocational qualifications." (article 8.15).

A similar provision exists in the China-New Zealand FTA (article 113). The China-Peru FTA, in its chapter on trade in services addresses recognition by stating that:

> "For the purposes of the fulfilment, in whole or in part, of its standards or criteria for the authorization, licensing or certification of services suppliers, and subject to the requirements of paragraph 3, a Party may recognize the education or experience obtained, requirements met, or licences or certifications granted in the other Party or a non-Party. Such recognition, which may be achieved through harmonization or otherwise, may be based upon an agreement or arrangement with the other Party or a non-Party concerned or may be accorded autonomously." (article 111).

A relatively similar provision can be found in the China-Korea FTA, which states that:

> "1. For the purposes of the fulfilment, in whole or in part, of its standards or criteria for the authorisation, licensing, or certification of services suppliers, and subject to the requirements of paragraph 4, a Party may recognise the education or experience obtained, requirements met, or licenses or certifications granted in the other Party. Such recognition, which may be achieved through harmonisation or otherwise, may be based upon an agreement or arrangement between the Parties or the relevant competent bodies or may be accorded autonomously" (article 8.9).

2. Climate change

2.1 Climate change-related provisions in FTAs

Mathews (2015) argues that the TPP also represents a window of opportunity for climate change mitigation through its chapter on trade and environment. The objectives of the TPP environment chapter are stated as follows:

> "1. The objectives of this Chapter are to: promote mutually supportive trade and environment policies; promote high levels of environmental protection and effective enforcement of environmental laws; and enhance the capacities of the Parties to address trade-related environmental issues, including through cooperation.

> 2. Taking account of their respective national priorities and circumstances, the Parties recognize that enhanced cooperation to protect and conserve the environment and sustainably manage their natural resources brings benefits which can contribute to sustainable development, strengthen their environmental governance and complement the objectives of the TPP.
>
> 3. The Parties further recognize that it is inappropriate to set or use their environmental laws or other measures in a manner which would constitute a disguised restriction on trade or investment between the Parties."

This chapter also includes provisions that allow for enhanced public participation. Furthermore, this chapter potentially represents an important opportunity to address environmental issues such as illegal logging, climate change, balance between trade and ensuring that governments respond to environmental issues (Meltzer, 2014).

As reviewed in Part II, by comparing environmental provisions in US and EU FTAs, Jinnah and Morgera (2013) notice that unlike US FTAs, EU FTAs include sophisticated provisions on climate change. This is for example the case of the EU FTA with Peru and Colombia (EU-COPE FTA), where Article 275 makes reference to the UNFCCC and the Kyoto Protocol, and stipulates that:

> "Considering the global objective of a rapid transition to low-carbon economies, the Parties will promote the sustainable use of natural resources and will promote trade and investment measures that promote and facilitate access, dissemination and use of best available technologies for clean energy production and use, and for mitigation of and adaptation to climate change."

Such provisions, or at least very detailed language on issues related to cooperation on trade and sustainable development, can be found in most EU FTAs concluded after the 2006 Global Europe communication discussed in Part II (European Commission, 2006). The recently signed FTA between the EU and Canada (CETA) also encourages cooperation on:

> "…trade-related aspects of the current and future international climate change regime, as well as domestic climate policies and programmes relating to mitigation and adaptation, including issues relating to carbon markets, ways to address adverse effects of trade on climate, as well as means to promote energy efficiency and the development and deployment of low-carbon and other climate-friendly technologies" and on environmental goods and services, " including environmental and green technologies and practices; renewable energy; energy efficiency; and water use, conservation and treatment " (article 24.12).

However, a study by Transport & Environment and ClientEarth (2016) expresses criticism towards this agreement, alleging that CETA would not reflect the ways in which Canada and the EU have evolved, in terms of climate and environmental policies, since the beginning of the negotiations eight years ago. They argue that while CETA is

praised for its progressivity, it fails to consider human and environmental concerns as a priority, and thus does not represent a "gold standard".

Brack et al. (2013) provide a useful overview of chapters and provisions included in FTAs relating to climate change and energy trade. They point out that many FTAs include provisions aiming at improving and strengthening laws and their enforcement, including climate change regulation, in either the cooperation chapter of the agreement or as a side agreement. FTAs also tend to make more and more specific references to multilateral environmental agreements (Brack et al., 2013; Jinnah and Morgera, 2013). This is for instance the case of article 287 of the EU-South Korea FTA, which refers to MEAs by stating that:

> "The Parties reaffirm their commitment to effectively implement in their laws and practice the multilateral environmental agreements to which they are parties including: (a) the Montreal Protocol on Substances that Deplete the Ozone Layer... (g) the Kyoto Protocol to the United Nations Framework Convention on Climate Change.".

Relatively similar provisions can be found in the FTAs concluded by Canada with Chile, Costa Rica, Colombia, et by the US with the Central America-Dominican Republic. Indeed, for instance, the US-CAFTA-DR FTA contains an article entitled "Relationship to environmental agreements" (article 17.12) which stipulates that:

> "1. The Parties recognize that multilateral environmental agreements to which they are all party play an important role in protecting the environment globally and domestically and that their respective implementation of these agreements is critical to achieving the environmental objectives of these agreements. The Parties further recognize that this Chapter and the ECA can contribute to realizing the goals of those agreements. Accordingly, the Parties shall continue to seek means to enhance the mutual supportiveness of multilateral environmental agreements to which they are all party and trade agreements to which they are all party.
>
> 2. The Parties may consult, as appropriate, with respect to ongoing negotiations in the WTO regarding multilateral environmental agreements.".

The Canada-Colombia FTA states in its environment chapter (chapter 17) that:

> "1. The Parties recognize that each Party has sovereign rights and responsibilities to conserve and protect its environment and affirm their environmental obligations under their domestic law, as well as their international obligations under multilateral environmental agreements to which they are party." (article 1701).

Beck et al. (2013) argue that such provisions can be interpreted as a reaffirmation of the parties' commitment to MEAs.

2.2 Technology transfer

Much has been written about the use of technology transfers to address climate change (see for instance Yang, 1999; Abbott, 2009; Yang, 2009; Karakosta et al., 2010; Brewer, 2011). The IPCC (2000) defines technology transfer as "a broad set of processes covering the flows of know-how, experience and equipment for mitigating and adapting to climate change amongst different stakeholders such as governments, private sector entities, financial institutions, NGOs and research/education institutions". Taking the 1996 Information Technology Agreement, which now counts 70 participants and has liberalised trade in IT goods, as a precedent, Mathews (2015) argues in favour of a trade agreement for clean technology goods and services. This would enable to promote green growth by progressively eliminate tariffs and trade barriers on green goods and services, therefore increasing efforts towards climate change mitigation. Indeed, the international community recognises that regarding GHG emissions, "it may be difficult to achieve emission reduction at a significant scale." (IPCC, 2007) in the absence of technology transfers.

Technology transfer enables countries, and more specifically developing countries receiving transfers from developed countries, to adapt more quickly to sustainable development and climate change related policies (Karakosta et al., 2010). Yang (1999) studies North-South technology transfers and concludes that moderate unilateral transfers will have beneficial impacts on developed and developing countries alike.

Technology transfer in FTAs

Hence the inclusion of technology transfer provisions in many FTAs, such as the EU-CARIFORUM FTA with its dedicated article on "Access to technology":

> "The EC Party and the Signatory CARIFORUM States shall endeavour to facilitate the transfer of technology on a commercial basis to commercial presences in the Signatory CARIFORUM States." (article 112).

Technology transfer is also closely intertwined with intellectual property rights (Abbott, 2009). For instance, the EU-CARIFORUM FTA includes provision to promote technology transfers and to prevent IPRs from restricting climate change mitigation initiatives, stating that:

> "The EC Party and the Signatory CARIFORUM States may require as part of the administrative requirements for a patent application concerning an invention which uses biological material as a necessary aspect of the invention, that the applicant identifies the sources of the biological material used by the applicant and described as part of the invention." (article 150).

Side agreements to FTAs can also include provisions for the promotion of clean-energy technologies, which are of paramount importance for climate change mitigation and adaptation (Brewer, 2011; Ockwell and Mallet, 2012). This is for example the case of the Canada-Peru Side Agreement on the Environment, whose preamble mentions the

"importance of the conservation, protection and enhancement of the environment in their territories and of the essential role of cooperation in these areas for achieving sustainable development for the well-being of present and future generations", while also setting the use and development of clean technologies in Annex I.

Many EU agreements pursue cooperation for clean technologies, namely through technology transfers as discussed earlier. Under article 50 on cooperation on environmental issues, the agreement between the EU and Central American countries calls for cooperation on inter alia climate change, natural resources, strengthening of carbon market mechanisms, and technology transfers. This article states that:

> "3. Cooperation shall in particular address: (a) the protection and sustainable management of natural resources and ecosystems, including forests and fisheries; (b) the fight against pollution of fresh and marine waters, air and soil, including through the sound management of waste, sewage waters, chemicals and other dangerous substances and materials; (c) global issues such as climate change, depletion of the ozone layer, desertification, deforestation, conservation of biodiversity and biosafety; (d) in this context, cooperation shall seek to facilitate joint initiatives in the area of climate change mitigation and adaptation to its adverse effects, including the strengthening of carbon market mechanisms."
>
> "4. Cooperation may involve measures such as: (a) promoting policy dialogue and exchange of best environmental practices, experiences, and capacity building, including institutional strengthening; (b) transfer and use of sustainable technology and know-how, including creation of incentives and mechanisms for innovation and environmental protection; (c) integrating environmental considerations into other policy areas, including land-use management; (d) promoting sustainable production and consumption patterns, including through the sustainable use of ecosystems, services and goods; (e) promoting environmental awareness and education as well as enhanced participation by civil society, in particular local communities, in environmental protection and sustainable development efforts; (f) encouraging and promoting regional cooperation in the field of environmental protection; (g) assisting in the implementation and enforcement of those multilateral environmental agreements that the Parties are part of; (h) strengthening environmental management, as well as monitoring and control systems.".

The EU-CARIFORUM agreement calls for similar measures to cooperate on projects related to environmentally friendly products and technologies, and to energy efficiency and renewable energy. In its Chapter 2 on innovation and intellectual property, it states that:

> "1. With a view to achieving sustainable development and in order to help maximise any positive and prevent any negative environmental impacts resulting from this Agreement, the Parties recognise the importance of fostering forms of innovation that benefit the environment in all sectors of their economy. Such

> forms of eco-innovation include energy efficiency and renewable sources of energy." (article 138, on cooperation on eco-innovation and renewable energy).

Other EU FTAs include commitments to collaborate on clean-energy initiatives, such as the agreements with South Africa, South Korea, Mexico, East and Southern Africa (ESA), the Development and Cooperation Agreement (TDCA). Such provisions are also found in agreements negotiated between developing countries, such as article 18.3 of the Chile-Colombia FTA, which points to the support of green markets. Guatemala and Taiwan agree to collaborate in the energy sector in article 20.13 of their FTA, with a view to protect the environment. Indeed, this article on cooperation in the energy sector states that:

> "1. The objective of the cooperation between the Parties shall be to develop their respective energy sectors, focusing on promoting the transfer of technology and information exchange regarding their respective legislations.
>
> 2. The cooperation in this sector will be carried out, fundamentally, by means of information exchange, training of human resources, technology transfer and joint technological, development and infrastructure projects agreed upon by the Parties, as well as the design of more efficient energy generation processes, the rational use of energy, support for the use of alternative and renewable energy sources that protect the environment, and promotion of recycling projects and waste management for energy use.
>
> 3. To promote cooperation with the institutions in charge of energy issues and formulation of energy policies." (article 20.13).

Technology transfer in the agricultural sector

An area in which trade and investment agreements can play an important role for both climate change mitigation and adaptation is agriculture. Indeed, the development of new technologies can benefit climate mitigation, while increased trade in climate-resistant crops and new technologies can considerably contribute to climate change adaptation (Gehring et al., 2013).

Certain FTAs include cooperation mechanisms for agricultural science and technology, which can be used to address climate change. This is for instance the case of the US-Chile FTA with its Annex 19.3 on environmental cooperation, which includes many provisions which can impact climate change, it stipulates that the parties agree to cooperate in:

> " (d) Sharing Private Sector Expertise. The Parties will seek to increase environmental stewardship by inviting enterprises of each Party to share their experiences in developing and implementing programs that have reduced pollution, including, where appropriate, demonstrating the financial benefits of these measures; (e) Improving Agricultural Practices. To help reduce pollution from agricultural practices in Chile, the Parties will adapt and implement a training program for Chilean farmers and other workers to promote appropriate

> handling of chemical pesticides and fertilizers, and to promote sustainable agriculture practices. The Parties will work jointly to modify existing training programs to fit Chilean agricultural practices and customs;".

This is also the case of the US-Morocco FTA, which includes a whole chapter on agriculture and phytosanitary measures (chapter 3). For instance, it includes cooperation through the creation of an agricultural trade forum:

> "The Parties affirm their desire to provide a forum, through the Joint Committee established pursuant to Article 19.2 or a subcommittee established thereunder, for addressing agricultural trade matters under this Section." (article 3.6).

The Mexico-Japan FTA contains an article entitled "Cooperation in the Field of Agriculture" (article 145) which states that:

> "1. The Parties, recognizing that the development in the field of agriculture in both Parties is of mutual interest and of economic and social importance for the rational and sustainable use of natural resources, shall cooperate in the field of agriculture. Such cooperation may include: (a) exchange of information and data regarding experience of rural development, know-how of financial assistance to *farmers and the agricultural cooperatives system*; (b) encouragement of dialogues and exchange of information between entities other than the Governments of the Parties concerning agriculture; and (c) encouragement of joint scientific and technological research in agriculture including new technologies.".

The Japan-Peru FTA is accompanied by an implementing agreement setting out that a potential area of cooperation is the sustainable development of small-scale agriculture. Article 28 of this implementing agreement stipulates that:

> "Pursuant to Article 201 of the Basic Agreement: (a) the areas of cooperation under this Article may include: (i) human resource development related to agricultural production activities; (ii) sustainable development of small-scale agriculture and rural areas; (iii) development and promotion of technologies related to agriculture; - (iv) improvement of productivity and quality in the field of agriculture; and (v) other areas as may be agreed by the Parties".

2.3 The case of the WTO's Environmental Goods Agreement and similar initiatives

The negotiation of the Environmental Goods Agreement (EGA) started in 2014 with the goal to promote trade in green goods and services. This free green market has the potential to be huge and to become the biggest market of the 21st century (Mathews, 2015). For instance, an estimation of the value of certified sustainable agricultural goods projects them to potentially rise from $40 billion in 2008 to $210 billion in 2020, and to $900 billion in 2050, thanks to new market opportunities (Bishop, 2012). The EGA would be a "plurilateral" agreement endorsed by the WTO and would become operative passed a certain "critical mass". It aims at going further than the reduction of rates on a list of environmental goods by the 2012 Asia Pacific Economic Cooperation (APEC)

given that countries negotiating the EGA have committed to global free trade in environmental goods (Sugathan, 2014).

The 2012 list of environmental goods given by the APEC includes clean energy technologies, such as solar power and wind turbines, air pollution technologies, water and waste treatment products, and environmental monitoring and assessment equipment (De Melo et al., 2014). However, the question remains as to how the environmental goods will be listed in the agreement: whether the agreement will create a living list of environmental goods, to which goods can be added, or whether the list contained in the ratified agreement will be final (Cosbey, 2015).

Cosbey (2015) analyses the implications and conditions for a living list, and derives recommendations for negotiators on how to accommodate such a list. Furthermore, some argue that in the current context of mega-regional agreements being negotiated and the debate around the position of the WTO as the appropriate forum for such negotiations, the negotiation of the EGA, which is mostly being led by emerging economies, represents a notable opportunity for them to shape the global agenda (De Melo et al., 2014). Nonetheless, others point out that developing countries refuse to join the negotiations, resulting in stalled negotiations, as they lack incentives and sufficient interests which could be derived from such an agreement (Wu, 2014).

Beyond the EGA, Dong and Whalley (2010) provide a useful analysis of the potential contribution of trade policies to the reduction of global climate emissions. Suggesting that the global trading system will increasingly be motivated by environmental concerns, they discuss carbon motivated trade policy arrangements and highlight three possible free trade area arrangements for carbon emission reduction. Accordingly, regional trade agreements provide an opportunity to reduce trade barriers on low carbon products, low carbon technologies, and products that are inputs to low carbon processes, so as to change the global composition of trade in a way that will reduce carbon emissions (Dong and Whalley, 2010).

Trade policies can also be implemented as a protective device against adverse competition from foreign producers through country emissions reduction initiatives. The last mechanism implies using trade policies as a sanctioning mechanism so as to encourage countries to take part in environmental agreements to reduce emissions (Dong and Whalley, 2010). Such initiatives are already included in some FTAs, such as the US-Chile FTA, which eliminates tariff and non-tarrif barriers on both environmental goods and services. Indeed, chapter 19 of this agreement outlines that:

> "The objectives of this Chapter are to contribute to the Parties' efforts to ensure that trade and environmental policies are mutually supportive and to collaboratively promote the optimal use of resources in accordance with the objective of sustainable development; and to strive to strengthen the links between the Parties' trade and environment policies and practices to further the trade expanding goals of this Agreement, including through promoting non-discriminatory measures, avoiding disguised barriers to trade, and eliminating

> trade distortions where the result can directly benefit both trade and the environment. ".

This is also the case of NAFTA, which contains dispute settlement rules for environmental services. Indeed, article 2005 of NAFTA states that:

> "3. In any dispute referred to in paragraph 1 where the responding Party claims that its action is subject to Article 104 (Relation to Environmental and Conservation Agreements) and requests in writing that the matter be considered under this Agreement, the complaining Party may, in respect of that matter, thereafter have recourse to dispute settlement procedures solely under this Agreement.".

Remarkably, however, some commentators argue that the proliferation of FTAs and the mega-regional trade agreements being negotiated potentially undermine efforts like the EGA, while their impact on environmental issues and on climate change mitigation more specifically has not been much researched (Mathews, 2015). Nevertheless, in spite of recently stalling negotiations, many argue that mega-regional trade agreements, and more specifically the Transatlantic Trade and Investment Partnership, constitute an opportunity for climate change mitigation (Holzer and Cottier, 2015) by setting new environmental and climate change related objectives which would make trade policy part of the "enabling environment" for emission reductions (Frey, 2015).

Regulatory cooperation on climate-friendly goods and services

Coordination of standards, including through mutual recognition systems, can also provide incentives for improving trade in climate friendly goods and services. This is for instance the case of the Nicaragua-Taiwan FTA, the EU-Albania association agreement, and the EU-Singapore FTA.

The EU-Singapore FTA contains a chapter on non-tariff barriers to trade and investment in renewable energy generation whose objective states the following:

> "In line with global efforts to reduce greenhouse gas emissions, the Parties share the objective of promoting, developing and increasing the generation of energy from renewable and sustainable non-fossil sources, particularly through facilitating trade and investment. To this effect, the Parties shall cooperate towards removing or reducing tariffs as well as non-tariff barriers and fostering regulatory convergence with or towards regional and international standards." (article 7.1).

Some FTAs, such as the EU-Central America Association Agreement, also address issues related to climate change adaptation and disaster risk reduction in addition to provisions on climate change mitigation. Chapter 51 of this FTA is about managing natural disasters and states that:

"1. The Parties agree that co-operation in this field shall aim to reduce the vulnerability of the Central American region to natural disasters through supporting national efforts, as well as the regional framework for the reduction of vulnerability and response to natural disasters, strengthening regional research, disseminating best practices, drawing from lessons learnt in Disaster Risk Reduction, preparedness, planning, monitoring, prevention, mitigation, response and rehabilitation. Cooperation shall also support efforts towards the harmonisation of the legal framework according to the international standards and the improvement of institutional coordination and government support.

2. The Parties shall encourage strategies that reduce social and environmental vulnerability and strengthen capacities of local communities and institutions for disaster risk reduction.

3. The Parties shall place particular attention on improving disaster risk reduction in all their policies, including territorial management, rehabilitation and reconstruction.".

2.4 Climate Finance

Endeavours to address climate change and environmental issues require heightened financial efforts, which are embodied by the increasingly large area covered by climate finance. In a new international context, scholars point to the need to end "business as usual" practices and the potential of the mega-regional FTAs currently under negotiation. This new context has led to the emergence of market-based incentives to gear countries towards enhanced efforts to reduce their negative environmental impact. This includes natural capital valuation and payments of ecosystem services, initiatives such as REDD and REDD+, and increased commitments to international environmental agreements such as the Kyoto Protocol.

As climate finance is divided into two categories, adaptation and mitigation, the allocation of resources differs between projects and efforts. Sources of climate finance can for instance take the form of the Green Climate Fund (GCF), cooperation clauses in FTAs, and public private partnerships aimed at fostering innovation. Another important source of climate finance is the allocation of subsidies, which can for instance be aimed at reducing carbon leakage. As a result, provisions encouraging such subsidies, or leaving room for interpretation in that sense, can increasingly be found in FTAs.

Patterns of climate finance

The transformation of the global economic landscape into a low-carbon and climate-resilient economy requires increased amounts of climate finance invested around the world, which have indeed known an 18 per cent increase in 2014 (Buchner et al., 2015). Studies show that more than half of global greenhouse gas emissions come from developing countries (OECD/IEA, 2013), and it is expected that they will generate almost 70 per cent of all global emissions by 2035 (Oliver et al., 2016). It therefore

appears that in order to be efficient, efforts for GHG reduction and climate change mitigation ought to be undertaken at a global level (Brunnée and Streck, 2013).

Indeed, Buchner et al., (2015) find that the largest destination of climate flows is the East Asia and Pacific region, with China accounting for 22 per cent of total finance, followed by Western Europe. They also note that significant increases in climate finance investments have been experienced by the Middle East, North Africa, and South Asia. Some scholars find that with the exception of the EU, not many countries or regions are adopting or following policies in order to reach the target of limiting the global increase in temperature to 2°C (Markandya et al., 2015), in spite of the many scientific sources providing reliable and international accepted evidence of the necessity to reduce global warming (International Institute for Sustainable Development and United Nations Environment Programme, 2014). An explanation is that while the global costs of meeting such a target are relatively small compared to the long-term benefits they will incur, they are relatively high in the short term, and will postpone the damages (Nordhaus, 2007; Stern, 2007; Tavoni and Tol, 2010). Indeed, such decisions are taken by politicians keeping in mind immediate costs that are constrained by budgets and impacts on living standards (Markandya et al., 2015).

Another issue regarding climate finance is that international negotiations make the distinction between two types of policy to address climate change: mitigation and adaptation (Locatelli et al., 2016), therefore leading to differentiated financial resources, both nationally and globally, allocated to each type of policy (Illman et al., 2013). While mitigation will bring long-term benefits on a global scale, adaptation is targeted towards more local benefits in both the short and the long term (Swart and Raes, 2007).

Mitigation and adaptation can be mutually supportive, but they can also negatively impact one another (Denton and Wilbanks, 2014) and lead to "maladaptation" (Barnett and O'Neill, 2010), therefore considerably reducing the efficiency of climate funding (Locatelli et al., 2016). As current climate finance flows are estimated to mostly go towards mitigation – 94 per cent of global funding in 2012 (Abadie et al., 2013) – while being insufficient to meet investment needs to reach climate change targets (Buchner et al., 2015), it is expected that better integration and synergies between mitigation and adaptation could fill the existing gaps (Klein et al., 2005; Locatelli et al., 2016). In that respect, many argue that the GCF, whose purpose is to assist developing countries with regards to climate mitigation and adaptation measures, has the potential to foster positive outcomes for both developing and developed countries (Markandya et al., 2015; Mathews, 2015). The GCF would indeed provide financial resources for both climate change mitigation and adaptation projects (Markandya et al., 2015).

Some argue that trade policies have not yet had a substantial impact on climate change issues, highlighting the need to bring an end to "business as usual" (Mathews, 2015). This is in assonance with the philosophy of the 2015 Paris Agreement, which makes no reference to international trade, proving that unilateral commitments made by countries to reduce carbon emissions are not necessarily linked to changes in trade or investment regimes.

2.4.1 Natural capital valuation and ecosystem services

At the heart of the debate on climate finance policies lie the difficulties associated with putting a price on nature and natural resources. This has resulted in a degradation of ecosystems, ecosystem services, and biodiversity (Jones-Walters and Mulder, 2009). While the depletion of natural resources and of the environment is strongly felt by populations who rely on activities such as agriculture, it often remains rather unnoticed at national and international decision-making levels as the value of natural capital is absent from decisions, indicators, accounting systems and prices in the market (UNEP, 2012). Pascual et al. (2010) address the technical and theoretical difficulties associated with putting a monetary value on natural capital, and emphasise the urgent need to do so in spite of all the complications it entails. Indeed, effective earth management requires policy makers and institutions to respond to natural constraints while taking into account the limitations of such institutions (Daily et al., 1996).

The concept of ecosystem services was given legitimacy by the Millenium Ecosystem Assessment launched in 2005 (TEEB, 2008). Ecosystem services can be defined as "the conditions and processes through which ecosystems, and the species that make them up, sustain and fulfill human life." (Daily, 1997). Subsequently, the EU Commission launched a global study entitled "The Economics of Ecosystems and Biodiversity" (TEEB, 2008) (Bishop, 2008), which seeks to put a value on the loss of biodiversity and depletion of ecosystems, compared to the costs of sustainable practices to protect the environment. In order to do so, a method of valuation has been developed: the Ecosystem Services Valuation (ESV) (Costanza et al., 2014).

All this led to the emergence of the market-based approach of payments for ecosystem services (PES) (Daily et al., 2009; Redford and Adams, 2009; Milder et al., 2010). For instance, in the current decade, China has invested over US$102.6 billion in policies related to ecosystem services (Liu et al., 2008).

PES have the potential to considerably contribute to poverty alleviation at a global level, by decreasing poverty levels of low-income households in developing countries (Milder et al., 2010).

Legal and economic features of PES-like schemes

PES-like schemes can take many different forms and, besides certain pillars in their legal architecture, such as the buyer-seller relationship, the resource conservation conditionality, and the existence of well-defined environmental services and property rights, their nature of market-based incentives is faced with the constant challenge of risking to create perverse incentives, including resource degradation aimed at capturing PES-related rents, or beggar-thy-neighbor behaviors in local communities.

Particularly in cases where regulation enforcement is weak, public PES work exactly like subsidies, and are exposed to the same critical considerations as any other subsidy: the potential to create market distortions that end up rewarding non-compliant behaviors.

This is why the institutional and social context proves to be crucial in determining the success of PES schemes.

Education programmes, for instance, fall squarely within this concept of "institutional and social context". The case of agriculture-related PES is a prominent example. In many such instances, the economic value of environmental services linked to agriculture activities is simply not visible, leading to situations where farmers, unwillingly, decrease the value of the assets that they already own. It then becomes clear that the definition of property rights and certainty in law enforcement do not suffice, and a more holistic approach to regulation needs to be put in place to create an enabling environment for PES.

In economic terms, a typical argument that is advanced in literature is that what is crucial in PES-related investment decisions on the side of smallholders is their opportunity cost. In simpler terms, these are the cost of the very choice to enter into PES-like contracts rather than exploiting the environmental service in question through other means. In reach countries this is, with some prominent exceptions, not really an issue, as the regulator can compensate sellers for potential economic losses linked to their decisions of implementing PES schemes. But in poorer countries and marginalized realities, the trade-off between reaping higher and more immediate economic profits or rather investing in long-term conservation plans under a PES scheme does exist, and needs to be addressed at the time when market conditions for the sustainability of PES schemes are being studied and explored.

All in all, as discussed in the following sub-sections, PES schemes can be a valuable tool of environmental stewardship and social protection, but their effectiveness in allowing benefits to *de facto* right holders still depends on the specific context in which they operate. The use of PES schemes should be weighed against the availability of valuable alternatives that, for instance, do not imply the same transaction costs while providing the same or higher level of resource conservation or restoration. Such alternatives can include, for instance, command and control policies and sanctions, in cases where law enforcement is effective, or the management of environmental services by local communities according to their traditional knowledge.

REDD and REDD+

Vincent (2012) shows that in terms of PES, a trans-boundary system will potentially have a much greater impact on the global economy than smaller-scale programmes. This is the goal of REDD and REDD+. These mechanisms launched by the UN under the UNFCC aim at Reducing emissions from deforestation and forest degradation in developing countries (REDD, launched in 2008), while REDD+ goes beyond deforestation and degradation by including conservation, sustainable management of forests and enhancement of forest carbon stocks, according to the UN's REDD website.

Trade agreements can support REDD and REDD+ by including a commitment to these initiatives. Vincent (2012) suggests that REDD could become part of a mandatory global programme to address climate change. Regarding the implementation and efficiency of

REDD, Fortman et al. (2014) address the issue of contracting, as literature has so far neglected the importance of properly designed contracts for transactions that involve complex goods, such as levels of carbon storage. Market-based incentives can also bring a solution to the issue of free-riding mentioned earlier. However, Barrett and Stavins (2003) show that while being more cost-effective, market-based instruments such a tradable permit regimes, are not as likely as domestic policies to promote compliance and participation.

Payments for ecosystem services in FTAs

With regard to PES in the agricultural sector, Milder et al. (2010) point out that international trade agreements encourage countries to revise their agricultural policies by introducing programmes with agri-environmental payments. These issues are mostly reflected in FTAs through reference to the Kyoto Protocol. Indeed, several FTAs include plans to cooperate for the adoption and use of climate finance instruments, including commitments to work towards the implementation of the Clean Development Mechanism (CDM) of the Kyoto Protocol, or REDD+ to reduce emissions from deforestation in developing countries, and commitments to develop domestic carbon markets (Gehring et al., 2013).

An example of this is the Mexico-Japan FTA, whose article 147 contains a provision targeted at supporting capacity and institutional building for the implementation of the CDM:

> "Article 147 - Cooperation in the Field of Environment 1. The Parties, recognising the need for environmental preservation and improvement to promote sound and sustainable development, shall cooperate in the field of environment. Cooperative activities under this Article may include: …(b) promotion of capacity and institutional building to foster activities related with the Clean Development Mechanism under the Kyoto Protocol to the *United Nations Framework Convention on Climate Change*, as may be amended, by means of workshops and dispatch of experts, and exploration of appropriate ways to encourage the implementation of the Clean Development Mechanism projects…".

The EU-Colombia-Peru Agreement also contains commitments to encourage cooperation mechanisms, stating in its article 271 entitled "Trade Favouring Sustainable Development" that:

> "The Parties recognise that flexible, voluntary, and incentive-based mechanisms can contribute to coherence between trade practices and the objectives of sustainable development. In this regard, and in accordance with its respective laws and policies, each Party will encourage the development and use of such mechanisms.".

Article 275 of the EU-Peru FTA entitled "Climate change" also makes a reference to the Kyoto Protocol. Furthermore, article 286 of this same agreement, entitled "Cooperation on Trade and Sustainable Development" promotes cooperation on " (d) activities related

to the adaptation to, and mitigation of, climate change, including activities related to the reduction of emissions from deforestation and forest degradation ("REDD")".

2.4.2 Subsidies

Another way through which government intervention can encourage efforts to reduce GHG emissions is through subsidies (Low et al., 2011; Espa and Rolland 2015). Studies also show the significant gains that could be derived from a reduction of fossil-fuel subsidies through liberalisation (Ellis, 2010; Burniaux and Chateau, 2011), and that there is still a long road ahead as there are only a few FTAs which specifically seek to reduce subsidies for unsustainable energy sources (Asmelash, 2015; Gehring et al., 2013).

Subsidies are generally performance-oriented and used as a "carrot" by governments to reduce GHG emissions, but they can also aim at saving energy in a specific sector or encouraging efforts towards energy efficient investments (Low et al., 2011). Subsidies can also be introduced in compensation for companies whose competitiveness deteriorates as a result of climate policies (Zhang, 1998; Assunçao, 2002; Van Hasselt and Biermann, 2007). Another possibility for governments is to provide indirect subsidies to some producers by softening the regulatory impact of an emission trading scheme for sectors exposed to carbon leakage (Low et al., 2011).

For instance, article 50 of the EU-Central America FTA states that "…in this context, cooperation shall seek to facilitate joint initiatives in the area of climate change mitigation and adaptation to its adverse effects, including the strengthening of carbon market mechanisms."

Many elements are to be taken into account in the design of climate subsidies, such as the necessity to promote gender equality and encourage women's participation in climate finance (Schalatek and Böll, 2011; Schalatek and Nakhooda, 2014; Williams, 2016). Indeed, as women will be the ones bearing the burden of coping with declining access to resources (Schalatek, 2009), discrimination in this context can lead to misallocation of resources for climate funding and therefore have a negative impact on access to housing and sanitary resources (Williams, 2016). Some FTAs are therefore starting to include provisions that include potential subsidies for improvements in climate policy, such as clean-energy technologies or other sources of energy (Gehring et al., 2013). For example, the EU-Central America Association Agreement leaves room for interpretation for the establishment of a green subsidy: article 50, on environmental cooperation, foresees the possibility of "transfer and use of sustainable technology and know-how, including creation of incentives and mechanisms for innovation and environmental protection".

Gehring et al., (2013) report that it is rare for FTAs to explicitly include commitments to support measures to promote collaboration in terms of sustainable energy through grants and subsidies. This is notably the case of the 2007 Taiwan – El Salvador and

Honduras FTA, which contains a full article about cooperation on energy related matters (article 17.09), which states that:

> "1. The objective of the cooperation between the Parties will be the development of their corresponding energy sectors, focusing on the promotion of technology transfer and sectorial regulation.
>
> 2. The cooperation in this field will be carried out, mainly, by means of exchanges of information, training of human resources, technology transfers, and joint projects for technological development and infrastructure projects agreed upon by the Parties; as well as the design of more efficient energy generation processes, the rational use of energy, support for the use of alternative and renewable energies that protect the environment, and the promotion of recycling projects and waste treatment for energy use.
>
> 3. Grant cooperation to the institutions in charge of energy issues and formulation of energy policies.".

Gehring et al. (2013) argue that while such provisions on green subsidies are still rather scarce in FTAs, there is room for optimism as there are signs of willingness to negotiate in that sense. Espa and Rolland (2015) point out the potential of mega-regional to promote new approaches to energy subsidies, as the TTIP negotiations for instance have notably included energy issues.

3. Norms supporting SMEs

3.1 Why supporting SMEs through FTAs?

The increasing number of SME-related provisions in FTAs takes its roots in the belief that public intervention to support SMEs will help overcome a number of market failures which have an adverse impact on SMEs as a result of increased trade liberalisation (Atherton et al., 2002). This for example includes access to external finance, in which asymmetries of information in the credit market lead to adverse selection, which in turn leads SMEs to struggle to find sources of financing (Beck and Demirguc-Kunt, 2006; Kuntchevet et al., 2013; Van der Schans, 2012).

In addition, smaller firms have a more limited capacity to comprehend and adapt to innovations in the market due to lack of public information available to them (Atherton et al, 2002; Ezell and Atkinson, 2011). Moreover, in the context of increased international trade, SMEs are not as well-equipped as larger firms to face the ensuing competition (Julien et al., 1994), which is why SMEs-support programmes can play an important role, especially in countries lacking an adequate competition policy framework (WTO, 2016b).

Compared to larger firms, SMEs do not benefit from economies of scale as much (Ciuriak and Melin, 2014), and are more affected by regulatory costs as they only have a limited

ability, in terms of costs and technical capacities such as in-house skills (Wignaraja, 2013), to comply with the complicated rules of origin requirements contained in FTAs.

SMEs therefore face the danger of being excluded from international trade (Bhagwati, 1995 and 2008; Ciuriak, 2015), as they are also deprived of the benefit of "learning by exporting" thanks to knowledge spillovers (Ciuriak, 2013). Indeed, lack of capacities leads to SMEs not understanding the provisions contained in an FTA and which will consequently not make use of it to trade with new partners.

Arudchelvan and Wingnaraja (2015) show that for many SMEs in Malaysia, lack of information is the most significant barrier to trade. Martens et al. (2016) highlight the need for a better understanding of FTAs by civil society, which includes SMEs. Spence et al. (2008) also point out that SMEs may not have the capacity and resources to comply with sustainable development objectives as they are outlined in FTAs. In the context of the Japan-Switzerland FTA, Schaub (2012) submits that a key challenge for policy makers is to increase the use of FTAs by SMEs. In this connection, it is worth reporting that various scholars fear that the proliferation of FTAs in East Asia create a "noodle bowl" syndrome, which will negatively impact SMEs (see for example Hiratsuka et al., 2008; Baldwin, 2008; Kawai and Wignaraja, 2009a; Kawai and Wignaraja, 2009b).

Moreover, many scholars highlight the important role of SMEs as a large and prolific source of job creation (see e.g. Lim and Kimura, 2009; Deijl et al., 2013), which can be further enhanced by adequate enabling policies, and therefore boost economic growth by reducing unemployment and underemployment. Indeed, in the case of South-East Asia for example, SMEs account for more than 90 per cent of private-sector firms (Asasen et al., 2003), and provide employment to 40 to 90 per cent of the workforce depending on the country (Lim and Kimura 2009). The WTO (2016a and 2016b) therefore highlights the need for international cooperation on SMEs in the context of free trade agreements.

3.2 General characteristics of SMEs-related provisions in FTAs

Except for a recent and forthcoming study which examines the approaches adopted by the EU and the US regarding SME-related provisions in their RTAs (Cernat and Lodrant, 2016), there is a gap in the literature regarding the features of SME provisions in FTAs. The WTO, in its World Trade Report 2016, tries to fill this gap by conducting an in-depth analysis and comparison of SME-related provisions contained in the 270 RTAs in force that have been notified to the WTO since 1957 (until May 2016).

SME-related provisions in this study are defined as "any provisions mentioning explicitly micro, small and medium enterprises (MSMEs)" (WTO, 2016b). SME-related provisions have evolved alongside the proliferation of FTAs over the last 25 years (Whalley, 1998; Crawford and Fiorentino, 2005; WTO, 2011) both in terms of range, number, and scope. This is characterised by a steady increase since the end of the 1990s, with half of the total FTAs notified to the WTO until May 2016 containing at least one

explicit provisions on SMEs, which are also included in 80 per cent of all the FTAs that have entered in force between 2011 and 2015 (WTO, 2016b).

The WTO divides the evolution of SME-related provisions in FTAs into three periods. The first one is characterised by the scarcity of FTAs mentioning SMEs, with only two FTAs containing SME-related provisions. This is the case of the South Pacific Regional Trade and Economic Cooperation Agreement (SPARTECA), signed in 1980 between Australia and New Zealand, which mentions in its article on economic, commercial, and technical cooperation (article VIII) that measures and programmes for development:

> "…may include those which contribute to (a) investment in industries, including agro-based industries, with particular emphasis on those of a smaller or medium size" (article VIII, paragraph 6).

The other FTA is the Cartagena Agreement signed in 1969, which establishes the Andean Community, which stipulates in its article 67 that:

> "In applying the modes of industrial integration, the Commission and the General Secretariat shall bear in mind the situation and requirements of small and medium-sized industry".

The second period ranges from 1990 to 1999, and is characterised by a slight but limited increase in the number of SME-related provisions in FTAs, with the NAFTA (Dana and Etemad, 1995) and the COMESA being notable exceptions.

The last period starts in 2000, with a sharp increase of SME-related provisions, which is in line with the increase in FTAs being negotiated. The WTO (2016b) highlights that out of the 270 RTAs surveyed which contain SME-related provisions, 65 per cent were negotiated between developed and developing countries, and 31 per cent were negotiated between developing countries, while only six RTAs negotiated between developed countries include such provisions.

The number and detail of these provisions has sharply increased in this period, with the Japan-Thailand economic partnership agreement containing the highest number of SME-related provisions (WTO, 2016b), which is followed by the RTAs between Japan and Malaysia, the Philippines, Singapore, and Viet Nam. The Japan-Thailand FTA contains an article entitled "Assistance for Acquisition of Intellectual Property Rights for Small and Medium Enterprises", which reads as follows:

> "Each Party shall, in accordance with its laws and regulations, take appropriate measures to provide assistance to small and medium enterprises for acquisition of intellectual property rights, which may include reduction of official fees." (article 142).

In addition, Chapter 13 on cooperation mentions SMEs as a field of cooperation between the two parties (article 153).

SME-related provisions can be found under different chapters of FTAs, including chapters on intellectual property and cooperation and cooperation on SMEs. The FTA between Colombia and the Northern Triangle (El Salvador, Guatemala, and Honduras), contains SME-related provisions in its chapters on e-commerce, cooperation, administration of the treaty and annexes to the chapters on government procurement and cooperation (WTO, 2016b).

Other FTAs notably include SME-related provisions, such as the EU-Central American association agreement, the EU FTAs with South Africa and Cameroon, and FTAs concluded by China. For instance, the FTA between the EU and SADC states in its article outlining cooperation priorities that:

> "3. Cooperation in supply-side competitiveness shall aim at increasing the competitiveness of the SADC EPA States and remove supply side constraints at national, institutional and, in particular, at company level. This cooperation includes, amongst others, fields such as production, technology development and innovation, marketing, financing, distribution, transport, diversification of economic base, as well as development of the private sector, improvement of the trade and business environment and support to small and medium enterprises in the fields of agriculture, fisheries, industry and services." (article 13).

The China-ASEAN FTA states in its article 7 entitled "Other Areas Of Economic Co-operation" that:

> "2. Co-operation shall be extended to other areas, including, but not limited to, banking, finance, tourism, industrial co-operation, transport, telecommunications, intellectual property rights, small and medium enterprises (SMEs), environment, bio-technology, fishery, forestry and forestry products, mining, energy and sub-regional development.".

All in all, SME-related provisions vary in terms of structure, location in the agreement, terminology, form, and areas in which they are included. In terms of language, the WTO (2016b) finds over 50 expressions used in RTAs to refer to SMEs, this includes farmers, artisans, start-up, micro and craft enterprises, individual contractors. They also distinguish eight main shapes that SME-related provisions can take. The most common is cooperation or promotion in the context of SMEs, followed by exemptions and flexibilities about the consistency of supporting programmes with the obligations outlined by the FTA. Other forms of SME-related provisions, which are only incorporated in a limited number of FTAs, include recognition, affirmation and agreement, institutional arrangements such as implementation committees, mandatory commitment to support SMEs, recommendations and best-endeavor, institutional review of the impact of the FTA on SMEs (WTO, 2016b).

Furthermore, the WTO (2016b) finds that SME-related provisions are included in different areas of the FTA, which are (in descending order): cooperation on SMEs, services and investment, government procurement, e-commerce, trade facilitation,

intellectual property, and transparency. We will focus on the areas of cooperation and access to finance, and e-commerce after having described the other areas.

Services and investment

More and more FTAs include provisions on services and investment, opening the door for small and medium-sized service providers to new market accesses as an FTA eliminates restrictions in some sectors.

SME-related provisions under services commitments are often subject to limitations or reservations, and they are frequently especially limited to financial services (WTO, 2016b). This is for example the case of the FTA between Canada and the Republic of Korea: Annex III of this agreement details measures that are "not inconsistent with Article 10.4 (Market Access for Financial Institutions)", which include that "banks and mutual savings banks in Korea are required to extend loans to small- or medium-sized companies." (Appendix III-A).

Reservation measures related to SMEs often include sectors such as insurance, fishing and mining, and are generally aimed at safeguarding and promoting local SMEs. For example, the US-Chile FTA limits the access to small-scale fishing activities to Chilean or foreign national persons with permanent residency in Chile. Annex I of this FTA includes a provision stating that:

> "Access to small-scale fishing activities (pesca artesanal) shall be subject to registration in the Registro de Pesca Artesanal. Registration for small-scale fishing (pesca artesanal) is only granted to Chilean natural persons and foreign natural persons with permanent residency, or a Chilean juridical person constituted by the aforementioned persons.".

Similarly, the US-Morocco FTA reserves certain types of mining activities in certain regions to small-scale miners from that region. Indeed, Annex I of this agreement mentions that "The mining of lead, zinc, and barite ores in the Tafilalet and Figuig region is reserved for small-scale miners from that region.".

With regard to investment, the WTO (2016b) finds that out of the 136 FTAs containing at least one provision on SMEs, 33 include provisions related to investment for SMEs or SMEs providing services. They give the example of the EFTA-Egypt FTA, which includes a provision mentioning the development of mechanisms for joint investments with SMEs in particular:

> "1. The Parties recognize the importance of promoting cross-border investment and technology flows as a means for achieving economic growth and development. Cooperation in this respect may include: […](d) the development of mechanisms for joint investments, in particular with small and medium enterprises." (Article 25 on investment promotion),

The EU-CARIFORUM FTA also contains an article encouraging parties to cooperate to support SMEs in the tourism sector: "The EC Party and the Signatory CARIFORUM States shall endeavour to facilitate the participation of small- and medium sized enterprises in the tourism services sector." (article 113).

Public procurement, transparency and due process

A growing number of provisions related to government procurement and SMEs appear in FTAs. Indeed, granting access and participation of SMEs in public procurement markets has been recognised by many governments as a "crucial element in fostering sustainable economic development and prosperity worldwide" (WTO, 2016b). Generally speaking, FTAs facilitate the proliferation of procurement reforms and common rules such as the WTO's Agreement on Government Procurement (GPA) (Anderson et al., 2015). The WTO's 2016 World Trade Report finds that such provisions specifically related to SMEs can be found in 43 FTAs. They can aim at facilitating access to government procurement markets, as it is for example the case of the Korea-Peru FTA.

Some FTAs also establish an institutional body to facilitate the involvement of SME's in procurement markets. This is for example the case of NAFTA and the Colombia-Mexico FTA. Colombia is part of FTAs containing measures to facilitate technology transfer and subcontracting.

An increasing number of FTAs includes provisions that aim at enhancing transparency and due process in policy making. In its agreements with Georgia, Korea, and Ukraine, the EU includes a specific provision on SMEs in the transparency chapter, which stipulates that the parties shall provide an efficient and predictable regulatory environment for economic actors, especially small ones, including SMEs (WTO, 2016b).

Upcoming FTAs also include SME-related provisions (Monteiro, 2016b). This is for instance the case of the Additional Protocol to the Pacific Alliance Framework Agreement between Chile, Colombia, Mexico and Peru, which contains, in its government procurement chapter, an article regarding the promotion of SMEs. The TPP also includes provisions to promote SMEs in its procurement chapter. This is embodied in Article 15.21, entitled "Facilitation of Participation by SMEs", which states that:

> "1. The Parties recognise the important contribution that SMEs can make to economic growth and employment and the importance of facilitating the participation of SMEs in government procurement.
>
> 2. If a Party maintains a measure that provides preferential treatment for SMEs, the Party shall ensure that the measure, including the criteria for eligibility, is transparent.".

Moreover, the TPP contains a whole chapter on SMEs, chapter 24, which includes a provision on information sharing, a provision establishing a Committee on SMEs, and a carve out from the general dispute settlement mechanism of the Agreement (Article

24.3). CETA also includes SME-related provisions, for instance on the resolution of disputes between investors and states, facilitating the process for SMEs by stating that:

> "The CETA Joint Committee shall consider supplemental rules aimed at reducing the financial burden on claimants who are natural persons or small and medium-sized enterprises. Such supplemental rules may, in particular, take into account the financial resources of such claimants and the amount of compensation sought." (article 8.39.6).

SMEs are also mentioned in the government procurement chapter of the agreement (chapter 19) stating that the Committee on Government Procurement shall meet to:

> " (d) consider the promotion of coordinated activities to facilitate access for suppliers to procurement opportunities in the territory of each Party. These activities may include information sessions, in particular with a view to improving electronic access to publicly-available information on each Party's procurement regime, and initiatives to facilitate access for small and medium sized enterprises." (article19.9.2).

Trade facilitation

Trade facilitation measures are increasingly included in FTAs. While their effect on firms is heterogeneous (Fontagné et al.; 2016), SMEs can benefit from trade facilitation, for example in the reduction of transport costs, which can potentially make them more competitive in international markets (WTO, 2016b). More specifically, the WTO (2016b) finds that 18 RTAs include trade facilitation provisions that concern SMEs. They most commonly take the form of a recommendation to take into account SMEs' interests. This is for example the case of 8 agreements negotiated by the EFTA states which require parties (which include Canada, Hong Kong, Serbia and Ukraine), to consult with their business communities and to pay particular intention to the interests of SMEs.

For instance, Annex I on trade facilitation of the EFTA-Canada agreement states that:

> "The Parties shall consult their respective business communities on their needs with regard to the development and implementation of trade facilitation measures, noting that particular attention should be given to the interests of small and medium sized enterprises. " (article 6).

These provisions can also refer to cooperation, as is the case with the Colombia-North triangle FTA, in which parties agree to develop information exchange and internship programmes for officials and technicians in the field of trade facilitation as a part of the cooperation activities on SMEs.

3.3 Access to trade finance for SMEs

The trade-led economic growth of SMEs is considerably hampered by a number of issues, including difficulties in accessing finance. Surveys show that SMEs are

particularly credit-constrained, therefore prevented from participating in global value chains or using FTAs to develop their activity internationally. FTAs attempt to respond to these issues by including provisions to collaborate on SMEs and improve their access to finance and inclusion in international markets. Moreover, FTAs also represent an opportunity to develop and promote new types of services, such as cooperatives and microfinance institutions, which can contribute to the financial inclusion of SMEs.

The 2008-2009 financial crisis has left significant market gaps for trade finance, meaning that smaller companies, especially in poorer countries, struggle to obtain affordable finance, hence the necessity for policy intervention (Auboin, 2016). Finance is often described as the "lubricant of trade" (Auboin et al., 2016; WTO, 2016), hence the necessity to improve SME's access to finance if they are to be part of the global trading market. Indeed, while 80 per cent of global trade is financed by credit or credit insurance, the distribution is widely heterogeneous, often constituting a barrier to trade for SMEs (WTO, 2016).

The Asian Development Bank (2014) shows in a study that SMEs are the most credit constrained, with around half of their financing requests being rejected, compared to 7 per cent in the case of transnational corporations. This study shows that trade finance gaps in Asia appear to be widened by lack of information and inside knowledge regarding the types of finance available.

The Dutch government-CBI (2013) conducted a survey on three thousand SMEs in 52 countries, in which respondents highlight the problematic lack of access to trade finance (Centre for the Promotion of Imports from developing countries, 2013). This is further emphasised by a survey by the International Chamber of Commerce (2014), in which 41 per cent of 298 banks consulted from 127 countries confirm the existence of a shortfall in the global supply of trade finance, which mostly leaves out SMEs and Africa.

The increase of trade linkages between countries gives SMEs the opportunity to enter global trade, mostly through supply chains. However, as supply chains expand throughout the world, SMEs struggle to obtain access to finance, which is rendered even more difficult by the limited capacities of the local financial sector in developing countries to support SMEs (Auboin et al., 2016). This is confirmed by a WTO study (2013), which concludes that this lack of access to trade finance is one of the primary obstacles which prevents low income countries from participating in global value chains (Auboin, 2016).

In their study of 234 firms in Malaysia, Arudchelvan and Wignaraja (2015) show that participation in GVCs is positively correlated to the size of the firm. They categorise the firms in their samples as small, large, or giant, and find that 86 per cent of the latter are engaged in GVCs, while this is the case for only 20 per cent of SMEs. In addition, they also find that the use of FTAs by a firm is also positively correlated to size. They draw conclusions regarding the characteristics of SMEs which are engaged in production networks and use FTAs, and observe that these SMEs are generally much larger than other SMEs; they are more likely to be of foreign ownership (foreign-owned SMEs are more likely to participate in GVC but no evidence points towards an increased use of

FTAs); they have better technological capabilities (technology spending, ISO certification, licenses); and they have a greater outward orientation. Moreover, SMEs in the automobile sector are also more likely to use FTAs, in contrast with firms in the electronics sector (but this can be explained by the existence of Malaysian free trade zones in the electronics sector). This study therefore highlights the need for a sound business environment that supports SMEs.

Lim and Kimura (2009) further show the need to promote the development of SMEs in the ASEAN region, including their access to financial resources, as a way to reduce income gaps, increase employment, build resilience to external economic fluctuations, and bring a shift towards a more sustainable type of development. McClanahan et al. (2014) provide a guidebook for countries to take advantage of FTAs of which they are party within the ASEAN, including the ASEAN Trade in Goods Agreement, the ASEAN-China Free Trade Area, the ASEAN-Japan Comprehensive Economic Partnership, the ASEAN-Republic of Korea Free Trade Agreement, the ASEAN-Australia-New Zealand Free Trade Agreement, and the ASEAN-India Free Trade Area.

FTAs can contribute to the promotion of SMEs by including provisions to increase and improve SMEs' access to finance. Indeed, collective action can help address the inefficiencies, coordination failures, or barriers to market access so as to increase the ability of SMEs to compete in the market and therefore increase their income (Markelova et al., 2009). By enhancing SME's participation in the global trade market, competition policies allow them to gain in terms of income capacity compared to larger enterprises with more market power (UNCTAD, 2016).

Aid for Trade provisions

In FTAs, SME-related provisions are most commonly found in provisions regarding cooperation on SMEs (WTO, 2016b). These provisions are most commonly Aid for Trade (AfT) provisions, by which developing countries ought to assist their trading partners to access trade as a lever for economic growth and poverty alleviation (see for example Nielson, 2006; Stiglitz and Charlton, 2006; Ismail, 2007; Suwa-Eisenmann and Verdier, 2007; Gamberoni and Newfarmer, 2009).

AfT provisions are characterised by their heterogeneity. While some of them address issues that are not necessarily restricted to SMEs, others specifically target SMEs. The promotion and facilitation of investments between SMEs, access to finance, and the development of financial intermediaries are often at the core of cooperation provisions on SMEs (WTO, 2016).

The EU-Central America association agreement is one of the FTAs with the most detailed provisions of AfT cooperation relative to SMEs. For instance, article 70, entitled "Micro, Small and Medium Enterprises" states that:

> "The Parties agree to promote the competitiveness and insertion of rural and urban MSMEs and their representative organisations, in the international markets, acknowledging their contribution to social cohesion through poverty

> reduction and job creation, through the provision of non-financial services, training and technical assistance".

Provisions related to cooperation on SMEs are also found in other parts of the agreement, and notably include cooperation and technical assistance in the context of employment, social protection, services, technical barriers to trade, artisanal and organic goods.

Other FTAs contain detailed SME-related provisions on AfT cooperation, such as the agreement between Colombia and the Northern Triangle, as well as the agreements negotiated by China with Chile, Costa Rica, Hong Kong, Macao, and Peru. For instance, the China-Chile FTA contains an article on SMEs (article 109) which states that:

> "2. Cooperation shall be oriented to share knowledge and good practices with SMEs. These practices should promote partnership and productive chain linkage development, downstream and upstream oriented, to improve SMEs productivity, development of capacities to increase SMEs access to markets, integrate technology to labor intensive processes and human resources development to increase their knowledge about Chinese and Chilean markets.".

The agreements to which Japan is party with Malaysia, Singapore, Thailand, and Viet Nam also outline various sectors and forms of cooperation. In addition, these FTAs foresee the establishment of a committee or working group on SMEs, whose role is to review and discuss issues related to the FTA's chapter on cooperation on SMEs, exchange views, and identify areas for further cooperation. The Japan-Singapore FTA states that one of its objectives includes: "…promoting, particularly, trade and investment activities of small and medium enterprises of the Parties through facilitating their close co-operation" (article 1). This agreements dedicates a whole chapter to SMEs (chapter 18), which includes the creation of a Joint Committee on SME in article 132, with the purpose of:

> "(a) reviewing and discussing issues concerning the effective implementation of this Chapter; (b) exchanging views and information on the promotion of SMEs co-operation; (c) identifying and recommending ways of further co-operation between the Parties; and (d) discussing other issues relating to SMEs co-operation".

Provisions on financial services

FTAs have the potential to enhance the development of financial services within emerging economies, from which SMEs will benefit by gaining increased access to sources of finance (PWC, 2015). In FTAs, provisions on financial services most commonly take the form of provisions or chapters covering trade in services, investment liberalisation, and/or capital movements.

Widespread firm heterogeneity leads to provisions on trade in services that are often influenced by lobbies so as to favour large firms, to the detriment of smaller ones (Coen,

1998; Bombardini, 2008). They also favour large financial services groups, which will favour larger and wealthier clients rather than small firms and farmers (PWC, 2015).

To recall, it is estimated that half of trade finance requests formulated are rejected, compared to only 7 per cent for larger firm, meaning that the overall concentration of liquidities lie in the hands of the biggest financial institutions and their clients (WTO, 2016). Furthermore, securing finance appears to be an "acute" problem even for SMEs in sectors that have significant levels of creditworthiness and collaterals as in spite of this, SMEs are not the preferred borrowers for banks (USITC, 2010).

This does not only concern developing countries, but also developed countries. A study of French exporters during the 2008-2009 financial crisis shows that credit constraints on SMEs were much larger than those on larger firms (Bricongne et al., 2009). Another study shows that in Japan, SMEs are more likely to suffer from financial crises as they tend to be more associated with troubled banks, showing the influence of bank health on trade finance and exports (Amiti and Weinstein, 2011). Yet, financing gaps nevertheless remain the highest in the poorest countries, especially in Africa and developing Asia (WTO, 2016).

FTAs therefore represent an opportunity to give more attention to the provision of financial services to SMEs. FTAs represent a "window of opportunity" (PWC, 2015) to enhance cooperation to promote SMEs' access to finance, by notably improving the framework for investments and capital transfers. Many scholars point to the opportunity and advantages of institutions such as cooperatives and microfinance institutions (Varangis et al., 2014; PWC, 2015), arguing that the inclusion of specific clauses related to cooperatives in FTAs would strongly benefit emerging economies.

However, while highlighting the role of financial inclusion to achieve the SDGs, Klapper et al. (2016), in a paper for the Consultative Group to Assist the Poor and the UN's Secretary General Special Advocate for Inclusive Finance for Development point out that there are mitigated or inconclusive results regarding the role of microfinance institutions and financial inclusion, stating that "Entrepreneurs often use microloans to increase investments in small businesses, but microcredit has not turned out to be the engine of innovation many once hoped it would be. Nor is there strong evidence that financial inclusion directly reduces inequality within and among countries (SDG 10) or leads to inclusive economic growth on the national level (SDG 8)."

Varangis et al. (2014) provide an analysis of the interactions between microfinance institutions (MFIs) and smallholders, highlighting best practices of MFIs in Latin America and the Caribbean with regards to small agricultural farmers. They indicate that MFIs require "high-level management commitment, setting realistic growth targets, and being ready to adjust terms and practices." Regional development banks, such as the Asian Development Bank (ADB), the European Bank for Reconstruction and Development, the Inter-American Development Bank, and the International Islamic Trade Finance Corporation, are also making efforts to increase access to trade finance for SMEs (WTO, 2016).

3.4 E-Commerce

Bieron and Ahmed (2012) broadly define e-commerce as "the buying and selling of products and services over the internet", and argue that "Future trade regulation should facilitate the growth of small businesses engaged in e-commerce.". Indeed, the internet opens many opportunities for businesses, and more specifically SMEs, to enter new markets at lower costs while raising issues on how to regulate this new type of trade (Mayer, 2000; Vartanian et al., 2000). The difficulties associated with reaching an international consensus on regulatory cooperation, exemplified for instance by the fact that only eighteen countries have signed the UN Convention on the Use of Electronic Communications and International Contracts (Rowley, 2010), are bringing countries to resort to FTAs to encourage the adoption of e-commerce regulations to provide guidelines and facilitate trade (Weber, 2007). Furthermore, cross-border information flows are not yet defined as traded services as they frequently do not involve the exchange of money, therefore increasing the complexity to regulate on such matters (Aaronson, 2015).

While the advent of e-commerce constitutes a considerable opportunity for SMEs, they still face obstacles in their cross-border transactions. This is for instance the case of intellectual property rights, which can be used as barriers to online trade. Scholars observe that the impact of e-commerce on SMEs has yet to be substantial. FTAs can therefore be used to facilitate trade via e-commerce and to encourage countries to issue regulations to clarify creating an enabling and inclusive environment for SMEs.

FTAs increasingly mention e-commerce and include provisions to facilitate the use of e-commerce by SMEs. Nevertheless, the new technologies remain associated with a number of concerns encompassing information flows, human rights, security, and sovereignty.

In addition to IT-based businesses, such as for instance EBay, which carries out over 20 per cent of its transaction as cross-border trade (Bieron and Ahed, 2012), more and more "brick-and-mortar" stores turn to e-commerce as it considerably expands their capacity to reach customers (Jacobson, 2011). However, while e-commerce brings unprecedented opportunities for the trade of goods and services, countries often resort to non-traditional barriers to trade by relying on narrow interpretations of intellectual property law to restrict cross-border transfers via e-commerce (Bieron and Ahmed, 2012).

SME-related provisions in FTAs are often included in the chapter on intellectual property. Much has been written about the linkages between intellectual property and free trade agreements (see for example, Abbott, 2006; Krikorian and Szymkowiak, 2007; Roffe, 2014; Antons and Hilty, 2015; Lutz, 2015; Zhang, 2016). The WTO's 1995 agreement on TRIPS, which is an Annex of the Marrakesh Agreement that establishes the WTO, sets out a number of minimum standards in various areas of intellectual

property. Generally speaking, this agreement covers copyrights, trademarks, geographical indication, industrial designs, patents, and undisclosed information. At its birth, it has sparked much controversy, as it was seen by some as a mostly Western agreement with many flaws, such as omitting the online aspects of intellectual property (Hamilton, 1996).

While the TRIPS has been at the centre of various academic studies (see for example Helfer, 2004; Fink and Reichenmiller, 2006; Correa, 2007; Rodrigues Jr, 2012), not as many studies have been conducted around the information technology aspects of FTAs (Brown et al., 2008).

Ciuriak and Melin (2014), for instance, observe that the impact of FTAs on SMEs' use of e-commerce has not yet been very strong. Indeed, while the lowering of tariffs should improve market access, complying with stringent RoOs is often too burdensome for SMEs (Ciuriak, 2015). As mentioned earlier, this leaves SMEs to be excluded from the possibility of international trade. Academics have voiced concerns about the ability of developing countries to fully take advantage of technological innovations to take part in the current competitive economy (Brown et al., 2007). This is why a growing number of FTAs have started including provisions or even full chapters on e-commerce over the past 15 years.

Provisions on e-commerce in FTAs

FTAs enable countries "to regulate sensitive issues in a speedy and tailor-made manner" (Weber, 2015a). As a result, an estimated 30 to 40 FTAs include provisions or chapters on e-commerce (Herman, 2010). The most common provisions on e-commerce in FTAs consist of a moratorium on customs duties on electronic transmissions, transparency commitments, and cooperation activities (WTO, 2016b).

More and more FTAs also cover domestic issues such as regulatory barriers, electronic authentication, unsolicited commercial electronic messages, online consumer protection, data protection (Herman, 2010). The WTO (2016b) counts 21 FTAs which include SME-related provisions on e-commerce, mostly aimed at facilitating SMEs' access to e-commerce and removing obstacles.

Accordingly, the most widespread type of SME-related provision on e-commerce deals with recognition by the parties of the importance of facilitating the use of e-commerce by MSMEs. This is for example the case of the FTA between Singapore and Taipei, and the FTAs concluded by Canada with Korea and with Peru. Article 1502 of the latter states that the parties recognise the importance of "facilitating the use of electronic commerce of micro, small and medium sized enterprises."

Article 15.03 of the Canada-Panama FTA goes one step further in recognising the importance of "sharing information and experiences on laws, regulations and programmes in order to facilitate the use of electronic commerce by micro-, small- and medium-sized enterprises." Other FTAs use a firmer language, such as the Korea-Peru FTA, which states the commitment of parties "to working together to facilitate the use of

electronic commerce of small and medium-sized enterprises" (article 14.9). The FTAs concluded by Japan with Australia and with Switzerland include SME-related provisions on cooperation to overcome obstacles to the use of e-commerce.

The Japan-Australia FTA marks a return to e-commerce liberalisation (Weber, 2015a), containing a whole chapter on e-commerce (chapter 13) that includes an SME-specific provision containing best endeavour language on cooperation (Article 13.10.3). The FTA between Colombia, El Salvador, Guatemala, and Honduras also includes SME-related provisions in its chapter on e-commerce. The FTA between the EU and Colombia and Peru includes, in its article on working groups, the possibility of establishing a working group with the aim of "recommending mechanisms to assist Micro and SMEs in overcoming obstacles faced by them in the use of electronic commerce" (article 109, d). According to the WTO (2016b), this is the only FTA to foresee such a possibility (WTO, 2016b).

Herman (2010) points out that US and Australian FTAs tend to cover a wider range of e-commerce related issues. The 2000 US-Jordan FTA is, according to Chander (2006), the first FTA explicitly seeking to cover e-commerce related issues in its Article 7, which reads as follows:

> "1. Recognizing the economic growth and opportunity provided by electronic commerce and the importance of avoiding barriers to its use and development, each Party shall seek to refrain from: (a) deviating from its existing practice of not imposing customs duties on electronic transmissions; (b) imposing unnecessary barriers on electronic transmissions, including digitized products; and (c) impeding the supply through electronic means of services subject to a commitment under Article 3 of this Agreement, except as otherwise set forth in the Party's Services Schedule in Annex 3.1.
>
> 2. The Parties shall also make publicly available all relevant laws, regulations, and requirements affecting electronic commerce.
>
> 3. The Parties reaffirm the principles announced in the U.S.-Jordan Joint Statement on Electronic Commerce.".

The US-Chile FTA and the US-Dominican Republic-Central America FTA both include provisions recognising the importance of e-commerce for SMEs, encouraging the sharing of information on internet regulations, and requesting private e-commerce actors to self-regulate (article 15.5 of the US-Chile FTA):

> "Having in mind the global nature of electronic commerce, the Parties recognize the importance of: (a) working together to overcome obstacles encountered by small and medium enterprises in the use of electronic commerce; (b) sharing information and experiences on regulations, laws, and programs in the sphere of electronic commerce, including those related to data privacy, consumer confidence, cyber-security, electronic signatures, intellectual property rights, and electronic government; (c) working to maintain cross-border flows of

> information as an essential element for a vibrant electronic commerce environment; (d) encouraging the development by the private sector of methods of selfregulation, including codes of conduct, model contracts, guidelines, and enforcement mechanisms that foster electronic commerce; and (e) actively participating in international fora, at both a hemispheric and multilateral level, with the purpose of promoting the development of electronic commerce.",
>
> (article 14.5 of the US-CAFTA-DR FTA): "Recognizing the global nature of electronic commerce, the Parties affirm the importance of: (a) working together to overcome obstacles encountered by small and medium enterprises in using electronic commerce; (b) sharing information and experiences on laws, regulations, and programs in the sphere of electronic commerce, including those related to data privacy, consumer confidence in electronic commerce, cyber-security, electronic signatures, intellectual property rights, and electronic government; (c) working to maintain cross-border flows of information as an essential element in fostering a vibrant environment for electronic commerce; (d) encouraging the private sector to adopt self-regulation, including through codes of conduct, model contracts, guidelines, and enforcement mechanisms that foster electronic commerce; and (e) actively participating in hemispheric and multilateral fora to promote the development of electronic commerce.").

However, these non-binding provisions do not appear in more recent FTAs (Bieron, 2012).

In Asia, according to Weber (2015b), the first FTA to dedicate a whole chapter to e-commerce was the 2003 the Singapore-Australia FTA (Chapter 14), whose preamble states that: "The Parties recognise the economic growth and opportunities provided by electronic commerce, the importance of avoiding barriers to its use and development, and the applicability of relevant WTO rules." Chapter 14 covers issues of transparency, custom duties, domestic regulatory frameworks, electronic authentication and electronic signature, online consumer protection, online data protection, paperless trading, exceptions, and non-application of dispute settlement provisions.

The importance of e-commerce the Asia-Pacific region has considerably grown in recent years, as this region reportedly became the world leader in e-commerce in 2013 (Weber, 2015b). The ASEAN for instance recognised the opportunities of e-commerce at an early stage, with the establishment of the "e-ASEAN" framework in 1999, which aimed at promoting e-commerce and ICT, enhance cooperation and facilitate trade (Weber, 2015a).

While most ASEAN FTAs initially did not include fully-fledged e-commerce chapters, one of the first to do so was the FTA with Australia and New Zealand, which set the precedent for future agreements. Indeed, article one of the chapter on e-commerce (chapter 10) states that:

> "The objectives of this Chapter are to: (a) promote electronic commerce among the Parties; (b) enhance co-operation among the Parties regarding development

> of electronic commerce; and (c) promote the wider use of electronic commerce globally.".

However, despite acknowledging that "the legal framework of the WTO does not meet the regulatory need of the digital trade business anymore", Weber (2015a) shows that compensating through bilateral and regional trade agreements does not appear to be sufficient compared to what a global framework could achieve.

Moreover, digital trade raises concerns over flows of information, human rights, and security issues. Under this token, arguing that "information is currency", Aaronson (2015) shows that US and EU FTAs have failed to "set information free" and to agree on common regulations. She argues that this is influenced by the US domination over the internet, who has shown to be reluctant to include actionable privacy obligations in mega FTAs such as the TPP or TTIP.

Conclusions

This thesis first tried to clarify why bilateral or "small-club" free trade agreements, as opposed to the WTO's non-discriminatory, multilateral club, constitute a suitable focus for a modern analysis of the relationship between trade and Sustainable Development: essentially, because this has been the geometry through which free trade agreements have proliferated the most over the past 20 years, and also the geometry that allows for more creativity in norm setting.

As the revamped trend of concluding bilateral or small club FTAs is a relatively recent phenomenon, however, it was also necessary to illustrate the origins and key evolutions of the broader academic and policy-oriented debate on trade and Sustainable Development. To that end, the thesis showed that there are two clear and two parallel evolutionary paths: 1) a multiplication of policy linkages, from trade and environmental policies only, to the inclusion of social and economic policies at a later stage; and 2) an emerging tendency to build synergies (and avert conflicts) between all these policies, undeniably proved, *inter alia*, by the important role bestowed on trade by the 2015 Sustainable Development Goals.

What form has then taken the modern debate on trade and sustainable development? To try and detect such dynamics, Part II presented a comparative literature review on the evolution of environmental, social, and economic sustainability norms in the texts of the agreements. In so doing, it confirmed the evolutionary paths identified in Part I, finding: 1) that norms and provisions related to Sustainable Development have expanded in both scope and reach; and 2) that the analytical exercises that in some instances accompany the negotiation of free trade agreements – sustainability impact assessments and the like – also have become more sophisticated. More importantly, Part II also showed first, that the meaning of economic sustainability in particular has yet to find a definition in free trade agreements, and second, that the complex policy linkages set out by the modern interplay between trade and Sustainable Development probably need policy consistency across the whole legal framework set out by a free trade agreement, rather than being confined in a specific chapter.

As the number of FTAs concluded over the world increased, their scope and architecture too have considerably evolved. The provisions dedicated to environmental and social issues, in particular, have gained in terms of depth, breadth, and scope, to become full chapters, which not only address environmental concerns, as was initially the case, but also labour and social standards, as well as human rights. Still, issues of economic sustainability have remained vague or absent from the dedicated SD sections of modern FTAs; for this reason, after making the point as to the main normative trends of reflection of SD considerations in modern FTAs in force, Part II dedicated special attention to the review of literature that could shed light on the apparent omission of norms that are specific to economic sustainability concerns.

From the quest for a meaning for economic sustainability, it emerged that fiscal policies are a key element that can help reduce trade-induced inequalities. Beyond taxes and similar market-based mechanisms, however, the way in which education policies are designed also appears to be of particular relevance to the reduction of inequalities. Indeed, as increases in trade linkages are linked with technological advances, raising skill levels is of paramount importance to reduce labour and earning inequalities. This includes notably an improvement of education quality, the elimination of financial barriers to higher education, and providing support for programmes such as apprenticeships.

Trade agreements open the road to increased investment opportunities, meaning that a greater financial inclusion is key to foster a type of growth that is coupled with equality. To do so, governments can create appropriate legal and regulatory framework, support the information environment, while educating and protecting consumers *and* producers/service providers.

Governments have a major role to play also in the design of labour market policies and institutions so as to reduce inequalities while at the same time not hampering efficiency. Increased spending in such policies can help poor and middle-income workers by for example raising minimum wages, supporting job search and skill matching, reducing gaps in employment protection between permanent and temporary workers, and improving market outcomes for women. Modern FTA norms showcase trends towards these policy goals, but far more could be done, particularly at the level of the single FTA party.

This led to the analysis carried out in Part III, which concentrated on three specific subject areas: regulatory cooperation, climate change, and small and medium-sized enterprises. By providing a comparative overview of norms and mechanisms in each of these subject areas, Part III tried to capture current trends in norm-setting, as well as instances that are particularly suitable for improvement, further research, and further work.

In a new world order marked by increasingly numerous and deep linkages among countries, the GATT and the WTO have been, and still are, laboratories to seek solutions to increase international regulatory cooperation. On the other hand, as they are continuously and increasingly proliferating, FTAs represent another opportunity to do so. While regulatory cooperation through FTAs mostly occurs among like-minded countries, Part III showed that instances of cooperation can nevertheless be found between heterogeneous and asymmetric trading partners. Trade regulatory cooperation involves standards such as TBT and SPS measures, mutual recognition of conformity assessment of such standards, and cooperation on scientific matters. Another area where countries undertake, or try to, cooperation in regulatory matters is trade in services. In the quickly evolving universe of FTAs, the negotiation of new large FTAs has the potential to provide new opportunities and set new norms for international regulatory cooperation.

Regulatory cooperation, being an approach to norm setting rather than a sectoral policy formulation area as such, paved the way for a discussion of the subsequent two policy areas addressed in Part III, namely climate change and SMEs-related provisions. The latter two thematic areas were fully informed by regulatory cooperation as an approach to norm setting.

Environmental and climate change concerns occupy the centre of the international stage. In light of the increasing number of scientific sources highlighting the pressing need to combat climate change and reduce greenhouse gas emissions, unprecedented levels of international cooperation in this area are required to achieve global and sustainable results. The effects of globalisation and trade liberalisation are sources of conflict with environmental and climate change endeavours. As a result, efforts to cater to these issues in the context of cross-border trade take, for instance, the form of negotiations around the elaboration of an Environmental Goods Agreement, and the inclusion of climate change concerns in FTAs, as their proliferation over the last years makes them undeniable strategic tools to address such issues.

Climate change concerns therefore appear in FTAs through provisions aimed at enhancing and promoting environmental cooperation, technology transfers and clean-energy technologies, and cooperation on environmental standards. It all seems to boil down to economic consideration, though, and for this reasons, they have been selected for a dedicated discussion on climate change finance and investment patterns. These show sustainable development opportunities, particularly for developing countries, and Part III proved that norms on climate change in FTAs have to be informed by these considerations in the first place.

Part III concluded with a dedicated analysis of SMEs-related norms in FTAs. It showed that the increasing number of SME-related provisions in FTAs takes its roots in the belief that public intervention to support SMEs will help overcome a number of market failures which have an adverse impact on SMEs as a result of increased trade liberalisation. While linking back to the quest for a meaning for economic sustainability in FTAs, initiated in Part II, the analysis here proved that a major constraint for SMEs development is access to external finance, in which asymmetries of information in the credit market lead to adverse selection, which in turn leads SMEs to struggle to find sources of financing. In addition, smaller firms have a more limited capacity to comprehend and adapt to innovations in the market due to lack of public information available to them, which fully justifies norms in FTAs specifically dedicated to technical cooperation and capacity building for SMEs, as well as for the local institutions that are meant to support them.

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