

STUDY

Requested by the INTA committee



# Finding the right balance across EU FTAs: benefits and risks for EU economic sectors



Policy Department for External Relations  
Directorate General for External Policies of the Union  
PE 603.881 - October 2018

EN

## STUDY

# Finding the right balance across EU FTAs: benefits and risks for EU economic sectors

### ABSTRACT

Globally, anti-trade sentiment is on the rise, meaning it is incumbent upon policymakers to explore and explain the benefits of free and open trade. This study examines the costs and benefits of various free trade agreements (FTAs) that the EU has completed, will complete, or is contemplating. With regard to completed FTAs, the EU has seen benefits in terms of consumer choice but has a much larger and positive impact on its partners (although not as much as *ex-ante* modelling would suggest). For forthcoming or contemplated FTAs, the issue of non-tariff barriers must be considered for FTAs with developed economies to be a success, while comprehensive liberalisation with emerging markets improves trade and other outcomes for both the EU and its partner. Across all FTAs, trade and economic metrics are improved by an agreement while indirect effects (human rights, environment) are less likely to change. We conclude that the EU must continue its focus on comprehensive liberalisation, incorporating NTBs effectively into new agreements, while tempering expectations of influence on human rights.

---

This paper was requested by the European Parliament's Committee on International Trade.

English-language manuscript was completed on 17 October 2018.

Printed in Belgium.

Authors: Christopher HARTWELL, Fellow, CASE-Center for Social and Economic Research, POLAND; Veronika MOVCHAN, Academic Director, Institute for Economic Research and Policy Consulting, UKRAINE.

Official Responsible: Susana MENDONÇA.

Editorial Assistant: Elina STERGATOU.

Feedback of all kind is welcome. Please write to: [susana.mendonca@europarl.europa.eu](mailto:susana.mendonca@europarl.europa.eu).

To obtain copies, please send a request to: [poldep-expo@europarl.europa.eu](mailto:poldep-expo@europarl.europa.eu)

This paper will be published on the European Parliament's online database, '[Think tank](#)'.

*The content of this document is the sole responsibility of the author and any opinions expressed therein do not necessarily represent the official position of the European Parliament. It is addressed to the Members and staff of the EP for their parliamentary work. Reproduction and translation for non-commercial purposes are authorised, provided the source is acknowledged and the European Parliament is given prior notice and sent a copy.*

ISBN: 978-92-846-4062-1 (pdf)

ISBN: 978-92-846-4063-8 (paper)

doi:10.2861/945343 (pdf)

doi:10.2861/463730 (paper)

Catalogue number: QA-04-18-872-EN-N (pdf)

Catalogue number: QA-04-18-872-EN-C (paper)

## Table of contents

Executive Summary	7
Introduction	9
1 Previously-Concluded Agreements	11
1.1 The Peru-Colombia FTA	11
1.1.1 Welfare	12
1.1.2 Real GDP	13
1.1.3 Prices	14
1.1.4 Aggregate exports and imports of goods and services	15
1.1.5 Employment and labour rights	16
1.1.6 Budget balance	18
1.1.7 Poverty	20
1.1.8 SMEs	20
1.1.9 Sectoral impacts	21
1.1.10 Human rights and environmental impact	23
1.2 The EU-South Korea FTA	25
1.2.1 Welfare	26
1.2.2 Real GDP	26
1.2.3 Prices	27
1.2.4 Aggregate exports and imports of goods and services	27
1.2.5 Employment and labour rights	29
1.2.6 Budget balance	31
1.2.7 Poverty	32
1.2.8 SMEs	33
1.2.9 Sectoral impacts	33
1.2.10 Human rights and environmental impact	36
1.3 The Association Agreement with Central America	38
1.3.1 Welfare	39
1.3.2 Real GDP	39
1.3.3 Prices	41
1.3.4 Aggregate exports and imports of goods and services	42
1.3.5 Employment and labour rights	43
1.3.6 Budget balance	44
1.3.7 Poverty	45
1.3.8 SMEs	46

1.3.9	Sectoral impacts	47
1.3.10	Human rights and environmental impact	48
1.4	Summary	50
2	Recently-concluded agreements	51
2.1	The EU-Canada Comprehensive Economic and Trade Agreement (CETA)	51
2.1.1	Welfare	51
2.1.2	Real GDP	52
2.1.3	Prices	52
2.1.4	Aggregate exports and imports of goods and services	53
2.1.5	Employment and labour rights	53
2.1.6	Budget balance	54
2.1.7	Poverty	54
2.1.8	SMEs	54
2.1.9	Sectoral impacts	54
2.1.10	Human rights and environmental impact	55
2.2	The EU-Japan Economic Partnership Agreement	55
2.2.1	Welfare	56
2.2.2	Real GDP	56
2.2.3	Prices	56
2.2.4	Aggregate exports and imports of goods and services	57
2.2.5	Employment and labour rights	57
2.2.6	Budget balance	57
2.2.7	Poverty	58
2.2.8	SMEs	58
2.2.9	Sectoral impacts	58
2.2.10	Human rights and environmental impact	58
2.3	The EU-Vietnam Free Trade Agreement	59
2.3.1	Welfare	59
2.3.2	Real GDP	60
2.3.3	Prices	60
2.3.4	Aggregate exports and imports of goods and services	60
2.3.5	Employment and labour rights	60
2.3.6	Budget balance	61
2.3.7	Poverty	61
2.3.8	SMEs	61
2.3.9	Sectoral impacts	62

2.3.10	Human rights and environmental impact	62
2.4	Summary	63
3	Agreements under negotiation	64
3.1	The EU-Indonesia Comprehensive Economic Partnership Agreement	64
3.1.1	Welfare	64
3.1.2	Real GDP	65
3.1.3	Prices	65
3.1.4	Aggregate exports and imports of goods and services	65
3.1.5	Employment and labour rights	66
3.1.6	Budget balance	66
3.1.7	Poverty	66
3.1.8	SMEs	67
3.1.9	Sectoral impacts	67
3.1.10	Human rights and environmental impact	67
3.2	The EU-Mercosur Free Trade Agreement	68
3.2.1	Welfare	68
3.2.2	Real GDP	69
3.2.3	Prices	70
3.2.4	Aggregate exports and imports of goods and services	70
3.2.5	Employment and labour rights	70
3.2.6	Budget balance	71
3.2.7	Poverty	71
3.2.8	SMEs	72
3.2.9	Sectoral impacts	72
3.2.10	Human rights and environmental impact	72
3.3	The EU-Mexico Free Trade Agreement	72
3.3.1	Welfare	73
3.3.2	Real GDP	73
3.3.3	Prices	73
3.3.4	Aggregate exports and imports of goods and services	74
3.3.5	Employment and labour rights	74
3.3.6	Budget balance	75
3.3.7	Poverty	75
3.3.8	SMEs	75
3.3.9	Sectoral impacts	75
3.3.10	Human rights and environmental impact	75

3.4	Summary	76
4	Conclusions and Recommendations	77
4.1	Lessons Learned	77
4.2	Recommendations Going Forward	79
	References	81
	APPENDIX	93
	Literature Review	93
	Economic Approaches to Understanding Integration	93
	Qualitative Approaches	97

## Executive Summary

Although economists are generally in (rare) agreement about the benefits of free trade for consumer choice, improved national welfare, and the potential for growth, a surge of populism globally has taken aim at continued progress towards free trade around the world. Against this backdrop, and with an eye on keeping trade opportunities for European firms moving forward, the European Union (EU) has been a notable exception to these protectionist impulses. Despite the Transatlantic Trade and Investment Partnership (TTIP) project remaining on life support, the EU has been leading the way in negotiating preferential trade agreements (PTAs) across the globe and attempting to enable the benefits of free trade to keep flowing to EU citizens and firms.

The objective of this study is to provide the European Parliament, its Members, and in particular the Committee on International Trade (INTA) with an estimate of the economic costs and benefits of various free trade agreements (FTAs) that the EU has completed, will complete, or is contemplating. This analysis was undertaken in the context of the EU's agenda for growth, jobs, and harnessing globalisation, with an eye on understanding the effects on the EU and the partner countries of these agreements. Several consistent themes emerged from this broad-ranging analysis:

- With regard to *already-completed* agreements, the effects on the EU have been **mainly as predicted in ex-ante assessments and are for the most part relatively tiny**, as befitting the staggering relative size of the EU economy versus either Peru and Colombia, Korea, or the six nations of Central America. And in nearly every case we examine, the **actual effects in the partner countries have been smaller than predicted** in computable general equilibrium (CGE) modelling due to both a short time-series worth of data and generally less-than-full liberalisation than envisaged in the models. We anticipated that trade, price, and poverty effects are likely to become magnified as economies continue to restructure themselves, but the accrual of these benefits will take more time than a few years.
- Although aggregate effects are small, **sectoral effects** have been quite impressive for both the EU and its partners, especially in areas where disaster was predicted: the example of the European automotive sector under the EU-South Korea FTA is instructive, as EU firms have increased their exports to South Korea at the same time that imports have increased rapidly. Importantly, the differentiation of EU brands and their quality levels, as well as evolving consumer tastes in South Korea, have allowed the European automotive industry to thrive even under increased competition.
- Perhaps most importantly for already-completed agreements, **in no example could we show that the FTA had a demonstrably negative effect on the welfare of the EU or the signatory country**. The key takeaway from the EU's existing agreements is that **trade agreements are very effective at influencing sectoral trade flows in the short run, while other economic and social metrics may take a longer time to influence** (if they are influenced at all).
- Turning to *recently-concluded agreements* (with Canada, Japan, and Vietnam), the EU is expected to see **small but positive impacts on GDP and welfare** with a small boost in trade and larger gains in specific sectors. *Ex-ante* estimates predict that **the agro-food sector will be among the top beneficiaries in the case of the agreements with Canada and Vietnam**, while studies of the Japan Agreement predict that **manufacturing will gain the most**. The most outstanding **negative change** in production is expected to be generated by the FTA with Vietnam, where **exports of leather products** could negatively affect EU producers at the lower-end of the quality scale. Additionally, tougher competition will also be felt by the EU producers of various **transport equipment** due to the expansion of Japanese and Canadian exports.
- The **impact of these recently-concluded agreements is, however, dependent on non-tariff barriers** (NTBs) in both trade in goods and services being substantially reduced, as tariff liberalisation

alone is not capable of generating substantial economic gains. This is a difference which may be attributed to the fact that more developed economies are the intended trade partners of these agreements, rather than the emerging market economies explored earlier (i.e. much of the tariff gains have already been captured). Finally, although all three agreements contain provisions related to trade and sustainable development, quantitative assessments of these provisions are difficult to forecast.

- The final area of analysis is on *agreements currently being negotiated by the EU*, including those with Indonesia, Mercosur, and Mexico. As Indonesia and Mercosur have no previous history of bilateral preferential trade agreements with the EU, the trade agreements inevitably focus on the ambitious liberalisation of tariffs and trade facilitation measures. On the contrary, the agreement with Mexico is a modernisation of the existing FTA, and thus its agenda is more elaborate. These agreements are expected to bring **positive but small increases in GDP and welfare for the EU**. Bilateral trade will boost significantly, benefiting both partners, while there are likely to be neutral or marginally positive impacts on poverty reduction.
- The **sectoral impact of the currently-negotiated FTAs on EU producers is also expected to be tiny**, with neither large gains nor losses anticipated. A positive impact is expected on **chemical production and machine-building**—that is, the sectors providing key inputs for the development of the EU's less-developed partners. Conversely, **the impact on the agro-food sector and light industry**—that is, sectors where partners might have more of a cost advantage—is **more uncertain**. While the agreement with Mexico is expected to boost agricultural production, the increased competition from Mercosur countries could put negative pressure on European producers, although benefiting EU consumers. Similarly, agreements with Indonesia and Mexico could result in decreased EU production in light industry.
- Finally, unlike the FTAs concluded with developed countries, however, the **environmental implications of agreements under negotiation could be very important**, especially in the spheres of land use and deforestation.

Surveying these results and seeing the commonalities across EU agreements, we believe that the EU and, in particular, the European Parliament should pursue six specific actions going forward in the negotiation of future FTAs:

1. Continue to press for a liberal, open global trading order, including via the negotiation of comprehensive trade agreements, to create opportunities for EU businesses;
2. Re-focus its efforts with trade partners to make trade deals comprehensive across goods and services, in order to maximise gains to the EU;
3. Tackle NTBs in a comprehensive manner in each and every FTA;
4. Do not oversell the short-run potential benefits of future FTAs, including caveating appropriately the CGE modelling produced through DG Trade's assessments;
5. Understand that labour and environmental protections are generally domestically determined, but remain a champion of both; and
6. Continuously push trading partners on human rights, no matter the development level of the partner country.

Based on our assessment, following these six steps will help to maximise benefits for the EU, EU firms, European consumers, and the EU's trading partners.

## Introduction

Although economists are in (rare) agreement about the benefits of free trade for individual choice, improving overall national welfare, and opening up potential for growth (see Appendix A), a surge of populism globally has taken aim at continued progress towards free and open trade. While recent public opinion polls from the Pew Research Center show 56% support for free trade as an opportunity for the US, President Donald Trump has held up massive trade deals such as the Transatlantic Trade and Investment Partnership (TTIP), withdrawn from others (the Trans-Pacific Partnership (TPP)), and has initiated a trade war with China with two tranches of tariffs in July and August 2018 (and the threat of much larger tariffs to come). Coupled with the slow-motion collapse of the Doha Round of the World Trade Organisation (WTO), the prospects for multilateral (or even large-scale regional) trade liberalisation appear bleaker than at any point since the General Agreement on Tariffs and Trade (GATT, the WTO's predecessor) was founded in 1947.

Against this backdrop, and with an eye on keeping trade momentum moving forward, the European Union (EU) has been a notable exception to these protectionist impulses. Despite the TTIP project remaining on life support, the EU has been leading the way in negotiating preferential trade agreements (PTAs) across the globe and attempting to enable the benefits of free trade to keep flowing to EU citizens and businesses<sup>1</sup>. Indeed, far from becoming 'Fortress Europe', the EU has been instrumental in fashioning comprehensive 'WTO-plus' and 'WTO-extra' arrangements with South Korea, Central America, Canada, and others, with more planned in the coming years<sup>2</sup>. The Commission's 'Trade for All' agenda from 2015 has also made it clear that this approach to open markets will continue, dedicating the EU to negotiating effective and substantial agreements with developing and developed countries.

With the EU standing almost alone in making the case for free trade, it is an opportune time to examine the economic effects of these agreements on the EU, its Member States, and particular sectors of the EU economy. This is particularly crucial given the clarification of EU policy towards trade agreements as typified in the Juncker Plan and especially in the 'Reflection Paper on Harnessing Globalisation' put out by the Commission in 2017. In both documents, it is stressed that EU-designed and concluded PTAs must serve a broader policy goal of increasing growth and employment opportunities within the EU. As the Reflection Paper notes (p. 12), 'more integrated and proactive European economic diplomacy would also deliver better outcomes for our citizens', meaning that the negotiation and implementation of PTAs need to be seen as part of a broader thrust of the EU for liberalisation.

While the economic case for free trade is, as noted, one of the only areas in economics which has near-universal approval, the link between PTAs and jobs is less clear. Indeed, specific effects on a sectoral and/or country basis, especially in relation to preferential agreements, are still subject to some debate mainly due to differential distributional effects across a society. At the aggregate level, any move towards trade liberalisation brings benefits, but there may be some specific sectors or skill levels which suffer through a period of dislocation before benefits accrue (thus reducing employment in the short run before increasing it in the long run). Similarly, the move towards 'WTO-extra' agreements, encompassing investment, procurement, environment, labour, and other non-traditional 'trade' areas, has also not been comprehensively studied for its effects on an economy which is party to a PTA. How do these non-conventional clauses actually affect the targeted variables in partners entering into PTAs?

<sup>1</sup> Throughout this report, the terms 'preferential trade agreements', 'free trade agreements', and 'regional trade agreements' are used interchangeably. While there may be slight differences in the meaning behind each term, for the most part, the intent and modalities of such agreements are indistinguishable.

<sup>2</sup> 'WTO-plus' agreements are those which promise larger commitments than those already adhered to at the multilateral level; 'WTO-extra' agreements contain additional clauses not found in the current WTO mandate, including clauses dealing with investor protection, public procurement, or human rights. See Horn *et al.* (2010) for an excellent summation.

The reality of uneven benefits from globalisation has meant that, despite the EU being a champion for open trade in nearly every region of the world, it too is not immune from the anti-trade sentiment building around the globe. Recent research from CASE-Center for Social and Economic Research in Warsaw for the Vision Europe Summit has shown that where economic dislocation from trade liberalisation is persistent, future trade liberalisation may be threatened. Thus, it is imperative that the EU understands how its move towards trade openness has affected the structure of the EU economy and how it can design agreements in the future to minimise dislocation and maximise benefits.

Given this background, the objective of this study is to provide the European Parliament, its Members, and in particular the Committee on International Trade (INTA) with an estimate of the economic costs and benefits of various free trade agreements (FTAs) that the EU has completed, will complete, or is contemplating. As of this moment, such a comprehensive examination of the EU's prior FTAs, seen holistically, does not exist, as each agreement has undergone its own impact assessments independent of other agreements. Being able to view the effects of trade on the EU, especially in the realm of growth and job creation, will help to inform policymakers on the appropriate path for the future.

Building on previous work by CASE for INTA examining the issues of overlapping PTAs, this work synthesises the effects of recent and upcoming PTAs on economic and social metrics across Member States. The results of our study are that all PTAs have indeed been good for the EU and its trading partners by several metrics, in some cases exceeding the optimistic projections of researchers and the EU itself. For other PTAs, the benefits have been smaller than predicted in *ex-ante* assessments but still positive. With regard to the new 'WTO-extra' provisions, while evidence is scattered, it appears that EU-negotiated PTAs have had little immediate effect on improving labour standards or environmental protection, but the reality is that the effects in these areas should take much longer to accrue. In either case, the value of PTAs to the EU is demonstrable, and, as such, should be continued.

The rest of this paper proceeds as follows: Section 1 will survey the landscape of economic research on FTAs, providing a comprehensive overview of the literature related to PTAs and their possible effects. Section 2 will then examine the evidence regarding PTAs already concluded by the EU, using a meta-analysis of the literature on the predicted and actual effects of the agreements on the EU, comparing the average predicted effects with the average actual effects. Section 3 will perform a similar analysis on recently concluded agreements and on agreements under negotiation, with the caveat that the lack of 'after' data on these agreements will make the analysis more theoretical. Section 4 will conclude and offer concrete policy recommendations for Members of the European Parliament (MEPs) and the EU in general going forward, in order to improve the efficacy of European trade policymaking.

# 1 Previously-Concluded Agreements

This section analyses the effects accruing from a sample of already-concluded FTAs, namely the agreements the EU has with Peru and Colombia, South Korea, and Central America. Given the fact that these agreements have already been finished and are either provisionally, partly, or fully implemented (with some in force for several years), the analysis of this section benefits from having a relatively large literature on predicted effects, especially as compared to negotiations which are still ongoing. Moreover, the PTAs assessed in this section also benefit from having a catalogue of completed *ex-ante* assessments and models on how possible effects of the particular PTA would play out.

In order to understand the overall, holistic effects of the EU PTAs in force, this section examines a particular set of effects across FTAs. These effects to be examined here are:

- Welfare,
- Real GDP,
- Prices,
- Aggregate exports and imports of goods and services,
- Employment and labour rights,
- Budget balance,
- Poverty,
- Small and medium enterprise (SME) effects,
- Sectoral impacts, and
- Human rights and environmental effects.

This set of effects will also be used in subsequent sections to examine agreements recently concluded and those under negotiation, in order to keep a consistent framework for analysis.

To examine the quantitative effects in the list shown above, this section will conduct a meta-analysis of the literature on the predicted effects of the agreements on the EU, comparing the average predicted effects with the average actual effects (if available). We will also analyse the predicted sectoral effects and how they, too, played out at the country level, with a focus on the effects of concluded and implemented trade agreements on labour markets, SMEs, and human rights. Finally, where areas have not been explored either in *ex-ante* predictions or *ex-post* examinations, we will use appropriate econometric techniques to capture the revealed effects of the particular FTA, relying on difference-in-difference (DiD) analysis on before and after data for the relevant agreement and against comparable countries. This approach, by capturing fixed- and omitted-effects, may allow for a rough approximation of PTA effects where necessary and has been popular in the trade and econometrics literature (for example, as in Slaughter [2001], Foster *et al.* [2011], or Baltagi *et al.* [2008] specifically in the context of Europe Agreements, and Baldwin and Forslid [2010] in the context of sectoral explorations). Such an analysis, a first for many of the PTAs explored in this paper, will not yield a precise sense of the magnitude of the effect of the PTAs but will reveal trends and may help to target sectoral effects for countries in an agnostic sense (i.e. without formal modelling).

## 1.1 The Peru-Colombia FTA

The first agreement to be examined in this section is a unique FTA, mainly in that it was not completed with one country or with a multilateral bloc, but with two countries simultaneously. The 'Trade Agreement between the European Union and its Member States, of the one part, and Colombia and Peru, of the other part' was originally envisioned as encompassing the entire Andean Community (a customs union also

including Bolivia and Ecuador), but only Peru and Colombia were interested in completing the negotiations with the EU (De Micco, 2014)<sup>3</sup>. The agreement has been provisionally applied in Peru since March 2013 and in Colombia since August 2013, with a further amendment to take into account Croatia's accession to the EU. A second amendment was added to recognise Ecuador's belated move towards joining this FTA, as it signed a protocol of accession in November 2016 and formally joined the FTA in January 2017.

Given the short time span in which Ecuador has been a member of the agreement and the lack of data on its effects, we will only examine the effects of the FTA on Peru and Colombia (in addition to the EU). However, even with the additional 3.5 years of data, there are still very few *ex-post* assessments of the effects of the FTA, with much of the work done in this area limited to official EU documents. Our analysis below will take this into account while trying to ascertain exactly how the FTA has impacted all three economies, using the methodologies noted above.

### 1.1.1 Welfare

Within international economics, welfare is usually treated as it is at the microeconomic level, namely as 'compensating variation', defined as the 'loss of income that would make a consumer just as well off after a change in prices (and income) as he had been in the initial situation' (Chipman and Moore, 1992:94). In trade computable general equilibrium (CGE) and partial equilibrium modelling, welfare is often expressed in terms of household income changes which occur as a result of (or, more accurately, plausibly attributed to) an FTA. Indeed, measuring welfare shifts due to a policy change has become a staple of trade modelling.

Given this fact, it is thus somewhat surprising that the welfare effects of the EU-Peru/Colombia (hereafter EU-P/C) FTA are not highlighted prominently in any *ex-ante* assessments of the FTA. While studies such as CEPR (2012) examined the effect of the FTA on wages in the three partner countries via a CGE model, the overall analysis was framed as part of the social component of the study rather than an integral part of the FTA's effects (and in this paper, we classify wage changes under 'employment' rather than welfare). Other studies such as the Sustainability Impact Assessment (SIA) carried out by Development Solutions *et al.* (2009) mention the possible welfare effects of the FTA, focusing on lower consumer prices and increased output efficiency, but explicitly state that their model does not examine the impact on consumer prices from trade liberalisation; like the CEPR (2012) study to follow, the SIA focuses on many of the attributes associated with welfare (wages, employment, aggregate income gains) but not necessarily with welfare as it is commonly conceived. Likewise, Spanish-language research into the effects of the agreement tends to stay narrowly within the bounds of trade and social effects, with little nod to overall welfare (Reinoso [2010] comes the closest but still fails to quantify possible effects). In fact, the first assessment of welfare came with the examination of the accession of Ecuador to the FTA (DG Trade, 2016), placing welfare gains for the EU at 0.001% of GDP and for Ecuador at approximately 0.32% of GDP.

Given this lack of *ex-ante* assessment of possible welfare gains, it is perhaps not surprising that the term 'welfare' appears in *ex-post* assessments of the EU FTA with Peru and Colombia only in the context of animal welfare and nowhere else. It can be anticipated, given the relative size of Peru and Colombia to the EU, that changes in welfare for consumers would be along the lines of that estimated for Ecuador; as the combined economies of Peru and Colombia are more than six times the size of Ecuador, and combined trade with the EU is four times higher for Peru and Colombia than Ecuador, we can estimate that welfare effects may be in the neighbourhood of 0.005% of GDP for the EU-P/C FTA. As we do not have access to DG Trade's CGE model and its assumptions regarding welfare, and without creating our own stylised model of the EU-P/C FTA, this is the closest estimate we can provide regarding the real welfare effects of the FTA.

<sup>3</sup> Ahearn (2011) notes that Bolivia disagreed with the objectives of the FTA while Ecuador, initially at least, disagreed with the EU's banana import regime and its stance on intellectual property.

From the Peru and Colombian side, as with most asymmetric FTAs, we also anticipate that welfare effects will be greater than those in the EU, a fact that has been explored in the modelling of other potential and concluded FTAs which these countries are party to. For example, an examination of four regional integration scenarios for Colombia (focused on the US) conducted by Gracia and Zuleta (2005) found welfare effects ranging from 0.28% to 0.79% of GDP, while a study looking at the possible effects of a Peru-China FTA saw welfare gains of 0.53% to 0.66% of GDP (*Ministerio de Comercio Exterior y Turismo*, 2007). On the other hand, Schott (2006) puts welfare gains to Colombia from a bilateral FTA with the United States (US) at between a more modest 0.2% to 0.4% depending on the extent of liberalisation, and Ludena and Wong (2006) predict welfare losses to Peru and Colombia from entering into an FTA with the US. Finally, an evaluation of the EU-Mexico FTA from Ecorys (2017) shows an increase in welfare of 0.35% (Mexico is a good comparator to Peru and Colombia because of the similar size of the combined P/C economy to Mexico). Given these facts and the differences between the FTA with the EU versus with the US, we can estimate that the real effect on welfare in Peru and Colombia from the FTA is likely closer to Mexico than the upper estimates of an FTA with the US, somewhere in the range of 0.3% to 0.35% of GDP.

### 1.1.2 Real GDP

Unlike welfare, the GDP effects of the FTA with Peru and Colombia have been better explored in both *ex-ante* and *ex-post* evaluations. As with welfare, however, the gains in GDP were projected to be heavily in favour of Peru and Colombia in terms of their relative importance: over a series of six scenarios spread out over several studies, including the SIA and CEPR (2012), the average estimated effect of the FTA on the EU's GDP was a gain of 0.01% of GDP, versus a gain of 0.39% for Peru and 0.60% for Colombia. While EU estimates were uniformly low across studies, and the average driven by one outlier predicting 0.03% growth at most (CEPR 2012), estimates for Peru ranged from 0.2% of GDP to 0.7% and estimates for Colombia ranged from 0.2% to 1.30% of GDP.

As the inception of the FTA was only in 2013, it is too early to say conclusively what the long-term growth benefits are; additionally, prior to the FTA, Peru and Colombia were already trading under preferential terms with the EU under the generalised system of preferences (GSP), and thus much of the potential gains could have been captured already. In the Commission's 'Annual Report on the Implementation of the EU-Colombia/Peru Trade Agreement' (now in its third iteration), GDP effects are not mentioned, only a focus on trade effects. With reference to actual GDP performance, Peru has continued to see robust growth, achieving rates of 2.35% in 2014, 3.25% in 2015, and 3.88% in 2016, while Colombia has seen its growth slow down from 4.39% in 2014 to 1.96% in 2016; this divergence in growth outcomes shows the difficulties inherent in attempting to trace growth effects directly to FTAs in the short term.

Perhaps a better approach to try and gauge growth effects attributable to the FTA would be to use the econometric technique of a DiD analysis, which analyses the change in growth rates in Peru and Colombia before and after the FTA versus those countries which remained outside the FTA, namely Ecuador and Bolivia. Under the DiD approach, the difference between the growth rates of Peru and Colombia (the 'treated' countries) versus Ecuador and Bolivia (the 'control' countries) before the FTA are compared to the differences between the two sets of countries after the FTA was completed. Table 1 shows the results of this analysis on growth rates in the Andean community from 1995 to 2016, using 2013 as the treatment year in which the FTA came into effect. As can be seen, there is no systematic difference in growth rates either prior to or after the FTA, with growth in Peru and Colombia averaging a half a percentage point higher than Bolivia and Ecuador prior to the FTA and only 0.12 percentage points higher after. Of course, there are many other issues which go into the determination of a growth rate (seen especially in the low R-squared of the DiD approach), but the fact that there is no systematic difference between growth rates means that the FTA likely had positive but not massively significant effects on growth in the short term. With more data in the coming years, this exercise can be revisited to see if the growth effects have taken longer to phase in.

**Table 1. Difference-in-Difference Analysis of Growth Rates in the Andean Community**

Number of observations	88			
	Before	After	Total	
Ecuador and Bolivia:	36	8	44	
Peru and Colombia:	36	8	44	
Total	72	16		
Outcome variable	GDP growth	Standard error	t	P-value
Before				
Ecuador and Bolivia	3.710			
Peru and Colombia	4.224			
Difference	0.513	0.597	0.86	0.39
After				
Ecuador and Bolivia	3.579			
Peru and Colombia	3.703			
Difference	0.123	1.266	0.10	0.923
Diff-in-Diff	-0.39	1.399	0.28	0.781
R-square:	0.01			

Source: Based on World Bank data

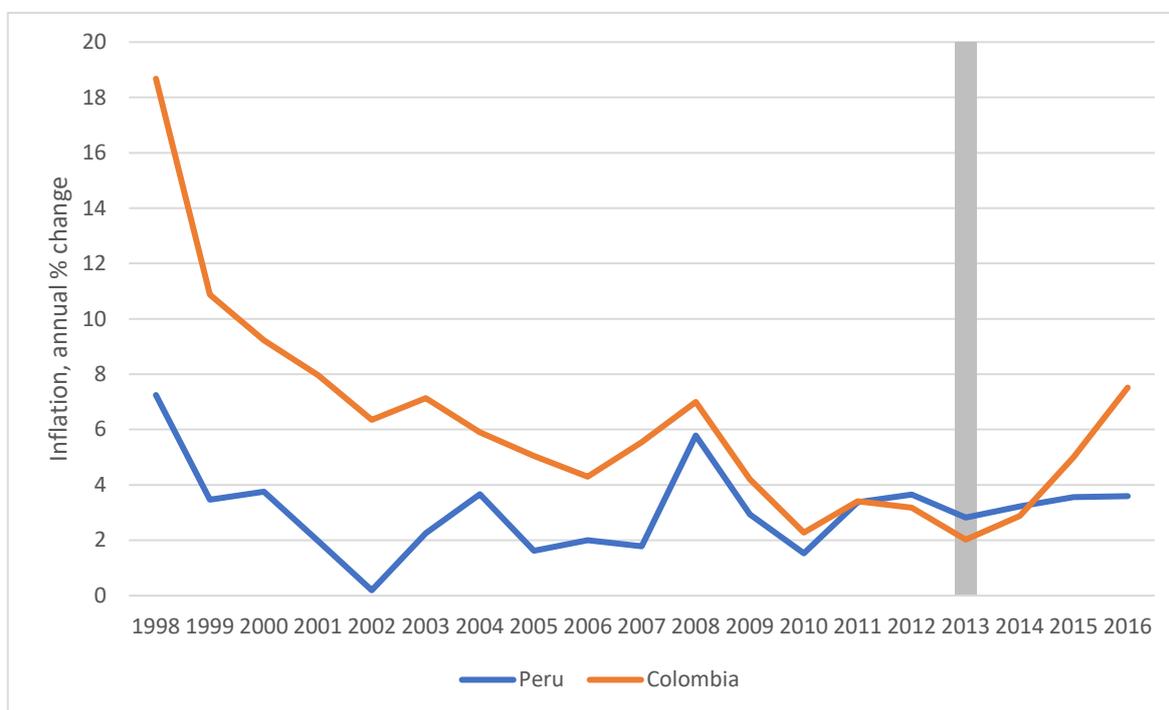
### 1.1.3 Prices

The effect of trade liberalisation on prices is somewhat ambiguous: as a first approximation, the competitive effects which come with opening borders to goods and services should increase the quantities and quality of goods, driving down prices (and subsequently improving consumer welfare). On the other hand, depending upon the exchange rate system in place, countries may 'import' inflation from abroad, and the more open and linked they are with countries prone to inflationary shocks, the more likely such a transmission will be (He, 2011). Watson (2016:137) also notes that trade 'raises strategic complementarity in firms' pricing decisions and the degree of real price rigidities, which makes inflation less responsive to changes in real marginal cost', meaning that trade may also entrench inflationary expectations. Perhaps most convincingly, Ihrig *et al.* (2010) show that inflation continues to be set by domestic factors and domestic policymakers, and globalisation or openness plays very little of a role in overall price dynamics.

Given these conflicting theoretical effects, assessments of EU FTAs have shied away from computing inflation/price changes either *ex-ante* or *ex-post*. Within the academic literature, studies of trade agreement effects have focused on inflation changes in the context of price changes of goods and services after liberalisation and their effect on consumers, thus subsuming actual inflationary effects into a broader examination of consumer patterns (see, for example, Breinlich *et al.* [2016], who find that EU FTAs across the board should lower prices). Indeed, most of the emphasis on prices in *ex-ante* assessments has been concentrated at the sectoral level (as an example, the SIA for Peru/Colombia offers thoughts on

liberalisation lowering prices on utilities). However, the CEPR (2012) study includes consumer price index (CPI) effects directly as part of the CGE model, and its predictions mirror the theoretical suppositions noted above: under a scenario of an FTA and the removal of GSP rates, the CEPR study predicted that prices in the EU would remain flat but there would be a rise of 1% in Colombia's CPI and 8% in Peru's. These effects are smaller than those predicted in Mexico (11%, see Ecorys [2017]), but larger than effects predicted with Peru and Colombia integrating with the US (Gracia and Zuleta [2005] predict average decreases in prices across the board under a variety of American integration scenarios).

**Figure 1. Inflation, annual percentage change, in Peru and Colombia**



Source: World Development Indicators

In line with the CEPR (2012) study, the EU saw no change in its overall inflation rates in reality, with the same rate in 2014 as in 2016 (approximately 0.22%), bracketing a year of disinflation (-0.06%) in 2015. And looking at the actual performance of inflation in Peru and Colombia after the FTA, it is clear to see that inflation has indeed increased (Figure 1), although how much of this is attributable to the agreement is highly debatable. From a low of 2.02% in 2013, inflation in Colombia has risen to 7.51% in 2016, while in Peru inflation has increased from 2.82% to 3.59% over the same time frame. Even if these changes were attributable solely to the FTA's implementation, their magnitude (assuming they levelled off in 2017) was less than predicted by the CEPR (2012) study even though the trend was correct (i.e. that Colombia saw higher increases than Peru). There is also a case to be made that many of these effects actually are attributable to the FTA, given that Colombia is a commodity-dependent country which relies on oil for exports (Caporale *et al.*, 2018) and, over this time frame, the price of oil has plummeted. With preliminary data for Colombia and Peru showing a decline in inflationary pressures in 2017, it is possible that the spike in prices over 2014 to 2016 was a transient effect and the competitive pressures of the FTA are now starting to assert themselves.

### 1.1.4 Aggregate exports and imports of goods and services

While welfare, growth, and price changes are all somewhat second-order effects from trade liberalisation, the first-order effect which should immediately be observed on an economy from an FTA is of course trade flows. Given this reality, it is not surprising that the work done via *ex-ante* studies and academic research on the possible effects of the FTA has concentrated on modelling the possible increase in exports and

imports between the EU and Peru and Colombia and/or trade flows in general. For example, the SIA from Development Solutions *et al.* (2009) examines the effect of the FTA on overall trade flows for each party to the agreement, estimating that EU trade would increase insignificantly (0.1%) on a global basis, but Peru and Colombia would see increases in their overall trade of 7.2% and 10.2%, respectively, over the long run. Bouët *et al.* (2008), modelling the effect of an FTA between the EU and the Andean Community (as appeared to be the case at the time), also found that Peruvian exports on the whole would increase by 8.13% globally.

Turning to bilateral trade, the CEPR (2012) study for DG Trade, in perhaps the most comprehensive overview, predicted that trade between the EU and Colombia and between the EU and Peru was to increase substantially, while intra-EU trade would decline somewhat (as would Peru-Colombian trade): their estimates were for an 11.2% increase in exports to the EU for Colombia and a 14.9% increase for Peru, with the EU seeing an impressive increase of 63.5% in exports to Colombia and 48.4% to Peru. Other studies such as Bouët *et al.* (2008) had similarly optimistic forecasts, projecting that Peru would increase its imports from the EU by 39.2% while similarly increasing its exports by 13.2% (as already noted, the Bouët *et al.* study considered Peru's gains within a broader Andean Community FTA with the EU).

However, the reality, as noted in EU documents and which can be seen from trade statistics, is that bilateral trade from Peru and Colombia has not performed as anticipated. The most recent report from the Commission to the European Parliament (European Commission, 2017:8) notes that 'bilateral trade between the EU and Colombia has decreased by 23.5% and the EU and Peru by 11% since the FTAs started to be applied', a fact it attributes to the growth slowdown in Latin America and falling commodity prices worldwide. Trying to salvage some results from the agreement, the report notes that the FTA has had a 'stabilising' effect on the trade relationship, as overall trade for both Peru and Colombia has fallen far further than the decline in EU bilateral trade.

In fact, it appears that trade gains have been highly concentrated in certain sectors, something we explore in below under Sectoral impacts. Perhaps more importantly, an earlier report (European Commission, 2016a) also made the point that the composition of trade had shifted beneath the aggregate numbers: mainly, that the imports of products from Peru which were fully liberalised under the FTA increased by 19%, while those partially liberalised rose by 15% and those under the preferential tariff quotas rose (from a very low level) by 86%. Similarly, from the Colombian side, the country had increased its imports which were fully liberalised by the FTA overall by 43% from the EU, with products partially liberalised increasing by 27% and those under preferential quotas by 71% (with the same caveat at Peru, mainly that this increase comes from a low base). As a result of these developments, the EU share of Colombian imports increased from 11% in 2012 to 14% in 2014, while for Peru it increased from approximately 14.74% to 16.52% from 2014 to 2016<sup>4</sup>.

### 1.1.5 Employment and labour rights

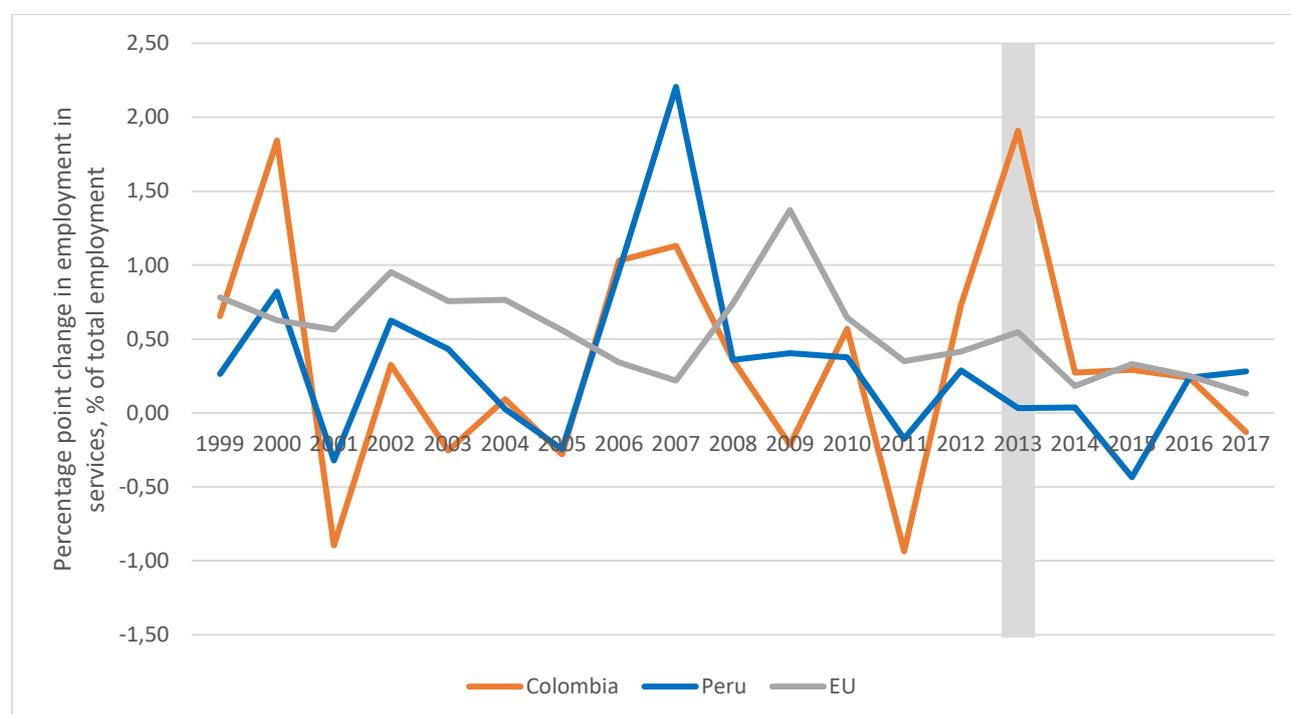
Employment gains (or losses) in the aggregate from an FTA are more of a long-term effect than prices or trade, mainly because of the dislocation which necessarily accompanies trade liberalisation and the reallocation of resources in an economy to take advantage of new gains. Moreover, this dislocation, if viewed through a short-term lens, can make it appear that liberalisation is detrimental for an economy, when, in reality, such dislocation is better for the country on the whole.

Examinations of the possible employment effects of the EU-P/C FTA focused on these displacement effects rather than broader aggregates (a necessity in the CGE models used, as they often assumed constant labour force size). In the SIA from 2009, Colombia was assumed to see inter-sectoral movement over the long term of 2% of its unskilled workers and 1.8% of its skilled workers, meaning that approximately 2% of

<sup>4</sup> Author's calculations based on Eurostat data.

all of its skilled workers over time would shift to more lucrative opportunities in other sectors of the economy. Similarly, Peru was projected to see 1.1% of its unskilled workers and 1.2% of its skilled workers experience an inter-sectoral shift over the long run and in the most ambitious liberalisation scenario. The CEPR study (2012) projected much smaller labour shifts across sectors for all partners, with 0.2% of skilled workers in the EU, 0.29% in Colombia, and 0.79% in Peru facing sectoral shifts (the comparable numbers for unskilled workers were 0.04% for the EU, 0.99% for Colombia, and 1.32% for Peru).

**Figure 2. Change in Employment in the Services Sector, 1999-2017**



Source: Author's calculations based on World Development Indicators data

As it is very early to see a massive inter-sectoral reallocation of labour, data can only, at this point, provide a rough guide to effects in the economy. Unfortunately, as Figure 2 shows, there are little discernible labour market trends from the FTA in any country, with most changes in sectors following long-standing trends locally. Using changes in the services sector as a benchmark for sectoral changes across the economy, for example, Peru saw a slight uptick in the percentage of people working in the services sector after the FTA but had seen a slowdown in growth since 2007. Similarly, the EU had a spike in services in 2008 and 2009 but otherwise has seen slow growth. Colombia appears to have had its spike in the services sector starting in 2011 and coinciding with the FTA, but growth rates have levelled off since then; perhaps Colombia is the only country where the FTA might have had an immediate effect on labour allocation (especially when one considers that the share of employment in industry dropped 1.06% in 2013, its largest drop over the past 20 years).

In relation to wages, the CEPR (2012) assessment predicted wage gains across the board in both the EU and Peru and Colombia: in particular, the EU was predicted to have real wage gains for skilled labourers of 0.03% and for unskilled of 0.02%, while in Peru the respective gains were 0.07% and 0.38% and Colombia it was projected at 0.25% and 0.45%. These gains were somewhat more muted than the SIA (although the CEPR [2012] study notes that they are 'similar'), which, in the best-case scenario, had EU skilled wage gains at 0.1% and Peru and Colombia at 0.3%. At the same time, the SIA saw no real gain for EU unskilled workers, but substantial gains of 0.9% for Colombia and 0.7% in the long run for Peru for unskilled labourers. These gains were also echoed in the DG Trade (2016) report examining the extension of the FTA to Ecuador, which predicted an overall gain of 0.6% for Ecuadoran workers. Finally, Bouët *et al.* (2008) predicted wage losses

across the board in Peru for both skilled and unskilled workers, an aberration from the other studies, driven mainly by losses in the non-agricultural sector (presumably due to import competition with the EU).

Much like the effects attributable to the FTA in labour flows, observing the changes in wages is also very difficult, not least because data on wage rates are difficult to come by (the International Labour Organisation (ILO) has no data for Colombia, for example). Moreover, so many factors go into wage determination that, without rigorous econometric modelling, no conclusive effects can be discerned. This is especially the case in the Andean Community, where real average wages have increased a full 17.49% since 2013 as opposed to Ecuador (where the increase was only 10.38%); however, contrast this with Bolivia, where the average real monthly wage has gone up 20.38% over the same time frame, and it is difficult to say if the FTA was responsible for Peru's gains. Drilling down deeper into skilled and unskilled categories, it appears that skilled professions in Peru (or at least in Lima, where the ILO coverage begins and ends) saw wage increases of 14% on average from 2013 to 2017 while unskilled workers saw comparatively less at 10%<sup>5</sup>. At this point, it is too early to say if gains from the FTA will match those effects predicted *ex-ante*.

With regard to labour rights, the picture is also very mixed. The CEPR (2012) study only mentions briefly the labour protections built into the FTA, implicitly endorsing the view that these provisions will improve labour protection in both Peru and Colombia. In a similar vein, the 2009 SIA mentions that the informal economy in the Andean Community calls into question the effectiveness of existing labour standards but does not mention explicitly the possible inclusion of labour protections in a forthcoming EU-P/C FTA<sup>6</sup>. And while there was no quantitative modelling of effect, the SIA also predicted positive gains for labour rights as a result of the FTA (even without explicit provisions) due to poverty and wage effects. At the same time, many civil society organisations in Europe and Latin America took the FTA to task for 'rewarding' governments with less-than-stellar labour and human rights records (Colombia has been especially singled out for the high rate of violence against trade unionists). However, the EU has anticipated these criticisms, as evidenced in Karel De Gucht's speech before the European Parliament in 2010, where he noted that the standard was much lower in the P/C FTA for the EU to suspend cooperation (De Gucht, 2010).

Given the thorny and byzantine world of labour rights in the Andean countries, it is unlikely that the FTA's provisions were going to provide anything but guidance for Peru or Colombia; moreover, as Campling *et al.* (2016) note, there is still no real framework for assessing the effect of labour provisions in EU FTAs. A cursory look at the state of labour rights pre- and post-FTA shows that the worries of civil society and labour rights groups pre-FTA (such as fear of foreign corporations vitiating labour contracts) still exist post-FTA: indeed, in October 2017, the Europe-Peru Platform (PEP) filed a 'Complaint against the Peruvian Government for failing to fulfil its labour and environmental commitments under the Trade Agreement between Peru and the European Union'. Similarly, the labour provisions of the FTA have been criticised in Colombia as being far too broad, lacking effective monitoring and evaluation frameworks (Marx *et al.*, 2016). Clearly, the perception is that the labour provisions have not had much of an impact on the behaviour in either country, calling into question why these provisions even exist if the EU is not prepared to bring forth sanctions. This is an area for further study, but in the context of this particular FTA, it appears that even the harder EU approach noted by De Gucht (2010) has had little effect.

### 1.1.6 Budget balance

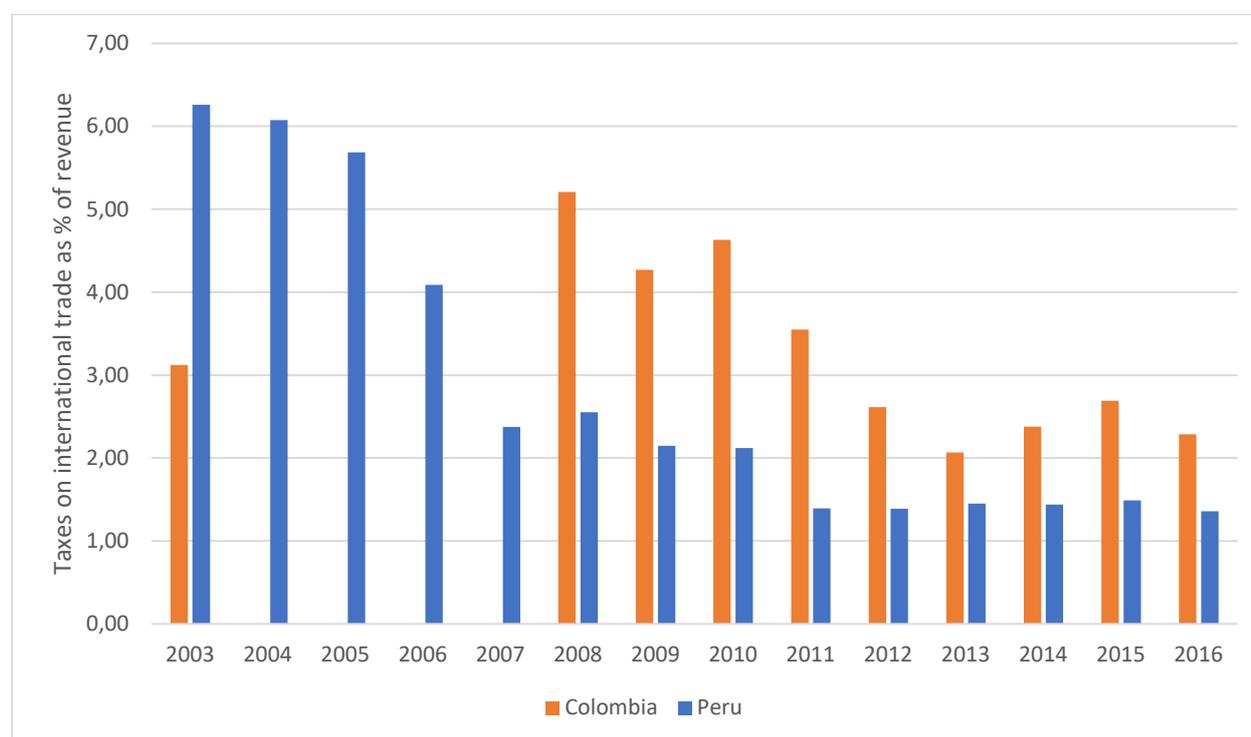
The reduction of formal trade taxes accompanying an FTA is destined to have an effect on a country's budget unless there is a well-developed tax administration and/or rationalisation of expenditures standing by to absorb the shock of revenue loss. This issue has been particularly acute in Latin America, which has

<sup>5</sup> Calculations based on ILO data, taking the average of ISCO-08 classifications 0-6 (skilled) and 7-9 (unskilled). Not enough data is available across countries to perform a DiD analysis for wage effects.

<sup>6</sup> The SIA does contain an excellent discussion of the baseline of labour rights in the Andean Community, however.

relied much more heavily on international trade taxes to fund public services than any other region globally (McCoon, 2015). However, as Figure 3 shows, there was already a trend away from trade taxes in Peru and Colombia over the past 15 years, with trade taxes comprising at most 1.5% of all revenue in Peru and less than 3% of revenue in Colombia (off highs over 5% in 2008). This has gone hand-in-hand with improvements in both tax policy and tax administration, with Colombia and Peru operating at similar levels of tax efficiency given their similar tax policies (Lora, 2012).

**Figure 3. Taxes on Trade as % of all Revenue, 2003-2017**



Source: World Bank Development Indicators

Despite both the theoretical basis for assuming an effect on the budget and the recent performance in Peru and Colombia, only the CEPR (2012) study contained a prediction regarding the fiscal effects of the EU-P/C FTA. Modelling tariff revenue as part of the CGE model, the study estimated that losses from tariffs would be highest for Colombia, at EUR 340 million, with the EU seeing losses of EUR 150 to 247 million and Peru seeing losses of no more than EUR 160 million in the most pessimistic scenario. For the Latin American countries, these drops correspond to a loss of approximately 30% of tariff revenue for Colombia and 21% for Peru, and as such are not an insubstantial sum.

With no *ex-post* assessments tracking the fiscal effects of the FTA, we are forced to check actual fiscal balances in the two countries as a potential gauge of the FTA's effect (the predicted effect on the EU would be miniscule in relation to the EU budget, given the small proportion of EU trade that Peru and Colombia represent, and also difficult to disentangle from other effects). According to the IMF's *Fiscal Monitor*, Peru's government balances have been deteriorating since it had a slight surplus in 2010, seeing a deficit of -0.3% in 2014 (immediately following the FTA) which widened to 3% in 2017 (with deficits projected to continue through 2022). Colombia also had a small budget surplus of 0.1% in 2012, the year preceding the FTA, and has seen deficits since the FTA was implemented (reaching a trough of 3.5% of GDP in 2015). In both cases, it is difficult to attribute the effect merely to the FTA, as Colombia's reliance on oil means that less revenues have been coming into state coffers at the same time that public spending has slightly increased. With regard to Peru, commodities have also been involved, as the falling price of copper has impacted the government's budget, along with reconstruction spending following major flooding and landslides in 2016. In sum, while the FTA may have had some effect on the budget balance of both countries (as

predicted in the CEPR [2012] study), it is likely that the effect has been dwarfed by commodity effects; however, given the fall in bilateral trade and shift towards tariff-free trade, it is unlikely that volume effects were able to supplant the price effects.

### 1.1.7 Poverty

Whereas FTAs are anticipated to have a direct effect on a government's budget balance, other topics covered by assessments of trade agreements are perhaps less obvious in terms of their effects. Poverty falls squarely into this category, with poverty incidence often not explicitly covered in assessments of FTAs, due to the reality that the theory linking trade and poverty is fragmented. Poverty itself is a delicate concept which is traced to various inputs, including income, consumption, employment, health, and access to formal labour markets, meaning that poverty can be thought of properly as a second-order effect if one or more of these inputs is missing. With regard to trade, as we have explored, it is anticipated that liberalisation will lead to higher income and better consumption, while having ambiguous effects on employment at the sectoral level and possibly putting fiscal strain on governments (i.e. making services more difficult to sustain); overall, however, it can be assumed that trade liberalisation should make at least some of the poor better off, although there is no consensus in economics on which effect would predominate (Winters, 2002).

In the case of Peru and Colombia, as the SIA (2009) noted, the entire Andean Community has had higher levels of poverty relative to the EU throughout its history, despite a downward trend in recent years. Ironically, it is possible that a lack of openness to trade has been to blame for this poverty, as the rent-seeking accompanying protection and its associated production inefficiencies have left employment opportunities depressed (Baker, 2003) and prices higher than would be obtained in a free market (Goldberg and Pavcnik, 2007). Given this baseline, it could be assumed that the opportunities afforded by the FTA, especially in increasing welfare, would lead to decreases in poverty in both Peru and Colombia; this effect would be tempered somewhat by the fact that both countries had already undergone some measure of trade liberalisation and thus were not starting from an autarkic position. On the other hand, as the SIA (2009) noted, increases in foreign direct investment (FDI) and trade opportunities could create competition for land and resources, disadvantaging certain segments of the poor.

Within the economic modelling done *ex-ante*, there was little quantification of the possible effects of the EU FTA on poverty apart from the aforementioned welfare, income, and employment effects. A CGE model on the effects of the US FTA done by Giordano and Watanuki (2010) also included a simulation of an EU-Andean FTA and found that poverty decreased moderately at the national level, with heterogeneous gains concentrated in the rural lowlands of Colombia and in most areas of Peru. In reality, poverty has been on a steep downward slope in Peru since well before the FTA, and this trend has continued since 2013: according to the World Bank, the percentage of the population in Peru living below the poverty line has dropped from 23.9% in 2013 to 20.7% in 2016 (the latest year available). This drop is nowhere near as precipitous as the decline from 2010 to 2013 (from 30.8%), but still represents impressive gains for the country. At the same time, overall poverty in Colombia declined from 30.6% to 28% from 2013 to 2016, also continuing a decade-long trend. It is likely that, as the effects of the FTA become more pronounced, poverty decreases will continue (especially as employment dislocations subside and efficiency increases) but at a much more moderate trend (as many of the price and quality gains have been realised already).

### 1.1.8 SMEs

SMEs have always played a large role in the economies of Latin America and especially in Peru and Colombia: according to Cisneros (1997), in the mid-1990s, 60% of Peru's urban labour force and 95% of its labour force overall were employed in the SME sector, while by 2011, Colombia saw 63% of its jobs in manufacturing located in SMEs (Savlovski and Robu, 2011) contributing 40% of GDP (according to the OECD). From a theoretical standpoint, not all SMEs will benefit from trade liberalisation, mainly because

smaller firms are the least likely to export and the most likely to be affected by import competition (as well as harmed by administrative barriers); however, for efficient SMEs, liberalisation offers the opportunity to reach new markets and expand their business (Love and Roper, 2015).

Within Latin America, there have been major obstacles faced by SMEs in internationalisation similar to those observed internationally: Vásquez and Doloriert (2011) noted that, like other SMEs globally, Peruvian SMEs are handicapped by lack of access to technology and expertise, while Stephanou and Rodriguez (2008) provide evidence that Colombian SMEs have had little access to finance. These obstacles have not gone unnoticed by the governments of Peru and Colombia during the run up to the EU FTA, as Peru's President Ollanta Humala called for a massive increase in SMEs with export capabilities as part of a major presidential address (Pangerl, 2014). At the same time, Colombian authorities enacted an export promotion programme (EPP) in the early 2000s, but, rather than encourage exports *per se*, the programme only helped to illuminate the issues that Colombian firms faced (Gonzalez, 2009); in particular, lack of growth for SMEs was noted as an issue, as nearly a quarter of Colombian SMEs had been in operation for over two decades, remaining small-scale (Varela Villegas, 2016). As part of Colombia's ongoing trade liberalisation, it appeared that SMEs were under increasing pressure and fighting for survival rather than seeking to expand, an effect which also had substantial gender effects, given that Colombian SMEs were mainly woman-headed or -staffed (MacLaren, 2013).

Given these issues, the effect of the EU-P/C FTA could have gone in any number of ways, and there was little consensus in *ex-ante* predictions. In the SIA (2009), the EU FTA was assumed to be beneficial to SMEs in the textile, motor vehicles, and leather industries, due to anticipated positive employment effects, while pressure on manufacturing in general could have harmful effects on import-competing SMEs. *Ex-post*, there have been no formal studies of the effect of the FTA on SMEs in the two countries, but there is anecdotal evidence that shifting consumer preferences in the EU have benefitted Peruvian agricultural producers, especially for nutritious foods such as avocados, quinoa, and blueberries<sup>7</sup>. De Luna Barrios (2014) also notes that the EU FTA has generated significant benefits for SMEs in Peru, and in a follow-up article (De Luna Barrios, 2016) shows how the FTA, by enabling diversification in the Peruvian economy, can benefit smaller actors. Looking at the numbers in Colombia, it appears that the SME sector has benefited as a result of the FTA as well, with loans to SMEs as a percentage of all loans jumping from 24% in 2012 to 49% in 2014 and SME collateral tripling from 2012 to 2014 (according to OECD statistics). While much of this performance is tied into the overall economy, these results show that the FTA is not having a deleterious effect and may indeed be contributing to the growth of the SME sector in both countries.

### 1.1.9 Sectoral impacts

As the previous section has hinted at, FTAs in general may have muted aggregate effects on growth, employment, and output, but they are likely to have dramatic effects on specific sectors, especially those reliant on exports or which are import-competing. The exact effect is of course dependent upon the sector being explored and the structure of the particular economy undergoing trade liberalisation, but the sectoral effects are what are really driving aggregate numbers. Indeed, this is the first lesson of trade liberalisation, namely that the competition and opportunities which accompany opening to trade produce both winners and losers—and these winners and losers are found at the sectoral level.

<sup>7</sup> 'Peru-EU trade deal provides boost to 'superfood' producers, other SMEs', *Euractiv.com*, 22 February 2018, <https://www.euractiv.com/section/economy-jobs/news/peru-eu-trade-deal-provides-boost-to-superfood-producers-other-smes/>.

**Table 2. Estimated Sectoral Impacts of the FTA on the EU, Peru, and Colombia**  
(% Change in Output)

Sectors	EU27	Colombia	Peru
Textiles	0.024	7.18	3.29
Wearing Apparel	-0.062	2.10	3.42
Leather	-0.061	-1.98	0.11
Wood products	0.025	-5.79	-0.51
Paper products	0.066	0.34	-4.00
Petroleum and coal	0.050	0.31	0.40
Chemical, rubber, plastic	-0.037	8.16	5.48
Minerals nec	0.023	2.20	0.03
Ferrous metals	-0.04	5.96	0.41
Metals nec	-0.21	6.04	5.31
Metal products	0.01	0.81	-0.85
Motor vehicles	0.02	24.51	-1.21
Transport equipment nec	-0.08	6.38	-0.44
Electronic equipment	-0.05	6.19	-0.50
Machinery and equipment nec	0.04	-1.48	-5.56
Manufactures nec	0.08	-2.62	-1.15

Source: Based on Table 53 from the 2009 SIA

The formal *ex-ante* assessments of the FTA in Peru and Colombia (as well as other *ex-ante* assessments) explicitly delve into the sectoral impact of the FTA, using in the model the reality that aggregate effects are a combination of sectoral effects. The SIA took a highly aggregated approach to sectoral effects in the Latin American countries, examining the FTA's impact on agricultural and processed agricultural goods, mining, and fishing, with further disaggregation of effects under these broader headings<sup>8</sup>. The CGE model predicted that both Colombia and Peru would see slight increases in their agricultural output (concentrated entirely in vegetables/fruits/nuts for Colombia and across the board for Peru), with losses in processed agriculture for Colombia and slight gains for Peru. With regard to industrial impacts, the picture was much more muddled (see Table 2): the EU was to see small gains in most categories, with a larger loss in metals not elsewhere classified, which corresponds with large gains for both Colombia and Peru in these categories. Colombia is projected as seeing a huge gain in motor vehicles (with a loss for Peru), while Peru and Colombia both with benefit from chemicals, rubber, and plastics trade. Interestingly, the losses or gains at the sectoral level do not just run from the direction of the EU to Peru and Colombia and back, but also include regional reallocation between Colombia and Peru, with transport equipment a gain for Colombia but a loss for both the EU and Peru.

The CEPR (2012) study contradicted these results somewhat, showing manufacturing losses for Peru and Colombia across the board but with gains in agriculture (especially in bananas). However, the CEPR study also showed a gain in services trade for each country (0.02% in the EU, 0.32% in Colombia, and 0.17% in Peru), an important result given that services are a key component of the new generation FTAs from the EU. The largest gains, predicted at 0.72% in Colombia and 0.32% for Peru, were projected for construction services (which also were to show a gain of 0.02% in the EU).

In reality, the gains in the Colombian economy at the sectoral level have been much more widespread. According to statistics from the Colombian Central Bank (*Banco de la República Colombia*), every sector of

<sup>8</sup> As may be expected, given the disparity in economic size, the CGE model predicted no change for output, employment, or other metrics in the EU as part of the FTA.

the economy has grown since 2013 apart from mining and quarrying (which has been in constant decline due to commodity price swings) and slight dips in services (2015 and 2016) and electricity (in 2015). While the long-term gains have not materialised as of yet in the short term, the worst effects predicted in the SIA have not occurred. Similarly, for Peru, sectoral gains have been broad based with declines in oil and gas and overall in manufacturing (starting in 2015), but primary manufacturing has been robust and only non-primary manufacturing has seen a slide (according to statistics from the Central Reserve Bank of Peru). With regard to services, there also has been a major increase in both countries, with construction in Colombia alone growing 2% per annum. While output reallocation will take a much longer time to work its way through both economies, in the short term, some of the direst predictions have not come to pass, and, in fact, have been driven by larger global trends—this fact has been especially true for the EU, which has seen growth across all sectors since 2013 but is not likely to attribute this to the FTA with Peru and Colombia. Without more stringent econometric modelling, we are not able to ascertain the direct impact of the FTA on various sectors, but the fact that sectoral gains have been widely shared once again should help to show that the FTA has not had a negative impact.

### 1.1.10 Human rights and environmental impact

Finally, the social impact of the FTA has been extensively studied, especially in relation to human rights, due to the particular circumstances of these two countries. In particular, the decades-long guerrilla insurgency by the Revolutionary Armed Forces of Colombia (FARC) in Colombia and Shining Path in Peru (coupled with accusations of violence against demonstrators under successive presidents in Peru), has made the human rights dimension more prominent in Latin America than in other recently-concluded EU FTAs. Given the spotty human rights record of these governments, civil society within Peru and Colombia has also been very critical of the FTA, asserting that it would enable further human rights violations and/or reward governments which had no reason to be rewarded (Lizarazo Rodríguez *et al.*, 2014). In fact, it was precisely the prior experience of human rights violations that was the impetus for the EU to include human rights in this (and other) new generation FTAs (although such 'essential elements' clauses had been included in EU agreements dating back at least to the Lomé Convention, see Bartels [2013]).

The difficulty in ascertaining the impact of FTAs on human rights is the lack of hard quantitative data on human rights; moreover, the disentangling of what are essentially political decisions from what is at its heart an economic agreement is even more difficult than understanding the economic effects of an FTA. This reality has meant that, even when human rights impacts have been included in *ex-ante* assessments of an FTA, they have not been part of formal CGE modelling and have been done on a more qualitative basis. This is the case with the EU-P/C FTA, as the 2009 SIA merely described the baseline of human rights in the entire Andean community (with particular reference to indigenous and labour rights). Similarly, the CEPR (2012) assessment contains a brief look at labour and (as we shall see) environmental clauses but makes little reference to human rights more generally (especially in light of the concerns with Peru and Colombia and their track records on human rights). In both of these reports, it was implicitly predicted that the inclusion of the human rights chapters in the EU-P/C FTA would help to lock in human rights gains in both countries.

Whether or not this is the case is debatable, although there are some encouraging signs. As the US State Department's Human Rights Report for 2017 notes regarding Peru, a series of extra-judicial killings by the Peruvian National Police (PNP) of suspected criminals was investigated by the new presidential administration and 14 officials were charged and/or placed under detention. Similarly, the National Criminal Court sentenced two former army colonels to decades in prison for their role in torture occurring under their command in 1983. While neither of these cases show that human rights are ironclad in Peru, they do show improvement, in that violators can be brought to justice. However, issues do continue to plague the Peruvian government, including the 2016 killing of radio journalist Hernán Choquepata Ordóñez in the Arequipa Region during a broadcast, murdered reportedly because of his criticism of the

mayors of the municipalities of Camaná and Mariscal Cáceres. Moreover, while killings by the police in response to protests have sharply declined since 2016, there is still a blanket guarantee of immunity under Law 30151 for police officials who cause injury or death on the job, meaning an incentive to over-utilise force. Thus, despite progress since the election of President Kuczynski in 2016 on the human rights front, Peru still faces issues with press freedom and violence against protestors. And in any case, it appears that progress in human rights has not been driven by the EU-P/C FTA but by Peruvian domestic politics.

In Colombia as well, protests against the government have a tendency to become violent and the police have been implicated in heavy-handed tactics resulting in injury and death; as an example, in Tumaco in 2016, five protestors against a coca eradication effort were killed and 20 were injured when security forces opened fire (accounts are spotty on the sequence of events but in any event the protest turned deadly). Violent crime connected with the decades-long insurgency and, in particular, extrajudicial killing remains a problem in Colombia, although the trend is positive—the number of killings has gone down since the peace accord with FARC in 2016. Again, this watershed moment in human rights progress in Colombia came about due to the efforts of domestic forces rather than as a response to the EU-P/C FTA, and thus it is uncertain the effect that the FTA actually had in pressing forward human rights in the country. This does not mean that the human rights clauses have had no effect in either Colombia or Peru, as the EU's commitment to human rights was crucial in moving the negotiations on the FTA forward. More importantly, as the Council on Hemispheric Affairs (2013) noted, the EU actually has an economic stake in human rights improvements in Peru and Colombia as a result of the FTA, given that better human rights equate with stability and thus economic growth. This linkage of EU commercial interests with its broader interest in human rights may still allow for externally inspired progress in a region which has been lacking it.

Turning to the environment, the predicted effects of the environmental impact of the EU-P/C FTA in *ex-ante* work can be divided into two categories: general effects as predicted by economic theory, and specific impacts as measured by targets contained in other multilateral agreements (as numbers or targets are not set in the agreement itself). With regard to general effects predicted by theory, trade has the potential to increase environmental degradation through increases in economic activity, requiring more resources or transportation. On the other hand, there are several mitigating factors at play here as well, as societies grow richer, they get much more efficient at using resources (Hartwell and Coursey, 2015) and also may allocate more resources to clean up the environment. Moreover, as Forslid *et al.* (2015) show in a theoretical model, exporting firms are on average cleaner than non-exporting ones, and thus the opening of trade will lead to more exports and cleaner technology on the whole. However, while an FTA may create more environmentally friendly outcomes for the parties involved, it may also induce third countries to specialise more strongly in CO<sub>2</sub>-intensive sectors to compete (including sectors that are CO<sub>2</sub>-intensive due to land use change, e.g. deforestation in developing countries). On balance, it is likely that trade will lead to cleaner environments, but the direct effects depend upon the economic structure of the countries being examined.

The environmental effects of the EU-P/C FTA were examined extensively in the 2009 SIA, mainly with regard to the baseline of regulation, the prevalence of the mining industry, and the structure of environmental policymaking within the two countries. While, unlike later FTAs, environmental impacts were not explicitly part of the CGE model examining the impact of the agreement, the SIA contained some conjecture on environmental effects matched up to sectors; in particular, increases in agricultural production were projected to create pressure on land and water usage, while industrial shifts could increase deforestation and discharge of untreated runoff. In sum, the environmental impact was expected to be negligible, as cleaner technology, improved regulation, and increases in living standards accompanying liberalisation were assumed to have offsetting effects to the possible increased use of resources. These impacts were also referred to in the 2012 CEPR report, although they were treated in a much less intensive manner, and more emphasis was placed on the possible effects of the FTA rather than the likely overall outcome.

There is evidence at the cross-country level that FTAs including environmental aspects do improve environmental outcomes (in this case, CO<sub>2</sub> emissions), but that US FTAs (relying on enforcement) foster better outcomes than EU ones (Baghdadi *et al.*, 2013). With regard to the actual outcomes in Peru and Colombia, we must consider that environmental indicators move slowly, and with this in mind, there has been little indication of major environmental gains since 2013. In particular, according to the World Bank, the percentage of forested land in both Colombia and Peru has continued to shrink at the same pace as prior to the FTA (forested land in Colombia shrank from 52.78% in 2013 to 52.73% in 2015, exactly the same as its change from 2011, when it was 52.82%). Particulate matter (PM<sub>2.5</sub>) pollution has, on the other hand, decreased slightly in both Colombia and Peru since 2013. In a similar vein, materials use intensity, a metric of environmental efficiency reflecting the amount of resources needed to generate one dollar or euro of output, has improved slightly in Colombia since the implementation of the FTA in 2013, with slight decreases in energy required per unit of GDP; on the other hand, Peru has seen an increase in its intensity since 2013 after years of decrease, a worrying result (this trend has been mirrored in CO<sub>2</sub> intensity, which also has decreased in Colombia but increased in Peru since the FTA). Thus, the trends have been mixed in terms of environmental progress, but there has been no steep environmental degradation as predicted by worst-case scenarios.

While environmental indicators may take time to shift for the better, an important way to think about the EU's influence via the FTA is to understand how the FTA has brought Peru and Colombia into global economic governance. Indeed, as Jinna and Morgera (2013) note, the EU has made an impressive showing in linking bilateral FTAs to multilateral environmental agreements, thus making environmental impacts less than they may have been (while at the same time improving environmental governance in the signatories of the agreement). It is plausible that the legacy of the EU-P/C FTA will be the linkage of development and sustainability, a linkage which will lead to better environmental outcomes in the future.

## 1.2 The EU-South Korea FTA

Signed in October 2009 and entering into force provisionally in July 2011 (and achieving full ratification in December 2015), the EU-Republic of Korea (ROK) FTA was, at that time, the most far-reaching trade agreement signed by the EU and also the second-largest FTA in the world (behind the North American Free Trade Agreement [NAFTA]). In terms of its trade effects, it was designed to eliminate tariffs on 92% of Korean goods (and 98.7% of the value of trade between the two) with extensive liberalisation of trade in services. However, it was also the first 'new generation' trade agreement coming out of the EU's renewed focus on regional initiatives, covering not only on trade but 'competition, mutual liberalisation of the public procurement market, and intellectual property protection, as well as facilitating investments' (Majchrowska, 2017:185).

Given its novel nature, the EU-ROK FTA was heavily scrutinised for its effects, especially given the fact that the economies of the two partners were simultaneously both highly advanced and also very different (an additional factor of interest being that this was the first FTA the EU concluded with an Asian country). We are thus advantaged by a relatively large literature on predicted effects, as well as a relatively long time-series on actual effects, allowing for some evaluation of the accuracy of *ex-ante* predictions across most of our categories (indeed, the Commission, in the form of DG Trade, has been one of the main sources of information regarding the effects of the FTA). A key point to note in advance is also that the wealth of scrutiny of the FTA's effects pre-implementation means that there is also a wide dispersion of estimates, meaning that there was less of a consensus across analyses than with other agreements we examine here. However, this also allows us to see which predictions—and which assumptions—were closer to the mark. As with Peru/Colombia, the results of this analysis are shown across the specific components discussed below.

## 1.2.1 Welfare

Surprisingly, especially when compared with income and sectoral effects, the estimates surrounding welfare gains in the EU-ROK FTA are very thin on the ground. With the exception of Li (2012), there is consensus in the literature that the gains would be overwhelmingly in favour of Korea, due mainly to the enormous size disparity between the South Korean and EU economies, with the EU benefiting only marginally (see especially Das, 2012): across all estimates, the highest projected gain for the EU is 0.08% of GDP (Erixon and Lee-Makiyama, 2010), while the average across all studies we obtained was 0.04% of GDP. On the Korean side, gains were projected to be between 0.4% and 2% of GDP, with both bounds coming from the IBM Belgium (2008) Sustainability Impact Assessment for DG Trade. Other studies examined were squarely within this range but tended to be closer towards the midpoint, with the Copenhagen Economics (2007) study predicting gains of between 0.75% and 1.12% of GDP depending upon the assumptions regarding the extent of liberalisation. Across all studies surveyed here, the average predicted effect was 1.04% of GDP for Korea.

The Li (2012) study deserves a special mention here, as its forecasts are the only one to show a *negative* impact on Korea and a substantial *positive* impact on the EU. Using a dynamic CGE model accounting for capital accumulation, the Li study predicts a decline in welfare in Korea of -0.38% of GDP while a corresponding increase of 0.50% of GDP for EU welfare. It appears that this result is driven by the fact that Li (2012) considers the EU FTA alongside other potential FTAs within the region, where tariffs are much higher; thus, the welfare gains forsaken by pursuing an EU-ROK FTA instead of one with Japan and China are also much higher. When including the Li estimates, the average welfare gain across all studies to the EU is increased substantially to 0.12% of GDP, while Korea declines to 0.80% of GDP. Thus, even with the inclusion of this study, there is still a pronounced imbalance in welfare gains towards Korea.

The actual gains in welfare, as shown in income increases, have been calculated by Civic Consulting (2017) for DG Trade and are much more muted for both sides than predicted. According to the DG Trade study, the EU has seen welfare gains of approximately 0.03% of GDP, aggregated across all Member States, in line with many of the estimates pre-agreement, but with high dispersion across Member States: within the EU, the greatest gains were seen for Malta (0.28% of GDP) and Slovakia (0.14%), with smaller economies such as Croatia and Lithuania seeing negligible gains. The surprising result has come from the Korean side, as Korea has seen welfare gains of 0.31%, an amount lower than even the lowest estimate from IBM Belgium (2008). This result is likely due to issues connected with the structure of the Korean economy, mainly the fact that the oligopolistic domination of *chaebol* (family-controlled conglomerates) means that some of the benefits of the FTA may be captured by firms with dominant market powers and those protected by the government, and thus would not be reflected immediately in lower prices for consumers<sup>9</sup>. Such an economic structure would be difficult to model *ex-ante* and may be responsible for the over-estimation of welfare gains in the previous literature (Cherry [2012] anticipates these and other issues in South Korea).

## 1.2.2 Real GDP

The majority of studies forecasting the growth effects of the EU-ROK FTA projected a modest increase for both parties, but with the ROK benefiting much more; indeed, only one study examined, a multi-agreement CGE model of the ROK and its trade partners (Li [2012], as noted above, already an outlier), found a negative impact on Korean GDP, with an estimate of -0.27% of GDP. Across the studies under examination, the average effect predicted on Korean GDP (with the negative outlier removed) was 1.80% of GDP, ranging

<sup>9</sup> This point, based on our reading of the literature on the countries examined here, appears to be unique to Korea, but there is no reason why it necessarily would be. Economic theory would predict that government protected firms, enjoying monopoly or quasi-monopoly status, would be providing lower quality at higher prices, and the expansion of trade opportunities would not necessarily alter their incentives. In this instance, deeper issues of government support for industry might also be considered as a tool for negotiating an FTA. Additionally, the effects that industrial support may have on EU consumers in the presence of an FTA also needs to be considered.

from a high of 2.4% under full implementation and with trade facilitation (Copenhagen Economics, 2007) to a low of 0.70% under a restrictive elasticity assumption (IBM Belgium, 2008). For the EU, estimates were much more bounded but uniformly were less than 0.5% of GDP, apart from Li (2012), who estimated EU gains at 0.53%; the average across all predictions was 0.24% of GDP, concurrent with the EU's much larger size.

The actual performance of GDP since the FTA for both parties has been much lower than the predictions from the *ex-ante* models, a reality that is likely more due to the weaknesses of the CGE models and their inability to model sovereign debt crises (i.e. in the Eurozone) than due to the FTA itself. According to the Civic Consulting (2017) report, the actual changes in GDP through 2015 were only 0.04% for the EU and a mere 0.58% for Korea. In terms of accuracy, the Copenhagen Economics (2007) study was closest to the mark, predicting a range of 0.03 to 0.05% of growth for the EU between its two baseline scenarios of partial liberalisation and full liberalisation; however, Korea's performance exactly matches their prediction for Korea in a limited-liberalisation scenario (0.58%), perhaps suggesting asymmetry in liberalisation under the FTA.

### 1.2.3 Prices

As one of the first FTAs to be subjected to extensive *ex-ante* analyses and CGE modelling across a broad series of metrics, it is perhaps surprising that the inflationary effects of liberalisation were not considered in any of the pre-FTA modelling undertaken (either contracted by the Commission or via academic research). Even within the *ex-post* assessments, only the Civic Consulting (2017) report mentions inflation, and that is in the context of inflation of food prices (as part of their examination of human rights and the right to food) and the influence on sectoral prices. While there were no explicit predictions on price in the *ex-ante* reports (subject to the caveat below), as noted above, trade theory would predict that competition should lead to a decrease in price levels through efficiency gains. This effect has been observed in the Civic Consulting (2017) report, which detailed an overall average decline in prices in the EU of 0.03% across sectors and a decrease of 0.27% in Korea. The largest sectoral declines were in metals for the EU (-0.07%) and machinery and equipment (-1.29%) for Korea.

Another way in which prices can be approximated is through the real effective exchange rate (REER), proxying for producer prices relative to trade partners. Using this metric, the anticipated change in the REER for the EU was an average appreciation of 6% (across two baseline scenarios), while for Korea it was an average appreciation of 35% (CEPII/ATLASS, 2010). According to data obtained from the Federal Reserve of St. Louis' FRED Database, the real change in Korea's REER over July 2011 to April 2018 was actually 10.1%, while for the Eurozone, the change was -1.96%. Of course, other factors are at play here, including monetary policy and political effects, but the rise in producer prices was much more muted than the CGE models predicted.

### 1.2.4 Aggregate exports and imports of goods and services

As a highly studied first-order effect of the FTA, it is perhaps not surprising that the large number of estimates regarding trade effects were also widely dispersed in their predictions. With regard to overall trade of the participants, there was little consensus across studies (or within studies) on the effect of the EU-ROK FTA: CEPII/ATLASS (2010) contains five separate scenarios for the development of trade after the FTA, with the EU expected to see an average growth of total exports of 1.31% and 1.19% in imports. Similarly, the study shows five scenarios for South Korean trade growth, with an average of 5.42% growth of Korean exports and 5.77% growth for imports.

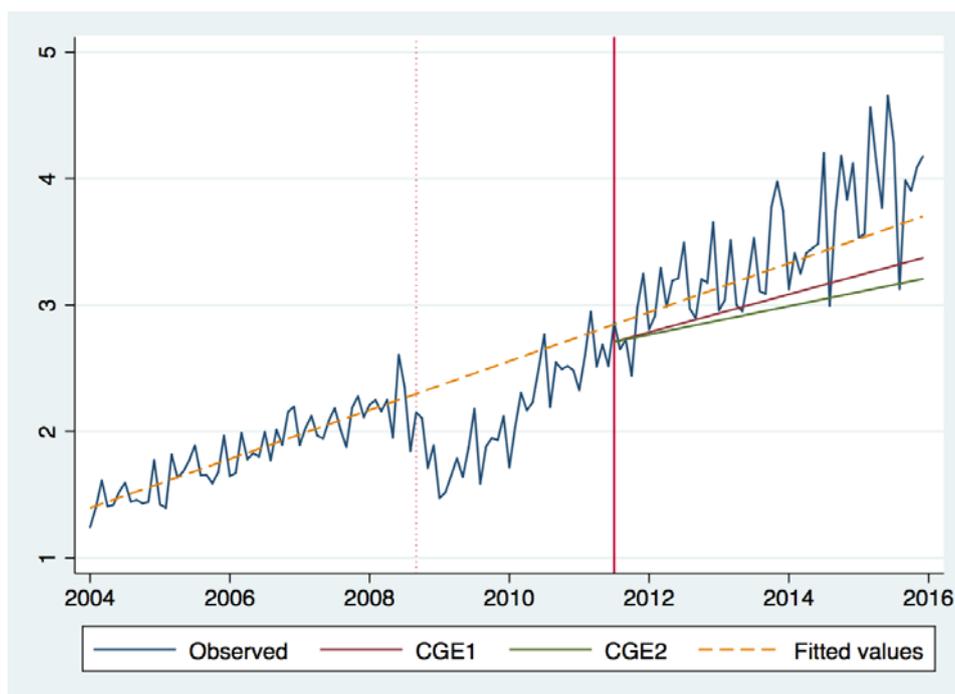
This uncertainty regarding trade effects is also prevalent in analyses of EU-ROK trade specifically. As an example, the CEPII/ATLASS (2010) study forecasts two different scenarios for the path of EU trade with Korea; across these scenarios contained in the CGE model, the change in exports from the EU to Korea ranges between 62.08% and 82.58%, while Korean exports to the EU are estimated to increase between

23.06% and 38.39%. These numbers are much more optimistic than the Copenhagen Economics (2007) study, which projected an increase of 0.9% in the value of EU exports and 20.8% in exports from Korea, and incredibly more optimistic than the IBM Belgium (2008) study, which projected changes of only 0.24% in EU exports and 0.97% in Korean ones. As CEPII/ATLASS (2010) note, the undercounting in these earlier studies may be due to the fact that the rollback of non-tariff barriers (NTBs) is considered in the 2010 study but not in either the Copenhagen or IBM studies. Across all the studies examined here, there is an average predicted effect of an increase of 33.56% in EU exports and 18.64% in Korean exports.

Perhaps because of the wide dispersion of predicted effects, there are similar issues when it comes to ascertaining the actual changes in exports of goods and services. Civic Consulting (2017) notes that exports of goods from the EU to Korea have increased by about 54% post-FTA compared to pre-FTA, while Korean exports increased by approximately 15%. Amighini (2016) calculates the overall increase for the EU slightly differently, coming in at 55% (with a 57% increase in goods that were totally liberalised), and noting that the reality has exceeded expectations. In a similar vein, Forizs and Nilsson (2016), transforming the CEPII/ATLAS model to Harmonized Commodity Description and Coding Systems (HS) aggregations, revise the expected increase in exports from the EU through 2015 to 22% (and exports from Korea to 10%), and then show that the actual increases (47% and 16%, respectively) far outpaced expectations. Cherry (2018), using the 12 months preceding the implementation of the agreement as a baseline, finds an increase in exports from the EU of 35% and from Korea of only 5%. In any case, EU exports to Korea have underperformed the most optimistic estimates (CEPII/ATLASS, 2010), but are above the average effect. At the same time, Korean exports have underperformed their average prediction, no matter which measure of trade performance is selected.

Of course, the key issue with these estimates is how much of the change in trade can be attributable to the FTA. Schwarzer (2017) notes that much of the trade increase can be attributed to the low baseline used in many of the studies, as exports dropped substantially during the global financial crisis (i.e. the period immediately preceding the entry into force of the trade portion of the FTA); as shown in Figure 4, Schwarzer (2017) makes the point that, while export values have increased, they are back at their pre-crisis trends, thus making the performance somewhat less spectacular than claimed. However, this criticism ignores the issue of endogeneity, in that there was no guarantee, post-financial crisis, that EU-ROK trade relations were going to return to their pre-crisis trend. It is likely that this occurred only because of the efforts of EU and Korean policymakers in moving towards trade liberalisation, thus making at least some of the increase in trade between the two directly attributable to the FTA.

**Figure 4. Extrapolated Trade Volumes, EU-South Korea**

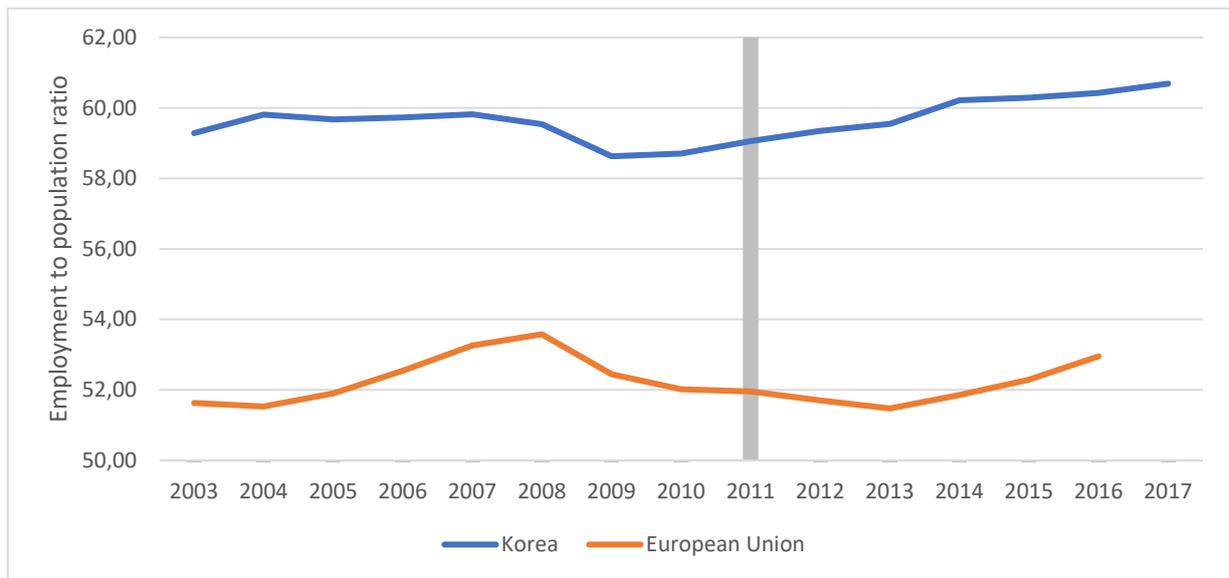


Source: Schwarzer (2017)

### 1.2.5 Employment and labour rights

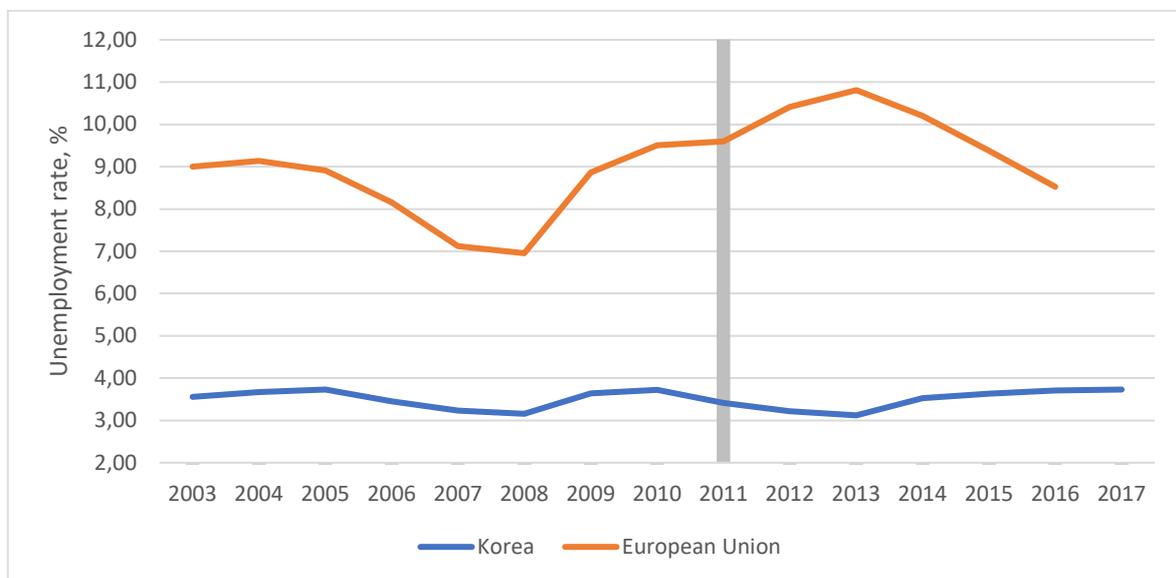
The employment effects of the EU-ROK FTA were generally left untouched in most of the *ex-ante* assessments of the agreement, with the focus falling on wage movements rather than aggregate employment or unemployment trends (or even sectoral allocation of labour and how this might be affected). With regard to wages, the effects of the FTA were projected to be unfavourable across both skilled and unskilled labour. In terms of wages, the IBM Belgium (2008) report showed very pessimistic predictions in their aggregated CGE model, with a drop in unskilled labour of 0.02% in the EU and 0.45% in Korea and declines in skilled labour of 0.08% in the EU and 0.14% in Korea. This contradicted the Copenhagen Economics (2007) study, which showed zero change in wages in the EU across skilled and unskilled labour but gains of up to 1.6% for skilled labour in Korea and 3.4% for unskilled labour. Across all studies showing a prediction for wage effects, both the average skilled and unskilled wage gains for the EU are estimated approximately at 0.01%, while Korea is estimated to have an average gain of 1.33% for skilled labour and 2.02% for unskilled labour.

**Figure 5. Employment Ratios in the EU and Korea, pre- and post-FTA**



Source: World Development Indicators

**Figure 6. Unemployment Rates in the EU and Korea, pre- and post-FTA**



Source: World Development Indicators

According to the Civic Consulting (2017) assessment, several trends could be discerned in the labour market as a result of the FTA, although the aggregate picture was unclear. Indeed, looking at aggregate employment figures, there has been little change in employment ratios or unemployment rates in Korea or the EU that can be attributed to the FTA. Employment ratios were on the climb in Korea after the global financial crisis and appear to have been unaffected by the FTA, while the EU saw these ratios in decline before the FTA due to the Eurozone crisis (Figure 5). Similarly, unemployment rates were rising in the EU and declining in Korea prior to the FTA, and this trend continued unabated post-FTA (Figure 6).

Beneath these aggregate numbers, there is even less data on the inter-sectoral allocation of workers. However, the Civic Consulting (2017) report uses a measure called the 'displacement rate', tracking the fraction of workers that had to change sectors due to the implementation of the FTA. According to this report, the index for Europe was calculated at 0.11, a normal rate for developed economies, while for Korea,

it was 0.28, a higher rate but one that is in proportion to overall welfare gains within the Korean economy. According to Civic Consulting (2017), the sectors with the biggest gains in employment in Korea were the automotive and business services sectors, while the EU saw a major shift into machinery and equipment (estimated at 40,000 employees). In sum, however, it appears that displacement was normal according to the patterns of liberalisation experienced, as labour elasticities did not appear to change as a result of the agreement (Mitra and Shin, 2012).

Turning to wages, the Civic Consulting (2017) assessment asserts that wage shifts in the EU as a whole (as well as for Korea) were positive, with wage gains of 0.04% of GDP in the EU and 0.59% for Korea. These gains favoured the EU much more strongly than predicted in the various *ex-ante* assessments, while Korean wage gains have been much less than anticipated. But even with these wage trends, there has been little evidence of increased formalisation in the Korean economy, as formalisation was proceeding apace before the FTA in Korea, and thus changes since 2011 are part of a broader trend in the Korean labour market rather than a specific effect of the FTA (Civic Consulting, 2017). Other labour attributes noted in the Civic study, such as income inequality and total civilian employment, also appear to have had no effect from the FTA in either the EU or Korea.

Beyond labour market outcomes, the EU-ROK FTA also includes an emphasis on labour protections and rights as part of its focus on human rights. In particular, the rights to peaceful assembly and to join unions, the right to just conditions at work, and the right to leisure are the main areas examined by researchers in reference to the labour effects of the EU-ROK FTA. There are precious few studies pre-agreement which forecast the possible effects of the FTA on labour rights, mainly because there was little hope that such a clause would actually be included (Gupwell and Gupta, 2009). To deal with this reality, the Civic Consulting (2017) study looked at a series of quantitative measures to understand the before and after state of play in labour rights in Korea; much as with the other human rights provisions (see below), they found that labour rights were mostly unaffected by the FTA. In particular, Korea's mildly hostile stance toward unionisation continued unabated, with trade union density continuing a downward drift and collective bargaining remaining at low levels and strikes (especially in the automotive sector) dealt with harshly. In this sense, the FTA can be said to not have had its desired effect of encouraging greater labour rights, as South Korean authorities have behaved the same pre- and post-FTA. Across other metrics, including working hours, number of 'precarious' workers (i.e. not under contract or temporary), and rights of migrant workers, the EU-ROK FTA has also had little effect, as these issues appear to be driven by Korean politics rather than international agreements (Van Roozendaal, 2017).

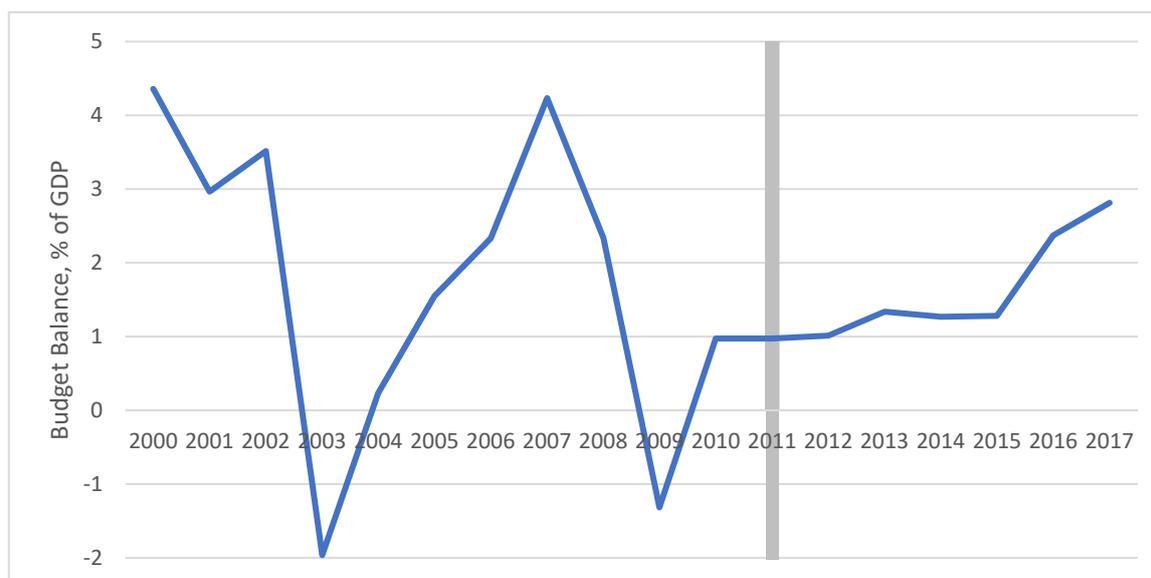
## 1.2.6 Budget balance

With the reduction of tariffs across so many sectors, it could be theoretically anticipated that there would be a loss of revenue accompanying the EU-ROK FTA. The Civic Consulting (2017:116) study confirms this assertion, noting that 'total revenues have fallen drastically in both the EU and Korea. EU tariff revenues decreased from roughly EUR 1.2 billion [in 2010] to EUR 200 million [in 2014], thus by more than 80 percent. The Korean revenues declined from initially EUR 2.4 billion [in 2010] to slightly below EUR 1 billion [in 2014], corresponding to a total reduction of 60 percent'. As Figure 7 shows, this loss of tariff revenue has not had a major impact on the Korean government, which has run a budget surplus every year since the global financial crisis, with an increase to almost 3% of GDP in 2017. Combined with increased social expenditures in 2017 and 2018, it appears that the increase in trade and economic activity that has accompanied the FTA has more than compensated for a loss of tariff revenue in Korea. According to the Civic Consulting report, the same effect occurred with the EU budget, as the increase in GDP in the EU was approximately EUR 5 billion, more than dwarfing the EUR 750 million lost in tariff revenues<sup>10</sup>. Of course, not all of this EUR

<sup>10</sup> The EUR 750 million number is less than the actual reduction of tariff revenues of EUR 1 billion because of the costs incurred by Member States (and deducted) in the collection of tariffs.

5 billion would be collected in taxes. The Civic Consulting (2017) report assumes that 1% would flow back to the Member States, meaning EUR 50 million, and thus the loss of revenues would be felt in the EU budget but would perhaps only represent EUR 700 million, or 0.5% of the total EU budget.

**Figure 7. Budget Balance in Korea, 2003-2017 (% of GDP)**



Source: OECD

## 1.2.7 Poverty

In general, poverty metrics were not considered in the official *ex-ante* modelling done prior to the EU-Korea FTA, an issue which can somewhat be attributable to the point noted previously, mainly that economic theory surrounding the potential effects of trade on poverty is relatively fragmented. In the context of the Korean FTA, issues relevant to poverty were somewhat covered in *ex-ante* assessments implicitly and as part of other concepts, including in the focus on welfare, changes in income, changes in employment, consumer choice and prices, and the extent of the informal economy. This approach thus focuses on the inputs or causes of poverty rather than poverty outcomes or level (somewhat puzzling, given that both the EU and Korea have well-developed statistics on poverty outcomes). Using the input approach towards poverty, many of the predicted effects of the FTA have been explored already in this section, including a predicted increase in welfare, decrease in food prices, and decrease in the informal economy. Moreover, the structure of poverty in Korea, heavily weighted towards the elderly population, also argues for a (slight) beneficial effect of the FTA, as lowered food prices were likely to benefit the elderly more so than changes in employment or consumer choice. On the whole, it appeared that it was anticipated that the EU-ROK FTA would decrease poverty as a second-order effect.

The Civic Consulting (2017) study, focusing on these aspects of poverty, does indeed show that these aspects of poverty have improved since the FTA but, as noted elsewhere, it is difficult to attribute these effects solely to the FTA. Similarly, according to OECD statistics, the poverty rate (defined as income at half the median for the population) in Korea has fallen from 0.146 in 2012 to 0.138 in 2015. Again, this change may be attributable to the effects of the FTA, but without more data (and a longer time-series), it will be difficult to make this claim.

A final point which has been overlooked on the possible effect on poverty from the EU-ROK FTA is the reality that (in Asia especially) poverty tends to be concentrated in agriculture. Unfortunately, this fact means that FTAs which focus on industry or manufacturing for trade liberalisation, and which neglect liberalising agriculture, can prevent substantial gains in lifting people out of poverty (Feridhanusetyawan, 2005). While agriculture only makes up 2% of Korea's GDP, and Korea is known for its amazing success in

closing the gap between rural and urban incomes (Lie, 1991), there may be more progress which can be made via extending this FTA more vigorously into agricultural liberalisation (as of 2015, about 85% of South Korean agri-food entered the EU duty free according to Copenhagen Economics [2016]). In this manner, gains can also be made more evenly across the population.

### 1.2.8 SMEs

As Cheong (2014) noted, an urgent goal of the Korean trade authorities prior to the FTA with the EU was to bring SMEs into the export sector, which has traditionally been dominated by *chaebol*. This objective was mirrored in EU trade policy (as noted above), which also sought to draw SMEs into exporting and encourage their growth into larger firms. In both of these strategies, there was an implicit acknowledgement that SMEs were not as well represented in exporting as they could be, due mainly to the usually substantial fixed costs SMEs faced in becoming an exporter; as noted above, the economics literature has long shown that SMEs usually confront several challenges in exporting, including the costs of scale and forging networks. Additionally, beyond firm-specific factors, there also are issues related to administrative burdens and, in particular, trade regulations. While an FTA such as the EU-ROK FTA may reduce trade costs, SMEs often still face a bewildering array of regulations which disadvantage them disproportionately, contributing to a substantial under-utilisation of preferences (most prominent among these are rules of origin, see Ciuriak and Bienen, 2014 and English, 2016). By reducing these and other trade costs, the EU-ROK FTA was to hopefully encourage SME participation without resorting to direct aid.

The Civic Consulting (2017) reports notes that data on SMEs is difficult to obtain, and judging the success of the FTA in encouraging SMEs to export is made more difficult by the lack of concrete predictions on exactly what the effects of the FTA might be (none of the *ex-ante* reports model SMEs, nor does the academic literature; however, they show, via anonymised firm-level data, that SMEs in both Belgium and Spain have been helped by the reduction of trade costs brought on by the FTA, bringing more firms into the exporting sector). Using another extrapolation from existing data, the study also notes that the variety of goods traded between the EU and Korea have increased, a reality which could plausibly not have occurred if SMEs were being shut out of markets (because of, for example, competitive pressures). Unfortunately, from the Korean side, it appears that SMEs have continued their under-utilisation of preferences which was so prevalent before the EU FTA was concluded (Cheong and Cho, 2009). Indeed, the available evidence suggests that Korean SMEs are less likely to utilise their preferences under any FTA, as evidence from firms in the Association of Southeast Asian Nations (ASEAN) shows that SMEs are still disproportionately under-utilising preferences with the EU where they should have been a boon to SMEs (Hayakawa *et al.*, 2014). In sum, and based on the available evidence, it appears that EU SMEs have benefited from the reduction of trade barriers, while the structure of the Korean economy still is biased against SMEs becoming effective exporters.

### 1.2.9 Sectoral impacts

Unlike SMEs, poverty, and (as we will see) human rights and environmental impact, there is a rich literature on the anticipated and actual sectoral effects of the EU-ROK FTA. In large part, this is because sectoral impacts are part and parcel of the CGE models used to examine the FTA, with aggregate effects often a summation of various sector effects. In addition, the FTA itself was designed to lessen NTBs specifically in the automotive, pharmaceuticals, medical devices, and electronics sectors (Lakatos and Nilsson, 2015), meaning that predicting sectoral effects was crucial for policy analysis. Finally, the effect of the FTA on specific sectors was anticipated to be large, especially regarding the automotive sector in Korea, and thus an estimation of these effects could also be helpful in selling the agreement to the public in both South Korea and the EU.

The CEPII/ATLASS (2010) report contained a detailed series of predictions regarding the possible sectors affected by the EU-ROK FTA (reproduced in Table 3) across two baselines: the first assumed that the Doha

round would not be concluded or implemented, and that only existing FTAs in force with the EU and Korea would continue, while the second assumed that Doha would be successful and that additional FTAs with Korea would be concluded (from the vantage point of 2018, we can see that the reality is somewhere in between). For every major heading (agriculture, manufactures, and services), the EU was projected to gain in both exports and imports, with only the second baseline showing no gain for services (due to losses in the transport sector). At the sectoral level, the EU was projected to show its largest trade gains in meat and animal products, dairy, and cars and trucks. From the Korean side, while both exports and imports were projected to grow in the aggregate (as noted above), there were to be more sector-specific losses, particularly in service sector exports and the transport sector.<sup>11</sup> All of these minor losses on the Korean side were to be swamped by huge gains in car exports, projected at an average gain of approximately 38% across the two baselines, and leather and clothing, projected to gain an average of 54% (CEPII/ATLASS, 2010, author's calculations). Guerin *et al.* (2008) concurred with this assessment, noting that the automobile sector in Korea was likely to gain from the FTA, stressing several times the opposition of the European automotive industry to the agreement.

Since the implementation of the FTA, many studies, commissioned by the EU and undertaken by academics, have considered the impact of the agreement at the sectoral level. Lakatos and Nilsson (2015) show that the propensity to export across all sectors has increased in both the EU and Korea, with the highest probability of exporting found in the areas covered by the FTA. Beyond the 'extensive margin' effect and, based on data from the Civic Consulting (2017) study shown in Table 4, the effects on EU exports in terms of value post-FTA have far outpaced the volume effects predicted in the CEPII/ATLASS (2010) report, with the largest gains in energy, utilities, processed food (as predicted), and agriculture (also as predicted). Cherry (2018) also notes that consumer goods imported from the EU into Korea, and in particular, their variety, have increased substantially post-FTA, with food and beverages increasing as part of a shift of Korean tastes. Across all sectors, EU firms have been winners in both the volume and value of exports (Forizs and Nilsson, 2016). From the Korean side, imports from Korea into the EU have also increased across the board, with the biggest gainers energy and the automotive sector. Moreover, there have been follow-on effects for Korea, especially in an increase in the demand for Korean seaborne logistics to accompany the increase in trade (Cheong and Cho, 2013). The Civic Consulting (2017) study also notes that trade diversion has been muted as at the sectoral level, with the biggest losers in Korean trade Japan and Turkey, meaning that the FTA has had a beneficial impact on Korean firms across sectors as well.

<sup>11</sup> The loss of exports to both Korea and the EU in transport signals that transport services were being routed to third countries, a result which would not necessarily be detrimental if these third parties had a comparative advantage in transport over both Korea and the EU.

**Table 3. Predicted Sectoral Effects of the EU-South Korea FTA**

	Exports: EU		Imports: EU	
	Baseline 1	Baseline2	Baseline 1	Baseline2
<b>a1 Agriculture and primary products</b>	<b>1.87</b>	<b>1.15</b>	<b>0.62</b>	<b>0.49</b>
s01 Meat and Animal products	12.33	6.06	0.72	0.59
s02 Dairy	13.10	8.35	1.87	1.17
s03 Other Agriculture	1.66	1.31	0.50	0.45
s04 Food	2.71	2.12	0.61	0.48
s05 Beverage and Tobacco	1.07	0.97	0.22	0.22
s06 Primary	0.01	-0.02	0.20	0.14
<b>a2 Manufactured products</b>	<b>1.61</b>	<b>1.17</b>	<b>1.95</b>	<b>1.29</b>
s07 Textiles	-0.54	1.36	4.60	3.45
s08 Leather and Clothing	5.44	2.72	0.76	0.56
s09 Chemicals	1.60	0.99	0.91	0.85
s10 Metals	1.99	1.52	0.36	0.37
s11 Cars and Trucks	5.56	5.67	14.75	7.14
s12 Planes Ships Bikes Trains	0.61	-0.02	1.35	1.46
s13 Electronic equipment	1.89	1.34	0.62	0.47
s14 Machinery	1.94	1.33	0.61	0.62
s15 Other manufactured products nec	0.79	0.58	0.41	0.42
<b>a3 Services</b>	<b>0.27</b>	<b>0.00</b>	<b>0.18</b>	<b>0.23</b>
s16 Trade	0.74	0.24	0.16	0.21
s17 Sea transport	0.93	-0.12	0.27	0.17
s18 Air transport	0.28	-0.15	0.14	0.17
s19 Other transport	0.10	-0.18	0.20	0.21
s20 Communication	0.19	-0.11	0.15	0.20
s21 Finance	0.18	0.00	0.17	0.23
s22 Insurance	0.27	0.06	0.22	0.25
s23 Business Services	0.41	0.14	0.15	0.21
s24 Recreation and related Services	-0.18	-0.22	0.22	0.27
s25 Admin Defence Health Education	0.07	-0.26	0.24	0.30
s26 Other Services	-0.08	-0.15	0.23	0.26
<b>TOTAL</b>	<b>1.40</b>	<b>0.96</b>	<b>1.27</b>	<b>0.88</b>

Source: Reproduced from the CEPII/ATLASS (2010) study

Finally, the impact of the FTA on the automotive sector on the EU-ROK FTA deserves closer scrutiny, as it has been observed by many researchers and confirmed in an unpublished paper by Juust *et al.* (2017) that the trade-enhancing effects of the FTA for automobiles was substantially higher than the aggregate effect on trade. More importantly, as Juust *et al.* (2017) note, it appears that the FTA has aided EU car exporters in addition to Korean ones, an effect also seen in Table 4, predicted by Copenhagen Economics (2014), and described in detail by Cherry (2018) in relation to the luxury car trade. This reality is an interesting development, given the vehement resistance to the FTA from European car manufacturers (detailed in Guerin *et al.*, 2008), once again showing that businesses may short-sightedly press for protection even if the consequences actually benefit them.

**Table 4. Percentage Changes in EU Exports to and Imports from Korea, post-FTA**

Sectors	% change exports	% change imports
Agriculture	194.56%	37.29%
Automotive	47.56%	64.31%
Business services	0.24%	40.21%
Chemicals	33.32%	38.27%
Construction	36.40%	23.64%
Electronic equipment	80.36%	5.44%
Energy	301.80%	129.98%
Financial and insurance services	60.81%	7.98%
Fishing	100.00%	33.33%
Machinery and equipment	55.81%	6.58%
Manufacturing	20.00%	0.47%
Metals	26.46%	30.08%
Other	39.74%	9.77%
Processed food	209.07%	30.20%
Raw material	80.70%	50.00%
Telecoms	45.92%	0.62%
Textile	34.69%	18.90%
Trade	49.69%	22.97%
Transport	42.35%	28.89%
Utilities	300.00%	0.00%
Wood paper and minerals	41.11%	25.27%

Source: Author's calculations based on data from the Civic Consulting (2017) study

### 1.2.10 Human rights and environmental impact

As noted in the previous section, it is difficult to quantify the impact on human rights that a trade agreement will have, both in predicted effects and *ex-post*. In regard to the EU-ROK FTA, the explicit commitment to human rights has become the template for all subsequent EU FTAs. However, that being said, the inclusion of human rights into the preamble and text of the framework agreement have left broad leeway for implementation, as there are few specifics attached (and the final text of the FTA only references the UN Universal Declaration of Human Rights with no more mention of human rights).

In practice, and as defined in subsequent documents commissioned by DG Trade (but without endorsement or official imprimatur), the specific human rights examined have been (as noted in the previous section) focused on labour rights, which were examined above with regard to Korea. Beyond the issues of unionisation, favourable conditions of work, and right to rest/leisure, the key human rights anticipated by the FTA are:

- Freedom from discrimination,
- Right to peaceful assembly and association, and
- Right to food (Civic Consulting 2017).

Pre-agreement, the level of human rights protection in Korea appeared to be at a higher level across these metrics than in the other FTAs concurrently negotiated by the EU (many of which have been concluded).

As a relatively homogenous society, there was little risk of discrimination against foreigners, with the worry being that there would be gender disparities. Similarly, as a prosperous country, right to food was never in serious question, as markets were well-developed and prices generally comparable to Central European countries (as evidenced by South Korea's ranking on *the Economist's* 'Big Mac Index' for 2018). Right to peaceful assembly is perhaps more problematic, given Korea's still-recent transition to democracy, memories of government repression, and the 'Candlelight Struggle' of 2016-2017 (which brought hundreds of thousands of protestors onto the streets demanding the resignation of President Park). However, compared with other countries, Korea still has an enviable human rights record in this respect.

It is only from considering these initial conditions that the apparent lack of progress due to the FTA can be explained. As the Civic Consulting (2017) report makes clear, the FTA is assessed to have had little impact on human rights in Korea, with little change over the 2011 status quo. Overall, the only human right for which a (minor) impact of the FTA can be attributed is the right to food, which saw some improvement due to increases in imported food availability and slight declines in prices. In areas where disparities are prevalent, there has been little substantial movement. In particular, the Civic Consulting report notes that freedom from discrimination could be quantified via wage gap ratios or employment-to-population ratios; Korea has continually had a high gap in labour force participation by sex, seeing a gap of 23.8 percentage points in 2012 (according to the ILO). Based on latest statistics from the OECD, in 2016, the participation gap was 21.8 percentage points, an improvement but one that cannot be entirely attributed to the FTA. Similarly, the gender wage gap has dropped from 39.6% in 2010 to 36.7% in 2016, a decline which has followed a general trend in Korea (the gap was 41.7% in 2000).

**Table 5. Difference-in-Difference Analysis on the Wage Gap in South Korea**

Number of observations	438			
	Before	After	Total	
OECD (non-Korea):	279	142	421	
South Korea:	11	6	17	
Total	290	148		
Outcome variable	Difference in wage gap from 2010	Standard error	t	P-value
Before				
OECD	1.745			
South Korea	0.182			
Difference	-1.563	0.762	-2.05	0.041**
After				
OECD	-0.334			
South Korea	-2.917			
Difference	-2.583	1.033	2.50	0.013**
Diff-in-Diff	-1.02	1.284	0.79	0.427
R-square:	0.16			

Source: Author's calculations based on OECD data

This may be some evidence for the beneficial effect of the FTA, given that the steepest decline in the gap occurred in 2011—that is, when the FTA entered into force provisionally, and also given the fact that the

OECD saw declines which were far smaller over this time period. A DiD analysis of the change in the wage gap since 2010 (Table 5) confirms that Korea had slower progress in closing wage gaps prior to the FTA and much faster after the FTA (and, when compared with the EU's progress after the FTA, the difference is striking and statistically significant). But the difference between the two—that is, the overall pace of narrowing the wage gap between the EU and Korea—remains statistically insignificant. This suggests that the impact of the FTA has been at best minimally positive on human rights in Korea.

Regarding environmental impact, the Trade and Sustainable Development Chapter of the FTA (Chapter 13) goes more in-depth than the human rights commitment, focusing on rights of regulation, adherence to multilateral agreements, and a review of sustainability impacts. Much like the human rights and employment sections, however, there are little quantitative measures or targets given for the environment, and thus both the predicted effects of the environmental impact of the EU-ROK FTA and the assessments have made recourse to economic theory and specific impacts derived from multilateral agreements. In general, the increase in economic activity anticipated by the agreement was expected to increase energy use and transportation, both of which could have an adverse effect on the environment; however, some mitigation was seen in the application of new technologies and in more efficiency (LSE Enterprise, 2010), an effect which has been seen around the world in relation to increased productivity (Hartwell and Coursey, 2015).

Unfortunately, quantitative evidence on the anticipated impact of the FTA on the environment is very scarce, as most modelling done *ex-ante* concentrated on GDP effects, trade, and sectoral flows (as noted above). In the most extensive impact assessment, done by IBM Belgium (2008), the baseline for environmental progress in Korea was noted across a series of components (nature/biodiversity, air, water, soil and groundwater, and waste); using these baselines, the Civic Consulting (2017) study found that global CO<sub>2</sub> emissions had decreased as a result of the FTA (due to trade diversion from the US and China), while CO<sub>2</sub> emissions in the EU and Korea had increased somewhat (in line with cross-country evidence, see Le *et al.* [2016]). With regard to all other baseline indicators, there is little evidence of any environmental impact in either the EU or Korea, as environmental progress is second-order (in that the agreement merely commits the parties to work through other agreements). In either case, it appears that the environmental clauses in the FTA, while not improving the environment in and of themselves, have also not contributed to a degradation of the environment via increased trade.

### 1.3 The Association Agreement with Central America

The final concluded agreement we will analyse in this chapter is the EU Association Agreement (AA) with Central America, signed in June 2012 and comprising three complementary pieces of political dialogue, cooperation, and trade. Of these three portions, the trade component has been provisionally applied since August 2013 with Honduras, Nicaragua, and Panama, while Costa Rica and El Salvador have had the trade portion applied since October 2013 and Guatemala has seen it in effect since December 2013. Much like the other agreements studied in this section, the trade chapter was not limited solely to matters of trade, and also focuses on NTBs, integration of customs and sanitary and phytosanitary (SPS) measures, procurement, and investor dispute resolution, while committing the EU and signatories from Central America to improving labour and environment-related matters (with an eye on sustainable development).

In concluding the agreement with Central America, there was an additional benefit for the EU that was not present with Korea or Peru/Colombia, namely a long history of integration leading to a much larger free trade area already in existence. The Central American Common Market (CACM) was constituted in the 1960s and was fairly effective in its mission of basic trade liberalisation, but it began to sputter in the 1970s and 1980s due to economic nationalism and communist takeovers (Feng and Genna, 2003). However, by the 1990s, the CACM had been reinvigorated with political will, a reality which meant that 'by 2000, the effect of CACM had been to roughly triple members' trade' with each other (Baier and Bergstrand, 2009:75). With integration already in place amongst Central American countries, the EU's agreement would be

tapping into a much larger and already-integrated market, meaning that trade, welfare, and other effects should theoretically be much larger as well. This section will explore if this is in fact the case.

### 1.3.1 Welfare

With such a large agreement over many varied economies, the welfare effects would necessarily also be quite different and dependent upon the particular country under examination. Giordano and Watanuki (2008), using a CGE model, show this variation across Central American countries, but predicted unequivocally that the agreement would have a pro-poor/positive welfare effect, with welfare increasing by 0.82% in El Salvador, 1.01% in Nicaragua, 1.05% in Guatemala, 1.67% in Honduras, and 1.76% in Costa Rica. The Ecorys *et al.* (2009) Trade Sustainability Impact Assessment, using a slightly different CGE simulation, comes to a similar conclusion in terms of absolute gains, but finds that Nicaragua would have a slight welfare loss (with Panama also having a loss in the most ambitious liberalisation scenario). The Ecorys study attributes most of the welfare gains in Central America to production increases, noting that consumer effects are very slight. Finally, Rivera and Rojas-Romagosa (2007), using yet another CGE model, note that welfare gains are less dependent upon the specific country but instead are linked to the extent of agricultural liberalisation that the EU includes in the agreement. In the Rivera and Rojas-Romagosa model, taking the Central American economies collectively, a full liberalisation scenario increases welfare by 1.6%, but lesser liberalisation only yields 0.4% gains; however, a scenario where most agricultural goods are exempt actually reduces welfare by 0.1% in Central America.

Although (as of the time of this writing) nearly five years have passed since the trade component of the AA was implemented, there are very few *ex-post* assessments which have actually examined if the *ex-ante* predictions were correct. The annual reports on the effect of the AA from the Commission to the Parliament do not examine welfare gains (in either the EU or Central America), while the academic literature has been similarly silent on where welfare gains may have accrued. In order to estimate the welfare effects after the AA, we must instead examine the extent of liberalisation that the AA actually covered versus the predicted scenarios, and then see if we can match up such a scenario with a realistic predicted outcome. In particular, while the AA is rather far-reaching in its treatment of agriculture, especially when put alongside the FTA with the US (European Parliament, 2011), the agreement still contains quantitative limits on Central American agricultural outputs and contains a very gradual schedule for the reduction of banana tariffs. This approach is similar to the agricultural liberalisation the EU has pursued with the African, Caribbean, and Pacific (ACP) countries, meaning something closer to the mild liberalisation scenario in Rivera and Rojas-Romagosa (2007). In fact, it is likely that overall gains in Central America are closer to the Ecorys *et al.* (2009) model, meaning slight losses for producers in Nicaragua and Panama, but gains for other countries. Based on other *ex-post* modelling done by DG Trade in the region (and especially on the AA with Chile), we can estimate that welfare gains in El Salvador, Guatemala, Honduras, and Costa Rica were likely between 0.2 to 0.3% at most.

### 1.3.2 Real GDP

As with other agreements examined in this study, changes in real GDP attributable to an FTA are difficult to disentangle, but they have nonetheless been a crucial part of CGE modelling and other *ex-ante* assessments. The Ecorys *et al.* (2009) SIA noted that gains in GDP directly attributable to the agreement would be sizeable in absolute numbers and as a percentage for Central America while correspondingly smaller for the EU: as the SIA notes, EU gains were estimated to be EUR 2.0 billion (statistically insignificant from a zero percent change), while Costa Rica was to see gains between EUR 330 million and EUR 925 million (1.3% to 3.5% of GDP), El Salvador would see increases between EUR 133 million and EUR 503 million (0.4% to 1.6%), and Honduras would have a gain of as much as EUR 423 million (2.2% of GDP). By contrast, Nicaragua's gains were forecast to be smaller (approximately 0.5% of GDP in nearly all scenarios), and Panama was projected to see gains up to 1.9% of GDP, but only in the short run. Rivera and Rojas-Romagosa (2007) had a slightly more pessimistic prediction of GDP gains across the entire region,

forecasting gains of about 1% of GDP, with Honduras seeing the largest gain at 1.07% of GDP and El Salvador seeing the lowest at 0.82% (the Rivera and Rojas-Romagosa model does not include Panama). Finally, De Miguel *et al.* (2010) have perhaps the most pessimistic forecasts of all, projecting GDP gains of only 0.22% for Costa Rica in a full liberalisation scenario (and 0.38% in El Salvador, Honduras, and Costa Rica, referred to as the rest of Central America), but only gains for Costa Rica (0.20%) and miniscule gains for the rest of Central America (0.03%) in a scenario where the EU exempted fruits and vegetables.

**Table 6. Difference-in-Difference Analysis on GDP Growth, Central American AA Countries versus Belize**

Number of observations	175			
	Before	After	Total	
Belize:	20	5	25	
AA countries:	120	30	150	
Total	140	35		
Outcome variable	GDP growth	Standard error	t	P-value
Before				
Belize	4.158			
AA countries	3.963			
Difference	-0.195	0.591	-0.33	0.74
After				
Belize	1.79			
AA countries	3.879			
Difference	2.089	1.182	1.77	0.079*
Diff-in-Diff	2.285	1.322	1.73	0.086*
R-square:	0.02			

Source: Author's calculation based on World Development Indicator data. \* signifies significance at the 10% level

As with welfare (noted above) and trade (as we will see below), the gains to be found in GDP in reality (as in the models) were highly dependent on the liberalisation scenario which was pursued. Given that the AA did not pursue full liberalisation and did in fact have limits on agricultural trade, the resulting gains in GDP in Central America were likely to be much lower than they could have been under more comprehensive liberalisation scenarios. Since the implementation of the AA in 2013, average growth in Central America as a whole has been 3.879% per year, down slightly from its pre-AA rate of 3.963%, but still outpacing comparator countries within Latin America such as Uruguay or (especially) Belize, the only Central American country not included in the AA. Indeed, if we perform a DiD analysis of the AA countries versus Belize, we see that the AA countries have done better since 2013 than Belize (Table 6). Looking closer into the data, Honduras, Nicaragua, and Panama have been leading the pack with growth rates close to 5% (exceeding it, in the case of Panama) since 2013, with El Salvador showing the slowest growth (averaging approximately 2.25% per annum). In each case, while difficult to disentangle the direct effects of the AA, it

appears that the agreement has boosted economic opportunities in the signatory countries. It is still a matter of projection if the AA could have boosted growth rates further, but it is our opinion that there are still gains to be had in further liberalisation for Central American countries.

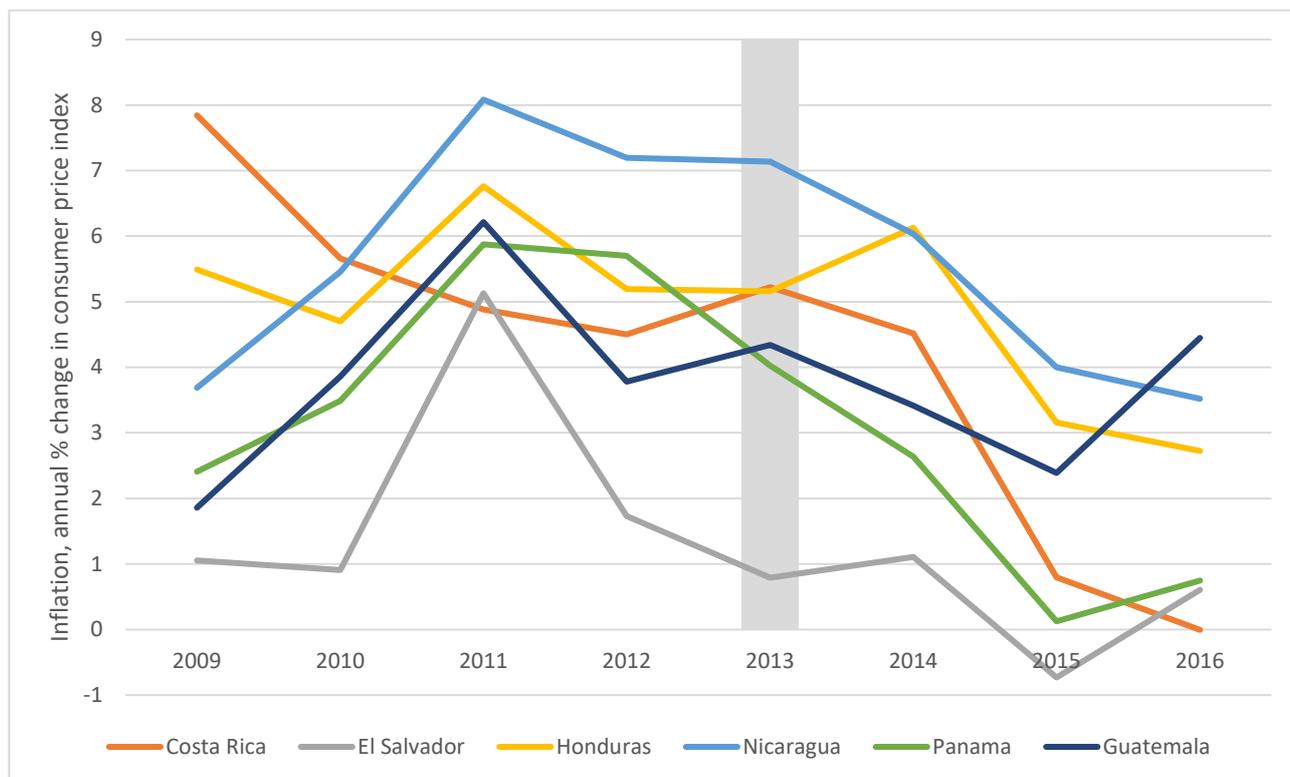
### 1.3.3 Prices

As mentioned throughout this section, price effects after an FTA are difficult to separate out from other macroeconomic and sectoral effects, and this caveat applies especially with the Central America AA with its six partner countries. From the *ex-ante* side, the SIA from 2009 only covered predicted price effects at the sectoral level, projecting slight price declines in the EU across agricultural products, but some price increases in Costa Rica and Panama for these same products (due to increased demand for land in order to grow exports). Overall, the CGE model in the SIA predicted Guatemala, Nicaragua, El Salvador, and Honduras would see lower prices across most sectors, with the service sectors (including financial services and insurance) seeing some of the largest drops. Harkening back to the welfare analysis, however, the SIA also asserted that price gains in Central America overall would likely be minimal. The only other study to predict price movements is the Rivera and Rojas-Romagosa (2007) examination, but they too break down changes in price, albeit by factors of production rather than by sector; using this approach, they estimate large increases in land prices (46.4% under a full liberalisation scenario, 20.2% under ACP equalisation, and only 0.4% under a restrictive scenario) and correspondingly smaller rises in capital, but declines across the board in natural resource prices.

The actual performance of consumer prices in the six Central American countries is shown in Figure 8, tracing changes in inflation from 2009 to 2016 (this timeframe was used, as a longer series would have encapsulated much higher inflationary periods which are not representative of recent developments). While the level of inflation differs across countries, the trend is broadly the same in the post-global financial crisis world, with inflation declining broadly from a peak in 2011 until the implementation of the AA in 2013. From 2013 onward, price dynamics have diverged somewhat, with Honduras seeing a brief increase in prices before steeply declining in 2015, and El Salvador, Guatemala, and Panama seeing a decline until 2015 and then a sharp uptick in 2016 (although El Salvador shifted from disinflation to inflation over this time period). Other indicators of prices also indicate that prices have declined since 2013: although the time series is limited, the price of capital (taken from the Penn World Tables) in nearly every signatory country in Central America declined from 2012 to 2014, with only Nicaragua and Panama seeing slight upticks (in line with their trends pre-AA)<sup>12</sup>. Even with anecdotal evidence regarding increased demand for land in the region (especially in Panama, which has seen its housing market heat up since 2013), it appears that the AA has not increased prices across the board and, more likely, has contributed to declining prices as a result of competition.

<sup>12</sup> Panama is a special case in terms of its monetary policy, as it is effectively dollarised with a hard link to the US dollar. Thus, its monetary policy is not its own, see Cachanosky (2014).

**Figure 8. Inflation in Central America, 2009-2016**



Source: World Development Indicators

### 1.3.4 Aggregate exports and imports of goods and services

Similar to other agreements explored here, there is far more information on the predicted and actual effects of the AA on trade volumes between the EU and Central America than other metrics, simply because the centrepiece of the AA was its trade component. For example, the Giordano and Watanuki (2008) model found very optimistic gains across all countries in Central America and for the EU: in particular, the EU was projected to see increases in exports between 14% and 27% to all Central American countries (excluding Panama), while it would also see increases in imports from 19% to 25%. For the Central American economies, there were projected gains in exports up to 3% for Costa Rica down to 1.13% for El Salvador, with corresponding gains in imports from 0.94% for Nicaragua to 2.04% in Costa Rica.

It is important to note again that this analysis from Giordano and Watanuki (2008) does not include Panama, which could have resulted in different results more in line with other *ex-ante* analyses, such as the SIA, which also models several scenarios with and without Panama. Indeed, the SIA contains a broad number of scenarios separated by extent of liberalisation and the countries involved, with the most far-reaching liberalisation scenario including Panama projected to have substantial increases in exports across all Central American countries over the long term, with Costa Rica gaining the most. While the increases predicted by the SIA are nowhere near as optimistic as the Giordano and Watanuki model (with the EU showing little gain in terms of exports or imports), the average gains across all scenarios are still substantial for Central America (Table 7), with the largest gains coming in the long run of a very comprehensive FTA.

More in the vein of Giordano and Watanuki (2008), De Miguel *et al.* (2010) also projected an increase in imports across the board as a result of an AA that encompassed full liberalisation, with El Salvador, Honduras, and Panama seeing the largest gains (a 6.4% increase across all three countries) and Nicaragua seeing the smallest increase (0.35%). The De Miguel *et al.* (2010) CGE model also predicted an increase in exports but only for Guatemala (0.93%) and Nicaragua (0.17%), with the rest of the region seeing a decrease in aggregate exports (due presumably to competition). Under a partial liberalisation, the Central American

economies were forecast to fare slightly better in their exports, with all countries seeing gains and Guatemala leading the pack at an increase of 1.01%, while imports were also set to increase but at a much slower pace compared to full liberalisation. Finally, under a very restrictive liberalisation scenario (where the EU excluded fruits and vegetables), Costa Rica was to be the main winner in imports and main loser in exports, while Nicaragua would actually see its imports decline and its exports rise slightly (by 0.17%).

**Table 7. Average Gains in Central America and the EU across all SIA Scenarios**

	Costa Rica	Nicaragua	Guatemala	El Salvador	Honduras	Panama	EU-27
Total exports (% change)	11.3	3.0	3.8	3.3	6.4	6.3	0.0
Total imports (% change)	13.8	1.6	2.2	-	-	4.7	0.0

Source: Author's calculations on data from Ecorys *et al.* (2009). Imports for El Salvador and Honduras were not modelled in the original SIA.

The wide dispersion of these predictions does not obscure the fact that, in each scenario and each model, there was projected to be an increase in trade volumes as a result of the AA. Given that only five years have passed since the AA began to be implemented, it is thus best to compare the short-run predictions of the *ex-ante* modelling with the actual results (rather than the longer-term projections). Since 2013, overall volumes of exports have grown modestly in Central America in all countries with the exception of Panama, with an annual average growth of 5.97% in Costa Rica, 4.58% in Nicaragua, 3.92% in Guatemala, 3.05% in Honduras, and 2.21% in El Salvador (and a corresponding decline of 2.76% in Panama)<sup>13</sup>. But according to Grieger and Harte (2017:14), EU trade with Central America is far off its highs prior to the AA, with 'bi-regional trade in goods actually decreasing from a peak of EUR 12.1 billion reached in 2012 to EUR 10.8 billion in 2016', and a major drop in EU exports to Central America of 7.8% in 2016 alone. According to the European Commission, the overall change in EU exports with Central America over 2013 to 2017 was -0.4%, while for imports it was even worse at -1.8%. From the Central American side, exports to the EU expanded to 27.19% of all exports in 2017 (up from 22.75% in 2015), but imports from the EU have slowly declined from 2014 to now comprise less than 10% of all Central American imports.

This actual performance compares unfavourably with any of the volumes predicted in the *ex-ante* assessments, but especially with the SIA, which saw immediate gains in trade for all countries (in particular, Panama). But while on the whole, the aggregate trade performance accompanying the AA has been disappointing, Section on Sectoral impacts below will show that the factors driving this aggregate performance are heavily sector specific.

### 1.3.5 Employment and labour rights

Aggregate employment numbers, like their counterparts in trade, are also difficult to interpret, given the sectoral reallocation that is presumed to come with freer trade. With reference to the Central America AA, given that there were sharp lines predicted between sectoral winners and losers in the region (see below), the aggregate employment gains could also be expected to be muted (especially in the short term) as labour was reallocated (as with nearly every other effect surveyed between the EU and Latin America, the effect on EU labour markets was predicted to be negligible). The 2009 SIA noted in particular that there was 'considerable' incentive for reallocation of labour throughout the region, an assertion that appeared to predict an increase in employment in the aggregate, with more jobs created than lost.

The channel through which this job creation was to occur was via increased demand and thus rising wages, and the SIA concentrated on the wage aspect of Central American labour markets in the CGE modelling.

<sup>13</sup> Calculations based on World Bank data on annual growth of exports of goods and services.

Across the various scenarios the SIA model examined, the results were clear that both skilled and unskilled labour would see wage rises in Costa Rica and Nicaragua while unskilled labour would see wages increase, but skilled labour would see a drop in Guatemala and in some scenarios for Panama (wages were not modelled for El Salvador or Honduras, and the EU was expected to see no change as well). Indeed, as with other trade effects, it appears that the already-open Costa Rica would benefit the most, with a projected rise of 3.2% in unskilled labour wages over the long run, despite undergoing large-scale sectoral displacement (approximately 6.2% of its workforce will relocate in the long run). At the other end of the scale, Panama was projected to see labour displacement of approximately 15 to 17% but would be a net loser in the long run, with both skilled and unskilled labour seeing wage declines. Additionally, given the openness of the region, it was anticipated in the SIA that there would be intra-regional migration from other countries to Costa Rica and Panama as a result of labour demand.

The picture of wages and employment post-AA is thus far difficult to discern across the six Central American signatories, as average monthly wages have increased since 2013 for Costa Rica, Honduras, and Panama, while they have decreased slightly in El Salvador and Guatemala, according to ILO data (comparable post-2013 data is not available for Nicaragua in their database, but their review of the region shows an increase in average wages of 4% from 2013 to 2015). At the aggregate level for employment, each country in the region also saw an increase in unemployment rates after 2013, albeit it is difficult to attribute this solely to the AA and is more accurate to situate this as part of a trend of general economic slowdown and overall uncertainty (International Labour Organisation, 2017). As a final note on labour effects, it appears that the SIA was correct on intra-Central American migration, as statistics show that from Nicaragua especially workers have been relocating to Costa Rica; as of 2017, a full 46% of Nicaraguan migrants have taken up residence in Costa Rica, befitting its economic performance and (one would assume) greater ability to take advantage of the AA (Orozco, 2017).

The employment situation in the region is not told entirely in statistics on wages, however, and (as with other FTAs explored here) labour standards were also an important component of the AA. While there have been issues surrounding working conditions in the region (including obligatory overtime and freedom of unionisation), positive changes in labour standards were built in to the Central American Free Trade Agreement (CAFTA) with the US and the signatories to the AA were already on a trajectory of improved labour rights since CAFTA negotiations (Schrank and Piore, 2007). Moreover, as Young (2015) notes, the EU has not necessarily pressed for 'EU regulations' to be observed in the field of labour but have instead pushed for international standards to be respected and this has been a key part of the AA, which obliges the signatories to observe ILO conventions (Ebert, 2016).

Given this softer approach to labour standards, the movement of the region towards international norms should be the yardstick by which reforms should be evaluated; but, as noted earlier, it is very difficult to attribute the move towards international norms directly to the signing of the AA. And as the ILO's labour overview of the region showed (International Labour Organisation, 2017), employment standards and perceptions regarding labour protection tend to be very coloured by the current economic situation; with varying degrees of growth and/or robustness in labour markets since the AA, there is no uniform story for Central America. On the whole, however, there has been progress, as Costa Rica has signed into law new labour protections and El Salvador, despite falling short, has committed to improving its employment rights records. Again, progress in this area will depend upon continued growth, so if the AA can promote growth in the region, there will likely be a concomitant increase in labour rights.

### 1.3.6 Budget balance

As previously noted, Latin America has always been highly reliant on trade taxes to fund government, and Central America has been no exception (McCoon, 2015), although, as Bronchi and Chua (2005) noted, the Central American countries diversified their tax systems more substantially than the rest of Latin America in the 1990s and 2000s. Despite this progress, the loss of revenue from the AA was likely to impact the

budgets of the governments within Central America, although the loss of tariff revenue was likely to be offset by increased economic activity. Unfortunately, the effects of the AA on budget balances in the region were not explored in many of the *ex-ante* assessments, with the SIA from 2009 using a CGE model which fixed the budget deficit exogenously. Giordano and Watanuki (2008) did in fact model the loss of tariff revenue across five of the six Central American nations, finding that tariff losses would be around 10% for each country, from a low of 8.02% in Nicaragua to a high of 14.18% in Costa Rica; however, this analysis considers tariff losses in isolation, without considering offsetting or overall effects on the budget in each country. Similarly, the De Miguel *et al.* (2010) CGE model predicted increases in government spending in each country under the AA but did not match these increases against revenue losses or gains, leaving the potential effects of the AA on government balance sheets a mystery.

The actual numbers from the Central American countries on their fiscal performance show just how difficult it is to pin down the effect of a trade agreement on a government's budget. Just over 2015 to 2016, Honduras saw an increase in tax revenue of 1.4% of GDP while Nicaragua saw an increase of 0.7% and El Salvador, Costa Rica, Panama, and Guatemala all saw increases between 0.2 and 0.5% of GDP (United Nations, 2017). On the whole, the region continues to be plagued by issues with tax administration and with public spending, and the revenue effects from the AA have been minor compared to the structural issues that governments in Central America face (Roldán *et al.*, 2018). In the short run, however, the implementation of the AA has not shown any appreciable negative effects on the budget balance in any of the Central American countries, with economic growth continuing to help increase the taxman's take.

### 1.3.7 Poverty

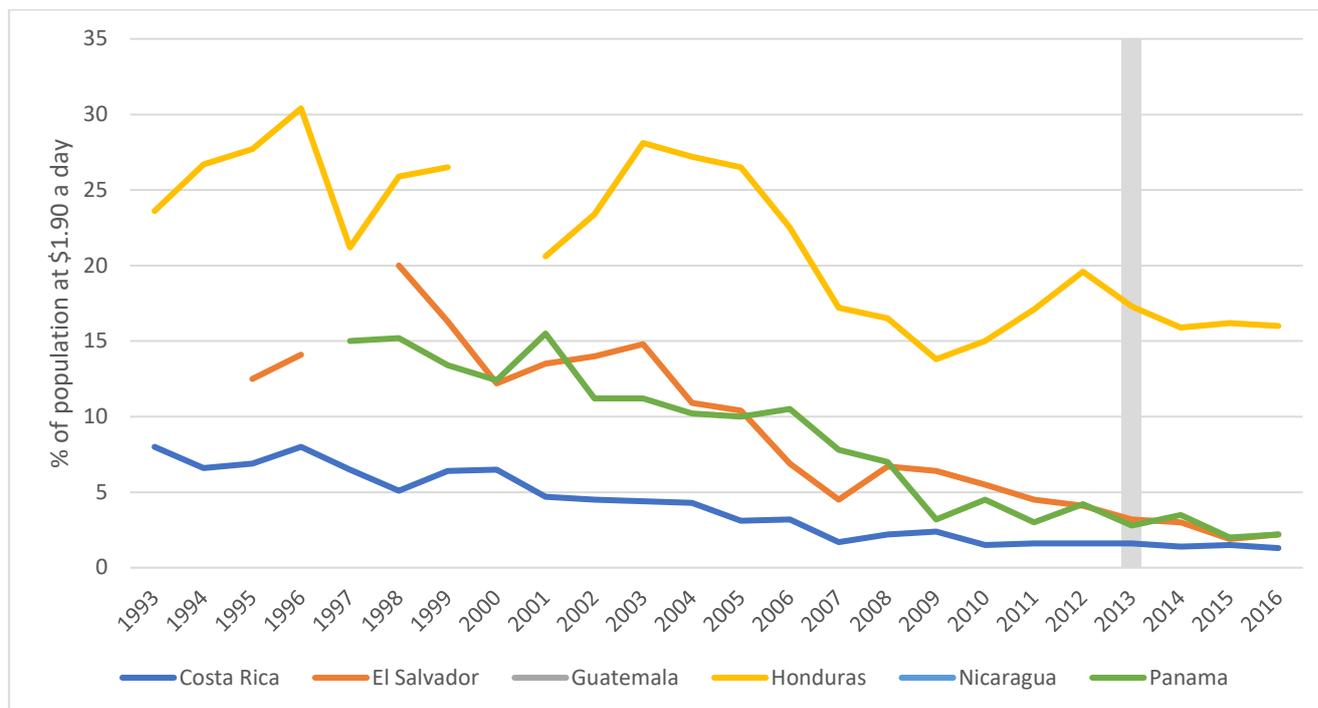
As already noted, Giordano and Watanuki's (2008) modelling of the effect of the AA showed that the agreement would have substantial pro-poor/anti-poverty effects, working through both employment generation and wage increases. While the reality of producer gains may have been muted due to the less-than-full liberalisation of agriculture contained in the final agreement, dynamic growth effects and especially increases in investment attributable to the AA may have had a pronounced effect on poverty rates in Central America. This possibility is also captured in the Ecorys *et al.* (2009) SIA, which echoed the Giordano and Watanuki work and predicted income effects dominating in nearly every country (excepting Panama), leading to an improvement in poverty throughout Central America on the order of 0.6%. As with other metrics, El Salvador and Honduras were projected to improve the most, seeing a drop of 1% in poverty as a result of the AA.

Perhaps surprisingly, given the focus on poverty in Latin America in much of the development literature, there have been little formal analyses of the effect of the AA on poverty in Central America since its implementation. A visual examination of poverty rates in the six signatory nations (Figure 9) shows a long downward trend in extreme poverty (defined as percentage of the population living on less than USD 1.90 a day in constant 2011 dollars), with very little change coming in the five years that the AA has been in force. In fact, no matter which metric of poverty is chosen (USD 3.20 or USD 5.50 a day), Central America has been showing progress in the fight against deprivation, with the trend post-AA an extension rather than an aberration<sup>14</sup>. A DiD analysis on all metrics of poverty was also performed, but due to the lack of countries to utilise as a control (Belize, Uruguay, Paraguay, and Suriname were included due to their slight similarities to the Central American parties to the agreement), no conclusive results are reached; indeed, using this control set, it appears that non-AA members had a steeper decline in average poverty rates than AA members (although the differences are not statistically significant—see the summary in Table 8). Regardless of this comparison, it appears that poverty rates have continued to fall and have not increased

<sup>14</sup> The World Bank calculates poverty uniformly in US dollars.

in Central America, even in Panama, meaning that the AA is likely to have a positive impact in the longer run.

**Figure 9: Percentage of Population in Extreme Poverty in Central America, 1993-2016**



Source: World Development Indicators

**Table 8. Summary of DiD Analysis Across Poverty Metrics**

Poverty Metric	DiD, AA versus non-AA countries	t-statistic
Poverty headcount ratio at USD 1.90 a day	1.04	0.33
Poverty headcount ratio at USD 3.20 a day	4.69	0.94
Poverty headcount ratio at USD 5.50 a day	10.12	1.53
Poverty headcount ratio at national poverty line	7.69	1.12

Source: Author's calculations based on World Development Indicator data. In each instance, difference in poverty rates is in favour of non-AA countries (i.e. lower poverty)

### 1.3.8 SMEs

As with the rest of Latin America, SMEs form the backbone of the Central American economies, with estimates from 2009 suggesting that SMEs contributed 30 to 50% of GDP and 75 to 90% of employment in the region (Guasch *et al.*, 2012). While SMEs in the region face the same obstacles as elsewhere, especially with regard to access to finance (Didier and Schmukler, 2013), SMEs in some countries actually have been incredibly effective in moving into exports; Nicaragua, for example, has the SME-dominated apparel industry as a large contributor to the country's export performance, while Costa Rica has seen great success in both the medical device sector (with generally more medium- than small-sized firms) and in software and ICT (Hernández *et al.*, 2014). Unlike other cases examined here, this established track record of SMEs in the region may have signalled that there would be more opportunities than threats for smaller firms in Central America stemming from the agreement with the EU. As the ADE (2015) evaluation of EU support to Central America hinted at, the productivity lag which many SMEs face could have been improved via the greater openness encapsulated in the AA.

However, unlike the other FTAs examined in this section, the *ex-ante* modelling of the AA in Central America avoided predicting the impact on SMEs and instead focused on overall employment and sectoral impacts and how these might filter down to SMEs. This absence of *ex-ante* predictions means we have to extrapolate from data the possible and actual effects of trade liberalisation on SMEs in the region. Unfortunately, here too we are limited by data limitations, as comparable data on SMEs in the region only exists for a few specific years and with very little data post-AA. The World Bank's Micro-, Small-, and Medium-sized Enterprises (MSME) Country Indicators Database, for example, contains data on all six Central American signatories but only for a few discrete data points in the late 1990s and early 2000s, with only Costa Rica having data for 2013. What this data does show is that the number of MSMEs per 1,000 people in the region has been in decline for the entire period where data is available, but the percentage of small enterprises to all enterprises has been fairly constant and has even seen an uptick in recent years. Absent any finer-grained data, however, we are left to guess the effect of the AA on SMEs only via an assessment of sectoral impacts.

### 1.3.9 Sectoral impacts

As with the other FTAs examined, and (as noted above) forming the basis of CGE modelling, the sectoral effects of the Central American AA have been extensively studied on an *ex-ante* basis. In the SIA from 2009, the biggest winner of the AA was projected to be the agricultural sector, and in particular vegetables, fruits, and nuts in Panama and Costa Rica. Other winners across sectors in Central America were projected to be electronic equipment (Costa Rica, Honduras, and El Salvador only), processed food/beverages/tobacco (Guatemala, Nicaragua, Honduras, and El Salvador), and public services and dwellings (all countries). The CGE model from the SIA also predicted some losses from the AA in Central America, with transport equipment showing the steepest declines in output, followed by other manufactures and insurance services. From the EU side, the SIA predicted negligible effects, with slight declines where Central America was gaining but some small gains in other agricultural products. The De Miguel *et al.* (2010) CGE model shows many of the same effects, with gains in vegetables, fruits, and nuts and a loss in light manufactures across various liberalisation scenarios, while the Giordano and Watanuki (2008) simulation shows gains across most sectors and most countries for Central America, with agriculture in Costa Rica showing the highest output gains at nearly 50%.

Given the evolution of overall trade volumes has not been as expected, it stands to reason that many of these predicted sectoral gains also may not have materialised since the AA was implemented in 2013. However, a reading of sectoral trends in trade show that many of the predictions made in the *ex-ante* studies have indeed come to fruition despite the overall volumes decreasing: according to data from Eurostat, EU imports of food and live animals (concentrated in vegetables) from Central America have increased 33% from 2014 to 2017, now encompassing 62% of all imports, while imports of animal and vegetable oils have also doubled over this time period. At the same time, machinery and transport equipment imports have dropped almost 90%, while the value of EU exports of its own food and live animals increased by approximately 39% (albeit from a low base). In fact, the sectoral reallocations are the reason that aggregate trade flows have not performed as expected, with the drop in trade of transport machinery almost single-handedly responsible for the decline in aggregate trade with the region. On the whole, the EU has also increased its import of services from Central America over 2013 to 2016 (Grieger and Harte, 2017), an area which was relatively neglected in the *ex-ante* modelling. Overall, it appears that the sectoral performances have gone as forecasted since the AA, with only higher-than-expected losses in some sectors signalling that labour and capital reallocation is perhaps more exhaustive than anticipated. To conclude the analysis from the previous section as well, the continued vibrancy of the agricultural sector in Central America, coupled with the excellent performance of electronics equipment, should also signal that SMEs have benefited from the AA; put another way, it is unlikely that the burden of concentrated losses in Central America (i.e. in transport machinery) has fallen on small enterprises.

### 1.3.10 Human rights and environmental impact

For the final impacts of the AA on Central America, we once again turn to the human rights and environmental dimension. Like Peru and Colombia, the Central American countries of the AA have had historical issues with human rights protection, although the degree of human rights concerns varies dramatically across countries: Costa Rica is generally seen as a paragon of human rights, while Panama, Honduras, and El Salvador have issues with their police/security forces and the justice system and Nicaragua is still grappling with the murderous legacy of its communist past. Given the common challenges to human rights protection in the region, the AA includes its political clauses (including human rights and rule of law) as ‘essential elements’, and while they suffer some of the same problems as the other FTAs examined in this section (namely ambiguity about what ‘human rights’ actually means and how a country can satisfy this clause), its inclusion signals EU commitment to continued development of human rights in Central America<sup>15</sup>.

With the baseline of human rights in the region extensively explored by academics and updated by international organisations and bodies such as the US Department of State (which issues an annual ‘human rights report’ for each of the countries in the region and elsewhere), the SIA had little need to summarise human rights and/or provide predicted effects. Indeed, as with the other FTAs explored in this section, the *ex-ante* assessments of human rights carried an implicit assumption that the agreement would help further the cause of human rights in the region, albeit via undefined channels or through political commitment. Moreover, given that the task of improving human rights was delegated to coordination groups and technical assistance from EuropeAid, the AA appeared to explicitly divorce the economic development envisioned by the AA from the political process of human rights protection (which may have been an appropriate approach). In any sense, like the other FTAs explored here, the human rights clauses were thus signalling a commitment to continued political reform rather than preconditioning economic access on political evolution (Arana, 2016).

Given this background, it is perhaps not surprising to see that issues in human rights protection continue along their historical trends. The US State Department’s ‘human rights reports’ from 2017 for each of the countries in the region notes that the issues facing each country have changed little from pre-AA times, including the overwhelming need to rein in the police and security forces in most of the region and help develop the judiciary throughout. A reason for this, apart from the difficulty of influencing domestic politics in Latin America, has been the uneven approach of the EU in general to human rights in Central America: EuropeAid’s technical assistance on human rights was comparatively small prior to the AA (comprising EUR 4.6 million out of total spending of EUR 115 million), and, as the ADE (2015) evaluation showed, the emphasis on human rights was carried out in an ad hoc and unbalanced manner. It was perhaps presumptuous to think that the AA would signal a new era of EU assistance to the region for human rights without an explicit commitment to reorienting this aid, and thus slow gains in human rights since the AA are not an indictment of the agreement but of the need for an EU re-think of its approach in Central America. Regardless, the inclusion of the human rights clauses remains important for furthering broader goals of human rights protection, although other vehicles than the AA may return more concrete results.

Turning to environmental issues, the same offsetting effects of increased economic activity on the environment predicted elsewhere have also been predicted as a result of the AA: increased stress on natural resources and possible higher CO<sub>2</sub> emissions versus better materials-use intensity, better technology, and more demand for environmental protection. The 2009 SIA, for example, noted that environmental effects on the EU would be minimal, apart from the possible increase in CO<sub>2</sub>, while it predicted slightly worse environmental impact in Central America due to increases in maritime activity and

<sup>15</sup> However, as Martens *et al.* (2018) note, the lack of collaboration with civil society organisations as part of the AA’s negotiation, especially with regard to human rights clauses, undermines its effectiveness somewhat.

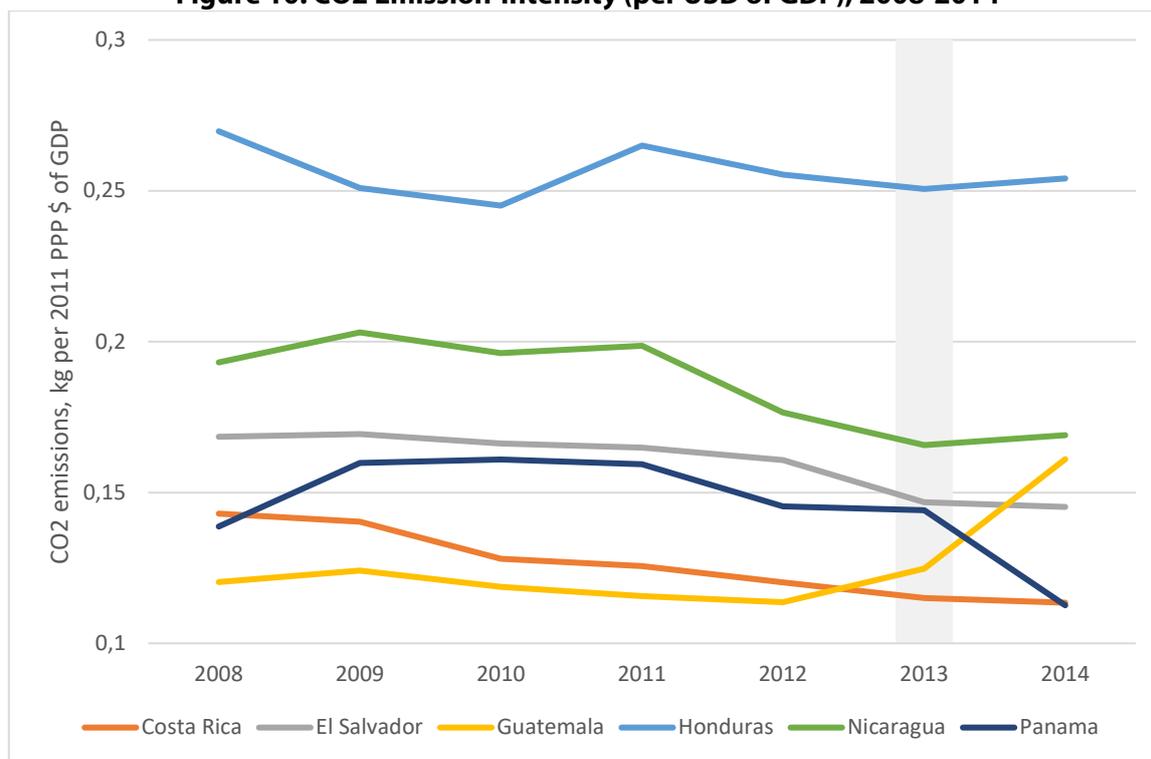
agriculture. More specifically, the CGE model from the SIA showed that the bulk (63%) of CO<sub>2</sub> emissions overall would come from the EU (small relative to the EU baseline), while land use reallocation and overall environmental pressures (including on biodiversity) would increase as more comprehensive trade liberalisation was pursued.

In contrast to the SIA, the De Miguel *et al.* (2010) study had a more novel approach to predicting environmental impact, estimating the amount of 'environmentally sensitive industries' (ESIs, for example textile mills, paper manufacturing, or oil and gas extraction) which would be affected by an AA under several different liberalisation scenarios. Using this methodology, their CGE model predicted a decrease of 7% of environmentally-sensitive industries across Central America in the region's exports in a full liberalisation scenario, important for economies such as Guatemala which see a large proportion of their exports in environmentally-sensitive industries. Scenarios with lower levels of liberalisation have less gains in environmental protection in the De Miguel *et al.* (2010) study, but even the most restrictive liberalisation scenario would see a decline of 0.7% in ESIs involved in export to the EU. Disaggregated at the sectoral level, their CGE model also attributed much of the decline in metals and metallic products, but the most restrictive and most liberal scenarios showed declines in environmental stress across all sectors. Based on this modelling, the authors conclude that the AA would have no deleterious effects on the environment in Central America and may have had a slight salutary effect.

The reality in the region is difficult to see over a mere few years span, as environmental outcomes (as noted previously) can take years to emerge. Even short-term effects are difficult to see in this region, mainly because of the lack of availability of data. Overall emissions of CO<sub>2</sub> have increased since the AA in 2013, but data from the Global Carbon Atlas ([www.globalcarbonatlas.org](http://www.globalcarbonatlas.org)) shows that the metric tonnes of CO<sub>2</sub> (MtCO<sub>2</sub>) emitted in Costa Rica, El Salvador, and Panama in 2016 were still on par with what they emitted in 2008 (for Costa Rica) or 2010 (the others). Indeed, it is only in Guatemala where CO<sub>2</sub> emissions have begun to skyrocket since the AA (from 13.62 metric tonnes of CO<sub>2</sub> in 2013 to 19.30 in 2016), while Honduras has seen a small increase (9.06 MtCO<sub>2</sub> in 2013 versus 9.98 in 2016) and Nicaragua a slightly larger one (4.55 MtCO<sub>2</sub> in 2013 versus 5.12 in 2016). Using a more limited time-series available from the World Bank and including only 2012-2014, we can see that the intensity use of CO<sub>2</sub> per dollar of GDP has decreased in every country apart from Guatemala (which saw increases from 2012 onward), a trend in line with longer-term trends but in an accelerating manner since immediately preceding the AA (Figure 10)<sup>16</sup>. From this data, it appears that Guatemala has seen the largest environmental impacts as a result of the AA, while other countries have been relatively unaffected.

<sup>16</sup> Materials use intensity is uniformly calculated in the literature on the basis of emissions output per US dollar. There are no conversions to output per euro available, but the ratios compared over time should be the same.

**Figure 10. CO2 Emission-Intensity (per USD of GDP), 2008-2014**



Source: World Development Indicators

## 1.4 Summary

This section has surveyed the predicted and actual effects of three EU FTAs which have been already concluded. As has been shown, the aggregate effects on the EU have been mainly as predicted and tiny, as befitting the staggering relative size of the EU economy versus the economies party to these FTAs. And in nearly every case, the actual effects in the partner countries have been difficult to disentangle from other macroeconomic and policy effects, and the observed effects have been smaller than predicted in CGE modelling. However, given the short timeframe available for data for these agreements, coupled with the aforementioned difficulty in rigorously modelling cause and effect with such a short data series, it is possible that longer-term effects may converge with CGE predictions as a result of price and income effects. In particular, while GDP effects may remain muted, trade, price, and poverty effects are likely to become magnified as economies continue to restructure themselves.

With regard to sectoral impact, each agreement was likely to have a different effect, given the disparities and differing comparative advantages of the EU's partners. In the case of Peru and Colombia, all sectors in both the EU and Peru and Colombia have seen gains, with the only setbacks occurring in the context of broader structural trends or global macroeconomic effects rather than directly attributable to the FTA. Similarly, the AA with Central America has seen large positive sectoral effects apart from a drop in transport equipment imports in the EU from Central America. And the South Korea FTA contains perhaps the most heartening demonstration of sectoral effects, as predicted losses in the European automotive industry have in reality been large gains for the sector, with both EU exports to South Korea and South Korean exports to the EU increasing.

A final point of note, as demonstrated here, is 'the dog that didn't bark': that is, in no example could we show that the EU-P/C FTA, the EU-ROK FTA, or the EU-Central America AA had a demonstrably negative effect on the welfare of the signatory country, also disproving some worst-case scenarios mooted by either civil society or CGE models. Indeed, one of the key takeaways of this section is that trade agreements are very effective at influencing trade flows in the short run, while other issues may take a longer time to influence (if they are influenced at all).

## 2 Recently-concluded agreements

This section surveys the projected effects across all of the metrics noted in the previous section for three recently-concluded agreements, between the EU and Canada, Japan, and Vietnam. As can be seen from this list, there is already a difference with the previous agreements, in that two-thirds of them have been concluded with major developed economies rather than emerging markets. It is thus likely that issues so crucial to new-generation FTAs between the EU and less-developed countries such as environment, labour rights, and human rights, will be of less importance than in those with developing economies. Also, unlike the FTAs which have been in place for some time, as examined in the previous section, the recently-concluded agreements have even less of a time-series (or in some cases none at all) in which we may examine *ex-post* their effects. To overcome this hurdle, our analysis in this chapter will examine the various *ex-ante* assessments and, with recourse to theory, examine the validity of their assumptions and forecasts.

### 2.1 The EU-Canada Comprehensive Economic and Trade Agreement (CETA)

The Comprehensive Economic and Trade Agreement (CETA) between the EU and Canada entered into force provisionally in September 2017, but not after some uncertainty surrounding its signature in October 2016: several weeks before the planned signing, the Belgian region of Wallonia blocked the process by refusing to give its consent to the federal Belgian government to sign the deal. The key fears driving the decision were that CETA would increase competition for farmers, strengthen multinational companies through the investor-state dispute settlement (ISDS) mechanism (replaced by the Investment Court System (ICS) before the launch of the agreement's provisional application), and would have a potentially negative impact on food safety and social and environmental standards (Van der Loo and Pelkmans, 2016).

The veto was revoked after a Joint Interpretive Instrument (JII) and an intra-Belgium Statement were negotiated. The JII had been already drafted before the Walloons 'non-vote' to accommodate concerns of CETA opponents. The JII is a legally binding document that specifies how several provisions of CETA should be interpreted but does not alter the text of the agreement (Van der Loo, 2016). The last-minute intra-Belgium Statement envisages that the Court of Justice of the EU will rule out regarding the compatibility of the ISDS/ICS with the EU *acquis*, while the regional parliaments of Belgium retain the right to block ratification if their concerns are not properly addressed. This means that the full ratification of CETA remains uncertain, although the provisional application of the agreement can last for quite a long time<sup>17</sup>.

#### 2.1.1 Welfare

Despite the seven years of negotiations, there are a surprisingly small number of in-depth studies of CETA. The study led by the European Commission and the Government of Canada (2008) is the most comprehensive that applies the CGE modelling framework. It was, however, produced when negotiations were only at the beginning and thus it does not take into account many recent economic trends, including the impact of the global financial crisis of 2008-2009.

The welfare effect of CETA is estimated to be comparable for both the EU and Canada, amounting to EUR 10.5 billion for the EU and EUR 8.4 billion for Canada in the long run (European Commission and Government of Canada, 2008), although due to the relative sizes of the economies, Canadian households are expected to be better off. For both partners, the gains are to be generated mostly by the liberalisation of trade in services (EUR 4.9 billion for the EU and EUR 3.8 billion for Canada). Services trade liberalisation

<sup>17</sup> The duration of the provisional application is currently being discussed and there are different views as to how long it can actually be implemented. Some have argued that provisional application cannot last forever (as it is only 'provisional') and therefore a legal instrument is necessary for the agreement to continue to apply beyond a reasonable period. However, there is no legal agreement, ruling, or precedent on what exactly constitutes such a period.

has been modelled as service trade cost savings at between 2 and 10%, depending on the type of services, amounting a fraction of total service trade costs estimated at between 18 to 42% in the EU and 24 to 52% in Canada (based on Francois *et al.* [2007] and Francois and Wignarajan [2008]). In particular, the EC/Canada study foresees 6% savings in the costs of financial services, but the introduction of new EU financial regulations after the crisis of 2008-2009 makes this parameter vague and potentially unstable.

Unlike many other EU agreements, CETA is expected to generate more gains from a classical elimination of tariffs than from the liberalisation of NTBs in trade in goods. The welfare gains from tariff cuts are EUR 3.4 billion for the EU and EUR 2.9 billion for Canada, while NTB liberalisation will generate EUR 2.2 billion for the EU and EUR 1.7 billion for Canada. In the short run, welfare gains are predicted to be higher for Canada, at EUR 4.1 billion compared to EUR 2.5 billion for the EU.

### 2.1.2 Real GDP

As with agreements explored in the previous section, the GDP gains associated with CETA are almost negligible for the EU, while relatively more important for Canada. The annual percentage change in GDP is expected to reach 0.8% for Canada and will be ten times less (0.08%) for the EU in the long run (European Commission and Government of Canada, 2008). In absolute (nominal) terms, however, *ex-ante* assessments have predicted that the EU would gain more, with an increase of EUR 11.6 billion of GDP annually, out of which half is generated by service trade liberalisation, with the rest split equally between tariffs and NTB liberalisation in goods trade. The GDP gains of Canada are EUR 8.2 billion per annum driven by services trade liberalisation (46% of the total), followed by tariff reductions and NTB liberalisation. In the short term, tariff cuts should be beneficial for both economies as these commitments realise immediately after the launch of CETA (even a provisional launch), while the liberalisation of trade in services and NTBs is a much longer process.

**Table 9. Estimated GDP Gains Generated by CETA**

		Total	Tariff liberalisation	Service trade liberalisation	NTB liberalisation in goods
<b>EU</b>	EUR billion	11.6	2.9	5.8	2.9
	% change	0.08	0.03	0.04	0.02
<b>Canada</b>	EUR billion	8.2	2.7	3.7	1.7
	% change	0.77	0.27	0.35	0.15

Source: European Commission and Government of Canada (2008)

Recently, the EU released another study on CETA's impact using a CGE modelling framework, but with scenarios which were not fully comparable to the earlier modelling (DG Trade, 2017). Both the 2017 EU study and the 2008 joint EU-Canada study model tariff reductions, but the modelling of effects differ. In particular, the recent study features a 3% reduction of trade costs in services, about half of what the 2008 study assumes. In addition, the 2017 study stresses the impact of the reduction in NTBs applicable to FDI in the goods sectors, compared to NTB liberalisation for non-commodity processed goods in the joint 2008 research.

Mostly due to the difference in the liberalisation scenarios modelled in the EC/Canada study, the more recent analysis (DG Trade, 2017) produced much more moderate expected results in terms of GDP gains. EU GDP will grow by between EUR 1.7 and EUR 2.1 billion, while Canada will see gains of between EUR 2.4 and EUR 3.0 billion, benefitting both more in nominal and relative terms.

### 2.1.3 Prices

As in the case of other FTAs, it is difficult to separate the price effects of CETA from the discussion of other macroeconomic and sectoral indicators. The most recent EU study (DG Trade, 2017) claims that CETA will

help to keep prices down and allows greater variety of better-quality products, mostly due to tariff elimination. At the same time, the stronger protection of intellectual property rights (IRPs), in particular geographic indications (GIs), will provide a price premium for producers through the reputational channel.

The joint study of the European Commission and the Government of Canada (2008) anticipates an expected reduction of prices due to the liberalisation of public procurement systems. In particular, it refers to the 30% price reduction associated with increased intra-EU competition for foreign procurement resulting from the EU's procurement directives (European Commission and Government of Canada, 2008:78). At the same time, the already-high levels of foreign competition in the EU procurement market are expected to mitigate the impact of CETA on price levels for the EU. This effect should be more pronounced in Canada due to its limited involvement in the WTO Agreement on Government Procurement (GPA).

While existing research papers omit an explicit discussion of the price effects of CETA, the change in prices has been one of the fears accompanying CETA negotiations and signing in both the EU and Canada. On the one hand, farmers in both the EU and Canada have been afraid of growing competition and associated downward pressure in prices in the agricultural sector. On the other, the higher protection of intellectual property rights in pharmaceutical sectors has brought a fear of growing prices for medicine (EPHA, 2017).

#### 2.1.4 Aggregate exports and imports of goods and services

Unlike many other trade agreements, the number of studies providing a quantitative impact assessment of CETA on trade flows is quite limited. The European Commission and Government of Canada (2008) study estimates that bilateral trade in goods and services could expand by EUR 25.7 billion, or by over 22.9% in the long run. While the term 'long run' is notoriously slippery and difficult to pin down in economics, this study estimates the long run to be more than 7-8 years after the enactment of the agreement, a time when the dynamic effects of the agreement (including both the reallocation of production factors and the changes in productive capacities of the economies) will materialise. Of this headline amount of EUR 25.7 billion, EUR 18.6 billion would be accounted for by an expansion of two-way goods trade and more than half of that—EUR 7 billion—by two-way cross-border services trade, highlighting that the welfare and GDP gains associated with services trade liberalisation are expected to come largely from other than cross-border modes of services trade.

According to the joint EU-Canada study, in the long run, the EU will benefit more from the expansion of trade in absolute terms, while Canada will gain more in relative terms as its economy is smaller and the EU is already among its key trade partners. In goods trade, the EU's bilateral export gain is EUR 12.2 billion (36.6%), while Canada would see gains of EUR 6.3 billion (24.3%). With regard to services trade, EU bilateral cross-border exports were projected to expand by EUR 4.8 billion (a 13.1% increase) and Canada's by EUR 2.2 billion (14.2%).

The recent EU study (DG Trade, 2017) predicts bilateral trade gains of only half of that of the 2008 study, at EUR 11.7 billion by 2030, but absolute gains will be almost equally distributed between the partners. In particular, the EU's gains should amount to EUR 5.8 billion, while Canada will see gains of EUR 5.9 billion. In both cases, the increase is about 8%. While too early to say definitively from the data which prediction is correct, the predicted growth of EU-Canada trade exceeds the currently-observed growth rate in trade of goods and services between the partners.

#### 2.1.5 Employment and labour rights

Unlike other modelling explored in the previous section, the quantitative assessment of the impact of the EU-Canada CETA on employment and wages remains largely untouched. The reallocation of factors of production, in particular labour and capital, from less productive sectors to sectors that are more productive, is among the crucial features of CGE models, but, regretfully, the authors of both the 2008 and

the 2017 studies did not report the labour reallocations associated with CETA. On average, each EUR 1 billion of EU exports supports about 14,000 jobs across the EU (Arto *et al.*, 2015). If this proportion holds true, CETA could generate from 84,000 to 252,000 jobs in the EU in the long run.

CETA also contains a number of commitments related to employment and labour rights, including the commitment to respect all ILO core labour standards and to progress on those that are not yet ratified. For example, Canada is in the process of the ratification of Conventions 98 on the Right to Organise and Collective Bargaining and 138 on Minimum Age (EU, 2017). Regretfully, these commitments are also not easily quantifiable, and little work has been done on how, if any, the agreement with the EU affected this path to ratification.

At the same time, the protection of employees' rights is among the key questions associated with CETA's impact and thus the process of its ratification. CETA opponents claim that the ISDS/ICS mechanism embedded in the agreement could harm employee protections in favour of investor interests (EPHA, 2017). There is little evidence that this will actually be the case, however, as the ICS mechanism does not touch on labour rights in any way.

### 2.1.6 Budget balance

Although existing studies do not consider the fiscal impact of CETA, we could expect that the agreement entails the reduction of tariff revenues, likely to be compensated by higher VAT revenues and direct taxes resulting from increased economic activity. As with the empirical evidence shown in the last section, there is likely to be no major decrease in revenue associated with CETA for either Canada or the EU, especially given the large and well-diversified nature of the tax systems of both countries.

### 2.1.7 Poverty

The impact of CETA on poverty has not been the focus of previous studies. However, some implications could be derived from the sectoral impact of the agreement on poverty, which will be shown below.

### 2.1.8 SMEs

There is no existing quantitative assessment of the impact of CETA on SMEs in particular, a curious omission which disregards the importance of SMEs for both the European and Canadian economies. Regardless, there have been sporadic qualitative evaluations of the impact of the various aspects of CETA on SMEs. For example, DG Trade (2017) highlights that CETA could help to reduce costs associated with NTBs and with intellectual property rights (IPR) protection. Similarly, the joint 2008 study of the EU and Canada underpins the importance of reducing cross-border trade costs especially for the SMEs, for which trade barriers can be a significant impediment. Without more detailed data, the specific effect on SMEs of NTB reduction is difficult to quantify, but there is no justifiable reason why the removal of NTBs would have a detrimental effect on SMEs in either Canada or the EU.

### 2.1.9 Sectoral impacts

The joint EU and Canada study (2008) provides the most comprehensive overview of CETA's sectoral impact. The agreement is expected to have a very limited long-term impact on the output of EU sectors, but considerable effects on the Canadian economy. The EU sectors projected to have the largest output gains in percentage terms are processed foods (0.6%), leather and apparel products (0.3%), beverages and tobacco products (0.1%), chemical products (0.1%), and insurance (0.1%). The impact on processed food, despite a very strong expansion of exports, is forecasted to be tiny at only a 0.6% increase, while the impact on primary agriculture is expected to be zero.

At the same time, Canadian sectors could experience noticeable changes in their output. In particular, the sectors with the largest output gains in percentage terms are predicted to be metals (11%), transport

equipment (7.3%), and electronic equipment (5.6%). At the same time, processed food production could be reduced by 6% *ceteris paribus*.

In exports, agro-food trade, the most protected segment of trade in goods, is expected to benefit the most. EU exports will expand the most for processed food (EUR 5.6 billion or 326%), followed by chemical products (EUR 1.9 billion or 28%) and machines and equipment (EUR 1.3 billion or 17%) in the case of goods and for transportation (EUR 1.1 billion or 20%) in the case of services. Canada will witness the most significant export expansion also in processed food (EUR 1.4 billion or 142%), followed by metals (EUR 0.9 billion or 29%), primary agriculture (EUR 0.8 billion or 42%), and transportation (EUR 0.8 billion or 24%). According to the joint study, CETA will widen the trade surplus of the EU and the trade deficit of Canada.

As an alternative to these official studies, Sandberg (2011) analysed the possible impact of CETA on trade in services using a gravity model (while the two above-mentioned studies use a CGE model). Therefore, while the results are not fully comparable, they both highlight the importance of extensive service liberalisation for CETA's ultimate success. According to Sandberg (2011), exports to Canada would increase most significantly for telecommunication services (70.8%), followed by other business services (46.1%), financial services (28%), transportation (14.6%), and travel services (10.4%). The growth of imports is concentrated in the same sectors, although expected to be much lower: imports from Canada increase in other business services (38.7%), telecommunications services (23.8%), financial services (12.7%), transportation services (3.9%), and travel services (3.3%).

### 2.1.10 Human rights and environmental impact

CETA includes several chapters related to the environment, including on trade and sustainable development and on trade and the environment, but the possible impact has not been examined quantitatively, while the qualitative assessments vary widely. On one hand, the European Commission claims that CETA reaffirms the existing environmental commitments of the parties and guarantees that the parties will not go back on them (European Commission, 2016). On the others, CETA opponents express concern whether the ICS (previously ISDS) would still ensure balance between investor and public interests, including in the sphere of environmental protection.

With regard to human rights, Canada is regarded as a paragon in the protection of human rights, notwithstanding some issues related to freedom of expression. It is unlikely that CETA would have any impact on Canada's human rights record.

## 2.2 The EU-Japan Economic Partnership Agreement

The Japan-EU Economic Partnership Agreement (JEEPA) was finalised in 2017 and signed on July 17, 2018. It is the largest (in value terms) trade agreement ever completed by the EU, and thus is expected to bring important economic benefits to both partners. The agreement envisaged the extensive liberalisation of trade in goods, including the elimination of import duties on all industrial and most agricultural products and the reduction of NTBs through adherence to international standards and simplified procedures (European Commission, 2018a). Trade in services will be also liberalised, although with exemptions. In line with the current practice of trade agreements negotiated by the EU, the agreement with Japan also includes such trade-related issues as public procurement, competition policy, data protection, IPRs, sustainable development, and corporate governance. Notably, JEEPA does not contain investment-related provisions, including the application of the ICS, as they will be regulated by a separate agreement that is still being negotiated at the time of writing. It is expected that the absence of the investment-related provisions will simplify ratification of JEEPA.

JEEPA, unlike CETA, and due to the size of the Japanese economy, has attracted the attention of many researchers, providing a wide spectrum of assessments, including quantitative results based on CGE models.

## 2.2.1 Welfare

The impact of JEEPA on welfare is explicitly estimated by Sunesen *et al.* (2009) and Francois *et al.* (2011). Both studies highlight the importance of the liberalisation of NTBs in trade of goods and services as a key driver for the welfare gains of the agreement. Sunesen *et al.* (2009) estimate the welfare gains associated with JEEPA at between EUR 10 to 18 billion for Japan and EUR 21 to 33 billion for the EU in the long run depending on the modelling scenario, with higher welfare gains associated with more reduction in trade costs in goods and services trade. For both the EU and Japan, the reduction of NTBs is much more important than tariff liberalisation for welfare gains. About two-thirds of EU welfare (real income) gains are derived from NTB reductions, and only one-third from tariff reductions. For Japan, the proportion is even more impressive: only one-sixth of the gains are due to tariffs, while the rest are due to NTB reductions, including in services trade.

The assessment of the welfare effect done by Francois *et al.* (2011) is very similar for Japan (about EUR 13 billion), but much higher for the EU, at EUR 100 billion in the long run<sup>18</sup>. The modelled scenario envisages tariff liberalisation and a symmetric 20% cut of NTBs for both goods and services in the EU and Japan. Again, the reduction of NTBs is the driver of welfare gains.

As NTB reductions are the core of the impact assessment of JEEPA, the expected gains should be treated with caution. Unlike the reduction of tariffs, which can be transparent and clear-cut, it is uncertain that the foreseen cuts in the NTBs encompassing regulations or standards would be achieved. Moreover, the changes in the NTBs could prove costly in the short run; in particular, if the changes in NTBs are less than predicted or their perceived costs are too high, the gains associated with the preferential agreements could be much smaller, especially in the short term.

## 2.2.2 Real GDP

Unlike welfare gains, the impact of JEEPA on GDP has been explored in detail by multiple studies. In all cases, GDP gains are quite modest, and the majority of researchers agree that the value of the long-term GDP change for Japan would be around 0.2 to 0.3% (Kawasaki, 2005; Sunesen *et al.*, 2009; Francois *et al.*, 2011; European Commission, 2016b; Felbermayr *et al.*, 2017). The major exception is the study by Benz and Yalcin (2015) reporting a 0.86% increase in Japan's GDP following comprehensive trade liberalisation, although GDP gains associated with tariff liberalisation are comparable at a 0.1% increase.

The assessment of potential GDP gains for the EU vary, depending on the starting level of NTB protection and the schedule of NTB reduction. The Trade Sustainability Impact Assessment report (European Commission, 2016b) predicts that the agreement results in a long-term GDP increase at 0.76% for the EU. Francois *et al.* (2011) finds the EU GDP gains of 0.4% in the short run to 0.7% in the long run. Benz and Yalcin (2015) report a 0.21% increase in GDP. At the same time, the Sunesen *et al.* (2009) assessment of EU GDP gains are much lower, at 0.10% in the short run and 0.14% in the long run, and Felbermayr *et al.* (2017) report a 0.06% increase for the EU.

## 2.2.3 Prices

Although existing studies do not report expected changes in prices associated with the implementation of JEEPA, they implicitly assume a reduction in prices as the driving force of welfare gains. For example, Sunesen *et al.* (2009) highlights the reduction of goods and services prices as a direct result of reduced trade costs as a source for welfare gains for consumers, while the European Commission (2016b) associates the welfare gains due to JEEPA as being partly driven by the price effect of competition associated with

<sup>18</sup> Regrettably, the annexes of the report are not publicly available, and it is impossible to verify the figure of the welfare gains for the EU.

growing imports. We agree with this assessment, especially in areas where NTBs are reduced and believe that reductions in NTBs would lead to lower prices in both markets.

## 2.2.4 Aggregate exports and imports of goods and services

As is the case with other indicators, the trade gains of the EU and Japan are quite dispersed (even within *ex-ante* studies) depending on the NTB reduction scenario. For instance, according to Sunesen *et al.* (2009), EU exports to Japan could grow by between EUR 27.8 billion and EUR 43.4 billion, corresponding to a 46 to 71% increase in EU bilateral exports compared to the baseline. The removal of tariffs generates from one-third to one-half of the total gains, while the variation in exports is attributed to changes in NTBs. For Japan, the increase in exports to the EU is estimated at between EUR 35.3 billion and EUR 53.8 billion or a 40 or 61% increase.

The study by Felbermayr *et al.* (2017) further highlights the importance and ambiguity of the impact of NTBs on trade flows. In the conservative scenario, EU exports to Japan increase by 12.5% and EU imports from Japan increase by 4%. NTB reduction boosts EU exports to Japan by 61% to 146% and EU imports from Japan by 55% to 162%. Similarly, Benz and Yalcin (2015) show that the reduction of NTBs complementing tariff elimination could boost export growth by a factor of ten or more, from USD 7 billion (approximately EUR 6.06 billion) to USD 77 billion (EUR 66.66 billion) for Japan and from USD 7 billion to USD 75 billion (EUR 64.94 billion) for the EU. These analyses show how important the issue of NTBs is for a developed economy FTA, an issue we will return to later.

## 2.2.5 Employment and labour rights

Unlike many other preferential trade agreements, the specific impact of JEEPA on the labour market, especially wages, has been addressed in several studies. Most trade-related CGE models are built on the assumption of the reallocation of resources, including labour, among sectors in response to a trade-related shock. This reallocation then affects wages (in the case of full employment) or reduces unemployment if the model allows unused labour in the baseline.

The several CGE-based studies examining JEEPA show that the agreement should lead to a moderate increase in the real wages of skilled and unskilled employees, with higher-skilled labour tending to benefit more. However, the (relative) size of changes varies across models. Sunesen *et al.* (2009) estimate the increase in wages of skilled labour at 0.25% in the EU and 0.73% in Japan, and of less-skilled labour at 0.25% in the EU and 0.68% in Japan (showing that Japanese skilled labour is anticipated to generally be better off compared to other categories). On the contrary, Francois *et al.* (2011) estimate that both high- and low-skilled labour in the EU will face the largest wage increase at 0.7%, while high-skilled labour in Japan will receive a 0.5% wage increase and low-skilled labour will receive a 0.4% increase.

The modelling of changes in unemployment shows the same trend in the labour market due to JEEPA—namely, that labour becomes scarcer, driving wages up and/or reducing unemployment. According to Benz and Yalcin (2015), ambitious trade liberalisation could result in the creation of roughly 10,500 jobs in Japan and 25 000 jobs in the EU, although the relative impact on employment is lower in the EU than in Japan due to the relative sizes of their economies.

## 2.2.6 Budget balance

As weighted applied import duties are less than 3%, estimated total tariff revenues are between EUR 1.6 billion (European Commission, 2016b) and EUR 1.9 billion (European Commission, 2012). The VAT revenues generated from the expansion of GDP and domestic household consumption, including the increased demand on imports, is estimated to bring at least EUR 12 billion of additional revenues, more than sufficient to compensate the foregone import tariffs revenues.

## 2.2.7 Poverty

As JEEPA was concluded between developed countries, issues such as social inclusion, poverty, protection of certain groups, and equal treatment and opportunities were generally not considered in the studies surveyed here. As with other FTAs, we conjecture that poverty would be lessened via price effects, the lack of impact on government finances, and labour reallocation, although these effects would necessarily be seen only in the longer term.

## 2.2.8 SMEs

Although SMEs play an important economic role in both the EU and Japan, there are no quantitative assessments on the impact of JEEPA on SMEs. Qualitative analysis shows that SMEs are expected to benefit from the reduction of NTBs, namely in reduced regulatory burdens and lower fixed costs (which are disproportionately higher for smaller enterprises compared to large firms, as noted by European Commission [2012]). At the same time, greater advice and assistance is required for SMEs to ensure that they are able to capture the opportunities offered by JEEPA.

## 2.2.9 Sectoral impacts

Several authors have studied the sectoral impacts of JEEPA, mainly as part of their CGE modelling. Unlike the recently-launched CETA, the impact of JEEPA is expected to concentrate in manufacturing. For the EU, most studies (see, e.g. Sunesen *et al.*, 2009; Francois *et al.*, 2011; European Commission, 2016 b; Felbermayr *et al.*, 2017) show that JEEPA is expected to have a very limited impact on output (below 1%), except for specific sectors (however, the list of *which* specific sectors does not fully match across studies). Sunesen *et al.* (2009) report that machinery, including medical devices, will see the largest (although still very moderate) increase in output among industrial sectors at 0.6%, while transportation leads the services output expansion. According to Francois *et al.* (2011), analysing sectors at a higher level of disaggregation, electrical machinery could gain the most, with a projected output increase of 6% and 8% in the short and long term, respectively. At the same time, Felbermayr *et al.* (2017) report that pharmaceutical products are the leader of output expansion, with wholesale trade as the leader in services.

The gains of Japan are much more pronounced, as reported by all studies, and the key beneficiary across sectors largely coincides. According to Sunesen *et al.* (2009), motor vehicle output will expand by 12.5% in Japan, followed by a 7.1% expansion of other transport, and a 5.8% growth of motor vehicles. Francois *et al.* (2011) also predict the expansion of motor vehicles and other machinery outputs, although at a slower 5%. Similarly, the European Commission (2012) and Felbermayr *et al.* (2017) identify various types of machinery and equipment as leaders in output expansion.

### 2.2.10 Human rights and environmental impact

The issue of human rights protection is not addressed in any *ex-ante* studies in detail, as the EU and Japan are already developed democratic countries committed to high standards of human rights protection. Even with this reality, it is expected that the agreement could have a positive indirect impact on human rights, for example, through deepened cooperation in labour-related areas such as the recognition of professional qualifications, which is related to the right to work and the right to just and favourable remuneration (European Commission, 2012).

The impact of JEEPA on the environment, on the other hand, is examined in more depth, with several authors analysing potential impacts. According to Francois *et al.* (2011), the agreement will have a negligible impact on the global profile of CO<sub>2</sub> emissions, generating less than 0.1% of the global emissions baseline. This conclusion is seconded by the European Commission (2012), who assert that the agreement will not have any deleterious effect on the environment.

## 2.3 The EU-Vietnam Free Trade Agreement

The free trade agreement between the EU and Vietnam (EVFTA) belongs to the family of bilateral FTAs with ASEAN countries, and Vietnam was the third ASEAN country (after Singapore and Malaysia) to begin talks on an agreement after negotiations with ASEAN as a whole were paused in 2009. Vietnam is the second ASEAN country after Singapore with which the talks were successfully concluded, although neither of these two agreements have been signed yet.

After the completion of negotiations in 2016, the agreement with Vietnam was split into an FTA and an Investment Protection Agreement (IPA), following the Opinion of the European Court of Justice on the Singapore FTA dated 2017. The legal review of the EVFTA text was finalised in end-June 2018, while the legal review of the IPA is ongoing.

The agreed-upon FTA will extensively liberalise trade between the two parties, eliminating about 99% of all import duties and effecting a partial liberalisation of others (European Commission, 2018b). The agreement also envisages the liberalisation of services and investments. Unlike FTAs explored in this and the previous section, the EVFTA is less ambitious in the sphere of NTBs related to product safety regulations, but it does have clauses to strengthen cooperation in the sphere of customs and trade facilitation. And as in other recent FTAs, the EVFTA covers issues of public procurement, IPR protection (in particular the protection of European geographic indications), labour safety, environment, and consumer protection, as well as reaffirms respect of human rights principles.

### 2.3.1 Welfare

There are only a few quantitative studies anticipating the impact of the EVFTA, and they mostly analyse EU-Vietnam trade liberalisation as a part of a wider EU-ASEAN trade liberalisation. In particular, Ecorys (2009) reports the increase in the national income of the EU ranging from EUR 4.7 billion to EUR 12.0 billion in the short term and from EUR 13.1 billion to EUR 29.5 billion in the long term, depending on the trade liberalisation scenario considered. These gains, however, are associated with the sharp reduction of trade barriers with all ASEAN countries, not only Vietnam. The impact of the bilateral trade liberalisation will be much lower and likely closer to the gains for Vietnam, estimated at between EUR 1.5 and 2.6 billion in the short term to EUR 5.0 to 7.6 billion in the long term.

The reasonableness of these modelling results largely depends on the scenarios of trade liberalisation embedded in the study. For example, the Ecorys (2009) assessment contained three scenarios: a limited FTA (90% bilateral tariff reductions, 25% reduction of services trade restrictions, and 1% trade costs savings through the reduction of NTBs on customs); an ambitious FTA (97% cut in tariffs, 75% cut in services restrictions, and 2% drop in NTB costs); and an ambitious FTA plus an additional 1% reduction in NTB costs for selected sectors. The agreed-upon EVFTA, however, does not fully match any of these scenarios. On the one hand, the liberalisation of tariffs will be more extensive, fully removing 99% of duties and partly liberalising others. On the other, the services trade liberalisation seems to be in between the limited and ambitious FTA scenario. The assessment of the NTB-related cost reductions correctly focuses on customs (and not on product safety regulations, reflecting the provisions of the EVFTA), with customs being a more problematic issue in the short run for trade with Vietnam. In sum, the projected gains are actually likely to *underestimate* the welfare impact of tariff liberalisation in goods, while service trade gains could be estimated by taking the average of the two modelled extremes.

The decomposition of real income effects estimated by Ecorys (2009) shows that the EU gains from ASEAN tariff liberalisation could be at EUR 6.7 to 7.0 billion in the long run (ambitious FTA scenarios), only a fraction of which is attributable to Vietnam. Vietnamese consumers could gain EUR 4.4 to 4.5 billion, considerably more than could be generated by the unilateral elimination of tariffs by the EU (assessed by Rahman and Inkyo [2014] at EUR 0.9 billion). The NTB-related long-term gains are quite dispersed, ranging from EUR 2.5 to 7.6 billion for the EU (only partly due to the reduction of trade costs by Vietnam) and from EUR 0.6 to 1.7

billion for Vietnam. The gain associated with services trade liberalisation, taken as an average between limited and ambitious FTA scenarios, is estimated by us at EUR 10.0 billion for the EU and a very moderate EUR 0.9 billion for Vietnam. Thus, Vietnam is expected to benefit the most from the mutual elimination of import duties, the estimated expected gains of which are the most accurate, while EU gains depend on the reduction of trade costs of NTBs and services regulations, a much less certain portion of our estimates.

### 2.3.2 Real GDP

The EVFTA is estimated to generate very moderate real GDP growth for the EU but could play an important role for the development of Vietnam. According to Ecorys (2009), the real GDP of the EU could increase by 0.02-0.06% in short run and by 0.10-0.23% in the long run thanks to overall trade liberalisation with the ASEAN countries; thus, the gains associated with the EVFTA would be necessarily lower. According to this same analysis, Vietnam's real GDP could increase much more substantially, by 1.92 to 3.22% in the short run and by 10.17 to 15.27% in the long run (depending on the scenario of trade liberalisation). At least half of the gains for Vietnam are generated by tariff liberalisation. Perhaps somewhat noteworthy, the Ecorys (2009) study shows that Vietnam could get the more out of the EU-ASEAN free trade deal than other ASEAN countries.

Other studies focused on tariff liberalisation only report results comparable with the tariff liberalisation scenario of Ecorys (2009). For instance, the real GDP growth in Vietnam associated with the unilateral liberalisation of tariffs by the EU is estimated at 2.46% by Rahman and Inkyo (2014). Similarly, Philip *et al.* (2011) report an increase in real GDP by 2.94 to 3.68% over the long run due to tariff dismantling (but depending on the speed of liberalisation).

### 2.3.3 Prices

Although the reduction of prices associated with increased foreign competition and reduced trade costs is among the key channels of the welfare gains, this reduction could be counterbalanced by other factors, including increased demand stimulated by boosted efficiency. Likely, this demand effect explains the slight increase in consumer prices predicted by Ecorys (2009) in the case of the EU-ASEAN free trade deal. According to this study, the impact of the FTA on the EU CPI will be negligible at 0.0 to 0.1% depending on the scenario and time horizon, while Vietnamese consumers might face a 0.6 to 0.8% increase in the CPI in the short run and 1.7 to 2.4% in the long run, although fully compensated by much higher growth rates of real wages. The reduction of import duties alone could cause a moderate reduction of prices at between 0.7 and 1%, as reported by Philip *et al.* (2011).

### 2.3.4 Aggregate exports and imports of goods and services

The direct impact of the EVFTA on trade has been studied by several researchers. Although the comparison of results is constrained by differences in methodologies and research questions, the general conclusion is that the EVFTA is expected to boost trade between the two partners, with Vietnam to gain more in relative terms. According to Ecorys (2009), aggregate exports of the EU could increase up 1.1% in the long run in the case of the most favourable trade liberalisation scenario of the entire ASEAN group of countries, so the impact of the EVFTA will likely be almost negligible for the EU trade balance. Vietnam's exports could increase by 10.3 to 16.1% in the short run and 22.8 to 34.9% in the long run, depending on the particular scenario (in this modelling, tariff elimination only brings small gains, see Rahman and Inkyo [2014] and Philip *et al.* [2011]). Using a gravity model, Duong (2016) estimated that a decrease of 1% of tariffs in the EU leads to an increase of 0.52% of Vietnam-EU trade, while a decrease of 1% of tariffs in Vietnam leads to an increase of 0.95% of Vietnam-EU trade.

### 2.3.5 Employment and labour rights

As with other CGE-based studies, the impact of the EVFTA on labour markets is predicated on allocative efficiency. According to *ex-ante* assessments, the specific impact of the EVFTA on EU wages was expected

to be negligible, as the effect of the EU-ASEAN FTA was gauged to be between a 0.04 to 0.21% increase depending on the depth of trade liberalisation; the much smaller size of the EVFTA means that many of these gains (along with their dependency on an internal ASEAN market) will obviously be smaller. The difference of impact on skilled and unskilled real wages is also tiny and in favour of skilled employees. In the case of Vietnam, the EVFTA is expected to generate much more tangible gains for workers, favouring the unskilled but only slightly. In particular, Vietnamese skilled workers could gain from a 3.59 to 12.61% increase in real wages, while unskilled could see gains from 3.70 to 13.30%. However, efficiency gains and productivity increases are expected to boost employment growth less than the increase in output (Ecorys, 2009), thus posing a challenge for Vietnam.

The EVFTA also contains provisions related to the strengthened protection of labour rights and decent employment. It is expected that the EU investors attracted by the EVFTA will bring higher labour safety standards to the country (Ecorys, 2009). At the same time, higher labour standards could bring additional costs for Vietnamese business, especially in the short term, as they struggle to conform with EU and international standards. The de facto non-binding nature of these provisions, however, may mitigate their cost as they could be phased in over a longer period; thus, as long as there is a trend towards improvement, the EU is unlikely to abrogate parts of the trade side in favour of labour rights.

### 2.3.6 Budget balance

The impact of the EVFTA on fiscal revenues has been analysed by several researchers, showing that, while the fiscal impact on the EU is expected to be negligible, Vietnam could see substantial changes in its revenue structure. According to Philip *et al.* (2011), the net fiscal revenue of Vietnam could increase substantially thanks to the EVFTA, as the revenue from import growth would exceed the losses associated with the reduction of tariffs. In particular, Vietnam's fiscal revenues would increase by 529 billion dong (approximately EUR 19.63 million) in the case of a rapid dismantling and by 6,305 billion dong (EUR 233.99 million) in the case of a progressive dismantling in the long run.

At the same time, Ecorys (2009) expresses concerns regarding the tariff revenue losses of Vietnam, as trade revenues account for a high share of budget revenues in the country. The authors suggest that tax base broadening is required to compensate the losses, an issue which nonetheless would be good for Vietnam's fiscal health even in the absence of the EVFTA.

### 2.3.7 Poverty

Unlike in the case of the FTAs between the EU and Canada and Japan, the impact of the EVFTA on poverty is an important aspect of the forthcoming agreement. However, the available *ex-ante* assessments are qualitative and incomplete. For example, Ecorys (2009) expects no major poverty impacts at the level of the EU, while the impact on Vietnam is likely to be positive thanks to a strong expansion of real wages, especially for unskilled workers. The EVFTA is also expected to contribute to poverty alleviation in Vietnam, especially through the growing leather industry, which is likely to absorb urban and partly rural unemployed workers. A further positive impact on poverty reduction is expected through the development of financial services, in particular, the micro crediting of business and better social insurance. However, these impacts are very uncertain, especially in the short term, and some (including labour reallocation) can only be expected to materialise in the medium to long term.

### 2.3.8 SMEs

There are no quantitative studies specifically focusing on the impact of the EVFTA on SME development in either the EU or Vietnam. Some conclusions can be derived, however, based on the development of sectors in each partner, taking into account the role of SMEs in their structure. In particular, the EVFTA could adversely affect some of least-efficient SMEs in the EU, especially those specialising in leather products, due to increased competition with cheaper Vietnamese workers (Ecorys, 2009). At the same time, the

EVFTA can create new opportunities throughout the economy, spurring innovation and investments, and this can, in turn, boost the development of SMEs, especially in services.

Unfortunately, all of the *ex-ante* studies completely lack an assessment of the impact of the EVFTA on SMEs in Vietnam, except for an expected increase in SME credit (Philip *et al.*, 2011); it is our assertion that SMEs will likely also undergo a period of adjustment while more efficient ones are able to reap the benefits which liberalisation offers and others either focus domestically, adapt, or go out of business. The dominant effect in this scenario is not apparent, although, as the next section shows, the sectors projected to gain the most as a result of the EVFTA are those which have been traditionally dominated by SMEs rather than larger firms. Indeed, the projected declines in manufacturing are not likely to fall on SMEs, meaning that there may be a net positive in the effect of the EVFTA on SMEs in Vietnam.

### 2.3.9 Sectoral impacts

The sectoral impacts reported by the various CGE models examining the EVFTA should be taken with caution as the reallocation of resources in response to policy shocks may exacerbate factor mobility in Vietnam. The impact of the ASEAN FTA (including the EVFTA) on EU output, according to Ecorys (2009), will be very small, with growth registered for processed food, motor vehicles, machines, equipment, and services, being the backbone of the EU economic structure. The only outstanding change is a 14 to 24% drop in leather production due to tougher competition from Vietnamese producers. Symmetrically, the model predicts that Vietnam boosts its leather output by 154% and exports by 164%, absorbing resources from other sectors. Although such intensive reallocation of resources is questionable in the short run, clearly, the leather sector has strong development potential in Vietnam due to the EVFTA. Beyond leather, the Vietnamese production of wearing apparel, selected sub-sectors of agriculture, and most services are estimated to increase due to the EVFTA, while manufacturing sectors are potential losers due to EU competition.

Similarly, according to Philip *et al.* (2011), the EVFTA will result in the higher—over 6% annually—growth of exports for sectors of interest for Vietnam (namely footwear and textiles), while the development of other sectors is projected to be much slower. Instead, Vietnam should intensify its imports of agro-food products, machinery, chemicals, and pharmaceuticals from the EU, reflecting the EU's comparative advantage in these products.

#### 2.3.10 Human rights and environmental impact

There are no quantitative impact assessments of the environmental and human rights impact of the EVFTA, although the qualitative assessments are generally positive. Among the key environmental concerns addressed by the EVFTA are illegal logging and deforestation, dealt with through the stimulation of systemic and sustainable forest management (Philip *et al.*, 2011). The EU may also stimulate the usage of more environmentally-friendly inputs, for example, in chemical production and in the leather and textile industry, to meet EU technical regulations in the case of exports. This impact, however, cannot be directly attributed to the EVFTA and would likely only accompany increased living standards in Vietnam. Apart from the impact on illegal logging, Ecorys (2009) also shows relatively limited effects of the EVFTA related to environmental protection, though the impact will differ according to the specific sector.

The trade agreement with the EU could also play an important role in helping to improve the human rights situation in Vietnam. The current situation remains problematic, according to Human Rights Watch (2018b), as the ruling Communist Party restricts basic human rights including freedom of speech, opinion, press, association, and religion. Economic rights are also infringed as workers cannot form independent labour unions, and land confiscation without adequate compensation is widespread.

The EVFTA contains provisions creating opportunities for better protection of human rights in Vietnam. In addition to the reaffirmation of the signatory parties' adherence to key UN treaties in the preamble, the

EVFTA addresses select human rights explicitly in the chapter on trade and sustainable development (European Commission, 2016c). In particular, it contains the commitments to respect the following fundamental rights at work:

- the freedom of association and the effective recognition of the right to collective bargaining;
- the elimination of all forms of forced or compulsory labour;
- the effective abolition of child labour; and
- the elimination of discrimination in respect to employment and occupation.

Moreover, the EVFTA is interconnected with the Partnership and Cooperation Agreement (PCA), which contains expanded human rights clauses. Within the framework of the PCA, a breach of these clauses could trigger 'appropriate measures' regarding the EVFTA (European Commission, 2016d). These EU-sponsored environmental and labour norms reportedly received broad support from the Vietnamese government, which considered them essential to integrating the country into the global trading system (Sicurelli, 2015a). Only the implementation of the agreement could show whether these norms could be effectively enforced. However, the Vietnamese record regarding the implementation of its human rights commitments is quite poor as demonstrated by its execution of UN recommendations (Human Rights Watch, 2018b).

The dedication of the European Commission to exercise its bargaining power and impose stronger discipline with respect to human rights in Vietnam through the EVFTA has also been challenged. The European Ombudsman (2016) criticised the decision of the European Commission for its refusal to carry out a specific human rights impact assessment for the EVFTA when negotiations were still ongoing. According to Sicurelli (2015a, 2015b), the split of responsibilities for trade and human rights negotiations between different institutions within the EU diffuses the normative power of the EU. Moreover, the influence of the European Parliament, the main institutional challenge for the representation of interests of NGOs and human rights activities during negotiations, appears to have been reduced.

## 2.4 Summary

This section surveyed *ex-ante* assessments of the recently-concluded trade agreements with Canada, Japan, and Vietnam, out of which only CETA has been launched at least provisionally. The body of research reviewed here shows that the recently-concluded FTAs are expected to have a small but positive impact on GDP and welfare in the EU and are projected to boost trade between the EU and its partners.

The sectoral impacts of the agreement, as with the already-completed agreements discussed in Section 1, will also be quite small. *Ex-ante* estimates predict that the agro-food sector will be among the top beneficiaries in the case of the agreements with Canada and Vietnam, while studies of JEEPA predict that manufacturing will gain the most, in particular medical devices, electric machinery, and pharmaceutical products (depending upon the particular model used). The most outstanding negative change in production is expected to be generated by the FTA with Vietnam, where exports of leather products could negatively affect EU producers at the lower end of the quality scale. Additionally, tougher competition will also be felt by the EU producers of various transport equipment due to the expansion of Japanese and Canadian exports.

The impact of the agreements on the EU, however, is dependent on the reduction of NTBs in both trade in goods and services, as tariff liberalisation alone is not capable of generating substantial economic gains. This is a difference which may be attributed to the fact that more developed economies are the intended trade partners of these agreements, rather than the emerging market economies explored earlier (i.e. much of the tariff gains have already been captured). Finally, although all three agreements contain provisions related to trade and sustainable development, quantitative assessments of these provisions are scarce.

### 3 Agreements under negotiation

Finally, based on the experience of the previous six (and other) FTAs negotiated by the EU, a new series of FTAs are currently under negotiation. While there can be no data on the effects of these agreements, due to their unfinished nature, the fact that they are in process means that there is a wealth of *ex-ante* examinations (as well as public debate) regarding their possible effects. Mirroring earlier sections, this final section of analysis will examine three agreements under negotiation: the agreements between the EU and Indonesia, Mercosur, and Mexico<sup>19</sup>. Shifting gears from the previous section, these agreements are all being conducted with emerging market economies and, as such, have more in common with the already-concluded FTAs of Section 1 than the recently-concluded agreements of Section 2. However, there are commonalities which can be discerned between these FTAs and all previous EU agreements, as we will discover.

#### 3.1 The EU-Indonesia Comprehensive Economic Partnership Agreement

Free trade talks with Indonesia were launched in 2016, when the negotiations with two other members of ASEAN—Singapore and Vietnam—were already concluded. Current relations between the EU and Indonesia are framed by a PCA which was enacted in 2014. The PCA provides the basis for regular political dialogue and cooperation across a wide spectrum of topics including trade but not particularly relevant for creating a preferential trade arrangement. Instead, the EU-Indonesia Comprehensive Economic Partnership Agreement (EI-CEPA) is expected to eliminate most of the import duties on agricultural and industrial products, reduce NTBs (in particular, through the standardisation and simplification of customs procedures), reduce trade barriers in services, and address trade and sustainable development issues. In substance, and perhaps because of geography, the EI-CEPA is likely to resemble the already-negotiated EVFTA.

##### 3.1.1 Welfare

In 2018, Development Solutions released a draft inception report of the new Sustainable Impact Assessment (SIA) study regarding the EI-CEPA, commissioned by the European Commission (Development Solutions, 2018). The study is aimed at updating the SIA conducted by Ecorys in 2008-2009, which was prepared for the potential EU-ASEAN FTA (Ecorys, 2008; Ecorys, 2009). Regrettably, this study is in progress, so we must rely on already-completed assessments to have a sense of the predicted effects of the EI-CEPA.

As in the case with the EVFTA, there are only a few studies available in the existing literature, and a comprehensive assessment of the bilateral EI-CEPA is lacking. Ecorys (2009) reports the EU-ASEAN FTA would result in overall EU income increasing by EUR 4.7 to EUR 29.5 billion depending on the time horizon and trade liberalisation scenarios (see below for details). Gains for Indonesia are expected to be quite substantial and comparable with the EU, taking into account that the increase in the EU national income is reported for the agreement with the ASEAN as a whole. The national income of Indonesia could increase by EUR 1.4 to 3.7 billion in the short run and EUR 6.4 to 14.2 billion in the long run, depending on the extent of trade liberalisation. In the long run, about EUR 3.0 to 3.5 billion would be generated by tariff liberalisation, another EUR 2.3 to 7.7 billion by reduced trade costs in services trade, and EUR 1.0 to 3.1 billion by trade facilitation. This would necessarily lead to increased welfare, a fact confirmed by Cheong and Sonnenschein (2012), who model tariff liberalisation in Indonesia and show that household real income increases for all specifications of their model of trade liberalisation. These welfare gains for Indonesia were also predicted by a report from the Vision Group (2011), comprised of representatives of the EU and Indonesian public authorities, business, and academia, which was presented in 2011. According

<sup>19</sup> The EU is also negotiating with other partners (including *inter alia* Australia, New Zealand, and the Gulf Cooperation Council countries), but these other negotiations (some currently on hold) are not the object of the study. More on the status on talks is available at [http://ec.europa.eu/trade/policy/countries-and-regions/negotiations-and-agreements/#\\_being-negotiated](http://ec.europa.eu/trade/policy/countries-and-regions/negotiations-and-agreements/#_being-negotiated).

to the Vision Group (2011), the welfare gains for Indonesia will range from 0.1% of GDP to 1.3% (about EUR 6.3 billion in 2010 GDP terms) depending whether the static or dynamic simulation is conducted. The gains for the EU are expected to be smaller. As with every other FTA explored thus far, welfare would thus rise proportionally more for Indonesia than for the EU, but there would be gains nonetheless.

### 3.1.2 Real GDP

There are only a few studies reporting the impact of the EI-CEPA on GDP. The growth of real GDP associated with the EI-CEPA will be almost negligible for the EU (again) given its relative economic size, while Indonesia is expected to benefit more than the EU but less than other ASEAN countries (Ecorys, 2009). Extensive trade liberalisation will result in a real GDP increase for Indonesia of 0.32 to 0.88% in the short run and by 1.64 to 3.66% in the long run, depending on the extent of trade liberalisation pursued. Similarly, tariff liberalisation alone could generate from a 0.5 to 1% increase in real GDP, according to Cheong and Sonnenschein (2012).

### 3.1.3 Prices

The only available quantitative assessment of the forthcoming EI-CEPA on prices is Ecorys (2009), again examining the prospects of a deal with the entirety of ASEAN. According to this study, there will be a negligible impact on EU prices as the result of an agreement, while the CPI of Indonesia could increase by 0.5 to 1.2% in the short run and 0.6 to 1.6% in the long run, depending on the trade liberalisation scenario. The increase in prices is attributed to the growing competition for resources within the economy and, as such, is a demand-side phenomenon. As the authors highlighted, this price increase should be fully covered by higher real wages, and thus has no negative effect on welfare. However, the difference between the estimated growth of real wages (see below) and the CPI change is quite small; thus, the net impact on the Indonesian price levels remains uncertain.

Moreover, the Ecorys (2009) model does not take into account the increased regulatory prices of some FTA provisions, like higher labour and environmental standards or the increased protection of IPRs. The impact of the above-mentioned factors potentially driving prices up has not been properly researched thus far, but it has already raised the concerns of civil society activists and must be carefully considered in the implementation of the agreement. For instance, according to Hertanti and Søna (2017), the EI-CEPA could result in an increase of drug prices in the country due to the extension of patent protection and the possible shifts in the availability of generic drugs. Such possible measures need to be explored in greater detail than can be undertaken in this report.

### 3.1.4 Aggregate exports and imports of goods and services

The expansion of EU-Indonesia trade is the most obvious and expected result of the EI-CEPA. There are several studies reporting the impact of the EI-CEPA on exports, and the general conclusion is that both partners win, although the exact assessments vary substantially. The growth of aggregate exports from the EU is estimated at up to 1.1% in the long run in the case of the most extensive trade liberalisation scenario with the entirety of ASEAN (Ecorys, 2009); this reality means that the impact of the EI-CEPA will be almost negligible for the EU in relative terms, despite being impressive in nominal/absolute terms. On the other hand, the growth of Indonesian aggregate exports to the EU is estimated to be between 4.23 and 8.35% in the short run and between 6.28 and 13.07% in the long run. Cheong and Sonnenschein (2012) report comparable results for Indonesia, and, taking into account the peculiarities of the labour market structure of their model, the EI-CEPA is predicted to raise Indonesia's exports by 2.72 to 2.84% and imports by 3.24 to 3.34%. While these numbers are somewhat muted, they also reflect that these numbers are in line with the trend established post-PCA (according to Eurostat, Indonesian exports to the EU increased substantially in 2015 and 2017, but contracted in 2016, for an overall growth rate since the PCA of about 4% per year).

There are also several studies reporting absolute changes. The Vision Group (2011) reports the increase in Indonesian exports to the EU will be approximately USD 9.8 billion (EUR 8.4 billion) in the long run, and that the Indonesian trade balance will improve by about USD 2.0 billion (EUR 1.7 billion). These gains are achievable in the case of the comprehensive trade agreement and the attraction of FDI, assisting in local capital accumulation. The results reported by Damuri *et al.* (2014), who used a partial equilibrium model, show that Indonesia's trade balance could even deteriorate. Enacting full-scale tariff liberalisation is estimated to boost EU imports from Indonesia by EUR 1.1 billion (or 5%), while Indonesian imports from the EU are estimated to grow by EUR 1.6 billion (or 14% from the baseline).

### 3.1.5 Employment and labour rights

The impact of the EI-CEPA on the labour market is projected to be negligible for the EU as a whole (Ecorys, 2009), while real wages in Indonesia could increase by 1.5 to 3% for both skilled and unskilled workers, depending on the trade liberalisation scenario embedded in the agreements. According to Cheong and Sonnenschein (2012), providing a more nuanced assessment of the labour market impact for Indonesia, the highest relative wage increases could occur for informal labour at 1.16 to 1.27% of their baseline, while formal but unskilled labourers will see the lowest increase in their wages of 0.48 to 0.68%. As a result, the EI-CEPA could help to close the wage gap between formal and informal employment, although not between skilled and unskilled workers, which is expected to widen. Cheong and Sonnenschein (2012) also show that the EI-CEPA could decrease unemployment by 0.1 to 0.3% in Indonesia depending on the assumptions of the labour market structure.

With regard to labour protections, like other new-generation FTAs, the EI-CEPA contains a chapter on sustainable development, with reference to international standards. Overall, Indonesia is generally seen as having improved its stance on labour rights since the Suharto regime ended, with labour leaders moving into government and an increased respect for the right to assembly. Indonesia has already joined all eight fundamental ILO conventions, but some important gaps remain: the country ratified only two out of four governance conventions (the conventions regulating employment policy and labour inspections in agriculture are not ratified) and just 10 out of almost 200 technical conventions (International Labour Organisation, 2018). Moreover, special attention should also be paid to the sometimes-difficult working conditions in the country (Human Rights Watch, 2016). The EI-CEPA could thus provide an important impetus for furthering the process of the ratification and implementation of international labour standards. Indeed, the Civil Society Statement (2018) puts the ratification and proper implementation of the ILO conventions as conditions for the EI-CEPA negotiations.

### 3.1.6 Budget balance

Thus far, there are no quantitative studies assessing the impact of the EI-CEPA on the budget revenues of the EU or Indonesia. We anticipate that, as with the other real effects noted in Section 2, the impact on the EU will be negligible, while Indonesia should be able to compensate for tariff revenue losses with higher VAT on imports and more economic activity.

### 3.1.7 Poverty

As in the case with the EVFTA, the EI-CEPA is anticipated to have a negligible impact on the poverty level of the EU. The impact on Indonesia is potentially positive thanks to the expansion of real wages and reduced unemployment. According to the Vision Group (2011), the overall increase in wages in Indonesia is estimated at 1.5%, contributing to the reduction of poverty. However, as noted above, the predicted wage growth in Indonesia is much smaller than that projected in other large ASEAN countries, and so the wage gap between skilled and unskilled workers will likely remain (or even be exacerbated) after the agreement, according to Ecorys (2009). These factors could undermine the poverty elevation impact of the EI-CEPA, leaving its effect still positive with regard to reducing poverty but less effective than it could be given another labour market structure.

### 3.1.8 SMEs

There are currently no quantitative studies on the impact of the EI-CEPA on SME development in either the EU or Indonesia. According to Ecorys (2009), the EI-CEPA should contribute to the creation of new opportunities throughout each of the economies of ASEAN, spurring innovation and investments and thus stimulating SME development to take advantage of these opportunities. At the same time, higher competition from established EU firms would likely drive the least-efficient firms from the market, possibly disproportionately affecting Indonesian SMEs in import-competing sectors. This aspect is examined in the next section.

The Vision Group (2011) highlights another potential temporary negative impact of the EI-CEPA on SMEs, namely the need for harmonising technical barriers to trade and food safety measures, the costs of which could create a disproportionately higher burden for SMEs. The effect could be especially important for agricultural producers. The proper scheduling of harmonisation, including softer requirements for local suppliers and assistance programmes, are usually necessary to mitigate the impact of transition costs and to cushion the blow for SMEs. Additionally, the export promotion policies targeting SMEs could help to ensure that the net impact of the EI-CEPA on the SMEs is positive.

### 3.1.9 Sectoral impacts

The only available sector impact assessment for the EU is the Ecorys (2009) study of the EU-ASEAN FTA, reporting the aggregated impact of trade liberalisation. According to this study, the impact of the ASEAN FTA on EU output will be small, with growth expected for processed food, motor vehicles, machines, equipment, and services. Unfortunately, it remains unclear which of these changes could be attributed to the EI-CEPA in particular, but our analysis shows that gains for Indonesia would likely be mostly in processed food. For Indonesia, higher growth is predicted for the production of electronic machinery, which could increase by between 14.2 and 38.9% in the short run and by 22.9 to 58.7% in the long run, again depending on the scope of tariff liberalisation and trade facilitation. Output in Indonesia is also predicted to increase for textiles, clothing, metal products, and manufacturing industries (Ecorys, 2008). The impact of trade liberalisation on agriculture and food production in Indonesia is regrettably not reported in either of the Ecorys reports, although these sectors, including palm oil products, are essential for the Indonesian economy.

The study conducted by the Vision Group (2011) reports a much more modest impact on production in Indonesia, putting light industry as a leader in production growth, with a 5% cumulative increase by 2030. The output of two other broad sectors—transport equipment and services—is also expected to increase by 2% and 1%, respectively. The growth of agro-food production is estimated at less than 1% cumulatively. Similar to the Ecorys (2009) report, the impact on EU production from the EI-CEPA is expected to be negligible.

#### 3.1.10 Human rights and environmental impact

The conclusion of the EI-CEPA, as with other new-generation FTAs, highlights human rights concerns, including the proportionality of the distribution of FTA gains across society, the impact of the FTA on prices of essential goods and services, and the ability of the government to pursue social goals. The existing assessment of the EI-CEPA's impact on human rights has been qualitative and, at the same time, very careful in its assessment. According to Ecorys (2009), the preservation of the wage gap between skilled and unskilled labour means a persistent level of relative inequality, as well as gender inequality (as men tend to be at a higher skill level in the Indonesian economy). The forthcoming Sustainability Impact Assessment (unavailable at this time) is expected to address these issues in more detail, but a key point to note here is that there is little to be noted in terms of *deliberate* human rights violations. In this sense, the EI-CEPA will focus on economic outcomes, where equality of opportunity has come a long way in recent years.

In the sphere of environmental protection, the development of the palm oil sector in Indonesia requires special attention (Development Solutions, 2018), as the implications of the sector's expansion on the environment has not been fully analysed yet. The sector plays a crucial role for Indonesia's employment and exports, but its expansion raises important environmental concerns, especially due to the removal of tropical rainforests. Whether increased economic activity results, as it did elsewhere, in the proliferation of more productive technology and better materials-use is an open question; based on previous experiences, however, it appears that there may be a disjoint between increased economic activity and technological proliferation, meaning a short period where environmental pressures accrue before they dissipate.

The EI-CEPA negotiations have already attracted the close attention of civil society organisations and human rights activists both in Indonesia and the EU. In February 2018, 32 Indonesian and 20 European civil society organisations issued a joint statement suggesting a number of red lines and conditions for the negotiations process (Civil Society Statement, 2018). They highlight the importance of transparent and inclusive negotiations, involving all stakeholders, and a call to end deforestation, to exclude palm oil from trade talks, and to ensure the protection of small domestic producers. The Statement highlights that the ratification of the EI-CEPA is to be conditional on the ratification and implementation of basic human rights law, as well as climate and environmental agreements.

The non-governmental organisation 'Indonesia for Global Justice'<sup>20</sup>, the first signatory of the Civil Society Statement (2018), has published several more papers (Hertanti & Søna, 2017; Knottnerus, 2018) raising concerns over the impact of the EI-CEPA on human rights and domestic economic and social policy, advocating *inter alia* for the preservation of selected protectionist policies in Indonesia. The issue of the impact of the ICS has also been raised. The campaign regarding the EI-CEPA is likely to accelerate bringing the sustainability issues into the core of the discussion accompanying the negotiations, as well as the future signature and ratification of the agreement. These pushbacks against expansive trade liberalisation also have the potential to ensure that neither the EU nor Indonesia gain as much as possible from the agreement.

## 3.2 The EU-Mercosur Free Trade Agreement

The EU and Mercosur have been attempting to negotiate a trade deal for some time, with the most recent talks launched in 2016 after a four-year pause. Negotiating an agreement with the four current members of Mercosur (Argentina, Brazil, Paraguay, and Uruguay), the EU is looking to enact broad trade liberalisation in the region, including cuts on currently prohibitively high import tariffs, the reduction of NTBs through the standardisation and simplification of customs procedures, closer cooperation on technical regulations and standards, the liberalisation of selected services, as well as the strengthening of social and environmental protection in the region. While previous attempts have fallen prey to both political exigencies and the diversity of countries in the region, there is hope that the comprehensive nature of this agreement will allow for broad support and the cover to finally see it through to completion.

### 3.2.1 Welfare

The EU-Mercosur FTA is probably among the best-studied potential FTAs, providing a rich ground for the comparative analysis of the impact of the FTA on its signatory parties. Most of these studies, however, focused on the impact of tariff liberalisation, thus potentially underestimating the full impact of the agreement. According to the European Commission (2007c), analysing the most comprehensive trade liberalisation scenario including the elimination of tariffs and NTBs on goods and the removal of all barriers in cross-border trade of services, Mercosur countries could gain USD 9 billion in total, including USD 6.9 billion in Brazil, USD 1.3 billion in Argentina, USD 0.6 billion in Paraguay, and USD 0.3 billion in Uruguay<sup>21</sup>.

<sup>20</sup> See <http://igj.or.id/profile/>

<sup>21</sup> The estimates produced in this EC-funded study were given in US dollars, and as such we leave them as is for this overview.

About two-thirds of these gains would be generated by the liberalisation of trade in goods. From the EU side, approximately USD 4 billion of additional national income thanks to the comprehensive FTA, due mainly to trade facilitation measures and liberalisation in goods trade, are projected to accrue (European Commission, 2007c).

Higher welfare gains for Mercosur than for the EU are also anticipated by Boyer and Schuschny (2010), who modelled trade liberalisation as a function of tariff liberalisation exclusively. According to this study, Mercosur could gain about USD 7.1 billion in the case of full tariff liberalisation, including USD 6.2 billion in gains for Brazil. As with other trade partners of the EU, these amounts are relatively higher as a percentage of the baseline for Mercosur than for the EU. In the case of the full liberalisation of trade in goods and in cross-border trade in services, static welfare gains are estimated at 0.5% of GDP for Argentina, 1.5% for Brazil, 2.1% for Uruguay, and up to 10% for Paraguay.

At the same time, Boyer and Schuschny (2010) report that the welfare gains to the EU-27 from full-scale tariff liberalisation would be zero, driven down by the negative impact of trade liberalisation on the then-recently accessed EU members. In the case of selective liberalisation, leaving some 'sensitive' products outside the FTA, Mercosur could gain a relatively smaller USD 6.9 billion, while the EU-27 would receive about USD 1.8 billion (mainly by protecting the agro-food industries of the then-new members from external competition).

The positive welfare impact of the EU-Mercosur FTA is reported by Francois *et al.* (2005) using a case of partial tariff liberalisation. A scenario envisaging the full-scale liberalisation of tariffs in manufacturing products and a partial liberalisation of tariffs in agriculture and the food sector results in welfare gains (approximated by real income) for the EU of USD 3.96 billion and for Mercosur at USD 2.30 billion.

The results of Boyer and Schuschny (2010) and Francois *et al.* (2005) highlight two important issues. First, the results of tariff liberalisation alone, unaccompanied by the reduction of NTBs and the liberalisation of services, might be negligible or even negative for the EU. The approximation of product safety systems, the reduction of border crossing costs, and broad services liberalisation are crucial to boost the benefits for EU businesses and consumers. Second, the negative impact of tariff liberalisation is associated with agricultural products, but the sector has changed significantly (especially in then-new members) since these original studies were commissioned. It drives the need to conduct a comprehensive new study, and the process has been already launched by the European Commission (LSE, 2018a).

### 3.2.2 Real GDP

Although the European Commission (2007c) does not explicitly report the predicted impact of the agreement on real GDP, we can safely assume that it is similar to the predicted welfare gains. According to the European Commission (2007c), the FTA would bring additional welfare gains to the EU-27 of 0.1% in the case of a static model, and somewhat more in the case of a dynamic model. However, as just noted, the impact on Mercosur is much more favourable.

There are several other studies projecting a comparable impact on Mercosur: according to Monteagudo and Watanuki (2003), Mercosur could receive an additional 2.9% of real GDP growth under the FTA, while Boyer and Schuschny (2010) report that Mercosur's total GDP could grow by an additional 4.6% in the case of full tariff liberalisation. Of the individual countries of Mercosur, Boyer and Schuschny (2010) predict a 0.9% increase in Argentina, 5.8% in Uruguay, 6.4% in Brazil, and 11.6% in Paraguay. Surprisingly, Boyer and Schuschny (2010) also report real GDP losses for the EU at 0.15%.

However, there are also very different estimates. For instance, according to Flores Jr. and Watanuki (2008), there will be a very moderate real GDP increase of 0.8% for Mercosur in the case of its FTA with the EU. The authors recognise that the reported estimates are unusually low for a CGE model with imperfect sectors

and explain these results as a function of the structure of trade, skewed towards perfectly competitive sectors.

### 3.2.3 Prices

There are no available quantitative assessments of the EU-Mercosur FTA with regard to price levels in any of the partner countries. The European Commission (2007c) implicitly expects a reduction in prices, referring to this factor as the reason for growing real incomes and higher welfare. We anticipate that price effects will be highly idiosyncratic based on the specific country, but overall, should be lower in the aggregate for both partners.

### 3.2.4 Aggregate exports and imports of goods and services

As with many other FTAs, the impact of the trade agreement on its centrepiece—trade—is studied the most intensively. According to European Commission (2007c), the EU-Mercosur FTA will boost exports of both partners, but heavily favours Mercosur countries. Its exports are expected to increase by USD 34.1 billion or by 26% compared to the baseline, including USD 25.7 billion (+38%) in Brazil, USD 4.4 billion (+14%) in Argentina, USD 1.3 billion (+42%) in Paraguay, and USD 0.9 billion (+27%) in Uruguay. In the EU, exports will expand by USD 11.7 billion (higher than Argentina, Paraguay, and Uruguay combined), but only a moderate 0.4% from its baseline.

Boyer and Schuschny's (2010) estimates of export expansion are also moderate, as the authors focus solely on tariff liberalisation. However, they also report the stronger expansion of Mercosur exports (+7.6% in the case of a full tariff liberalisation scenario) compared to a 0.45% predicted increase in EU exports. In the case of partial liberalisation, Mercosur exports will grow by a very modest 1.9%, while EU export growth shrinks to 0.06%. In another examination by Monteagudo and Watanuki (2003), tariff liberalisation will increase Mercosur exports by 7.9%, while EU exports will see growth of 0.38%. The authors showed that the Mercosur-EU FTA would stimulate agro-food exports, although export growth would be more heterogeneous across sectors than in the case of the establishment of the proposed US-led Free Trade of the Americas Agreement (FTAA). In general, a key effect of the FTA is that Mercosur is expected to reorient both its exports and imports towards the EU. The rise in exports to the EU market could take place at the expense of generalised decreases to all other regions, especially in the short run (Calfat and Flores, 2004).

### 3.2.5 Employment and labour rights

The EU-Mercosur FTA is estimated to have a positive although uneven impact on labour markets both in the EU and Mercosur countries. In the EU, skilled workers are expected to gain more, corresponding with expected EU export growth in machines and motor vehicles (see below). However, unskilled labour is projected to gain more in Mercosur countries, with the highest increase predicted for Uruguay at 5.5% (European Commission, 2007c).

**Table 10. Impact on real wages, % change**

	Argentina	Brazil	Uruguay	Paraguay	EU15	EU10
Unskilled real wages	0.3	0.9	5.5	1.4	0.2	0.1
Skilled real wages	0.0	0.7	3.2	0.7	0.3	0.2

Source: European Commission (2007c)

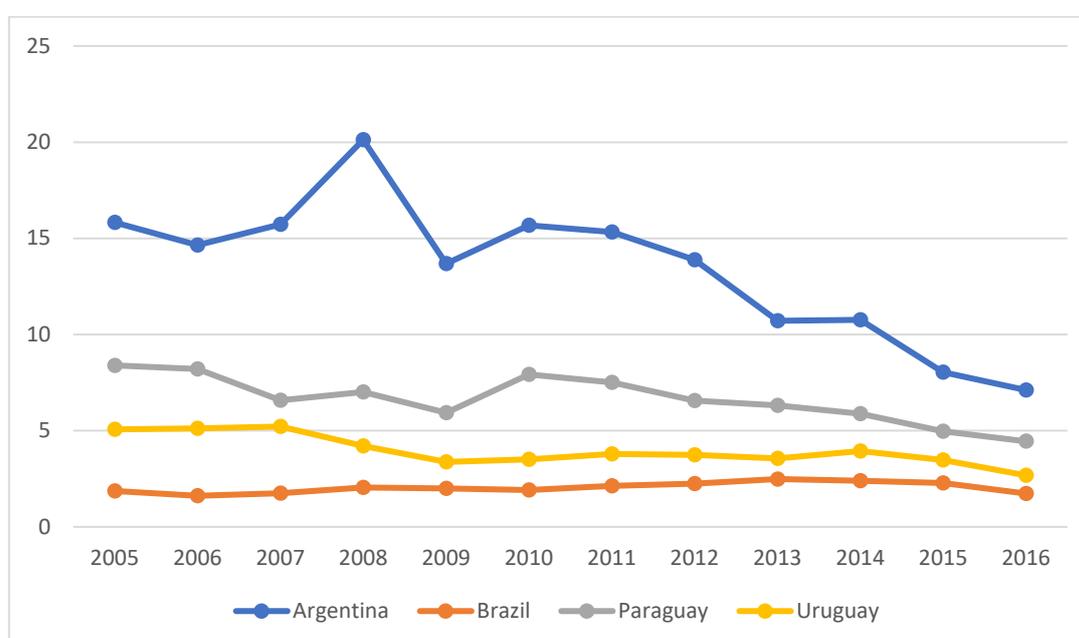
Flores and Watanuki (2008) showed that the FTA with the EU25 would result in labour reallocation in Mercosur countries from heavy industry into agriculture and food products that corresponds to the faster growth of unskilled wages reported by European Commission (2007c). However, the labour reallocation assessments should be taken with caution, as they are not costless as assumed in the CGE models. The channelling of labour into more efficient sectors requires developed education and social policy

supporting this mobility, part of the larger heading of labour rights. Unfortunately, there is uneven development of labour support across Mercosur countries, with little common policy toward labour developed as part of the internal integration of the member states (Powell, 2008). It is unlikely that such a common policy would be developed as a result of the EU agreement.

### 3.2.6 Budget balance

Trade liberalisation is expected to reduce tariff revenues within Mercosur, a reality that could be challenging due to the historical reliance of these countries on trade taxes. According to the European Commission (2007c), the magnitude of tariff revenue losses may be the highest for Brazil at USD 2.4 billion and for Argentina at USD 0.9 billion<sup>22</sup>. However, as Figure 11 shows, there was already a trend away from trade taxes in all Mercosur countries over the past decade, with all countries showing diversification of their tax bases. Indeed, taxes on international trade comprise more than 5% of revenues only in Argentina, with a level of 7.1% in 2016 but down from 20.1% in 2008. In Brazil, which could experience the highest nominal losses, they account for only 1.7% of revenues. Increased VAT revenues thanks to GDP growth, accompanied by better tax administration, is likely to compensate for tariff revenue losses for Mercosur.

**Figure 11. Taxes on international trade in Mercosur, % of revenue, 2005-2016**



Source: World Development Indicators

### 3.2.7 Poverty

As with other FTAs examined in this section, the Mercosur agreement is expected to have an anti-poverty effect through growing real wages, especially for the unskilled labour force (European Commission, 2007c). However, existing *ex-ante* studies are dominated by qualitative assessments of the impact of trade on poverty, suggesting a theory of change in poverty rather than concrete numbers or analysis of the actual impact. The case studies in the European Commission (2007c) study help to identify some important regional peculiarities and challenges associated with social inclusion and poverty across the region and, especially, the diversity of each country. In particular, the FTA is likely to stimulate commercial farming, resulting in the displacement of informal farmers, one of the most socially vulnerable categories in the region. Moreover, the expansion of agricultural production would require new land plots, while the additional agricultural land would negatively affect indigenous communities living in the forest area.

<sup>22</sup> As noted above, the figures given in the official EU SIA were in US dollars and are preserved here for the sake of consistency.

However, it is possible that the expansion of job opportunities accompanying the FTA would draw informal workers into the formal sector, an issue which would also assist in protecting labour rights.

### 3.2.8 SMEs

There is no quantitative impact assessment of the FTA on the SMEs in either the EU or Mercosur, although the discussion of the impact of the FTA on agriculture (European Commission, 2007a) shows the risks associated with the development of commercial farming for the livelihood of smaller farmers. The report by the London School of Economics (LSE, 2018a) is expected to conduct a more in-depth assessment of the effect of the agreement on SMEs, and until that analysis is released, we can only conjecture (as done with other FTAs in this paper) that the effects on SMEs will split along sectoral lines.

### 3.2.9 Sectoral impacts

The existing literature tends to agree on the sectoral impact of the Mercosur trade agreement with the EU. In general, across *ex-ante* assessments, it is predicted that Mercosur countries will see an expansion of the agro-food sector (European Commission, 2007b) and a contraction of heavy industry, while in the EU, the opposite process will come to fruition: manufacturing will expand while agro-food production contracts directly as a result of the FTA.

In terms of quantitative effects, it is estimated that Mercosur's production of agricultural products and light manufacturing will increase by 26% and 15%, respectively, while heavy industry output could drop by 8% (Boyer and Schuschny, 2010). According to the European Commission (2007c), Brazil and Paraguay are expected to witness the largest boost in processed food and animal production, while the production of motor vehicles will contract sharply. In Uruguay, accounting for the largest production of processed food among Mercosur countries, the expansion of this sector could come at the expense of the reallocation of production factors from textile and clothing, unlike in Brazil and Paraguay. At the same time, Argentina will not experience major or dramatic changes in its structure of production, except for a sizable contraction of motor vehicle production (which nonetheless has a limited impact on overall output). Monteagudo and Watanuki (2003) also predict that the FTA with the EU would boost meat production in Brazil and Argentina and grain production in Brazil, while the Argentinian machine-building industry would contract.

#### 3.2.10 Human rights and environmental impact

The environmental impact of the EU-Mercosur FTA could be significant, as the expected expansion of agricultural production would put additional pressure on water and land resources, exacerbating the existing problems of deforestation, water pollution, the loss of natural habitats by indigenous communities living in forests, and soil erosion (European Commission, 2007c). A formal Human Rights Impact Assessment (HRIA) has not been conducted for the EU-Mercosur FTA but is expected within the recently launched new trade SIA (LSE, 2018a).

## 3.3 The EU-Mexico Free Trade Agreement

Unlike in the case of Indonesia and Mercosur, the ongoing negotiations between the EU and Mexico have built upon an existing free trade agreement (the Global Agreement) covering trade in goods and services, which entered into force in 2000 (for goods) and 2001 (for services). The currently-enforced FTA eliminated tariffs for EU-Mexico trade in manufacturing products and significantly reduced barriers on trade in services.

The untapped trade liberalisation opportunities missed in the Global Agreement but covered in the newly negotiated agreement concerns the liberalisation of trade in agricultural products, the further liberalisation of trade in services (in particular, in the financial sector and telecommunications), the simplification of customs procedures, mutual access to public procurement markets, and better IPR protection. The new agreement also covers trade and sustainable development measures addressing

social and environmental concerns, in line with the new generation of FTAs and reflecting the shifts in EU policy which have occurred since the negotiation of the original Global Agreement.

While not currently in force, the new agreement is moving rapidly towards enactment, with the EU and Mexico achieving 'agreement in principle' in April 2018 (European Commission, 2018c). Based on this 'agreement in principle', the negotiations will continue in order to resolve the remaining technical issues and prepare the text for presentation to the European Parliament and Council. It is expected that the technical phase of the talks will be completed by the end of 2018, meaning a move towards implementation by the 20<sup>th</sup> anniversary of the original agreement.

### 3.3.1 Welfare

In April 2018, LSE released an intermediate report with the sustainability impact assessment of the forthcoming new EU-Mexico FTA. According to LSE (2018a), the welfare impact of the agreement will likely be tiny for both the EU and Mexico, as many of the gains have already been realised by changes accompanying the existing agreement. EU welfare is estimated to increase by between 0.004 and 0.021%, depending on whether a conservative or ambitious scenario of reduction in NTBs on goods and services is applied. The changes for Mexico are slightly more favourable, but still small at between 0.083 and 0.357%. For comparison, the *ex-ante* estimates of the effect of the enacted EU-Mexico FTA were comparable, predicting a 0.01% increase in welfare for the EU and 0.2% for Mexico (Slotmaekers and Vinhas de Souza, 2000). Importantly, the reliability of these *ex-ante* estimates has been confirmed by *ex-post* studies: according to Ecorys (2017), Mexico witnessed an average increase in welfare of 0.35% attributable to the FTA with the EU, while the impact on the EU was expectedly more modest at approximately 0.01%.

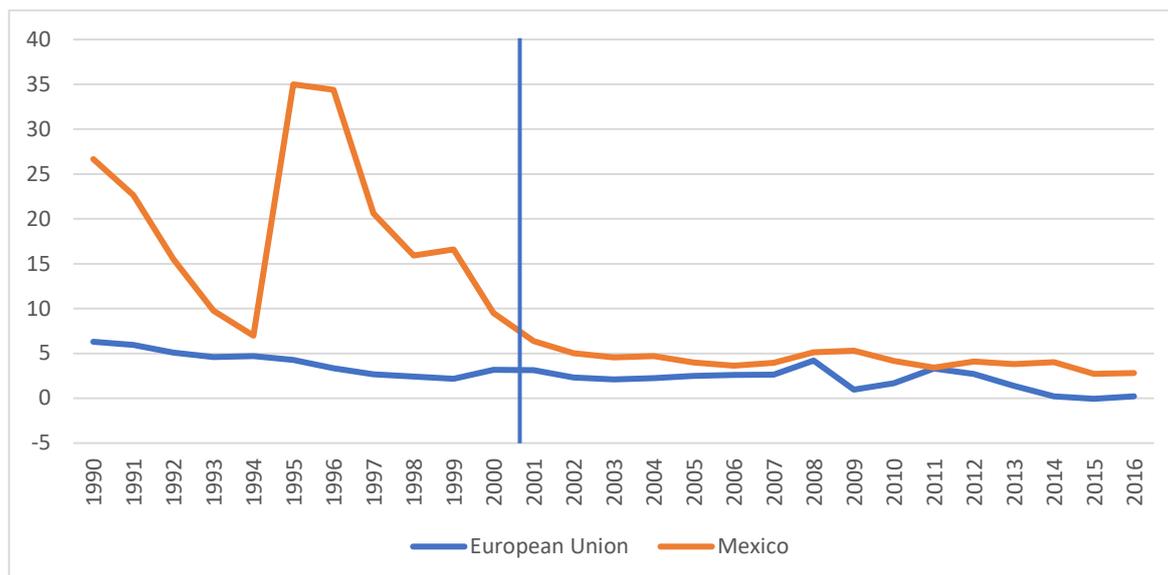
### 3.3.2 Real GDP

The real GDP gains of the forthcoming FTA are also projected to be moderate. EU GDP overall is estimated to increase by EUR 0.5 billion to EUR 1.8 billion (or between 0.003 to 0.01% of the baseline), depending on the extent of NTB liberalisation in the final agreement. From the Mexican side, Mexico could see gains of EUR 1.8 billion to EUR 6.4 billion, or an increase between 0.11 to 0.39% (LSE, 2018b). The *ex-post* assessment of the current EU-Mexico FTA shows very similar results, with the Ecorys (2017) study estimating the GDP gain of the EU from the previous agreement was 0.01%, while Mexico saw a GDP increase of 0.34% as a result of the agreement.

### 3.3.3 Prices

The SIA of the forthcoming agreement does not contain a quantitative assessment of the price effect of the FTA, while the assessment of the previous FTA also overlooks price effects. LSE (2018b) refers to several transmission mechanisms of trade liberalisation on domestic prices, including lower import prices, competitive pressure, and increased specialisation that drives down production costs, indirectly suggesting that the FTA would reduce domestic prices in both partners. At the same time, prices tend to be sticky, and thus any FTA is unlikely to cause across the board deflation (the most plausible effect is the deceleration of inflation). As Figure 12 shows, consumer price fluctuations in Mexico significantly reduced after the enactment of the Global Agreement. Although there are multiple factors responsible for the stabilisation of inflation in Mexico, it is likely that trade liberalisation also played a role—one we can expect to continue with the revised agreement.

**Figure 12. CPI change in the EU and Mexico, 1990-2016**



Source: World Development Indicators

### 3.3.4 Aggregate exports and imports of goods and services

Despite the presence of an existing FTA, the modernisation of the EU-Mexico trade relationship is expected to significantly boost bilateral trade and have a positive, although small, impact on the total trade of the signatory parties. Depending on the level of NTB liberalisation achieved within the new FTA, EU exports to Mexico could increase by 17% to (an impressive) 75%, although the impact of the agreement on EU total trade will once again remain moderate at between 0.02 and 0.08% (LSE, 2018b). The impact on Mexico is expected to be smaller in terms of bilateral trade expansion, ranging from 9 to 33%, while its total trade could increase by up to 0.8%.

The predicted impact of the modernised FTA is comparable with the *ex-post* estimated impact of the already-enacted FTA. According to Ecorys (2017), the Global Agreement resulted in a 1.5 to 1.7% increase in Mexico’s aggregate exports and imports, and a 0.05% increase in the EU’s aggregate trade. Bilateral exports increased by 19% in the case of EU exports to Mexico and by 16% in the case of Mexico exports to the EU.

### 3.3.5 Employment and labour rights

As CGE models usually imply full employment, the increased demand for labour coming from more productive sectors results in labour mobility across sectors and the increase in real wages. According to LSE (2018b), the modernised FTA with Mexico is expected to have noticeable impact on wages in Mexico ranging at 0.15 to 0.53% for unskilled and 0.19 to 0.74% for skilled labour, while the EU labour market will remain almost unaffected with wage increases at 0.02 to 0.1% both for skilled and unskilled labour in the case of the most ambitious trade liberalisation. Again, the *ex-ante* assessment of the new phase of trade liberalisation between the EU and Mexico are very close to the *ex-post* assessment of the existing FTA. The real wage increase in the EU attributable to the EU-Mexico FTA is estimated at 0.02% overall, without reference to the skill level of workers (Ecorys, 2017). The impact on Mexican workers is higher and more nuanced, with low-skilled workers getting a 0.24% increase in real wages, medium-skilled workers seeing a 0.45% increase, and high-skilled workers receiving an increase of 0.36%.

### 3.3.6 Budget balance

No assessment of the fiscal impact of the forthcoming FTA has been released yet. The *ex-post* estimate of the existing FTA, however, confirms the widely shared view that the forgone fiscal revenues are small from both the EU and Mexican sides. For the EU, the existing FTA caused the loss of 0.01% of tariff revenues or EUR 0.2 billion. The losses of Mexico were higher, but still insignificant at 0.14% of tariff revenues or EUR 0.6 billion (Ecorys, 2017).

### 3.3.7 Poverty

While the impact assessment of the forthcoming FTA on poverty is still to be completed, Ecorys (2017) contained a detailed quantitative assessment of the impact of the existing EU-Mexico FTA on poverty. The authors explored the impact of trade liberalisation on multiple poverty measures including absolute and relative poverty lines, the extreme absolute poverty line, and the depth of poverty, as well as indicators measuring inequality. The general conclusion was that the trade agreement had only a marginal impact on poverty in Mexico, with either no change in poverty levels or a small improvement of approximately only 0.01%. Given the expansive nature of the new agreement, it is possible that there will be a much more positive effect on poverty, but the effects are likely to be localised depending upon the sector and income/price effects.

### 3.3.8 SMEs

The SIA for the new FTA thus far does not contain a quantitative assessment of the impact of the forthcoming trade deal on the SMEs. However, the LSE (2018b) study emphasises the importance of transparency and non-discriminatory market access conditions for SMEs, recommending a focus on regulatory harmonisation in the spheres of standards, technical regulations, and conformity assessment procedures to reduce the costs of NTB compliance. Special attention is paid to information sharing regarding various trade-related regulations as a prerequisite for the realisation of the trade opportunities by SMEs.

The *ex-post* assessment of the existing EU-Mexico FTA on the effect of the FTA on SMEs is also vague. The number of the SMEs participating in foreign economic activities in Mexico is tiny, at about 2% of the total (Ecorys, 2017), and there is no explicit evidence of the FTA's impact on SMEs (although interviews with stakeholders confirm the view that Mexican SMEs benefited from the existing preferential agreement indirectly though supplying to exporters).

### 3.3.9 Sectoral impacts

The modernised FTA will result in a major liberalisation of the agro-food trade, while at the same time reducing the costs of trade in manufacturing goods and services. According to LSE (2018b), for the EU, the biggest relative increases in output will be a 0.4% increase in the production of milk and dairy, 0.3% in the production of chemicals, and 0.2% in petrochemicals, while electrical machinery and leather products will see an output decline of 0.2% a piece. In the case of Mexico, the highest expansion is expected for the service sectors—in particular, business services and other services. Within manufacturing, the production of motor vehicles is expected to increase by 1.2%, while other machinery decreases by a corresponding magnitude. Dairy production is also expected to drop amid intensified competition from the EU.

### 3.3.10 Human rights and environmental impact

As an agreement still under negotiation, and reflecting the latest advances in CGE modelling, the SIA of the modernised Global Agreement between the EU and Mexico contains a quite elaborate environmental impact assessment. According to LSE (2018b), the environmental impact of an expanded agreement is expected to be manifold but likely limited in its effect. In particular, the limited impact of the agreement on GDP allows us to conclude a similarly limited impact on CO<sub>2</sub> emissions (which tends to be directly

correlated with GDP). The *ex-post* assessment of the existing trade agreement showed that it resulted in a decrease of CO<sub>2</sub> emissions, thanks to a shift in intermodal transport to less-polluting modes (shipping and air) compared to road transport (Ecorys, 2017). On the other hand, land use is likely to increase based on the experience of the previous agreement (LSE, 2018b), contributing to the problems of deforestation and water use.

Finally, with regard to human rights, Mexico shares many of the issues of its neighbours, including extrajudicial killings related to security forces and torture connected with the war on drug-related crime (Human Rights Watch, 2018a). As the drug war has intensified over the past decade, during the period when the previous agreement was in place, human rights violations have also been on the increase, so it is unlikely that the EU's trade agreement had any effect within Mexico. However, the Mexican Congress passed a law in April 2018 to curb these issues, although it is far too soon to see if it has had any effect. As with other FTAs examined in this study, it appears that local and domestic political considerations have been driving human rights protection rather than trade agreements.

### 3.4 Summary

This section reviewed three forthcoming trade agreements that are currently being negotiated by the EU—namely, those with Indonesia, Mercosur, and Mexico. The agreement with Indonesia could become the third bilateral agreement with ASEAN countries, expanding the network of bilateral FTAs after the agreement with the ASEAN as a whole was put on hold. Current trade negotiations with the Mercosur countries is another attempt to conclude an agreement after a four-year pause and many years of false starts. As these countries have no previous history of bilateral preferential trade agreements with the EU, the current trade agreements inevitably focus on the ambitious liberalisation of tariffs and trade facilitation measures for trade in goods, and the liberalisation of trade in services. On the contrary, the agreement with Mexico is a modernisation of an existing FTA, and thus its agenda is more elaborate. Moreover, the expected results of this new agreement, contrasted with the *ex-post* assessment of the previous trade agreement, demonstrates a high coherence of results across agreements.

As in the case of the recently-concluded FTAs explored in the previous section, the forthcoming agreements are expected to bring positive but small increases in GDP and welfare for the EU. Bilateral trade will be boosted significantly, benefiting both partners, while there are likely to be neutral or marginally positive impacts on poverty reduction. Unlike the FTAs concluded with developed countries, however, the environmental implications could be very important, especially in the spheres of land use and deforestation.

The sectoral impact of the currently-negotiated FTAs on EU producers is also expected to be tiny, with neither large gains nor losses anticipated. A positive impact is expected for chemical production and machine-building—the sectors providing the key inputs for the development of the EU's partners. Conversely, the impact on the agro-food sector and light industry—sectors where partners might have more of a cost advantage—is more uncertain. While the agreement with Mexico is expected to boost agricultural production, the increased competition from Mercosur countries could put negative pressure on European producers, although benefiting EU consumers. Similarly, agreements with Indonesia and Mexico could result in the EU's decreased production in light industry.

## 4 Conclusions and Recommendations

### 4.1 Lessons Learned

This study has examined the prospective and actual effects of a myriad of trade agreements that the EU has either concluded, recently-concluded but not yet implemented, or which are currently under negotiation. Although for many of these agreements, there is not enough (or any) data on the impact of the FTA on either the EU or its trading partner, the wealth of *ex-ante* assessments and scholarly work examining the impact of trade liberalisation does allow for some examination of possible effects. Given our analysis in the previous three sections, there are some conclusions which we may draw regarding the effects of EU FTAs:

- *Impacts of any single FTA on the EU in the aggregate are likely to be small*

In each agreement examined above, whether in terms of *ex-ante* or *ex-post* modelling, there was very little estimated impact on the EU in each aggregate category (GDP, overall trade, and employment, among others), even when the economies that the EU were negotiating with were comparatively large (with each other, not with the EU). A key reason for this is that the EU's economic might, taken together, dwarfs most other economies, so that even major nominal benefits from trade mean small gains relative to the EU's already enormous baseline. However, a deficiency in this line of thinking is that each *ex-ante* (and most *ex-post*) models we considered show the effect of each FTA in isolation from others; there is more likely a cumulative effect of the EU's push for liberalised trade, meaning that each additional agreement expands benefits for EU producers and consumers, including with the countries with which agreements have already been negotiated. Put another way, the benefits of liberalisation grow with each additional agreement, meaning the small benefits of each agreement in isolation are amplified when taken jointly. To the best of our knowledge, there is no formal modelling of this effect, but the gulf between EU-wide impact and each individual treaty is likely due not only to endogenous factors but the cumulative effects of all EU agreements.

- *Sectoral impacts on the EU matter, but generally only locally*

Where FTAs can have considerable impacts is at the sectoral level in both the EU and in the partner country/grouping, another issue which should be considered across all FTAs holistically. According to our analyses, even the most profound sectoral effects in the EU have been incredibly minor relative to the baseline for the EU and tend to be localised in smaller, niche sectors (meaning they are unlikely to have a large macroeconomic or headline effect). And the sectoral impacts do not necessarily follow conventional wisdom, as the case of Korea shows: while industry predictions within the EU were of a deluge of Korean imports, decimating European makers, the European car industry has seen its exports to Korea increase by almost 50% even as Korean imports have also increased. In this case, even an import-competing sector was able to win due to differentiation of brands.

This brings up another important point, namely that most predicted sectoral impacts do not allow for the stratification of goods by quality; to take an example from the EVFTA, while *ex-ante* assessments predict a large jump in leather products being imported from Vietnam to the EU, even such a shift is likely to have little impact on European luxury goods, and Italian shoe manufacturers will have little to fear as they operate in a different quality band from Vietnamese exporters. Indeed, it is only at the lower end of the quality scale where there may be displacement at the sectoral level in the EU, and even this could be a benefit for Europe if its comparative advantage is indeed at the high end. And finally, regarding this point, one need only look at even the *ex-ante* predictions of sectoral changes arrayed against each other (even within a single agreement) to see that the EU gains far more from the general opening of markets than it may lose in some specific sectors. In each FTA assessed here, overall gains to the economy are positive even if some sectors lose out temporarily.

- *NTBs matter... but they must be tackled comprehensively*

Building on the sectoral analysis, another key issue emerged from the different types of FTAs discussed here with specific reference to the development level of the partner country. In the FTAs concluded with more advanced countries, gains appeared to be driven mainly by the reduction of NTBs rather than from formal tariff reductions, a reality which is also lost in most policy and/or popular discussions regarding trade policy. This empirical regularity is due mainly to the fact that much of the low-hanging fruit between developed economies has already been picked in tariff reductions, leaving the largest gains to be realised from removing difficulties in customs administration, sanitary and phytosanitary standards, logistics, regulatory burdens, and other NTBs. As shown previously, the removal of NTBs is at the heart of predicted gains for already-completed and forthcoming EU FTAs—and like overall tariff liberalisation, halting or half-hearted measures towards removing NTBs would have much less benefit for the EU and its trading partner than a comprehensive removal. Such a tendency towards comprehensive removal would also avoid a focus on the ‘wrong’ NTBs—those which are politically favourable, as has been seen in the EVFTA, where the emphasis on product labelling missed the reality that customs administration is a more problematic NTB for EU companies.

- *EU trade agreements benefit partners no matter what*

Any form of trade protection introduces distortions that would not be found in a purely competitive market, hindering markets clearing—this is not an ideological stance, but merely reality when one considers that trade restrictions change relative prices and thus decisions for supply and demand. In not one of the FTAs examined in this paper did an FTA with the EU harm the economy of the partner country or countries, nor did it harm the EU (either at the aggregate level or in a more disaggregated analysis). The worst criticisms we could find of existing EU FTAs were related to the fact that many observed trade effects did not measure up to the predicted effects, but in most cases, this was due to the fact that reality did not live up to the models. Indeed, most *ex-ante* studies had ‘comprehensive’ or ‘complete’ liberalisation scenarios which envisaged a much higher level of tariff/NTB reduction than was eventually enshrined in the final agreements (due mainly to political reasons). This was seen most clearly in the Central America AA, where a much lower level of liberalisation than envisaged by the *ex-ante* assessment was eventually agreed upon, a fact which also somewhat occurred with the EU-ROK FTA. If more expansive liberalisation, especially in the area of agriculture, had been opted for by EU policymakers, it is likely that results across all existing FTAs would have been much better than those that actually materialised (as noted before, these results have also been quite good). Such a reality should also be considered by the EU as it negotiates trade agreements going forward, namely that bigger (more comprehensive) actually is better across economies and sectors than half-hearted measures.

- *Trade agreements have more benefits in trade, however, than other areas*

Finally, with regard to labour rights, environmental protection, and human rights, the vague nature of FTA provisions and/or recourse to international standards has not necessarily led to tangible gains in these areas. As shown in our DiD analyses in Section 1, in most of the FTAs where we had data available, there was little change pre- and post-FTA, although, as we noted at the time, this could definitely be due to the short time-series available post-FTA. Moreover, the difficulty of quantifying human rights or labour rights practices makes it difficult to discern ‘progress’, much less to attribute it directly to a trade agreement. It appears that trade agreements are excellent for doing what they are designed to—bolstering trade and rewarding competitive sectors with additional opportunities—but that they are less effective in shifting results in areas which are essentially political decisions taken internally. In every agreement we examined, human and/or labour rights barely budged post-agreement when compared to their status pre-agreement.

This does not mean that the EU's defence of human and labour rights is impotent, as the inclusion of and recourse to international standards sends an important signal on where the EU places its soft power priorities. As a matter of EU evaluation, however, actual progress on human or labour rights, not to mention environmental protection, will likely occur through other forums. And as years of economic research has demonstrated, this is to be expected, at least in reference to labour and environmental protection: only after growth and attainment of a certain level of development do environmental and labour standards increase. Conversely, there is evidence that poor human rights correlate with poor development (Blume and Voigt 2007), and thus human rights are a benefit in and of themselves.

## 4.2 Recommendations Going Forward

These lessons learned, based on the econometric and rigorous analysis of Sections 1 to 3, point the way to some self-evident recommendations for the EU as it prepares to move forward with its trade agenda. We believe that the EU, and in particular the European Parliament, should:

1. Continue to press for a liberal, open global trading order, including via the negotiation of comprehensive trade agreements;

As shown in our analyses, freer trade has benefited both the EU and partner countries, opening up opportunities for EU firms, and improving choice for EU consumers. With the US withdrawing to a more state-centric model of negotiating trade agreements (and scuttling important trade deals), the opportunity exists for the EU to take up the mantle of trade liberalisation and lead the way for emerging markets. Empirically, trade has been good for the EU—we have not even begun to touch upon the vast evidence on how lowering barriers to trade within the EU has benefited its members—and the latest generation of FTAs have been good for the EU and its partners. It is important that the EU, and in particular the European Parliament, does not let such an opportunity pass by untouched.

2. Re-focus its efforts with trade partners to make trade deals comprehensive across goods and services, in order to maximise gains to the EU;

The previous section noted that there is often a mismatch between anticipated and realised gains from FTAs, a mismatch which can be traced to the bulk of *ex-ante* assessments assuming higher levels of liberalisation than actually come to pass. Given that the gains to trade grow on each other with each additional barrier removed, it is in the EU's best interest to pursue more comprehensive agreements and push for maximising the gains for liberalisation. If EU firms are to benefit from more opportunities to expand their business to trade partners, why should they be denied this opportunity?

3. Tackle NTBs in a comprehensive manner in each and every FTA;

The disparity between developed/emerging countries and which approaches bring the biggest gains has already been noted as a matter of targeting the appropriate instrument, with developed country partners needing more of a focus on NTBs than tariffs. This reality is often lost in public debates regarding trade liberalisation, which tend to be confined to tariffs alone. Thus, not only do NTBs need to be approached comprehensively in future EU trade agreements, the public needs to be informed about the multidimensional channels of liberalisation and the fact that NTBs play a major role in preventing EU firms from seeing the gains they would otherwise be accruing. Such a focus on NTBs could also link to other EU funding and technical assistance facilities (utilising the 'coherence for governance' approach), helping partner countries to overhaul their trade institutions while at the same time increasing choice and opportunities within the EU.

4. Do not oversell the short-run potential benefits of future FTAs, including caveating appropriately the CGE modelling produced through DG Trade's assessments;

While a better job can be done in publicising the benefits of NTBs, and focusing on the multidimensional nature of trade liberalisation, it is important the MEPs and EU policymakers do not oversell the potential short-term benefits of future FTAs. International trade is conducted like any other business, in that supply chains must be built, customers must be attracted, and loyalties may shift, but with the added difficulty of crossing national borders. Building an export business has been shown in the economics literature to be a more difficult venture than serving the domestic market (which is why most SMEs do not do it); given these difficulties, even the exposure of new opportunities abroad may not be realised immediately. And the restructuring of an economy to take advantage of these opportunities, including via the sectoral reallocation of capital and labour, is a long process which may not be reflected in next year's GDP or investment figures. MEPs should be careful not to undercut their own position by overselling the benefits of trade in the short run, managing the public's expectations correctly.

5. Understand that labour and environmental protections are generally domestically-determined, but remain a champion of both;

As mentioned in the previous section, if the EU is committed to labour and environmental protection, such a commitment should be embedded in everything that the EU does. Even if the evidence regarding improving these protections is not stellar with regard to FTAs, the EU should continue to press for such progress as a signal of the importance the EU places on these issues. In any event, the welfare effects which come from liberalised trade are likely to help improve environmental and labour protections in the longer run as well.

6. Finally, continuously push trading partners on human rights, no matter the development level of the partner country.

At the same time, while there is no evidence that the inclusion of human rights into EU FTAs has demonstrably increased human rights protections in partner countries, the EU should continue to press for human rights in its agreements. In this way, there will be a measure of consistency with the rest of the FTA, for, as engaging in commerce is a human right, so too is freedom of assembly, freedom of thought, and freedom of expression.

While adopting some of these recommendations will be driven by the prevailing political winds (e.g. the comprehensive nature of trade agreements) or by the ability/political will of partners, and while others will be highly technical (e.g. NTBs), it is crucial that the EU pursues points 2 through 6 in order to ensure that point 1 is a reality. And by doing so, the EU will help countless millions worldwide, both within the borders of the EU and elsewhere.

## References

- ADE (2015). *Evaluation of the EU's Cooperation with Central America - Final Report*. Brussels: EuropeAid.
- Ahearn, R.J. (2011). *Europe's preferential trade agreements: Status, content, and implications*. Washington DC: Congressional Research Service.
- Amighini, A. (2016). *Implementation of the EU-ROK FTA*. Briefing paper prepared for the European Parliament INTA Committee. Available at [https://www.ispionline.it/DOC/EU\\_Parl\\_EU-ROK\\_3.pdf](https://www.ispionline.it/DOC/EU_Parl_EU-ROK_3.pdf).
- Anderson, J.E., & van Wincoop, E. (2003). Gravity with Gravitas: A Solution to the Border Puzzle. *American Economic Review*, 93 (1), pp. 170-192.
- Arana, A.G. (2015). The European Union and the Central American Common Market Signs an Association Agreement: Pragmatism versus Values? *European Foreign Affairs Review*, 20(1), pp. 43-63.
- Arto I., Rueda-Cantuche, J.M., Amores, A.F., Dietzenbacher, E., Sousa, N., Montinari, L., & Markandya, A. (2015). *EU Exports to the World: Effects on Employment and Income*. Luxembourg: Publications Office of the European Union. Available at [http://trade.ec.europa.eu/doclib/docs/2015/june/tradoc\\_153503.pdf](http://trade.ec.europa.eu/doclib/docs/2015/june/tradoc_153503.pdf).
- Badinger, H. (2005). Growth effects of economic integration: evidence from the EU member states. *Review of World Economics*, 141(1), pp. 50-78.
- Baghdadi, L., Martinez-Zarzoso, I., & Zitouna, H. (2013). Are RTA agreements with environmental provisions reducing emissions? *Journal of International Economics*, 90(2), pp. 378-390.
- Baier, S.L., & Bergstrand, J.H. (2007). Do free trade agreements actually increase members' international trade? *Journal of International Economics*, 71(1), pp. 72-95.
- Baier, S.L., & Bergstrand, J.H. (2009). Estimating the effects of free trade agreements on international trade flows using matching econometrics. *Journal of International Economics*, 77(1), pp. 63-76.
- Baier, S.L., Bergstrand, J.H., & Feng, M. (2014). Economic integration agreements and the margins of international trade. *Journal of International Economics*, 93(2), pp. 339-350.
- Baker, A. (2003). Why is trade reform so popular in Latin America? A consumption-based theory of trade policy preferences. *World Politics*, 55(3), pp. 423-455.
- Baldwin, M. (2006). EU trade politics—heaven or hell? *Journal of European Public Policy*, 13(6), pp. 926-942.
- Baldwin, R. E., & Forslid, R. (2010). Trade liberalization with heterogeneous firms. *Review of Development Economics*, 14(2), pp. 161-176.
- Baltagi, B. H., Egger, P., & Pfaffermayr, M. (2008). Estimating regional trade agreement effects on FDI in an interdependent world. *Journal of Econometrics*, 145(1), pp. 194-208.
- Bartels, L. (2013). Human rights and sustainable development obligations in EU free trade agreements. *Legal Issues of Economic Integration*, 40(4), pp. 297-313.
- Benz, S., & Yalcin, E. (2015). Productivity Versus Employment: Quantifying the Economic Effects of an EU-Japan Free Trade Agreement. *The World Economy*, 38 (6), pp. 935-961.
- Bergstrand, J.H., Baier, S.L., Sunesen, E.R., & Thelle, M.H. (2011). *Ex-Post Assessment of Six EU Free Trade Agreements*. Study for DG Trade by Copenhagen Economics.
- Blume, L., & Voigt, S. (2007). The economic effects of human rights. *Kyklos*, 60(4), pp. 509-538.

Bouët, A., Mevel, S., & Thomas, M. (2008). *The effects of alternative free trade agreements on Peru: Evidence from a global computable general equilibrium model* (No. 824). Washington DC: International Food Policy Research Institute (IFPRI).

Boyer, I., & Schuschny, A. (2010). *Quantitative assessment of a free trade agreement between Mercosur and the European Union*. United Nations Estudios Estadísticos y Prospectivos Series No. 69. Available at <http://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.905.7944&rep=rep1&type=pdf>.

Breinlich, H., Dhingra, S., & Ottaviano, G.I.P. (2016). *How have EU's trade agreements impacted consumers?* Centre for Economic Performance, London School of Economics and Political Science, Discussion Paper, 1417.

Brenton, P., & Manchin, M. (2003). Making EU trade agreements work: the role of rules of origin. *The World Economy*, 26(5), pp. 755-769.

Bronchi, C., & Chua, D. (2005). Trade Liberalization and Tax Coordination. In Rodlauer, M. and Schipke, A. (eds.), *Central America: Global Integration and Regional Cooperation*. Washington DC: IMF Press, pp. 41-58.

Cachanosky, N. (2014). The effects of US monetary policy on Colombia and Panama (2002-2007). *The Quarterly Review of Economics and Finance*, 54(3), pp. 428-436.

Calfat G., & Flores Jr., R.G. (2004). *The EU-MERCOSUL free trade agreement: Quantifying mutual gains*. Graduate School of Economics (EPGE), Fundação Getulio Vargas, Working Paper No. 575, December. Available at <https://bibliotecadigital.fgv.br/dspace/bitstream/handle/10438/915/1757.pdf>.

Caliendo, L., & Parro, F. (2010). Welfare gains from changing partners in a trade bloc. In: Beladi, H., & Choi, E. K. (eds.), *New Developments in Computable General Equilibrium Analysis for Trade Policy*. *Frontiers of Economics and Globalization*, 7, pp. 41-60.

Caliendo, L., & Parro, F. (2015). Estimates of the Trade and Welfare Effects of NAFTA. *The Review of Economic Studies*, 82(1), pp. 1-44.

Campling, L., Harrison, J., Richardson, B., & Smith, A. (2016). Can labour provisions work beyond the border? Evaluating the effects of EU free trade agreements. *International Labour Review*, 155(3), pp. 357-382.

Caporale, G.M., Costamagna, R., & Rossini, G. (2018). Competitive devaluations in commodity-based economies: Colombia and the Pacific Alliance Group. *Review of Development Economics*, 22(2), pp. 558-572.

CEPII/ATLASS (2010). *The Economic Impact of the Free Trade Agreement (FTA) between the European Union and Korea*. Report for the European Commission, DG Trade, May. Available at [http://trade.ec.europa.eu/doclib/docs/2010/may/tradoc\\_146174.pdf](http://trade.ec.europa.eu/doclib/docs/2010/may/tradoc_146174.pdf).

CEPR (Centre for Economic Policy Research) (2012). *Assessing the Economic Impact of the Trade Agreement Between the European Union and Signatory Countries of the Andean Community (Colombia and Peru)*. Paper produced for DG Trade, July. Available at [http://trade.ec.europa.eu/doclib/docs/2012/september/tradoc\\_149939.pdf](http://trade.ec.europa.eu/doclib/docs/2012/september/tradoc_149939.pdf).

Cheong, D., & Sonnenschein, X. (2012). Trade Liberalization and Employment in Indonesia: A CGE Analysis. Presented at the 15th Annual Conference on Global Economic Analysis, Geneva, Switzerland. Available at <https://www.gtap.agecon.purdue.edu/resources/download/6046.pdf>.

Cheong, I. (2014). Korea's Policy Package for Enhancing its FTA Utilization and Implications for Korea's Policy. *ERIA Discussion Paper Series*, (2014-11).

Cheong, I., & Cho, J. (2009). An empirical study on the utilization ratio of FTAs by Korean firms. *Journal of Korea Trade*, 13(2), pp. 109-126.

- Cheong, I., & Cho, J. (2013). The impact of Korea's FTA network on seaborne logistics. *Maritime Policy & Management*, 40(2), pp. 146-160.
- Cherry, J. (2012). Upgrading the 'software': The EU-Korea Free Trade Agreement and sociocultural barriers to trade and investment. *The Pacific Review*, 25(2), pp. 247-268.
- Cherry, J. (2018). The Hydra revisited: expectations and perceptions of the impact of the EU-Korea free trade agreement. *Asia Europe Journal*, 16(1), pp. 19-35.
- Chipman, J.S., & Moore, J.C. (1992). Compensating variation as a measure of welfare change. In Neuefeind, W. and Riezman, R.G. (eds.), *Economic Theory and International Trade*. Berlin: Springer Verlag, pp. 93-128.
- Cieřlik, A., & Hagemeyer, J. (2009). Assessing the Impact of the EU-sponsored Trade Liberalization in the MENA Countries. *Journal of Economic Integration*, pp. 343-368.
- Cisneros, S.P. (1997). Banking on the poor: Peru's small and micro enterprise sector. *Development in Practice*, 7(2), pp. 130-139.
- Ciuriak, D., & Bienen, D. (2014). *Overcoming Low Preference Utilization in PTAs: Presumption of Origin for Small Shipments*. BKP Development Research & Consulting Trade & Development Discussion Paper No. 02/2014. Available at <https://ssrn.com/abstract=2460648> or <http://dx.doi.org/10.2139/ssrn.2460648>.
- Civic Consulting (2017). *Evaluation of the Implementation of the Free Trade Agreement between the EU and its Member States and the Republic of Korea*. Study produced for DG Trade. Available at [http://trade.ec.europa.eu/doclib/docs/2017/june/tradoc\\_155673.pdf](http://trade.ec.europa.eu/doclib/docs/2017/june/tradoc_155673.pdf).
- Civil Society Statement (2018). *Civil Society Statement on the EU-Indonesia Comprehensive Economic Partnership Agreement (CEPA)*. Available at [https://www.illegal-logging.info/sites/files/chlogging/CEPA\\_Statement\\_IndonesiaEU.pdf](https://www.illegal-logging.info/sites/files/chlogging/CEPA_Statement_IndonesiaEU.pdf).
- Copenhagen Economics (2007). *Economic Impact of a Potential Free Trade Agreement (FTA) Between the European Union and South Korea*. Short study produced for DG Trade. Available at [http://trade.ec.europa.eu/doclib/docs/2007/march/tradoc\\_134017.pdf](http://trade.ec.europa.eu/doclib/docs/2007/march/tradoc_134017.pdf).
- Copenhagen Economics (2014). *The impact of trade liberalisation on the EU automotive industry: trends and prospects*. Study produced for DG Trade. Available at [http://trade.ec.europa.eu/doclib/docs/2016/march/tradoc\\_154340.pdf](http://trade.ec.europa.eu/doclib/docs/2016/march/tradoc_154340.pdf).
- Copenhagen Economics (2016). *Impacts of EU trade agreements on the agricultural sector*. Paper produced for DG Agriculture and Rural Development. Available at [https://ec.europa.eu/agriculture/sites/agriculture/files/external-studies/2016-bilateral-trade-agreements/final-report\\_en.pdf](https://ec.europa.eu/agriculture/sites/agriculture/files/external-studies/2016-bilateral-trade-agreements/final-report_en.pdf).
- Council on Hemispheric Affairs (2013). *Human Rights Considerations in the EU-Colombia Trade Agreement*. Available at <http://www.coha.org/human-rights-considerations-in-the-e-u-colombia-trade-agreement/>.
- Damuri, Y.R., Atje, R., & Soedjito, A. (2014). *Study on the impact of EU-Indonesia CEPA*, Centre for Strategic and International Studies. Available at <https://media.neliti.com/media/publications/332-EN-study-on-the-impact-of-an-eu-indonesia-cepa.pdf>.
- Das, D.K. (2012). The EU-Korea Free Trade Agreement: Making of a 'Deep' Free Trade Agreement. *Global Economy Journal*, 12(1).
- De Gucht, K. (2010). *On the EU Trade Agreement with Colombia and Peru. Speaking Points Before the International Trade Committee of the European Parliament (INTA)*. Available at [http://trade.ec.europa.eu/doclib/docs/2010/march/tradoc\\_145896.pdf](http://trade.ec.europa.eu/doclib/docs/2010/march/tradoc_145896.pdf).

De Luna Barrios, A.M. (2014). Economic relations between the European Union and Peru: Analysis of the Free Trade Agreement. *Acta Juridica Hungarica*, 55(3), pp. 277-289.

De Luna Barrios, A.M. (2016). The free trade agreements between the European Union and Latin America. The Peruvian and Mexican case. *Challenges of the Knowledge Society*, 5(1), pp. 817-827.

De Micco, P. (2014). *The US and EU free trade agreements with Peru and Colombia: A comparison*. In-depth study produced for the European Parliament's Committee on International Trade, February. Available at [http://www.europarl.europa.eu/RegData/etudes/briefing\\_note/join/2014/522326/EXPO-INTA\\_SP%282014%29522326\\_EN.pdf](http://www.europarl.europa.eu/RegData/etudes/briefing_note/join/2014/522326/EXPO-INTA_SP%282014%29522326_EN.pdf).

De Miguel, C.J., Giordano, P., Watanuki, M., Durán Lima, J.E., & Guzmán, J. (2010). *Modelling public policies in Latin America and the Caribbean*. Santiago, Chile: United Nations ECLAC.

Dee, P., & Gali, J. (2005). The trade and investment effects of preferential trading arrangements. In *International Trade in East Asia, NBER-East Asia Seminar on Economics, Volume 14*. Chicago: University of Chicago Press, pp. 133-176.

Development Solutions (2018). *Sustainability Impact Assessment (SIA) in support of Free Trade Agreement (FTA) negotiations between the European Union and Republic of Indonesia Draft Inception Report*. Paper produced for DG Trade, 25 May. Available at [http://trade.ec.europa.eu/doclib/docs/2018/may/tradoc\\_156900.pdf](http://trade.ec.europa.eu/doclib/docs/2018/may/tradoc_156900.pdf).

Development Solutions, CEPR, & the University of Manchester (2009). *EU-Andean Trade Sustainability Impact Assessment: Final Report*. Study produced for DG Trade, October. Available at [http://trade.ec.europa.eu/doclib/docs/2010/april/tradoc\\_146014.pdf](http://trade.ec.europa.eu/doclib/docs/2010/april/tradoc_146014.pdf).

DG Trade (2016). *Assessing the economic impact of the Trade Agreement between the European Union and Ecuador*. Brussels: European Commission.

DG Trade (2017). *The economic impact of the comprehensive economic and trade agreement (CETA)*. An analysis prepared by the European Commission's DG Trade. Available at [http://trade.ec.europa.eu/doclib/docs/2017/september/tradoc\\_156043.pdf](http://trade.ec.europa.eu/doclib/docs/2017/september/tradoc_156043.pdf).

Didier, T., & Schmukler, S.L. (eds.) (2013). *Emerging issues in financial development: Lessons from Latin America*. Washington DC: The World Bank.

Duong, N. B. (2016). *Vietnam-EU Free Trade Agreement: Impact and Policy Implications for Vietnam*. ECO/WTI Academic Cooperation Project Working Paper Series 2016/07. Available at [https://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=2802488](https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2802488).

Ebert, F.C. (2016). Labour provisions in EU trade agreements: What potential for channelling labour standards-related capacity building? *International Labour Review*, 155(3), 407-433.

Ecorys (2008). *Trade Sustainability Impact Assessment for the FTA between the EU and ASEAN Phase 1 - Global Analysis Report*. Report produced for DG Trade.

Ecorys (2009). *Trade Sustainability Impact Assessment of the FTA between the EU and ASEAN Final Report Volume I - Main Findings and Recommendations*. Report produced for DG Trade. Available at [http://trade.ec.europa.eu/doclib/docs/2010/april/tradoc\\_145989.pdf](http://trade.ec.europa.eu/doclib/docs/2010/april/tradoc_145989.pdf).

Ecorys (2017). *Ex-post evaluation of the implementation of the EU-Mexico Free Trade Agreement*. Report produced for DG Trade, February. Available at <http://www.trade-sia.com/wp-content/uploads/2015/09/EU-MEX-FTA-ex-post-evaluation-final-report.pdf>.

Ecorys, Corporate Solutions, and Centro de Estudios para el Desarrollo Rural (2009). *Trade Sustainability Impact Assessment of the Association Agreement to be negotiated between the EU and Central America*. Report

produced for DG Trade, September. Available at [http://trade.ec.europa.eu/doclib/docs/2010/april/tradoc\\_146042.pdf](http://trade.ec.europa.eu/doclib/docs/2010/april/tradoc_146042.pdf).

Egger, H., Egger, P., & Greenaway, D. (2008). The trade structure effects of endogenous regional trade agreements. *Journal of International Economics*, 74(2), pp. 278-298.

Egger, P., & Larch, M. (2008). Interdependent preferential trade agreement memberships: An empirical analysis. *Journal of International Economics*, 76(2), pp. 384-399.

Egger, P., & Larch, M. (2011). An assessment of the Europe agreements' effects on bilateral trade, GDP, and welfare. *European Economic Review*, 55(2), pp. 263-279.

English, R.A. (2016). Why are EU Generalized System of Preferential tariffs not being fully utilized by eligible importers? *The Business & Management Review*, 7(2), pp. 180-190.

EPHA (2017). *The Unhealthy Side Effects of CETA*. Joint CETA booklet. Available at <https://env-health.org/IMG/pdf/epha-booklet-the-unhealthy-side-effects-of-ceta.pdf>.

Erixon, F., & Lee-Makiyama, H. (2010). Stepping into Asia's Growth Markets: Dispelling Myths about the EU-Korea Free Trade Agreement. *ECIPE Policy Briefs*, 3, 2010.

European Commission (2007a). *Trade Sustainability Impact Assessment (SIA) of the Association Agreement under Negotiation between the European Community and Mercosur. Final Overview*. Trade SIA EU-Mercosur. Final Report. Revised, March 2009.

European Commission (2007b). *Trade SIA of the Association Agreement under negotiation between the European Community and Mercosur. Agriculture sector study*. Final report. Revised, November 2007.

European Commission (2007c). *Trade SIA of the Association Agreement under negotiation between the European Community and Mercosur. Update of the overall preliminary trade SIA EU-Mercosur*. Final report. Revised, November 2007.

European Commission (2012). *Impact Assessment Report on EU-Japan Trade Relations Accompanying the Document Recommendation for a Council Decision Authorising the Opening of Negotiations on a Free Trade Agreement Between the European Union and Japan*. Commission Staff Working Document. Brussels, 18.07.2012.

European Commission (2016a). *Report from the Commission to the European Parliament and the Council Second Annual Report on the Implementation of the EU-Colombia/Peru Trade Agreement*. Brussels: European Commission, 10 February. Available at <https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:52016DC0058&from=ES>.

European Commission (2016b). *Trade Sustainability Impact Assessment of the Free Trade Agreement between the European Union and Japan. Final Report*. Available at [http://trade.ec.europa.eu/doclib/docs/2016/may/tradoc\\_154522.pdf](http://trade.ec.europa.eu/doclib/docs/2016/may/tradoc_154522.pdf).

European Commission (2016c). *EU-Vietnam Free Trade Agreement: Agreed text as of January 2016. Chapter 15. Trade and Sustainable Development*. Available at <http://trade.ec.europa.eu/doclib/html/154229.htm>.

European Commission (2016d). *Human Rights and Sustainable Development in the EU-Vietnam Relations with specific regard to the EU-Vietnam Free Trade Agreement*. Commission Staff Working Document. SWD (2016) 21 final.

European Commission (2017). *Report from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions on Implementation of Free Trade Agreements, 1 January 2016 - 31 December 2016*. Brussels: European Commission, 9 November. Available at <https://ec.europa.eu/transparency/regdoc/rep/1/2017/EN/COM-2017-654-F1-EN-MAIN-PART-1.PDF>.

European Commission (2018a). *Key elements of the EU-Japan Economic Partnership Agreement. Fact-sheet*. Strasbourg, 18 April 2018. Available at [http://europa.eu/rapid/press-release\\_MEMO-18-3326\\_en.htm](http://europa.eu/rapid/press-release_MEMO-18-3326_en.htm).

European Commission (2018b). *EU and Vietnam finalise trade and investment discussions*. Press release, Brussels, 26 June 2018. Available at <http://trade.ec.europa.eu/doclib/press/index.cfm?id=1875>.

European Commission (2018c). *EU and Mexico reach new agreement on trade*. Press release, Brussels, 21 April 2018. Available at <http://trade.ec.europa.eu/doclib/press/index.cfm?id=1830>.

European Commission and Government of Canada (2008). *Assessing the costs and benefits of the closer EU-Canada economic partnership*. Available at [http://trade.ec.europa.eu/doclib/docs/2008/october/tradoc\\_141032.pdf](http://trade.ec.europa.eu/doclib/docs/2008/october/tradoc_141032.pdf).

European Ombudsman (2016). *Decision in case 1409/2014/MHZ on the European Commission's failure to carry out a prior human rights impact assessment of the EU-Vietnam free trade agreement*. Strasbourg, 26/02/2016. Available at <https://www.ombudsman.europa.eu/en/decision/en/64308>.

European Parliament (2011). *EU - Central America Association Agreement - Free Trade Chapter*. Policy Briefing, Directorate General for External Policies, May. Available at [http://www.europarl.europa.eu/meetdocs/2009\\_2014/documents/dcam/dv/10\\_2\\_policycentralamerica/10\\_2\\_policycentralamerica\\_en.pdf](http://www.europarl.europa.eu/meetdocs/2009_2014/documents/dcam/dv/10_2_policycentralamerica/10_2_policycentralamerica_en.pdf).

Feenstra, R.C. (2018). Alternative Sources of the Gains from International Trade: Variety, Creative Destruction, and Markups. *Journal of Economic Perspectives*, 32(2), pp. 25-46.

Felbermayr, G., Kimura, F., Okubo, T., Steininger, M., & Yalcin, E. (2017). *On the Economics of an EU-Japan Free Trade Agreement*. Study of the Ifo Institute on behalf of the Bertelsmann Foundation. Final Report, 3 March. Available at [https://www.bertelsmann-stiftung.de/fileadmin/files/BSt/Publikationen/GrauePublikationen/NW\\_EU-Japan\\_FTA.pdf](https://www.bertelsmann-stiftung.de/fileadmin/files/BSt/Publikationen/GrauePublikationen/NW_EU-Japan_FTA.pdf).

Feng, Y., & Genna, G. (2003). Regional integration and domestic institutional homogeneity: A comparative analysis of regional integration in the Americas, Pacific Asia and Western Europe. *Review of International Political Economy*, 10(2), pp. 278-309.

Feridhanusetyawan, T. (2005). Preferential Trade Agreements in the Asia-Pacific Region. *IMF Working Paper: Preferential Trade Agreements in the Asia-Pacific Region*, 5(149).

Flores Jr., R.G., & Watanuki, M. (2008). *Integration options for Mercosur: a quantitative analysis by the AMIDA model*. Inter-American Development Bank INTAL-INT Working Paper No. 36, January. Available at <https://publications.iadb.org/bitstream/handle/11319/2475/Integration%20Options%20for%20Mercosur%3A%20A%20Quantitative%20Analysis%20by%20the%20AMIDA%20Model.pdf?sequence=1&isAllowed=y>

Forizs, V., & Nilsson, L. (2016). *Trade Effects of the EU-Korea Free Trade Agreement: A Comparative Analysis of Expected and Observed Outcomes*. DG Trade Analysis, Issue 3. Available at [http://trade.ec.europa.eu/doclib/docs/2016/september/tradoc\\_154972.pdf](http://trade.ec.europa.eu/doclib/docs/2016/september/tradoc_154972.pdf).

Forslid, R., Okubo, T., & Ulltveit-Moe, K.H. (2015). *Why are firms that export cleaner? International trade, Abatement and Environmental Emissions*. Research Papers in Economics 2015:2, Stockholm University, Department of Economics.

Foster, N., Poeschl, J., & Stehrer, R. (2011). The impact of Preferential Trade Agreements on the margins of international trade. *Economic Systems*, 35(1), pp. 84-97.

Francois, J., & Pindyuk, O. (2013). *Modeling the Effects of Free Trade Agreements between the EU and Canada, USA and Moldova/Georgia/Armenia on the Austrian Economy: Model Simulations for Trade Policy Analysis* (No. 2012/13-03). FIW Research Reports.

- Francois, J., & Wignaraja, G. (2008). Economic implications of Asian integration. *Global Economy Journal*, 8(3), doi: <https://doi.org/10.2202/1524-5861.1332>.
- Francois, J., Hoekman, B., & Woerz, J. (2007). *Does gravity apply to intangibles? Measuring openness in services*. Center for Economic and Policy Research, Johannes Kepler Universitat, World Bank, and Vienna Institute for International Economic Studies. Unpublished manuscript. Available at [https://www.researchgate.net/profile/Julia\\_Woerz/publication/253632676\\_Does\\_Gravity\\_Apply\\_to\\_Intangibles\\_Measuring\\_Openness\\_in\\_Services/links/0a85e53b53febecc26000000.pdf](https://www.researchgate.net/profile/Julia_Woerz/publication/253632676_Does_Gravity_Apply_to_Intangibles_Measuring_Openness_in_Services/links/0a85e53b53febecc26000000.pdf).
- Francois, J., Manchin, M., & Norberg, H. (2011). *Economic Impact Assessment of an FTA between the EU and Japan*. Paper produced for DG Trade. Available at [http://trade.ec.europa.eu/doclib/docs/2017/july/tradoc\\_155782.pdf](http://trade.ec.europa.eu/doclib/docs/2017/july/tradoc_155782.pdf).
- Francois, J., Wignaraja, G., & McQueen, M. (2005). European Union-Developing Country FTAs: Overview and Analysis. *World Development*. 33(10), pp. 1545-1565. doi:10.1016/j.worlddev.2005.05.006.
- Giordano, P., & Watanuki, M. (2008). *Evaluating the impact of trade agreement for Central America: Does trade integration improve poverty and inequality?* Paper presented at the GTAP Eleventh Annual Conference 'Future of Global Economy', Helsinki, Finland, 12-14 June. Available at <https://jgea.org/resources/download/3800.pdf>.
- Giordano, P., & Watanuki, M. (2010). Andean countries at a crossroads: evaluating pro-poor trade integration options. In: *Modeling public policies in Latin America and the Caribbean*. Santiago: CEPAL, 2010. LC/G. 2461-P. pp. 33-86.
- Goldberg, P.K., & Pavcnik, N. (2007). The effects of the Colombian trade liberalization on urban poverty. In *Globalization and Poverty* (pp. 241-290). Chicago: University of Chicago Press.
- Gonzalez, J.H.S. (2009). Assessing exporting culture in Colombian SMEs: a look at the Export Promotion Program (EPP). *Cuadernos de administración*, 22(39), pp. 99-134.
- Gracia, O., & Zuleta, H. (2005). The Free Trade Agreement between Colombia and USA: What can happen to Colombia? In *DEGIT Conference Papers* (No. c010\_023). DEGIT, Dynamics, Economic Growth, and International Trade, June.
- Grant, J.H., & Lambert, D.M. (2008). Do regional trade agreements increase members' agricultural trade? *American Journal of Agricultural Economics*, 90(3), pp. 765-782.
- Grieger, G., & Harte, R. (2017). *EU trade with Latin America and the Caribbean: Overview and figures*. Brussels: European Parliamentary Research Services.
- Gstöhl, S., & Hanf, D. (2014). The EU's Post-Lisbon Free Trade Agreements: Commercial Interests in a Changing Constitutional Context. *European Law Journal*, 20(6), pp. 733-748.
- Guasch, J., Rojas-Suarez, L., & Gonzales, V. (2012). *Competitiveness in Central America: The Road to Sustained Growth and Poverty Reduction*. Washington DC: Center for Global Development.
- Guerin, S.S., Edwards, T.H., Glania, G., Kim, H., Lee, H., Matthes, J., & Tekce, M. (2008). *A Qualitative Analysis of a Potential Free Trade Agreement between the European Union and South Korea*. CEPS Special Report, 25 November 2008.
- Gupwell, D., & Gupta, N. (2009). EU FTA negotiations with India, ASEAN and Korea: the question of fair labour standards. *Asia Europe Journal*, 7(1), pp. 79-95.
- Hartwell, C.A., & Coursey, D.L. (2015). Revisiting the environmental rewards of economic freedom. *Economics and Business Letters*, 4(1), pp. 36-50.

- Hayakawa, K., Kim, H., & Lee, H.H. (2014). Determinants on utilization of the Korea-ASEAN free trade agreement: margin effect, scale effect, and ROO effect. *World Trade Review*, 13(3), pp. 499-515.
- He, L.T. (2011). A Note on Impacts of International Trade on Economic Growth and Inflation. *The International Trade Journal*, 25(4), pp. 418-432.
- Hernández, R., Martínez Piva, J.M., & Mulder, N. (2014). *Global value chains and world trade: Prospects and challenges for Latin America*. Santiago, Chile: United Nations Economic Commission for Latin America and the Caribbean (ECLAC).
- Hertanti, R., & Søna, A. (2017). *Human Rights as a Key Issue in the Indonesia-EU Comprehensive Economic Partnership Agreement*. Briefing Paper, September 2017. Available at <https://www.somo.nl/wp-content/uploads/2017/09/Briefing-paper-CEPA.pdf>.
- Hertel, T., Hummels, D., Ivanic, M., & Keeney, R. (2007). How confident can we be of CGE-based assessments of Free Trade Agreements? *Economic Modelling*, 24(4), pp. 611-635.
- Hinkle, L.E., & Schiff, M. (2004). Economic partnership agreements between Sub-Saharan Africa and the EU: a development perspective. *The World Economy*, 27(9), pp. 1321-1333.
- Horn, H., Mavroidis, P.C., & Sapir, A. (2010). Beyond the WTO? An anatomy of EU and US preferential trade agreements. *The World Economy*, 33(11), pp. 1565-1588.
- Human Rights Watch (2016). *The Harvest is in My Blood: Hazardous Child Labor in Tobacco Farming in Indonesia*. Available at [https://www.hrw.org/sites/default/files/report\\_pdf/indonesia0516web\\_0.pdf](https://www.hrw.org/sites/default/files/report_pdf/indonesia0516web_0.pdf).
- Human Rights Watch (2018a). *World Report 2018*. Washington DC: Human Rights Watch. Available at <https://www.hrw.org/world-report/2018/country-chapters/mexico>.
- Human Rights Watch (2018b) *Vietnam: Clean Up Abysmal Rights Record. Past UN Member Recommendations Ignored*. 23 July 2018. Available at <https://www.hrw.org/news/2018/07/23/vietnam-clean-abysmal-rights-record>.
- IBM Belgium (2008). *Trade Sustainability Impact Assessment of the EU-Korea FTA: Final Report*. Study produced for DG Trade, June. Available at <http://www.eu-korea-sia.org/uploads/filedir/Docs/Front%20Page%20T/EU%20Korea%20FTA%20SIA%20Phase%203%20Final%20Report.pdf>.
- Ihrig, J., Kamin, S.B., Lindner, D., & Marquez, J. (2010). Some simple tests of the globalization and inflation hypothesis. *International Finance*, 13(3), pp. 343-375.
- International Labour Organisation (2017). *2016 Labour Overview, Latin America and the Caribbean*. Lima: ILO Regional Office for Latin America and the Caribbean.
- International Labour Organisation (2018). *Ratification by Indonesia*. Available at [https://www.ilo.org/dyn/normlex/en/f?p=NORMLEXPUB:11200:0::NO::P11200\\_COUNTRY\\_ID:102938](https://www.ilo.org/dyn/normlex/en/f?p=NORMLEXPUB:11200:0::NO::P11200_COUNTRY_ID:102938).
- Jinnah, S., & Morgera, E. (2013). Environmental Provisions in American and EU Free Trade Agreements: A Preliminary Comparison and Research Agenda. *Review of European, Comparative & International Environmental Law*, 22(3), pp. 324-339.
- Juust, M., Vahter, P., & Varblane, U. (2017). The Trade Effects of the EU-South Korea Free Trade Agreement in the Automotive Industry. Working paper, University of Tartu. Available at <http://www.zbw.eu/econis-archiv/bitstream/handle/11159/1131/febawb105.pdf?sequence=1>.
- Kawasaki, K. (2005). *The sectoral and regional implications of trade liberalization*. Paper submitted to the 8th Annual Conference on Global Economic Analysis, June, Center for Global Trade Analysis, Purdue University, West Lafayette, Indiana. Available at <http://www.esri.go.jp/jp/workshop/041130/041130kawasaki.pdf>.

- Knottnerus, R. (2018). *The EU - Indonesia CEPA negotiations. Responding to calls for an investment policy reset: are the EU and Indonesia on the same page?* Available at <https://www.somo.nl/wp-content/uploads/2018/02/The-EU-Indonesia-CEPA-negotiations.pdf>.
- Krueger, A.O. (2012). Free trade agreements as protectionist devices: Rules of origin. In *Trade, Theory and Econometrics* (pp. 113-124). London: Routledge.
- Lakatos, C., & Nilsson, L. (2015). *The EU-Korea free trade agreement: Anticipation, trade policy uncertainty and impact* (No. 2015-2). DG Trade, European Commission. Available at [http://trade.ec.europa.eu/doclib/docs/2015/july/tradoc\\_153601.pdf](http://trade.ec.europa.eu/doclib/docs/2015/july/tradoc_153601.pdf).
- Le, T.H., Chang, Y., & Park, D. (2016). Trade openness and environmental quality: International evidence. *Energy policy*, 92, pp. 45-55.
- Lewis, J.D., Robinson, S., & Thierfelder, K. (2003). Free trade agreements and the SADC economies. *Journal of African Economies*, 12(2), pp. 156-206.
- Li, L. (2012). *A Comparative Analysis of Korea's Free Trade Agreements by CGE Models: New Challenges under Globalization*. Paper produced for the AKES (Association of Korean Economic Studies) Conference on Korea and the World Economy, June. Available at [http://www.akes.or.kr/eng/papers\(2012\)/17.full.pdf](http://www.akes.or.kr/eng/papers(2012)/17.full.pdf).
- Lie, J. (1991). The state, industrialization and agricultural sufficiency: the case of South Korea. *Development Policy Review*, 9(1), pp. 37-52.
- Lizarazo Rodríguez, L., De Lombaerde, P., Ortiz Riomalo, J.F., Parra, A., & Rettberg, A. (2014). Constitutional Aspects of FTAs: A Colombian Perspective. *European Law Journal*, 20(6), pp. 824-847.
- Lora, E. (2012). *Structural reforms in Latin America: What has been reformed and how to measure it (updated version)*. Inter-American Development Bank Working Paper No. IDB-WP-346. Available at SSRN: <https://ssrn.com/abstract=2219778>.
- Love, J.H., & Roper, S. (2015). SME innovation, exporting and growth: A review of existing evidence. *International Small Business Journal*, 33(1), pp. 28-48.
- LSE (2018a). *Sustainability Impact Assessment in support of association agreement negotiations between the European Union and Mercosur: Inception Report*. Paper produced for DG Trade, 24 January. Available at [http://trade.ec.europa.eu/doclib/docs/2018/march/tradoc\\_156631.pdf](http://trade.ec.europa.eu/doclib/docs/2018/march/tradoc_156631.pdf).
- LSE (2018b). *Sustainability Impact Assessment (SIA) in support of the negotiations for the modernization of the trade pillar of the Global Agreement with Mexico Interim Report*. Paper produced for DG Trade, 5 February. Available at [http://www.siaeumexico.com/uploads/1/0/9/7/109735155/eu-mexico\\_draftinterimreport\\_revised.pdf](http://www.siaeumexico.com/uploads/1/0/9/7/109735155/eu-mexico_draftinterimreport_revised.pdf).
- LSE Enterprise (2010). *An Assessment of the EU - South Korea FTA*. Paper produced for the European Parliament's Committee on International Trade, July. Available at [http://www.europarl.europa.eu/RegData/etudes/etudes/join/2010/133875/EXPO-INTA\\_ET\(2010\)133875\\_EN.pdf](http://www.europarl.europa.eu/RegData/etudes/etudes/join/2010/133875/EXPO-INTA_ET(2010)133875_EN.pdf).
- Ludena, C., & Wong, S. (2006). Domestic support policies for agriculture in Ecuador and the US-Andean countries free trade agreement: an applied general equilibrium assessment. Paper prepared for the American Agricultural Economics Association 2006 Annual meeting, Long Beach, CA. Available at <https://www.gtap.agecon.purdue.edu/resources/download/2580.pdf>.
- Magee, C. (2008). New measures of trade creation and trade diversion. *Journal of International Economics*, 75(2), pp. 349-362.

- Majchrowska, E. (2017). EU-South Korea FTA as one of the New Generation Agreements - An Overview of the Effects of the Agreement. *Research Papers of the Wroclaw University of Economics/Prace Naukowe Uniwersytetu Ekonomicznego we Wroclawiu*, 486, pp. 179-193.
- Martens, D., Van Den Putte, L., Oehri, M., & Orbie, J. (2018). Mapping Variation of Civil Society Involvement in EU Trade Agreements: A CSI Index. *European Foreign Affairs Review*, 23(1), pp. 41-62.
- Martinez-Zarzoso, I. (2003). Gravity model: An application to trade between regional blocs. *Atlantic Economic Journal*, 31(2), pp. 174-187.
- Marx, A., Lein, B., & Brando, N. (2016). The Protection of Labour Rights in Trade Agreements: The Case of the EU-Colombia Agreement. *Journal of World Trade*, 50(4), pp. 587-610.
- McCoon, M.A. (2015). Determinants of Latin America's Overreliance on International Trade Taxation. *Accounting and Finance Research*, 4(4), pp. 60-68.
- MacLaren, B. (2013). *Free Trade Agreements in Peru and Colombia: Monitoring Impacts from a Gender Perspective*. Ottawa, CA: North-South Institute.
- Melitz, M.J. (2003). The impact of trade on intra-industry reallocations and aggregate industry productivity. *Econometrica*, 71(6), pp. 1695-1725.
- Meunier, S. (2000). What single voice? European institutions and EU-US trade negotiations. *International organization*, 54(1), pp. 103-135.
- Ministerio de Comercio Exterior y Turismo (2007). *Peru – China Free Trade Agreement Joint Feasibility Study*. Available at [http://www2.congreso.gob.pe/sicr/cendocbib/con2\\_uibd.nsf/79BFC7E810B3A76D052576CB00730496/\\$FILE/PERU\\_CHINA\\_FREE\\_TRADE\\_AGREEMENT.pdf](http://www2.congreso.gob.pe/sicr/cendocbib/con2_uibd.nsf/79BFC7E810B3A76D052576CB00730496/$FILE/PERU_CHINA_FREE_TRADE_AGREEMENT.pdf).
- Mitra, D., & Shin, J. (2012). Import protection, exports and labor-demand elasticities: Evidence from Korea. *International Review of Economics & Finance*, 23, pp. 91-109.
- Monteagudo, J., & Watanuki, M. (2003). Regional trade agreements for Mercosur: a comparison between the FTAA and the FTA with the European Union. *Économie internationale*, (2), pp. 53-76.
- Ornelas, E. (2005). Endogenous free trade agreements and the multilateral trading system. *Journal of International Economics*, 67(2), pp. 471-497.
- Orozco, M. (2017). *Patterns of Central American Migration*. Washington DC: Inter-American Dialogue.
- Panagariya, A. (2002). EU preferential trade arrangements and developing countries. *The World Economy*, 25(10), pp. 1415-1432.
- Pangerl, S. (2014). *Obstacles to SME growth in Peru: an empirical analysis of the effect of labor constraints on firm performance* (Doctoral dissertation, Georgetown University).
- Philip J.M., Laurenza, E., Pasini, F.L., Dinh, A.V., Nguyen, H.S., Phan, A.T., & Nguyen, L.M. (2011). *The free trade agreement between Vietnam and the European Union: quantitative and qualitative impact analysis*. EU-Vietnam Multilateral Trade Assessment Project (MUTRAP) III, Ha Noi, October. Available at <https://www.eurochamvn.org/sites/default/files/uploads/pdf/FTA9-%20EU-VN%20FTA%20assessment.pdf>.
- Powell, S.J. (2008). *Humanizing Trade's Economic Benefits: An Analysis of MERCOSUR's Effects on the Environment, Labor Standards, Indigenous Populations, and Health*. Paper presented at the Ninth Annual Legal and Policy Issues in the Americas Conference, Rio de Janeiro International Trade, Business, and Dispute Settlement Panel, 26-28 May. Available at

[https://www.law.ufl.edu/pdf/academics/centers/cgr/9th\\_conference/Stephen\\_Powell\\_MERCOSUR\\_Human\\_Rights\\_Paper.pdf](https://www.law.ufl.edu/pdf/academics/centers/cgr/9th_conference/Stephen_Powell_MERCOSUR_Human_Rights_Paper.pdf).

Rahman, M.M., & Inkyo, C. (2014). New Trade Policy of EU: Implications for LDCs. *Journal of International Logistics and Trade*, 12(1), pp. 43-73.

Reinoso, A.F. (2010). TLC y agendas complementarias: balance y lineamientos de propuesta. In Rodriguez, J., and De Tello, M. (eds.), *Opciones de política económica en el Perú: 2011-2015*. Lima: Fondo Editorial de la Pontificia Universidad Católica del Perú, pp. 275-326.

Rivera, L., & Rojas-Romagosa, H. (2007). *Economic implications of an association agreement between the European Union and Central America*. Institute for International and Development Economics Working Paper No. 20071001. Available at <http://www.i4ide.org/content/wpaper/dp20071001.pdf>.

Robinson, S., & Thierfelder, K. (2002). Trade liberalisation and regional integration: the search for large numbers. *Australian Journal of Agricultural and Resource Economics*, 46(4), pp. 585-604.

Roldán, H., Donis, S., & Bermejo, A.M. (2018). *Perfiles Macrofiscales de Centroamérica No. 9*. Guatemala City: Instituto Centroamericano de Estudios Fiscale.

Rutherford, T.F., Rutstrom, E.E., & Tarr, D. (2014). Morocco's free trade agreement with the EU: A quantitative assessment. In Tarr, D. (ed.), *Applied Trade Policy Modeling in 16 Countries: Insights and Impacts from World Bank CGE-Based Projects*. London: World Scientific, pp. 405-437.

Sandberg, O. (2011). *Bridging the Atlantic. A Trade Effect Assessment of Services Inclusion in a Canada-EU Trade Agreement*. Master's Dissertation, Lund University, Sweden. Available at <https://lup.lub.lu.se/student-papers/search/publication/1963303>.

Savlovski, L.I., & Robu, N.R. (2011). The role of SMEs in modern economy. *Economia, Seria Management*, 14(1), pp. 277-281.

Schott, J.J. (2006). *Trade relations between Colombia and the United States* (Vol. 79). Washington DC: Peterson Institute.

Schrank, A., & Piore, M.J. (2007). *Norms, regulations and Labor standards in Central America*. United Nations ECLAC Studies and Perspectives No. 77. Available at [https://repositorio.cepal.org/bitstream/handle/11362/5002/S0700170\\_en.pdf?sequence=1&isAllowed=y](https://repositorio.cepal.org/bitstream/handle/11362/5002/S0700170_en.pdf?sequence=1&isAllowed=y).

Schwarzer, J. (2017). *CGE Models vs Educated Guesswork: The Case of the EU-Korea FTA*. Council on Economic Policies blog post, January 17. Available at <https://www.cepweb.org/cge-models-vs-educated-guesswork-the-case-of-the-eu-korea-fta/>.

Sicurelli, D. (2015a). The EU as a norm promoter through trade. The perceptions of Vietnamese elites. *Asia-Europe Journal*, 13, pp. 23-39.

Sicurelli, D. (2015b). The EU as a Promoter of Human Rights in Bilateral Trade Agreements: The Case of the Negotiations with Vietnam, *Journal of Contemporary European Research*, 11(2), pp. 230-245.

Slaughter, M. J. (2001). Trade liberalization and per capita income convergence: a difference-in-differences analysis. *Journal of International Economics*, 55(1), pp. 203-228.

Slotmaekers, V., & Vinhas de Souza, L. (2000). *Effects of the EU-Mexico Free Trade Agreement*. Unpublished manuscript. Available at <https://www.gtap.agecon.purdue.edu/resources/download/2085.pdf>.

Solís, M., & Katada, S. (2009). Explaining FTA Proliferation: A Policy Diffusion Framework. In: Solís M., Stallings B., Katada S.N. (eds.) *Competitive Regionalism*. International Political Economy Series. Palgrave Macmillan, London.

Soloaga, I., & Winters, L.A. (2001). Regionalism in the nineties: What effect on trade? *The North American Journal of Economics and Finance*, 12(1), pp. 1-29.

Stephanou, C., & Rodriguez, C. (2008). *Bank financing to small and medium-sized enterprises (SMEs) in Colombia*. Washington DC: The World Bank.

Sunesen, E.R., Francois, J.F., & Thelle, M.H. (2009). Assessment of barriers to trade and investment between the EU and Japan. Available at [http://trade.ec.europa.eu/doclib/docs/2010/february/tradoc\\_145772.pdf](http://trade.ec.europa.eu/doclib/docs/2010/february/tradoc_145772.pdf).

United Nations (2017). *Fiscal Panorama of Latin America and the Caribbean*. Santiago, Chile: United Nations Economic Commission for Latin America and the Caribbean (ECLAC).

Van der Loo, G. (2016). *CETA's signature: 38 statements, a joint interpretative instrument and an uncertain future*. CEPS Commentary, 31 October 2016. Available at <https://www.ceps.eu/publications/ceta%E2%80%99s-signature-38-statements-joint-interpretative-instrument-and-uncertain-future>.

Van der Loo, G., & Pelkmans, J. (2016). *Does Wallonia's veto of CETA spell the beginning of the end of EU trade policy?* CEPS Commentary, 20 October 2016. Available at <https://www.ceps.eu/publications/does-wallonia%E2%80%99s-veto-ceta-spell-beginning-end-eu-trade-policy>.

Van Roozendaal, G. (2017). Where symbolism prospers: An analysis of the impact on enabling rights of labour standards provisions in trade agreements with South Korea. *Politics and Governance*, 5(4), pp. 19-29.

Varela Villegas, R.O. (2016). Colombia small-and medium-sized enterprise's 70 years of progress: what's next? *Small Enterprise Research*, 23(3), pp. 302-315.

Vásquez, F., & Doloriert, C. (2011). Case-Study of Internationalization in Peruvian SMEs. *Journal of Centrum Cathedra*, 4(1), p. 77.

Vision Group (2011). *Invigorating the Indonesia-EU Partnership Towards a Comprehensive Economic Partnership Agreement*. Jakarta: EU and Indonesian Vision Group. Available at [http://eeas.europa.eu/archives/delegations/indonesia/documents/press\\_corner/20110615\\_01\\_en.pdf](http://eeas.europa.eu/archives/delegations/indonesia/documents/press_corner/20110615_01_en.pdf).

Watson, A. (2016). Trade openness and inflation: The role of real and nominal price rigidities. *Journal of International Money and Finance*, 64, pp. 137-169.

Winters, L.A. (2002). Trade liberalisation and poverty: what are the links? *The World Economy*, 25(9), pp. 1339-1367.

Woolcock, S. (2014). EU Policy on Preferential Trade Agreements in the 2000s: A reorientation towards Commercial aims. *European Law Journal*, 20(6), pp. 718-732.

Wouters, J., Goddeeris, I., Natens, B., & Ciortuz, F. (2014). Some critical issues in the EU-India Free Trade Agreement negotiations. *European Law Journal*, 20(6), pp. 848-869.

Young, A.R. (2015). Liberalizing trade, not exporting rules: the limits to regulatory co-ordination in the EU's 'new generation' preferential trade agreements. *Journal of European Public Policy*, 22(9), pp. 1253-1275.

## APPENDIX

### Literature Review

The proliferation of preferential trade agreements (PTAs) globally over the past two decades has increased at an exponential pace: from 1990 to 2002, the number of binding PTAs worldwide grew from 40 to 250 (Dee and Gali, 2005), and the World Bank Global Preferential Trade Agreements Database now contains 352 such agreements. Likewise, as of 2008, the World Trade Organisation (WTO) had been notified of 402 free trade agreements (FTAs) (compared to 80 between 1948 and 1988, see Solís and Katada, 2009), a number which has risen to 459 in 2018. With the expansion of regional integration and innovations in various types of agreements and their coverage, understanding the effects of economic integration and trade agreements has taken on a particular urgency.

Economists and other researchers have taken up this challenge eagerly, and a rich and diverse literature has emerged examining the effects of regional trade agreements (RTAs). The methodologies used in the literature determining the welfare effects of economic integration can be divided into two main groups: economic approaches, using quantitative methods (and encompassing econometric analyses, gravity models, and computable general equilibrium (CGE) models), and qualitative analyses, encompassing legal and political science-based analysis. We will take each of these in turn.

### Economic Approaches to Understanding Integration

The vast majority of quantitative studies have focused on whether such RTAs are, on balance, trade-creating or trade diverting, and from this starting point, determining whether they support or hinder multilateral liberalisation. Follow-on literature has also drilled down into more specific aspects of these agreements, for example the effects of RTAs on trade structure or the impact of non-tariff barriers (NTBs). As just noted, many of these papers rely on either gravity models or CGE models, and thus two general methodological remarks are needed in order to aid in our interpretation of the effects of integration. In the first instance, the gravity model, the workhorse of international trade in general, has benefitted from two important contributions in Anderson and van Wincoop (2003) and in Baier and Bergstrand (2007); in particular, these studies highlight the need to include time fixed effects in the model, showing that papers which did not take into account these effects may suffer from estimation biases. In a similar vein, with regard to CGE modelling, its application to the issues of economic integration may be difficult to interpret and compare if model specifications are not described in detail (Hertel *et al.* 2007). For example, as reported by Rutherford *et al.* (2014), the CGE studies conducted to estimate the welfare and sectoral effects of the North American Free Trade Agreement (NAFTA) (of which there were over 30) produced estimates so varied that a special conference was held to try and reconcile the differences.

With these caveats in mind, we turn to some of the key papers in this literature which may offer clues to what the European Union (EU) may expect from its own PTAs. A number of studies investigating the welfare effects of RTAs point to net trade creation (rather than net trade diversion) and positive welfare effects. For example, Soloaga and Winters (2001) evaluate the effects of PTAs signed or updated between 1980 and 1996 on the imports and exports of 58 individual signatory countries (representing over 70% of world imports at the time) as well as intra-bloc trade. Using a modified gravity model, they conclude that the 'new regionalism' did not significantly augment intra-bloc trade, although they do find proof of trade diversion in the cases of the EU and the European Free Trade Association (EFTA). Similarly, Martinez-Zarzoso (2003) estimates a gravity equation for data between 1980 and 1999 in order to evaluate the effects and determinants (population, cultural differences, and income levels, among others) of bilateral trade flows between 47 countries across several trade blocs, including the EU, the North-African Free Trade Area, the Caribbean Community, the Centro-American Common Market, and various Mediterranean countries. Her

research finds significant influence of trade agreements in spurring intra-bloc trade, showing large increases in each of the trading arrangements studied.

A robust study in this vein is also provided by Grant and Lambert (2008), who study the effects of RTAs on trade flows (in particular in the agricultural sector) using the gravity model. The authors utilise data from 86 regions (69 countries and 17 country-groups) over the period 1982-2002 and find that RTAs increased trade in agriculture more (by 72% on average) than they did in other sectors (by 27% on average), showing their strength as a tool of agricultural trade liberalisation. While the positive effects are not always visible immediately after introduction of a given FTA—sometimes taking more than several years to materialise—the evidence that these agreements *always* increase trade is, in the authors' opinion, unambiguous. Especially important for this success in trade volumes were RTA phase-ins, allowing for trade-related adjustments; Grant and Lambert (2008) find that RTAs with such a clause increase trade by 149% over a 12-year span in the agricultural sector. Importantly, the positive effects of RTAs and their phase-in periods were mostly consistent across various agreements (with the exception of the Association of Southeast Asian Nations (ASEAN) agreement).

Magee (2008) uses a dynamic gravity model with fixed effects for country pair, importer-year, and exporter-year to analyse the trade effects of a large number of FTA, RTAs, and customs unions (including the European Economic Community (EEC), Mercosur, and NAFTA). The author finds that RTAs have a substantial anticipatory effect on trade flows, increasing them by 26% on average in the four years leading up to the implementation of the deal. According to Magee, they continue to increase trade significantly over the first 11 years of the duration of the agreement, with an average effect equal to 89%. Moreover, the author concludes that the use of fixed effects generally leads to more conservative estimates of the trade effects of RTAs.

Finally, Grant and Lambert (2008) argue that RTAs, by virtue of fostering by liberalising NTBs (such as technical standards and domestic regulations) may in turn facilitate further trade integration in the future. This point is given credibility by Egger and Larch (2008), who study the effect of existing PTA membership on new PTA membership. Using two samples, one of 10,430 unique country pairs over the period 1955-2005 and another of 15,753 country pairs in 2005, and deploying a spatial econometric model, the authors find that the PTA membership of one country creates an incentive for other countries to join or to form new PTAs, in particular among adjacent countries. Ornelas (2005) also finds similar evidence for this effect by modelling the endogenous nature of trade agreements, noting that governments tend to endorse *only* welfare-improving agreements. This means that potentially harmful agreements are discarded in trade negotiations, and, thus, those agreements which are adopted tend to reduce the power of special interests via broader-based liberalisation. In this way, trade liberalisation momentum can be maintained and builds on itself.

As Ornelas (2005) hints at, there is a substantial political component to PTAs, and this aspect has also come under scrutiny from economists. In particular, the EU and its (political) approach to agreements have been examined for clues to overall trade and welfare effects. In the first instance, the EU itself is highly conducive to both trade and growth. In their study on the EEC (as well as the Central American Common Market (CACM)) in the years 1960-2000, Baier and Bergstrand (2009) use matching econometrics to create nonparametric cross-section estimates of the long-run effect of membership; they find these estimates to be statistically significant, suggesting that FTAs increase member bilateral trade in every year. In particular, they find that the average increase of international trade relative to GDP due to the EEC was 116% by 2000 in the case of the six original members, while the effect of the CACM was to triple the members' trade by 2000. Badinger (2005) also studies the permanent and temporary growth effects of European and global (GATT based) integration in a growth accounting framework. Using panel data from 15 EU Member States (MS) in the period 1950-2000, and creating an index of economic integration, he finds substantial level effects of integration. According to Badinger (2005), the GDP per capita of MS would be one-fifth lower in

the absence of integration since 1950, with both induced investment and increased efficiency responsible for the increase in growth due to integration. On the other hand, the study finds no permanent effects of integration, an issue which could correspond to the methodological point noted above, namely that the integration index may be correlated with time-specific effects.

Moving beyond the intra-bloc trade of the EU, Egger and Larch (2011) examined the Europe Agreements with prospective Central and Eastern European (CEE) countries in the 1990s, finding that GDP gains were substantial in the partner countries (7% of GDP) and positive but more muted for the EU15 (0.2% of GDP); at the same time, trade to the EU increased substantially for the CEE countries as well. Egger and Larch (2011) attribute these gains almost entirely to the elimination of 'political trade frictions', as the process of EU accession would have removed the costs of 15 separate domestic political environments acting independently on trade agreements with the CEE countries.

Cieřlik and Hagemeyer (2009), studying the effects of EU Association Agreements with the Middle East and North Africa (MENA) countries in the period 1980-2004, showed a different effect, but one that was due to the same reason. Their analysis found that the EU's exports to the MENA countries increased substantially but imports from the MENA countries did not; their assertion was that the EU benefited from the agreements more than the MENA countries due to asymmetric trade liberalisation, as there was an opening up of sectors in which the EU had a comparative advantage (industry) without an opening up of the sectors in which the MENA countries had a comparative advantage (agriculture). This effect was further exacerbated by the EU's Common Agricultural Policy, which made it difficult for the agricultural exporters from the MENA countries to compete with EU producers.

From a similar political economy point of view, Egger *et al.* (2008) studies the effect of RTAs on trade structure, using a difference-in-difference with matching approach to account for the self-selection of countries into agreements. Examining a sample of country pairs covering mainly Organisation for Economic Co-operation and Development (OECD) economies since 1970, the study uses a range of economic and political factors as determinants of self-selection (including GDP, factor endowments, and trade costs as economic factors and proxies for protectionist lobbying, fractionalisation and polarisation of legislature, checks and balances, duration of the regime, and political similarities between countries as political factors). Within this model, Egger *et al.* (2008) find that RTAs boost total trade through its effect on intra-industry trade, increasing its average share (equal to 11% in the sample) by about 4 percentage points.

In another study, carried out for DG Trade, Bergstrand *et al.* (2011) estimate the trade effects of six EU FTAs: with South Africa (1999), with Mexico (2000), with Morocco (2000), with Tunisia (1998), with Chile (2003), and with Jordan (2002). Using two methodologies: gravity model and matching, they find that, as a result of the FTAs, EU exports to Tunisia and Morocco increased by 80%, and to Chile by over 100%. Likewise, EU imports from Chile and Mexico increased by 50 to 90%. On the other hand, EU exports to Mexico did not increase substantially (as a result of a long transition period), much like the EU imports from South Africa, Tunisia, and Morocco (due to the tariff barriers being already low prior to the conclusion of the trade deals).

The point regarding intra-industry trade raised in Egger *et al.* (2008) is important in and of itself, as many papers have focused on this channel as crucial to understanding the effects of trade agreements. Melitz (2003) models the impact that liberalisation has on intra-industry trade, noting that such liberalisation will help to increase the efficiency of the economy as inter-firm relations allocate capital towards more productive firms. Empirically, the Egger *et al.* (2008) result has been echoed in a more recent study by Caliendo and Parro (2015), who examine the welfare effects of NAFTA and find that industries reliant on other sectors (such as automobiles) and within industries (intermediate goods) were driving gains from the agreement. Looking at trade flows from 1962 to 2000, Baier *et al.* (2014) also find that 'the growth of intra-industry trade over this period dominated inter-industry trade growth' in relation to the effects from trade

agreements. Such a move has also benefited consumers through an increase in variety and lower prices, consistent with the theoretical model of Melitz (see Feenstra, 2018 for a recap of the empirical evidence).

Shifting away from gravity-based models, the use of CGE models have become far more prevalent for *ex-ante* exploration of the possible effects of trade agreements, as well as being utilised *ex-post* for ascertaining actual effects. Robinson and Thierfelder (2002) conducted an early review of studies using CGE models, concluding that, in general, the effect of RTAs also appears to be net trade creation rather than net trade diversion (while welfare gains accrue both to existing and new members of RTAs). In their survey, Robinson and Thierfelder (2002) note that higher estimates of positive welfare effects are found in models that integrate features of New Trade Theory (economies of scale, imperfect competition, network effects) compared to those that rely solely on neoclassical theory. Hertel *et al.* (2007) also note that the key in obtaining the 'correct' effects from CGE models is accurately modelling the elasticity of substitution among imports from different countries; when this is corrected for, multi-country trade agreements such as the Free Trade Agreement of the Americas (FTAA) have the potential to be substantially welfare enhancing.

CGE-based studies at the level of existing trade agreements have largely confirmed these findings. An example is Rutherford *et al.* (2014), which examines the welfare effects of the considered EU-Morocco FTA (eventually signed in 2018) on Morocco. The authors estimate the effect at 1.5 to 2.5% of Moroccan GDP (in the case of the trade liberalisation of Morocco with the rest of the world). At the same time, the 'fairly large' welfare gains that they estimate for Morocco are according to the results of their modelling are mostly an effect of import liberalisation in the country, rather than better access to the EU markets. They also find that in general, RTAs are more likely to have an adverse effect on welfare when domestic and imported goods are not close substitutes. Moving further south, Lewis *et al.* (2003) deploy a multi-country CGE model to study the impact of trade liberalisation in Southern African countries, including the EU FTA with South Africa, finding that all FTA configurations under consideration lead to net trade creation.

Another recent study in this research avenue is Francois and Pindyuk (2013), which attempts to determine the potential effect on Austria of three proposed EU FTAs: 1) with Armenia, Georgia, and Moldova, 2) with Canada, 3) and with the United States (US). The CGE model used in the research is disaggregated into 21 sectors and nine regions, and it is benchmarked to 2007. The authors find a positive effect of the three FTAs, with a gain of 2% of Austrian GDP over the long run. The largest effect among these three agreements can be found in the proposed Transatlantic Trade and Investment Partnership (TTIP) agreement, due to the relative size of the US economy and the potential gains for Austria. The study finds that the reduction of NTBs with the US could create static effects accounting for 0.4% of GDP growth, with a further investment response (following from increased productivity as NTBs are reduced) accounting for the remaining 1.6% of GDP.

Caliendo and Parro (2010) also deploy a heterogeneous-firm CGE model with 48 sectors and five countries to study the Ricardian gains of Uruguay in a number of hypothetical trade scenarios (but not, it should be noted, an FTA with the EU). The authors find positive welfare effects on Uruguay from leaving Mercosur and entering into an FTA with the US—an increase of welfare by 5% and of wages by 5.3%—coming mainly from access to cheaper intermediate (input) goods. An even larger gain, of respectively 6.6% and 7.7%, occurs in the case of Uruguay signing FTAs with all important economies in the world. Likewise, the bilateral elimination of tariffs between all countries of Mercosur and the US sees Uruguay benefit the most and Argentina and Brazil only marginally. A major caveat of this study is that the authors look at tariff barriers and do not consider NTBs.

Indeed, the issue of NTBs features prominently in Brenton and Manchin (2003), which examines the EU's PTAs with the Balkan countries (Albania, Croatia, Bosnia and Herzegovina, Serbia, and Montenegro) in the context of the rules of origin integrated into those PTAs. It finds that observance with the rules of origin under the generalised system of preferences (GSP) by the exporters is prohibitive—corresponding to the conclusion made in Dee and Gali (2005) and Krueger (2012)—to the extent of nullifying the underlying

trade preferences. This is due to: 1) the strictness of those rules; 2) the high costs of proving origin; 3) and challenging customs procedures. For example, compared to almost 84% of Albanian exports to the EU that were eligible for preferential treatment under the GSP in 1998, only 2% were actually granted it. The authors suggest several possible solutions to the problem, from increased monitoring of the results of trade agreements by the EU to softening the rules of origin (for example by using a one-step rule).

In sum, despite the thematic and geographic breadth of the literature on economic integration, several conclusions of a general nature come to the fore. First, with the exception of some studies (e.g. Dee and Gali, 2005; Cieřlik and Hagemeyer, 2009), RTAs are shown to lead to net trade creation and to enhance welfare. Second, NTBs appear to be at least as important a hurdle to economic integration as tariffs, especially with regard to rules of origin.

## Qualitative Approaches

As noted above, a key pillar in the examination of PTAs beyond the quantitative analyses noted above has been a more legal or political science-based approach, examining the development of the EU's policy on these agreements to attempt to tease out effects. While some aforementioned studies have taken an economic approach to the clauses which the EU chooses to include or exclude from an agreement (e.g. Cieřlik and Hagemeyer, 2009), the qualitative approach is generally more effective in the examination of the 'softer' clauses of PTAs (i.e. those less likely to be quantifiable), such as effects on human rights or the environment. Woolcock (2014) is indicative of this approach, presenting an overview of EU policy on PTAs over the past two decades. Woolcock describes the EU's PTA policy *vis-à-vis* the ACP countries (African, Caribbean, and Pacific Group of States), Central and Eastern Europe, and North African and Middle Eastern countries up to the mid-1990s as 'predominantly political', and the EU's efforts between 1999 and mid-2000s as multilateralism driven. Since that time, the paper argues, there has been a shift towards an 'active PTA policy', which encompasses both commercial aims and the 'constitutionalisation of trade'.

Hinkle and Schiff (2004), examining the Economic Partnership Agreements with Sub-Saharan African (SSA) countries, concur with Woolcock's assessment, noting that the agreements would be helpful if the EU prioritised its pro-development goals over commercial ones. Having evaluated three sets of PTAs between the EU and developing countries (in the Mediterranean region, in the ACP regions, and the GSP), Panagariya (2002) does not find conclusive evidence of a positive impact of the agreements on the latter. Based on his results, he argues for the non-discriminatory elimination of trade barriers during the then-upcoming Doha Round, a solution that in his opinion would produce better results than the introduction of one-way trade preferences.

Wouters *et al.* (2014) take a closer look at the FTA between the EU and India, which was under negotiation at the time of preparing their analysis. The authors investigate the debate surrounding issues such as access to medication, labour standards, and human rights, acknowledging that while the numerous concerns raised by non-governmental organisations in relation to the text of the agreement have a legitimate basis, the discussion could be more substantive and factual, and the negotiation process much more transparent.

Gstöhler and Hanf dedicate an entire paper (2014) to the above-mentioned idea of the 'constitutionalisation of trade', analysing the interaction between the EU's Common Commercial Policy in the 'post-Lisbon era' (the period after entering into force of the Treaty of Lisbon in 2009) and constitutional rights in the EU and in its trade partners. The study, building on a legal analysis of the Treaty of Lisbon and the EU's recent FTAs with CARIFORUM (2008), South Korea (2010), Colombia and Peru (2011), and Central America (2012), establishes that the EU's pursuit of a normative agenda through trade (a 'mixed constitutional balance'), strengthened by the Treaty of Lisbon, has a potential for both synergy effects and policy incoherencies. On the one hand, they argue, the EU's economic weight can be a serious positive in its foreign policy. On the

other hand, the drive to safeguard the universal interests of public health, the environment, and workers may be construed as protectionism under some circumstances.

In a similar vein, Young (2015) explores whether the EU in fact uses PTAs to export its own regulatory approach. Deploying textual analysis of the 'new generation' PTAs with Canada, Central America, Singapore, and South Korea, and considering the open position of the European Commission on the TTIP agreement (under negotiations at the time of the preparation of the paper), Young argues that, unlike in trade agreements with countries in its neighbourhood, the EU neither planned nor attempted to use PTAs to enforce regulatory harmonisation with partners 'far from its borders'. Unwilling to put at risk potential economic benefits to European companies, the study argues that the EU did not attempt to leverage its trade power to export rules, especially to powerful partners such as the US, focusing instead on commercial interests.

Finally, the extent to which the EU is capable of exerting influence through trade agreements was tackled by Meunier (2000), who developed an institutional model of the EU's bargaining power in trade negotiations. Having examined three cases of EU-US trade negotiations, he argues that while the EU's internal institutional processes have some influence on the final outcome of the bargaining process, it is predominantly the extent to which individual nations control and influence the negotiations that matters both for the final outcome and the probability of the deal being concluded at all. Likewise, Baldwin (2006) evaluates the impact of external factors such as the state of the global economy or globalisation on EU trade politics and their implementation, finding it to be predominantly adverse. He demonstrates that in order to mitigate the negative effects, a greater role should be assigned to the European Parliament, using politics to facilitate trade policy development and implementation (e.g. expanding flanking policies), as well as exploring the idea of 'collective preferences' to a greater extent. The fact that political problems need political solutions is perhaps his most important recommendation.

---

PE 603.881  
EP/EXPO/B/INTA/2018/01

Print ISBN 978-92-846-4063-8 | doi:10.2861/463730 | QA-04-18-872-EN-C  
PDF ISBN 978-92-846-4062-1 | doi:10.2861/945343 | QA-04-18-872-EN-N