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## Inhalt

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E-Mail: fritz.breuss@wifo.ac.at

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Medieninhaber (Verleger), Hersteller: Österreichisches Institut für Wirtschaftsforschung
1030 Wien, Arsenal, Objekt 20 | Tel. (43 1) 798 26 01-0 | https://www.wifo.ac.at
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# Pro-globalization via FTAs in times of COVID-19

Fritz Breuss

Fritz.Breuss@wifo.ac.at; Fritz.Breuss@wu.ac.at

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**Abstract**

This analysis attempts to offer a counter strategy to the idea of anti-globalization and de-growth that had flared up again since the COVID-19 crisis. All international forecasts expect for the year 2020 the deepest recession since the Great Depression. Countries which can afford it, run a super-Keynesian fiscal policy to fight the crisis, accompanied by an extremely expansionary monetary policy in the United States (Fed) and in the Eurozone (ECB). As a third policy instrument besides fiscal and monetary policy, an aggressive pro-globalization trade policy could relieve and strengthen the crisis macro policy. To demonstrate which options are available we analyze nine mega free trade agreements, some of them are already in effect, others will be enacted soon. Overall, not the big players in world trade, the EU and the United States win by a simultaneous implementation of the nine FTAs. Japan would be the winner because it participates in four combinations (overlaps) of FTAs: EU-Japan, USA-Japan, CPTPP and RCEP. The United States hardly gain from further globalization. Similarly, the EU27 cannot profit much from further globalization.

**Keywords:** Globalization; International Trade Policy; Model simulations
**JEL Classification**: F13, F60, C54, C68.

# Contents

# 1. Introduction

The year 2020 – paraphrasing Queen Elizabeth II - will be remembered as an "annus horibilis". The world has been infected by the Coronavirus and as a reaction most governments locked down all activities of the economy. This resulted in the worst recession since the Great Depression in the thirties. The IMF (2020) forecasts for the year 2020 the biggest drop in world real GDP (-4.4%) since World War II, followed by an increase of 5.5% in 2021. The volume of world trade (goods and services) in 2020 will decline by 10.4% and is expected to increase by 8.3% in 2021. In contrast, the structure of the Great Recession in 2009 was different: world real GDP declined by only 0.5% (-2% according to the WTO), followed by a strong upswing (+5%; +4.3% WTO) in 2010, but the slump of the volume of world trade in 2009 (-10.9%) was deeper and the upswing in 2010 (+12.4%) steeper than in the COVID-19 crisis. According to the latest forecast by WTO (2020), world trade shows sign of a rebound from COVID-19. The WTO now forecasts a 9.2% decline in the volume of world merchandise trade for 2020, followed by a 7.2% rise in 2021. The Great Recession in 2009 saw a decline in world merchandise trade by 12.5% (2010 +13.8%). Furthermore, the WTO registers a much steeper year-on-year decline in global services trade during the current recession (-23%, peak-to-trough) than during the financial crisis (-9%). The plunge was exacerbated by restrictions on international travel, which represents a key source of export earnings for many low-income countries.

The COVID-19 pandemics has again popularized old concepts of de-growth and retreat from international cooperation. We will counteract such unpleasant thoughts and propose a pro-globalization strategy via implementing further mega FTAs[1]. As the global liberalization process in the WTO halts since the inception of the Doha Development Round in 2001, the major players in world trade push the second-best solution of globalization by negotiating more and more regional FTAs. The fate of the most recent mega FTAs, TTIP and TPP showed that their implementation is politically sensitive. Either anti-globalizers and/or a majority of the population rejects it for several reasons, or new political leaders, like US president Trump prefer less complex trade deals.

[1] The Peterson Institute for International Economics (PIIE) is currently working on a similar project, called *"Rebuilding the Global Economy"*. This should help policymakers (in particular those in the United States) to reshape globalization (see: https://www.piie.com/). These PIIE-led proposals and dialogues will be rolled out through the end of 2020, culminating in the release of a major comprehensive policy program in January 2021. They will take the form of memoranda to policymakers and policy briefs, accompanied by data visualizations, blogs, videos, and virtual events with experts, edited and moderated by Adam S. Posen, President of PIIE.

Nonetheless, we want to show what advantages the implementation of already negotiated or pending FTAs would have for the respective partners, but also for third countries. For this purpose, we analyse the impact of nine FTAs, some of them are mega FTAs. Then we demonstrate who would win by profiting from overlapping FTA arrangements. This result is then confronted with the scenario of a complete global trade liberalization.

After a comparison of the pros and cons of a global liberalization under the WTO with the current piecemeal FTA strategy we describe the modelling framework. Before going into the detailed analysis of the nine FTAs we give a short review of the dimension of the FTAs we consider. In summing-up the impact results of the FTA simulations are confronted with a global liberalization and with the negative outcome of the US China trade war. Finally, conclusions are drawn.

## 2. WTO versus regional liberalization

With WTO's Fourth Ministerial Conference in Doha, Qatar, in November 2001, the WTO wanted to launch the next multilateral liberalization since the Uruguay Round in 1995. It should consider particularly the needs of the developing countries. Since its inception in 2001 no progress has been reached. Since the WTO is dead regarding its goal of liberalizing world trade, the alternative is only the negotiation of regional FTAs. This multiplication of FTAs, however, increases the complexity of the already existing complex network of regional FTAs, named by Bhagwati (1995), "spaghetti bowl". In contrast to the first-best non-discriminatory global trade liberalization under the WTO rules of MFN, the conditions of regional FTAs are – if not equally developed partners negotiate - dictated by major players in world trade.

The total number of regional free trade agreements in force and notified to the World Trade Organization (WTO) increased from 47 in 1995 to 302 in 2019. One driving force is the European Union, whose agreements increased in number from 8 to 43 over the same period. Not only the number of FTAs has increased but also its "depth", meaning their comprehensiveness (from poor tariff cuts to deep and comprehensive FTAs) has grown. Reiter and Grübler (2020) analyse the increase of complexity of the existing FTAs ("spaghetti bowl") over the period 1977-2017 in a network graph system based on data by DESTA. Dür et al. (2014) evaluate the FTAs in their new Design of Trade Agreements (DESTA) Database[2] according their deepness. For this purpose, they provide an additive index for each FTA, ranging from 0 (shallow agreement) to 7 (deep agreement). One component of the index

[2] See the DESTA Website: https://www.designoftradeagreements.org/

captures whether the establishment of a free trade area with (almost) zero tariffs is foreseen ('Full FTA'). The remaining six areas of trade liberalisation go beyond tariff cuts and address services trade, investments, standards, public procurement, competition, and intellectual property rights (IPRs). E.g. CETA is marked with 7 as it is one of the most comprehensive trade and investment agreements the EU has ever closed.

In our simulation of the impact of overlapping FTAs we limit our analysis to the lowest level of FTAs, zero tariffs and subsidy (Full FTA according to Dür's classification). In some cases (CETA, EUJPEPA, TTIP Light) we also consider NTBs.

Although customs unions and free-trade areas are exempted from the MFN clause according to Article XXIV GATT, they are generally discriminatory against third countries even if – as requested by point 8.(a)(i) of this article – the restrictive regulations are "eliminated with respect to substantially all the trade between the constituent territories of the union or at least with respect to substantially all the trade in products originating in such territories".

In our simulations we obey the GATT rules an eliminate all import tariffs and existing export subsidies on all goods and services. In fact, most regional FTAs do not include such a maximum liberalization scenario, but they reduce trade barriers only partially. Even existing NTBs are rarely eliminated completely. As we simulate the extreme zero tariff and subsidies scenarios for all nine FTAs our results must be understood as the maximum potential for liberalization between the FTA parties.

## 3. Modelling framework

The simulations are carried out with the the flexible and modular CGE model CGEBox developed by Britz and Van der Mensbrugghe (2018). A full documentation of all equations for that open-source CGE modelling platform can be found in Britz (2019). The model is encoded in General Algebraic Modelling Language (GAMS) and – in our case - is based on the GTAP (Global Trade Analysis project) database, version 10 (data of 2014), both of which require a license[3]. CGEBox can accommodate different assumptions regarding the model structure.

### *3.1 Armington and Melitz model structure*

We execute our simulations with two version of the GATP Model:

[3] In our simulations we use the GTAP standard closure rules: Foreign savings: Global equal returns to capital; Government: Tax income; Final consumption: Spending; Regional reference price: Exchange rate; GDP price deflator: Fisher.

(1) *Armington* version: This is the Standard GTAP Model by Hertel (1997), a comparative static global CGE model based on Walrasian general equilibrium structure. It assumes cost minimizing behaviour under constant returns to scale (CRS) production technologies along with utility maximizing consumers in competitive markets. The Armington model (Armington, 1969) is based on the premise that each country produces a different good and consumers would like to consume at least some of each country's goods.

(2) *Melitz* version: Britz (2019) and Jafari and Britz (2020) explain the expansion of the CGEBox by a module base on Melitz (2003). That considers firm heterogeneity, firm entry and exits in the industry as a whole and on specific trade linkages, and love-of-variety effects by different agents, resulting in monopolistic competition. The module allows for each sector the choice between imperfect competition based on Melitz (2003) and the default assumption of perfect competition based on the Armington assumption. In the Melitz version of our simulations we assume that all sectors are subject to imperfect competition.

The CGEBox allows further adjustments to the standard GTAP model (see Jafari and Britz, 2020, pp. 24-25).

## *3.2 Welfare measure*

In the standard GTAP model the regional household's utility is specified by consumption of the private household, government spending, and saving (all per capita). The welfare effect measured in the CGEBox framework (Jafari and Britz, 2020, p. 25) is based on a money metric, equivalent variation (EV), of the regional household's utility change, expressed in constant dollar values (USD million). This welfare measure recognizes that the regional household benefits from private consumption and the government's provision of public goods and expects benefits from net savings to increase future consumption.

In our simulations we show changes in GDP as an alternative to the welfare measure mentioned above.

## *3.3 Sectoral and regional aggregation*

The latest GTAP database (i.e., version 10)[4] comes with a geographic coverage of 121 countries, representing 98% of world GDP and 92% of world population. The sectoral coverage comprises 65 sectors. The database is the year 2014.

[4] See GTAP website: https://www.gtap.agecon.purdue.edu/databases/v10/index.aspx

We aggregate the full global GTAP10 database into 10 regions and 10 sectors. Depending on the different FTAs we make different aggregations for the regions. The sectors remain always the same (see Table A1 in the Appendix)

## 4. Pro-globalization via FTAs

In contrast to the idea of de-growth, unearthed again in the course of the COVID-19 crisis we want to propagate a pro-globalization strategy to overcome the slump in world trade and hence also help economies to recover from the deepest recession since World War II. Besides the super Keynesian fiscal and the extreme expansionary monetary policy interventions in most advanced economies, the stimulus of growth via further trade liberalization, even if it happens regionally and not globally might contribute to a recovery.

**Box 1: From NAFTA to USMCA**

We do not deal with the renegotiated NAFTA deal, the United States-Mexico-Canada Agreement (USMCA)[1] or – as it the Government of Canada calls, the Canada-United States-Mexico Agreement (CUSMA)[2] - which came into force on 1 July 2020 because it includes only some reform steps of the 26 years old NAFTA (entered into force on 1 January 1994). Six key differences between NAFTA and the USMCA deal were identified[3]: 1) auto manufacturing boost: It corrects some of the inequalities to the detriment of the USA by increasing the value-added share of cars. The USMCA requires 75% of a vehicle's parts to be made in one of the three countries (Canada, Mexico and the United States) – up from the current 62.5% rule – in order to remain free from tariffs when moving between the three signatory countries. This rule should reduce the bilateral trade deficit in the USA vis à vis Canada and Mexico. 2) Labour law is strengthened: 40% to 45% of car parts must be produced by workers which earn at least $16 per hour. 3) dairy farmers get more market access; 4) updating NAFTA for the digital era; 5) environmental protection; and 6) Congress keeps control over biologic drugs.

In April 2019, the United States International Trade Commission published the USMCA Impact Assessment (2019). The main results: U.S. real GDP could increase in the medium-term (after six years) by 0.35%, employment should increase by 175.700 persons or by 0.12%. US exports (+5.9% to +6.7%) to the partner countries Canada and Mexico would increase higher than the bilateral imports (+4.8% to +3.8%). It is, however, unclear where the GDP impulses should come from, given the fact that the reduction in tariff and nontariff barriers have already taken place among the three countries. Eight USMCA provisions included in the economy-wide model should bring the stimulus (details, see USMCA Impact Assessment, 2019, p. 39), like: provisions that reduce policy-uncertainty regarding cross-border data flows and data localization; certain automotive rules of origin (ROOs) have the most significant impact in the impact estimation.

[1] See the text of the USMCA: https://ustr.gov/trade-agreements/free-trade-agreements/united-states-mexico-canada-agreement/agreement-between; for an interpretation of the agreement see also USMCA Impact Assessment (2019).

[2] See the text of the CUSMA: https://www.international.gc.ca/trade-commerce/trade-agreements-accords-commerciaux/agr-acc/cusma-aceum/text-texte/toc-tdm.aspx?lang=eng

[3] For six key differences between NAFTA and the USMCA deal that replaces it; see: https://edition.cnn.com/2019/12/10/politics/nafta-us-mexico-canada-trade-deal-differences/index.html

For this purpose, we analyze nine smaller and mega regional FTAs, most of them are already into force; some are still pending and one – TTIP light – depends on the will of the US government. We carry out standardized simulations with the GTAP10 database as of 2014, using the simulation instrument CGEBox, described before. For all nine FTAs we assume the same maximum liberalization scenario of zero tariffs and subsidies. Only for three FTAs (CETA, EUJPEPA and TTIP light) we also consider the effects of a cut of 50% of NTBs. All standard simulations are carried out for the Armington and the Melitz version. Our simulations do not consider changes in investments (FDIs). Our CGE model is static. We do not use the dynamic version of GTAP, GTAP-Dyn.

### *4.1 The dimension of nine mega FTAs*

In terms of GDP the most important FTA would be TTIP light with 42.1% of World GDP (see Table 1). Second comes the USA-Japan FTA (USAJPFTA) with 28,1%, followed by RCEP with 26,3%, the EUJPEPA (with 25.7%) and EU-Mercosur (23.8%). Measured by the coverage of trade, RCEP with a share of 31% of world trade would be the largest FTA, followed by TTIP light (29.8%) and EUJPEPA (21.8%). Looking on the potential of consumers, RCEP with a share of 30.3% of world population would be by far the largest FTA.

**Table 1:** The dimension of existing and planned FTAs, 2014

| | **Into** | **Population** | | **GDP** | | **Trade** | |
|---|---|---|---|---|---|---|---|
| | **force since** | **Mio.** | **% world** | **Bio.USD** | **% world** | **Bio.USD** | **% world** |
| CETA | 21.09.2017* | 478.35 | 6.60 | 17326.23 | 22.15 | 6869.54 | 19.89 |
| CPTPP | 18.07.2018 | 491.29 | 6.78 | 10642.12 | 13.60 | 6016.42 | 17.42 |
| EUJPEPA | 01.02.2019 | 569.94 | 7.86 | 20138.61 | 25.74 | 7540.68 | 21.83 |
| AfCFTA | 30.05.2019 | 1145.11 | 15.80 | 2459.54 | 3.14 | 1353.68 | 3.92 |
| USAJPFTA | 01.01.2020 | 446.04 | 6.15 | 21944.27 | 28.05 | 6220.13 | 18.01 |
| RCEP | 2020 | 2194.31 | 30.27 | 20537.24 | 26.25 | 10700.02 | 30.98 |
| EU-Mercosur | 2020/21** | 701.84 | 9.68 | 18595.66 | 23.77 | 6569.42 | 19.02 |
| EFTA-Mercosur | 2020** | 272.72 | 3.76 | 4283.97 | 5.48 | 1790.61 | 5.18 |
| TTIP light | plan | 761.72 | 10.51 | 32890.56 | 42.05 | 10280.53 | 29.77 |

* Provisionally applied; ** planned
Trade = exports and imports of goods and services; world trade includes only extra EU27 trade
Source: GTAP10 data base as of 2014
CETA = EU27 and Canada
CPTPP = 11 countries: Australia, Brunei, Canada, Chile, Japan, Malaysia, Mexico, New Zealand, Peru, Singapore, Vietnam.
EUJPEPA = EU27 and Japan
AFCFTA = 54 African States (except Eritrea)
USAJPFTA = USA and Japan
RCEP = 15 countries: Australia, Brunei, Cambodia, China, Indonesia, Japan, South Korea, Laos, Malaysia, Myanmar (Burma), New Zealand, Philippines, Singapore, Thailand, Vietnam.
Mercosur = Argentina, Brazil, Paraguay, Uruguay.
TTIP light = EU27 and USA

The European Union deals mainly with itself: EU intra-trade amounts to 51.5% (see Table 2). In all other mega FTAs (AfCFTA, CPTPP, RCEP) the members trade much less with itself. An exception is RCEP: with a share of 21.6%, the members of RCEP do most of their trading with themselves. The relationship between the EU and the UK is highly asymmetric. The UK is – after the United States - EU27's second trading partner with a share of 14%. For the UK, however, the EU27 is the most important trade partner (46.2%).

**Table 2:** Trade Matrix 2014: Bilateral exports in % of total exports

| | USA | Canada | Mexico | EU27 | UK | EFTA | Japan | China | Mercosur | AfCFTA | CPTPP | RCEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **USA** | - | 14.29 | 11.30 | 20.55 | 3.88 | 2.03 | 4.52 | 9.29 | 3.36 | 2.80 | 6.54 | 10.27 |
| **Canada** | 65.58 | - | 1.90 | 7.38 | 3.37 | 0.97 | 2.38 | 5.26 | 0.93 | 1.24 | 2.46 | 4.33 |
| **Mexico** | 69.25 | 6.55 | - | 6.08 | 0.69 | 0.57 | 1.09 | 2.75 | 1.91 | 0.44 | 2.26 | 21.58 |
| **European Union 27** | 7.46 | 1.14 | 0.67 | **51.47** | 6.77 | 4.23 | 1.71 | 5.01 | 1.47 | 3.41 | 2.75 | 4.58 |
| *EU27_extra exports* | *15.37* | *2.35* | *1.39* | - | *13.95* | *8.72* | *3.52* | *10.33* | *3.02* | *7.03* | *5.66* | *9.44* |
| **United Kingdom** | 11.15 | 2.40 | 0.46 | 46.24 | - | 7.50 | 1.99 | 6.01 | 1.60 | 3.15 | 4.60 | 6.90 |
| **EFTA** | 8.48 | 1.15 | 0.44 | 45.92 | 7.08 | 0.68 | 2.23 | 7.93 | 1.30 | 12.36 | 9.98 | 5.67 |
| **Japan** | 15.58 | 1.65 | 2.19 | 11.03 | 1.59 | 0.83 | - | 26.04 | 1.02 | 1.72 | 8.45 | 22.20 |
| **China** | 18.60 | 2.59 | 3.25 | 16.37 | 3.01 | 0.74 | 7.97 | - | 2.44 | 4.60 | 9.59 | 18.17 |
| **Mercosur** | 10.63 | 1.66 | 1.57 | 16.20 | 1.99 | 1.31 | 3.15 | 15.22 | 11.73 | 4.94 | 7.24 | 8.24 |
| **Africa_AfCFTA** | 7.05 | 0.92 | 0.25 | 30.87 | 3.44 | - | 2.60 | 12.54 | 2.46 | **12.36** | | |
| **CPTPP** | 9.96 | 1.38 | 0.77 | 12.91 | 2.21 | - | 9.73 | 20.53 | 1.65 | | **9.98** | |
| **RCEP** | 10.38 | 1.23 | - | 11.81 | 2.01 | - | 8.87 | 22.06 | 1.40 | 2.44 | | **21.58** |

Source: GTAP10: trade = goods and services

Important for our analysis are the overlaps. That means how often a country participates in FTAs. In our study of 9 FTAs, Japan (EUJPEPA, USAJPFTA, CPTPP, RCEP) and the EU27 (CETA, TTIP, EUJPEPA, EU-Mercosur) have four overlaps. All other countries have only two overlaps (see Table A2 in the Appendix). It can be assumed that those countries that have the most overlaps between the different FTAs will also benefit most from regional liberalization. This hypothesis is tested.

We analyse the nine FTAs in the order in which they come into force, starting with CETA and ending with a possible TTIP light.

## *4.2 The impact of standardized simulations*

The purpose of our exercise is to analyse nine FTAs, some of them already in force, some planned or in the enactment state. Numerous studies have already estimated the possible economic impact of the big three FTAs (CETA, EU-Japan und the failed TTIP). Various methods (structural gravity equations, a big variation of static and dynamic CGE models, new quantitative trade models) have been applied with different scenarios: tariff elimination; reduction of NTBs; investment-led growth strategies and combinations. Some blow up the impact for the trade partners forming a FTA by considering also spill-overs to third-countries

(e.g. Francois et al., 2011). And of course, past studies worked with different data bases, most of them out of date today.

The novelty of our approach is manifold:

- We use the most actual data base of GTAP10 with the 2014 data set for 121 countries, and 65 sectors, aggregated by a 10x10 matrix.
- We apply as simulation instrument the CGEBox, described above, with two versions:
  - Armington
  - Melitz
- We make comparable simulation exercises for all 9 FTAs:
  - For all nine FTAs we simulate a maximum free-trade scenario: zero tariffs and subsidies
  - Only for the big three FTAs we also consider reduction of NTBs (a cut of 50% of NTBs across all sectors)
- Finally, we look at the outcome for the case that all nine FTAs would be in force simultaneously by summing up the impact results and compare them with a global free trade scenario.

### 4.2.1 CETA

Canada is for EU27 the tenth largest trading partner. In 2019, EU27 exported goods to Japan amounting to 38 bn EUR (or 1.8% of total EU27 exports) and imported from Canada goods worth 21 bn EUR (1.1%), resulting in a trade surplus of 17.6 bn EUR. In 2018, the EU27 exported more services (19 bn EUR) to Canada than it imported them from Canada (13.5 bn EUR), resulting in a services trade surplus of 5.5 bn EUR. Canadian firms invested more in the EU (FDI stocks: 397.3 bn EUR) than EU firms invested directly in Canada (392.2 bn EUR), giving a negative FDI balance of -5 bn EUR[5].

The Comprehensive Economic and Trade Agreement (CETA) is a "New Generation" Free Trade Agreement (FTA) between the European Union and Canada[6]. On 24 April 2009, the European Council authorized the European Commission to open negotiations for an Economic Integration Agreement with Canada[7]. The EU and Canada launched CETA negotiations in May 2009 and after several years of negotiations on 21 September 2017, it

[5] See: https://ec.europa.eu/trade/policy/countries-and-regions/countries/canada/

[6] See EU-Canada, the CETA Website of the European Commission: https://ec.europa.eu/trade/policy/in-focus/ceta/

[7] On 15 December 2015, the European Council decided to declassify the directives given to the Commission to negotiate a comprehensive economic and trade agreement with Canada. See European Council Website: https://www.consilium.europa.eu/en/press/press-releases/2015/12/15/eu-canada-trade-negotiating-mandate-made-public/

entered into force provisionally. CETA is the most progressive trade agreement the EU has ever adopted[8]. It has some of the strongest commitments ever included in a trade deal to promote labour rights, environmental protection, and sustainable development. CETA integrates the EU's and Canada's commitments to apply international rules on workers' rights, environmental protection, and climate action. And these obligations are binding.

**Box 2: EU's New Generation trade policy**

In 2006 the EU announced a reform of its common trade policy (CTP). On the one hand WTO is seen as the most effective way of managing trad in a rules-based system, and a cornerstone of the multilateral system ("first-best solution"). The Doha Development Agenda should have first priority. However, as the Doha Round stalled since its beginning in 2001, the EU – like many other grand world trade players like the USA – wants to embark into further regional free trade agreements (FTAs) as a "second-best solution". With the proposals for a "New Generation" of carefully selected and prioritized FTAs the EU's global role should be strengthened. The EU wanted to stimulate growth and jobs in Europe (contributing to the EU's Growth and Jobs Strategy "Europe 2020") and build a more comprehensive integrated and forward-looking external trade policy that makes a stronger contribution to Europe's competitiveness. These targets were proclaimed in *"Global Europe: Competing in the World"* (European Commission, 2006).

The first "New Generation" FTA was the EU-South Korea FTA[1] which went into force provisionally on 1 July 2011. It was formally ratified in December 2015. The agreement eliminates duties for industrial and agricultural goods in a progressive, step-by-step manner. Most import duties were removed in 2011. The remaining ones – except for a limited number of agricultural products – were removed after five years on 1 July 2016. The FTA also addresses non-tariff barriers to trade, specifically in the automotive, pharmaceutical, medical devices and electronics sectors. The agreement has created new opportunities for market access in services and investments, and includes provisions in areas such as competition policy, government procurement, intellectual property rights, transparency in regulation, and sustainable development. The agreement established a number of specialised committees and working groups between the two parties to monitor implementation.

In 2010, the EU and South Korea upgraded their broader relationship to a Strategic Partnership. On 10 May 2010, the two sides signed a Framework Agreement, which entered into force on 1 June 2014. It provides a basis for strengthened cooperation on major political and global issues such as human rights, non-proliferation of weapons of mass destruction, counterterrorism, climate change and energy security. This is an overarching political cooperation agreement with a legal link to the EU-South Korea Free Trade Agreement.

In a second wave of "New Generation" FTAs the EU wanted to conclude even more comprehensive trade and investment agreements with the USA (TTIP) and with Canada (CETA), later with Japan.

[1] See: https://ec.europa.eu/trade/policy/countries-and-regions/countries/south-korea/

[8] See "CETA explained": https://ec.europa.eu/trade/policy/in-focus/ceta/ceta-explained/index_en.htm

It not only eliminates nearly 99% of pre-existing tariffs, but it allows firms to bid for public contracts (public procurement), makes firms to invest easier (FDIs), and allows for mutual recognition of some qualifications.

After entering into force provisionally, most of the agreement already applies. As it is a "mixed agreement", it must be ratified by each EU Member State[9] in addition to the European Parliament. Areas that are not yet in force are:

- investment protection
- investment market access for portfolio investment (but market access for foreign direct investment is an exclusive EU competence)
- the Investment Court System

During the CETA and TTIP negotiations many (NGOs and the public) – in particular in Germany and Austria – demonstrated against these comprehensive trade agreements. The major point of critique was the non-transparent Investor-State Dispute Settlement (ISDS)[10] system, but also the lack of transparency of negotiations. To address the ISDS criticism the Commission has set up a "New Investment Court System"[11]. To counter the criticism of the lack of transparency of the negotiations, the Commission amended its trade strategy by the "Trade for All" strategy in 2015 (European Commission, 2015).

For each "New Generation" trade agreement the European Commission commissions Trade Sustainability Impact Assessments (Trade-SIAs) which assess the potential impacts of proposed trade liberalisation agreements on all pillars of sustainable development in order to optimise policy decision-making/trade negotiations. The EU-Canada SIA was conducted by Development Solutions Europe (2011). It concluded that the EU would increase its real GDP by 0.02% to 0.03% in the long-term, while Canada can expect increase of 0.18% to 0.36%[12].

In an own assessment of the impact of CETA, the European Commission (2017, p. 3) made simulations with the GTAP-9 CGE model (data base 2011). They predict that once the CETA agreement is fully implemented there will be important gains through tariff

[9] As of June 2020, 15 Member States have notified the European Council of the completion of national ratification procedures for CETA. These Member States are Austria, Croatia, Czechia, Denmark, Estonia, Finland, Latvia, Lithuania, Luxembourg, Malta, Portugal, Slovakia, Spain, Sweden, and the United Kingdom (see: https://www.consilium.europa.eu/en/documents-publications/treaties-agreements/agreement/?id=2016017)

[10] While ISDS is often associated with international arbitration under the rules of ICSID (the International Centre for Settlement of Investment Disputes of the World Bank), it often takes place under international arbitral tribunals governed by different rules or institutions, such as the London Court of International Arbitration (LCIA), the International Chamber of Commerce (ICC), the Hong Kong International Arbitration Centre (HKIA), or the UNCITRAL Arbitration Rules (see: https://en.wikipedia.org/wiki/Investor-state_dispute_settlement).

[11] See: https://ec.europa.eu/trade/policy/in-focus/ceta/ceta-explained/index_en.htm

[12] Development Solutions Europe (2011), p. 14

elimination, FDI liberalisation for goods, and services bindings, leading to an annual increase in bilateral exports and imports between EU and Canada of at least 8%, amounting to approximately €12 billion per year additional two-way trade by 2030, split roughly evenly between the two parties. Half of this increase will already materialise in the first year of implementation, in particular as customs duties on 98% of all tariff lines will be eliminated at entry into force of the agreement. European exporters of dairy (+€300m), automotive products (+€880m), chemicals (+€451m), textiles, apparel and leather products (+€812m), as well as business services (+€644m) will see the most considerable increases in their exports to Canada. CETA will also add between €1.7-2.1 billion to the EU GDP on an annual basis.

The CETA negotiations also stimulated numerous institutions to conduct studies. All studies see Canada as the winner of CETA. Aichele and Felbermayr (2014) estimated the biggest gains of real income in the long run, for Canada +2.97% and for the EU 0.22%. The Joint Study: European Commission and Government of Canada (European Commission and Canada, 2008) delivers the second biggest gains: for Canada +0.77%, for the EU +0.08%. The study by Raza, Tröster, and von Arnim (2016) forecast only slight GDP gains: in Canada +0.06%, in the EU +0.02%.

On 21 September 2020, the EU and Canada celebrated the third anniversary of CETA[13]. The Commission concludes that the balance of these three years is very positive: bilateral trade between the EU27 and Canada has increased by 27% for goods and 47% for services as compared to the situation before CETA entered into force. This is much better than similar trends between the EU and the rest of the world over the same period.

Our first CETA simulation with zero tariffs and subsidies results in modest GDP and welfare gains (see Table 3a). As a rule, the Melitz version delivers at least three times larger effects. Accordingly, Canada would gain 0.06% more real GDP, whereas the increase in EU27 would only be 0.01%. The distribution of welfare is similarly, with Canada in the lead. The current account would deteriorate in both partners. Bilateral exports would increase in Canada (+5.3%) and in the EU (+5.9%) with the same speed. Total exports and imports are nearly unchanged in the EU but increase somewhat in Canada.

Given the asymmetry of both partners concerning their power (population in million: EU27 443, Canada 36) and trade relations it is no wonder that Canada, the smaller partner of CETA is the winner, because it allows Canada to participate in the large EU market. According to GTAP10 data as of 2014, the share of EU27's trade (goods and services) with Canada is 2.4% of EU's external trade. The share of Canada's trade with EU27 is 7.4%. Most

[13] See: https://trade.ec.europa.eu/doclib/press/index.cfm?id=2184

of the third countries of CETA lose – although in a small dimension - welfare and trade (see Table A3a in the Appendix).

**Table 3a:** The impact of zero tariffs and subsidies in CETA

| | Real GDP %-chg | | Welfare: USD change pc | | Current account, chg, Bio$ | |
|---|---|---|---|---|---|---|
| | Armington | Melitz | Armington | Melitz | Armington | Melitz |
| **EU27** | 0.00 | 0.01 | 1.90 | 4.20 | **-0.39** | **-1.09** |
| **Canada** | **0.01** | **0.06** | **18.41** | **23.81** | -1.81 | -1.89 |
| | Bilateral exports, %-chg | | Total exports, %-chg | | Total imports, %-chg | |
| **EU27**-->Canada | 7.67 | 5.31 | 0.02 | 0.04 | 0.03 | 0.06 |
| **Canada**-->EU27 | 6.73 | 5.85 | 0.06 | 0.18 | 0.44 | 0.47 |

Bold = best performer
A = Armington; M = Melitz.

While trade policy makers have made significant progress in lowering barriers to international trade linked to tariffs, the policy relevance of non-tariff measures (NTMs) or non-tariff barriers (NTBs) has increased. The reason for the greater attention to NTBs is three-fold. First, as the level of tariffs has decreased, the relative importance of NTBs has increased. In addition, during this time, significant progress has been made in terms of quantifying the effects of NTBs, leading to a better understanding of the costs these barriers impose on the cost of doing business. And finally, there is some evidence of NTBs being used as substitution for the tariffs that have been reduced. While international organisations classify (UNCTAD, 2012) and collect data[14] on various kinds of NTMs, scientists try to estimate its equivalent in trade costs or Ad-Valorem Equivalents (AVEs). The EC NTM project led by ECORYS (2009b) had the stated goal of trying to "shed light on the existence of nontariff measures (NTMs) and regulatory divergence at the sector level of EU-US trade.

**Table 3b:** The impact of zero tariffs and subsidies plus 50% cut of NTBs in CETA

| | Real GDP %-chg | | Welfare: USD change pc | | Current account, chg, Bio$ | |
|---|---|---|---|---|---|---|
| | Armington | Melitz | Armington | Melitz | Armington | Melitz |
| **EU27** | 0.01 | 0.04 | 8.62 | 16.04 | **1.07** | **3.04** |
| **Canada** | **1.68** | **3.53** | **954.21** | **1532.02** | -27.08 | -51.65 |
| | Bilateral exports, %-chg | | Total exports, %-chg | | Total imports, %-chg | |
| **EU27**-->Canada | 38.84 | 33.07 | 0.11 | 0.30 | 0.15 | 0.26 |
| **Canada**-->EU27 | 33.50 | 26.47 | -1.32 | -1.67 | 4.36 | 6.14 |

[14] WTO, Integrated Trade Intelligence Portal (I-TIP): https://www.wto.org/english/res_e/statis_e/itip_e.htm; or: WITS, World Inegration Trade Solution, Non-Tariff Measures: https://wits.worldbank.org/tariff/non-tariff-measures/en/country/CAN

With CETA, many NTBs should be eliminated or adjusted. In contrast to tariffs and export subsidies, the GTAP10 data base does not include NTBs explicitly. As the CETA treaty deals with the "Mutual recognition of some qualifications", it is difficult to quantify the reduction of NTBs. In our case we assume that the bilateral NTBs which Egger et al. (2015, p. 559) have estimated for the case of TTIP (EU-USA) also apply grosso modo in the case of EU27-Canada. The NTBs in all sectors are similar in both countries. As it is not clear whether all existing NTBs are eliminated completely or only some of those, we make a further assumption in our simulations. We cut 50% of the existing NTBs across all sectors in both countries. This is implemented in the model by an equivalent reduction of the existing tariffs in our 10 sectors of the GTAP10 data base.

Taking all liberalization steps together (zero tariffs and subsidies plus 50% cut of NTs) the results of Table 3b show that in case of the Melitz version, real GDP would increase in Canada by 3.5%, but in the EU only by 0.04%. Canada can improve its welfare strongly. However, the current account in Canada deteriorates, whereas it improves in the EU. Bilateral trade could be increased by 33% in the case of EU27 to Canada and by 26% of Canada trade with the EU27. Total trade is asymmetrically influenced. Exports rise in both regions, but imports increase strongly in Canada, whereas they decrease in the EU. Whereas CETA creates strong trade creation between its partners, the third countries, and after the Brexit, also the UK belongs to this group would be negatively affected by trade diversion (see Table A3b in the Appendix).

### 4.2.2 CPTPP

The Comprehensive and Progressive Agreement for Trans-Pacific Partnership (CPTPP), also known as TPP11 or TPP-11, is a trade agreement between 11 countries: Australia, Brunei, Canada, Chile, Japan, Malaysia, Mexico, New Zealand, Peru, Singapore, and Vietnam. It evolved from the Trans-Pacific Partnership (TPP), which never entered into force due to the withdrawal of the United States[15]. At the time of its signing (8 March 2018), the eleven countries' combined economies represented 13.4 percent of world GDP (approximately US$13.5 trillion).

The TPP was signed on 4 February 2016, but never entered into force, as Donald Trump withdrew the US on 23 January 2017 from the agreement soon after being elected. All original TPP signatories except the US agreed in May 2017 to revive it and reached

[15] See for the following: https://en.wikipedia.org/wiki/Comprehensive_and_Progressive_Agreement_for_Trans-Pacific_Partnership

agreement in January 2018 to conclude the CPTPP. The formal signing ceremony was held on 8 March 2018 in Santiago, Chile. The CPTPP incorporates most of the TPP provisions by reference but suspended 22 provisions the US favored that other countries opposed and lowered the threshold for enactment, so the participation of the US is not required[16]. The agreement specifies that its provisions becomes effective 60 days after ratification by at least 50% of the signatories (six of the eleven participating countries). On 30 December 2018, the agreement entered into force between Australia, Canada, Japan, Mexico, New Zealand, and Singapore, and hence the agreement became effective. On 1 January 2019, Australia, Canada, Mexico, New Zealand, and Singapore implemented a second round of tariff cuts. Japan's second tariff cut took place on 1 April 2019. The ratification in Chile is still pending. On 14 January 2019, the agreement entered into force for Vietnam. United Kingdom, after the Brexit is interested in joining CPTPP. On May 2020, also China announced interest in becoming a member of CPTPP.

Two-thirds of the provisions in the signed CPTPP are identical to the TPP draft at the time the US left the negotiating process. The chapter on state-owned enterprises (SOEs) is unchanged, requiring signatories to share information about SOEs with each other, with the intent of engaging with the issue of state intervention in markets. It includes the most detailed standards for intellectual property of any trade agreement, as well as protections against intellectual property theft against corporations operating abroad.

CPTPP is primarily concentrated on the mutual market access by the elimination of tariffs. Our scenario with a maximum liberalization between the 11 members of CPTPP implies zero tariffs and subsidies in all 10 sectors[17]. We simulated separately the consequences for Canada, Mexico, and Japan and CPTPP8 as a group of Asian and Latin American countries. The biggest winner is Japan with an expected increase of real GDP (Melitz version) of 0.4% (see Table 4). the other partners of CPTPP gain less income. If one sums all 11 countries, CPTPP11 would increase it real GDP by 0.12%. Bilateral trade of CPTPP11 would increase by around 10%.

For all third countries, the trade diversion would also result in a decline in real GDP (see Table A4 in the Appendix).

[16] The consolidated TTP Text, the “CPTPP Treaty” can be found on the website of the Government of Canada:: https://www.international.gc.ca/trade-commerce/trade-agreements-accords-commerciaux/agr-acc/tpp-ptp/text-texte/toc-tdm.aspx?lang=eng

[17] An impact analysis for Canada can be found on: https://www.international.gc.ca/trade-commerce/trade-agreements-accords-commerciaux/agr-acc/cptpp-ptpgp/index.aspx?lang=eng

**Table 4:** The impact of zero tariffs and subsidies in CPTPP

| | Real GDP %-chg | | Welfare: USD change pc | | Current account, chg, Bio$ | |
|---|---|---|---|---|---|---|
| | Armington | Melitz | Armington | Melitz | Armington | Melitz |
| **Canada** | 0.02 | 0.04 | 63.34 | 60.48 | -3.88 | -0.78 |
| **Mexico** | 0.00 | 0.02 | 5.89 | 8.58 | **-0.73** | **-0.07** |
| **Japan** | **0.03** | **0.35** | **29.79** | **89.83** | -4.14 | -13.61 |
| **CPTPP** | 0.02 | 0.09 | 14.29 | 15.03 | -2.98 | -0.43 |
| **CPTTP11** | 0.02 | 0.12 | 28.33 | 43.48 | -2.93 | -3.72 |
| | Bilateral exports, %-chg | | Total exports, %-chg | | Total imports, %-chg | |
| **CPTPP-->CPTPP** | 2.50 | 1.16 | 0.46 | 0.97 | 0.89 | 1.25 |
| **CPTPP11-->CPTPP11** | 10.66 | 9.42 | 0.34 | 1.06 | 0.94 | 1.75 |

CPTPP1 = CPTPP+Canada+Mexico+Japan

### 4.2.3 EUJPEPA

Japan is for EU27 the seventh largest trading partner. In 2019, EU27 exported goods to Japan amounting to 61 bn EUR (or 2.9% of total EU27 exports) and imported from Japan goods worth 63 bn EUR (3.2%), resulting in a trade deficit of 1.7 bn EUR. In 2018, the EU27 exported more services (27.9 bn EUR) to Japan than it imported services from Japan (14.6 bn EUR), resulting in a services trade surplus of 13.3 bn EUR. Japanese firms invested more in the EU (FDI stocks: 192 bn EUR) than EU firms invested directly in Japan (104.8 bn EUR), giving a negative FDI balance of -87.1 bn EUR[18].

The EU-Japan EPA negotiations were officially launched on 25 March 2013, after the release of an EU-Japan Impact Assessment (2012) on the future Economic Partnership Agreement in July 2012. An in-depth analysis of the EU-Japan EPA (EU-Japan Analysis, 2016), carried out for the European Commission, was published in 2016. Furthermore, based on the outcome of the negotiations, the European Commission produced an EU-Japan Economic Impact Report (2018) in July 2018. The EU and Japan's Economic Partnership Agreement (EUJPEPA) entered into force on 1 February 2019. It is – after the EU-South Korea FTA and CETA – the third comprehensive "New Generation" FTA.

The trade EU-Japan agreement – according to the EU[19]:

- removes tariffs and other trade barriers (also in trade in services) and creates a platform to cooperate in order to prevent obstacles to trade; the biggest obstacle for the EU are the high Japanese tariffs on farm products; the EU has liberalised 99% of tariff lines and 100% of imports and Japan 97% of tariff lines and 99% of imports; and

[18] See: https://ec.europa.eu/trade/policy/countries-and-regions/countries/japan/

[19] See: https://ec.europa.eu/trade/policy/in-focus/eu-japan-economic-partnership-agreement/index_en.htm; for details of the agreement, see also the "Key Elements of the EU-Japan Economic Partnership Agreement": https://ec.europa.eu/commission/presscorner/detail/en/MEMO_18_6784

- liberalizes areas of public procurement, state owned enterprises, intellectual property rights; and
- promote investment between the EU and Japan. The agreement does not cover the protection of investment, on which negotiations are ongoing between the two sides for a potential agreement on the protection of investments. The EU has also tabled to Japan its reformed proposal on the Investment Court System. For the EU, it is clear that there can be no return to the old-style Investor to State Dispute Settlement System (ISDS).
- helps the EU to shape global trade rules in line with their high standards and shared values, and
- sends a powerful signal that two of the world's biggest economies reject protectionism.

Francois et al. (2011) made one of the first estimations of an FTA between EU and Japan with a GTAP CGE model. They simulated tariff cuts and reductions of NTBs. They used NTB estimates by ECORYS (2009a) and Copenhagen Economics (2009). If liberalization (under the Armington assumption) were to be limited to removing tariffs only (like in our scenario in Table 5a), the impact both for Japan and the EU would be almost insignificant. While for the EU it would be an almost insignificant positive increase, for Japan it would imply a tiny (0.05%) decrease in GDP in the short run. In the scenario with elimination of tariffs in addition to a reduction of NTM across all sectors for both economies by 20%, liberalizing trade between the EU and Japan is expected to yield positive effects on the GDP of both economies. In the EU, GDP is expected to increase by 0.4 and 0.7% in the short and long run, respectively. The corresponding figures for Japan are 0.1 and 0.3%, thus indicating that the gains are expected to roughly double as the investment effects set in, i.e. in the long run setting.

An early EU-Japan Analysis (2016) by the European Commission estimated much higher gains from a EUJPEPA than we did, but similar to the results of Francois et al. (2011), namely an increase of real GDP in the long-term of 0.76% for the EU and 0.29% for Japan. The reason is that this study includes – besides the elimination of NTBs – also new investment opportunities (FDI flows) which push GDP in the case of the EU. Accordingly, bilateral exports should increase by 34% for the EU and 29% for Japan, while the total export increase is 4% for the EU and 6% for Japan.

In the EU-Japan Economic Impact Report (2018), the dynamic Global Trade Analysis Project (GTAP) CGE model, GTAP-Dyn is used for the impact analysis of EUJPEPA. It is a recursively dynamic applied general equilibrium model of the world economy and extends the comparative static framework of the standard GTAP model (which we are using) and works

with the Armington assumption. This model allows to simulated effects of the agreements on investment and wealth. The macroeconomic impact of EUJPEPA in the year 2035 is estimated as follows: Real GDP would increase by 0.14% in the EU, but by 0.61% in Japan. Bilateral exports increase by 13.2% in the EU and by 23.5% in Japan.

Grübler, Reiter, and Stehrer (2018) with a structural gravity approach get very small welfare (GDP) results from the implementation of the EUJPEPA. They estimate two scenarios: a cut in tariffs only and one inclusive cut of NTBs. The first (tariff only) scenario delivers negative GDP effects for Japan (-0.01%) and slight positive ones for the EU (0.0% to 0.01%). The second scenario (cuts of tariffs and NTB) increases somewhat the liberalization effects: EU's GDP would increase by 0% to 0.02%, those of Japan by 0.01%. Reiter and Grübler (2020) with a similar structural gravity model estimate that EUJPEPA would result in a GDP gain of 0.06%, both in the EU and in Japan.

Felbermayr et al. (2017) with the ifo trade model estimate the welfare (GDP) effects also in two scenarios: In the tariffs only scenario the GDP effects are extremely small: Japan (-0.02%) even would lose welfare, the EU could increase GDP only by 0% to 0.01%. In a more ambitious scenario (tariffs plus NTBs), Japan would gain +0.23% more GDP, the EU28 +0.04%. If the authors assume (scenario 3) that trade costs fall in a similar quantity as in the average trade agreement observed in Head and Mayer (2014), then the get larger welfare effects. Accordingly, real GDP would increase by 1.6% in Japan and by 0.4% in EU28. But even Felbermayr et al (2017, p. 45-46) doubt whether the NTB estimates from other countries are transferable to the EU-Japan case.

**Table 5a:** The impact of zero tariffs and subsidies in EUJPEPA

| | Real GDP %-chg | | Welfare: USD change pc | | Current account, chg, Bio$ | |
|---|---|---|---|---|---|---|
| | Armington | Melitz | Armington | Melitz | Armington | Melitz |
| **EU27** | -0.01 | -0.02 | 2.06 | -0.93 | **-2.11** | **3.83** |
| **Japan** | **0.03** | **0.26** | **23.07** | **55.72** | -3.51 | -9.27 |
| | Bilateral exports, %-chg | | Total exports, %-chg | | Total imports, %-chg | |
| **EU27**-->Japan | 19.07 | 16.95 | 0.01 | 0.01 | 0.08 | 0.08 |
| **Japan**-->EU27 | 15.83 | 11.72 | 0.80 | 2.04 | 1.34 | 2.81 |

Our first EUJPEPA simulation with zero tariffs and subsidies results in a slight loss of GDP and slight welfare gains (see Table 5a) for the EU27, but considerable gains for Japan: real GDP (Melitz version +0.26%) and strong welfare gains. Bilateral exports from EU27 to Japan increase by 17% and by 11.7% from Japan to EU27. Total trade goes up – stronger on the import than on the export side in Japan. This leads to a deterioration in the current account. The asymmetry in the liberalization is due to the higher share of Japanese exports to

the EU27 (11%), than those of EU27 exports to Japan (3.5%). Japan is smaller (population in million: 127) than EU27 (443).

Whereas EUJPEPA creates strong trade creation between its partners, the third countries would be negatively affected by trade diversion (see Table A5a in the Appendix).

In its Trade Sustainability Impact Assessment of the FTA between the EU und Japan (EU-Japan Analysis, 2016, p. 20) the European Commission stressed the fact that the NTM hurdles in Japan are higher than those in the EU by remarking, that *"In the case of Japan, regulatory and other behind the border issues such as rules, restrictions on competition and technical barriers to market access have long been more important than tariffs or other border measures."* And further: *"The existence of NTMs (Non-tariff measures) affecting trade or limited competition is important in a number of key sectors, such as financial services, distribution, railway equipment as well as other key EU exporting sectors such as automobiles, machinery and pharmaceuticals. Horizontal rules, such as intellectual property protection, government procurement, competition and investment protection are important in this context. Such issues are also relevant to food exporters together with Japan's implementation of a system for agricultural and foodstuff geographical indications (GIs)".*

Although there has been made progress in quantifying NTBs or NTMs, their implementation into the sectors of a CGE model are still highly questionable. We made the attempt to implement asymmetric NTBs into our 10 sectors relying on estimates by Copenhagen Economics (2009) and ECORYS (2009a), quoted in Francois et al. (2011, pp. 10-11). Accordingly, total NTBs in the EU amount to 13.3% (estimated total trade costs), in Japan 15.6%. As in the case of CETA we assume that NTBs are cut by 50% across all sectors and in both countries.

**Table 5b:** The impact of zero tariffs and subsidies plus 50% cut of NTBs in EUJPEPA

| | Real GDP %-chg | | Welfare: USD change pc | | Current account, chg, Bio$ | |
|---|---|---|---|---|---|---|
| | Armington | Melitz | Armington | Melitz | Armington | Melitz |
| **EU27** | 0.01 | 0.00 | 11.84 | 10.12 | **-0.91** | **9.94** |
| **Japan** | **1.31** | **2.96** | **523.30** | **929.02** | -37.28 | -77.54 |
| | Bilateral exports, %-chg | | Total exports, %-chg | | Total imports, %-chg | |
| **EU27**-->Japan | 53.87 | 50.00 | 0.17 | 0.40 | 0.28 | 0.38 |
| **Japan**-->EU27 | 39.61 | 30.18 | 0.42 | 2.04 | 5.28 | 8.72 |

Taking both scenarios together (zero tariffs and subsidies plus 50% cut in NTBs), EU27's real GDP improves only slightly (see Table 5b). Welfare would increase compared to the tariff-only scenario (Table 5a). In Japan, however, real GDP would increase between 1.3% (Armington) and 3% (Melitz). Welfare gains would be substantial, but the current account

balance would deteriorate as Japan imports increase much stronger than exports. However, as the higher NTBs in Japan would be reduced, the EU27 could export (over 50%) more to Japan than vice versa (over 30%).

Whereas EUJPEPA creates strong trade creation between its partners, the third countries, and after the Brexit, also UK belongs to this group would be negatively affected by trade diversion (see Table A5b in the Appendix). We did not like Francois et al. (2011) consider (artificial) positive spill over effects.

### 4.2.4 AfCFTA

The African Continental Free Trade Area (AfCFTA) is a free trade area covering 54 of the 55 African Union (AU) nations[20]. The free-trade area is the largest in the world in terms of the number of participating countries since the formation of the World Trade Organization. Accra, Ghana serves as the Secretariat of AFCFTA and was commissioned and handed over to the AU by the President of Ghana His Excellency Nana Addo Dankwa Akuffo Addo on August 18, 2020 in Accra.

The agreement was brokered by the African Union (AU) and was signed on by 44 of its 55 member states in Kigali, Rwanda on 21 March 2018. The agreement initially requires members to remove tariffs from 90% of goods, allowing free access to commodities, goods, and services across the continent. The United Nations Economic Commission for Africa estimates that the agreement will boost intra-African trade by 52 percent by 2022. The proposal was set to come into force 30 days after ratification by 22 of the signatory states. On 2 April 2019, Gambia became the 22nd state to ratify the agreement, and on 29 April the Saharawi Republic made the 22nd deposit of instruments of ratification; the agreement went into force on 30 May 2018 and entered its operational phase following a summit on July 7, 2019.

The general objectives of the AfCFTA agreement[21] are to:

- create a single market, deepening the economic integration of the continent
- establish a liberalized market through multiple rounds of negotiations
- aid the movement of capital and people, facilitating investment
- move towards the establishment of a future continental customs union
- achieve sustainable and inclusive socio-economic development, gender equality and structural transformations within member states

[20] See: https://en.wikipedia.org/wiki/African_Continental_Free_Trade_Area
[21] The text of the AfCFTA can be found on the African Union (AU) Website: https://au.int/en/treaties/agreement-establishing-african-continental-free-trade-area

- enhance competitiveness of member states within Africa and in the global market
- encourage industrial development through diversification and regional value chain development, agricultural development, and food security
- resolve challenges of multiple and overlapping memberships.

Our simulations assume a complete liberalization of the Intra-Africa trade between the 54 African States participating in the AfCFTA. GDP and Welfare in Africa would increase, stronger in the Melitz version than in the Armington case (see Table 6). Intra-Africa trade could be stimulated to increase by 30% to 37%. Table A6 in the Appendix shows that trade diversion would result in a negative impact in all third countries.

**Table 6:** The impact of zero tariffs and subsidies in AfCFTA

| | Real GDP %-chg | | Welfare: USD change pc | | Current account, chg, Bio$ | |
|---|---|---|---|---|---|---|
| | Armington | Melitz | Armington | Melitz | Armington | Melitz |
| EU27 | 0.00 | -0.02 | -3.89 | -7.57 | 1.40 | **2.77** |
| USA | 0.00 | 0.00 | -1.93 | -2.32 | **1.65** | 1.53 |
| **AfCFTA** | **0.02** | **0.44** | **3.22** | **8.33** | -7.09 | -9.44 |
| | Bilateral exports, %-chg | | Total exports, %-chg | | Total imports, %-chg | |
| **AfCFTA-->AFCFTA** | 36.82 | 29.26 | 2.14 | 2.67 | 2.97 | 3.44 |
| **AFCFTA-->EU27** | -2.68 | -1.22 | -0.01 | -0.03 | -0.04 | -0.07 |

### 4.2.5 USAJPFTA

The United States and Japan have achieved a trade agreement regarding market access for certain agricultural and industrial goods, with plans to pursue subsequent negotiations for an expanded free trade agreement. On October 17, 2019, the United States and Japan reached an agreement on market access for certain agriculture and industrial goods. The United States looks forward to further negotiations with Japan for a comprehensive agreement that addresses remaining tariff and non-tariff barriers and achieves fairer, more balanced trade. The Japanese Legislature approved the agreement on December 5, 2019. Presidential Proclamation 9974 was issued on December 26, 2019 establishing an entry into force date of 1 January 2020[22]. On 30 December 2019, the Federal Register Notice (84 FR 72187) was issued to implement the Agreement[23].

The United States will provide tariff elimination or reduction on 241 tariff lines. The affected agricultural products include perennial plants and cut flowers, persimmons, green tea, chewing gum, and soy sauce. The United States will also reduce or eliminate tariffs on certain

[22] See the U.S.-Japan Trade Agreement text: https://ustr.gov/countries-regions/japan-korea-apec/japan/us-japan-trade-agreement-negotiations/us-japan-trade-agreement-text

[23] See: https://www.cbp.gov/trade/free-trade-agreements/japan

industrial goods from Japan such as certain machine tools, fasteners, steam turbines, bicycles, bicycle parts, and musical instruments.

The major issues in the U.S.-Japan Trade Agreement are[24]:

*1. Liberalizing market access between U.S. and Japan:*

- Japan will eliminate or lower tariffs for certain U.S. agricultural products (up to 90% of U.S. food and agricultural products imported into Japan). For other agricultural goods, Japan will provide preferential U.S.-specific quotas.
- This agreement provides for the limited use of safeguards by Japan for surges in imports of beef, pork, whey, oranges, and race horses, which will be phased out over time. American farmers and ranchers will have then the same advantage as CP-TPP countries selling into the Japanese market.
- The United States will provide tariff elimination or reduction on 42 tariff lines for agricultural imports from Japan valued at $40 million in 2018, including products such as certain perennial plants and cut flowers, persimmons, green tea, chewing gum, and soy sauce.
- The United States will also reduce or eliminate tariffs on certain industrial goods from Japan such as certain machine tools, fasteners, steam turbines, bicycles, bicycle parts, and musical instruments.

*2. High standard digital trade agreement*

- The United States and Japan have reached a separate agreement on a high-standard and comprehensive set of provisions addressing priority areas of digital trade. Prohibitions on imposing customs duties on digital products transmitted electronically such as videos, music, e-books, software, and games.
- The digital trade agreement with Japan meets the gold standard on digital trade rules set by the USMCA and will expand trade in an area where the United States is a leader.

The trade agreement between the United States and Japan is far from being complete. For the time being both parties reached only a partial liberalization. More is planned in the future. Our liberalization scenario of zero tariffs and subsidies must therefore be understood as a maximum. Anyhow, the results in Table 7 show that Japan would be the winner of a complete bilateral trade liberalization. The United States could increase its bilateral exports to Japan by around 24%, whereas the Japanese exports to the US would only raise by around 7%. Again, third countries would be negatively affected by the USAJPFTA (see Table A7 in the Appendix).

[24] See: https://ustr.gov/about-us/policy-offices/press-office/fact-sheets/2019/september/fact-sheet-us-japan-trade-agreement

**Table 7:** The impact of zero tariffs and subsidies in USAJPFTA

| | Real GDP %-chg | | Welfare: USD change pc | | Current account, chg, Bio$ | |
|---|---|---|---|---|---|---|
| | Armington | Melitz | Armington | Melitz | Armington | Melitz |
| **USA** | 0.00 | 0.02 | 14.60 | 19.95 | -7.66 | -2.09 |
| **Japan** | **0.03** | **0.26** | **15.29** | **58.43** | -2.39 | -8.88 |
| | Bilateral exports, %-chg | | Total exports, %-chg | | Total imports, %-chg | |
| **USA**-->Japan | 23.09 | 24.10 | 0.12 | 0.48 | 0.55 | 0.69 |
| **Japan**-->USA | 7.58 | 6.98 | 0.92 | 1.91 | 1.21 | 2.61 |

### 4.2.6 RCEP

The Regional Comprehensive Economic Partnership (RCEP) is a free trade agreement in the Indo-Pacific region between the ten member states of the Association of Southeast Asian Nations (ASEAN), namely Brunei, Cambodia, Indonesia, Laos, Malaysia, Myanmar, the Philippines, Singapore, Thailand, and Vietnam, and five of ASEAN's FTA partners—Australia, China, Japan, New Zealand, and South Korea. India, which is also ASEAN's FTA partner, opted out of RCEP in November 2019[25].

RCEP negotiations were formally launched in November 2012 at the ASEAN Summit in Cambodia. The RCEP was signed by the 15 member countries on 15 November 2020. In 2018, the 16 negotiating parties accounted for about half of the world's population and 39% of the world's GDP. Without India, the 15 negotiating parties account for 30% of the world's population and just under 30% of the world's GDP. In terms of population and trade RCEP is by far the largest mega FTA (see Table 1).

RCEP has been criticized by free culture activists for containing "quite simply the worst provisions on copyright ever seen in a trade agreement." Global health care activists have criticized the agreement for potentially forcing India to end its inexpensive supply of generic medications to poor countries. In November 2019, India pulled out of the deal primarily due to concerns of dumping of manufactured goods from China and agricultural and dairy products from Australia and New Zealand, potentially affecting its own domestic industrial and farming sectors.

The RCEP is comprehensive[26], as it aims at progressively eliminating tariff and non-tariff barriers on substantially all trade in goods in order to establish a free trade area among the parties, consistent with the WTO, including GATT Article XXIV and GATS Article V. The RCEP will also eliminate restrictions and/or discriminatory measures with respect to

[25] See: https://en.wikipedia.org/wiki/Regional_Comprehensive_Economic_Partnership
[26] See: https://asean.org/summary-regional-comprehensive-economic-partnership-agreement/?highlight=RCEP

trade in services, consistent with GATS. It will create a liberal, facilitative, and competitive investment environment in the region. Further elements of the comprehensive RCEP agreement comprises economic and technical cooperation, intellectual property regulations, competition, and dispute settlement.

In our maximum liberalization scenario (see Table 8) Japan and the rest of the RCEP countries would be the winners. China would gain only half of that of Japan. Interestingly, however, the bilateral trade of the RCEP member states would not be higher than around 10%. As RCEP is the biggest mega FTA, the trade diversion effects for the third countries are considerable (see Table A8 in the Appendix). As the RCEP trade liberalization is an ongoing process over several years, the impact results in Table 8 must be understood as a medium-term effect.

**Table 8:** The impact of zero tariffs and subsidies in RCEP

| | Real GDP %-chg | | Welfare: USD change pc | | Current account, chg, Bio$ | |
|---|---|---|---|---|---|---|
| | Armington | Melitz | Armington | Melitz | Armington | Melitz |
| **China** | 0.12 | 0.59 | 2.60 | 31.40 | **-23.81** | **-29.11** |
| **Japan** | **0.06** | **0.97** | **211.87** | **356.54** | -26.05 | -48.02 |
| **RCEP** | 0.06 | 0.97 | 21.56 | 68.06 | -25.95 | -38.98 |
| **RCEP15** | 0.08 | 0.85 | 78.67 | 152.00 | -25.27 | -38.70 |
| | Bilateral exports, %-chg | | Total exports, %-chg | | Total imports, %-chg | |
| **RCEP-->RCEP** | 3.43 | 7.28 | 2.85 | 5.19 | 4.45 | 7.01 |
| **RCEP15-->RCEP15** | 7.64 | 11.21 | 2.95 | 5.30 | 5.03 | 7.88 |

RCEP15 = RCEP+China+Japan

### 4.2.7 EU-MERCOSUR

After 20 years of negotiations, on 28 June 2019, a political "agreement in principle" was reached between the EU and the four founding members of the Common Market of the South (Mercosur) – Argentina, Brazil, Paraguay, and Uruguay – on the trade pillar (free trade agreement (FTA)) as part of a wider Association Agreement (AA) including political dialogue and cooperation. The latter part was agreed upon in June 2018.

The EU-Mercosur FTA has a significant geopolitical relevance and is a strong sign against protectionism and unilateralism. If ratified, the FTA would establish the largest free trade zone the EU has ever created, covering a population of over 780 million, and consolidate the close political, economic, and cultural ties between the two regions. Negotiations on the bi-regional AA started in 2000 based on Council negotiating directives of 1999[27]. Currently, EU-Mercosur relations are governed by the 1995 Interregional Framework

[27] See: https://ec.europa.eu/trade/policy/in-focus/eu-mercosur-association-agreement/agreement-explained/

Cooperation Agreement. Once the final text has been translated into all official EU languages, it will - as it is a "mixed agreement" à la "New Generation" type FTA - require ratification at EU and Member State levels. The trade pillar, however, can be put into effect provisionally by the European Commission with the approval of the European Parliament.

Economically, the EU-Mercosur trade agreement is asymmetric. Mercosur is only the number 11 trade in goods partner for the EU (export/import shares: Argentina 0.3%/0.4%, Brazil 1.5%/1.4%, Paraguay 0%/0%, Uruguay 0.1%/0.1%; Mercosur 1.9%/1.9%)[28]. In 2019 the EU's exports to the four Mercosur countries totalled €41 billion while Mercosur's exports to the EU were €35.9 billion, resulting in a trade surplus of €5.4 billion in favour of the EU. For Mercosur, however, the EU is number one trade and investment partner. The EU is Mercosur's second biggest trade in goods partner after China, accounting for 17.1% of the bloc's total trade in 2019. Mercosur's biggest exports to the EU in 2019 were agricultural products, such as foodstuffs, beverages, and tobacco (21.2%), vegetable products including soya and coffee (17.4%) and meats and other animal products (6.5%). The EU's exports to Mercosur include machinery (28.6%), transport equipment (12.7% of total exports), chemicals and pharmaceutical products (24.2%). The EU exported €21 billion of services to Mercosur while Mercosur exported € 10 billion of services to the EU in 2018. The EU is the biggest foreign investor in the region, with an accumulated stock of investment that has gone up from €130 billion in 2000 to €365 billion in 2017. Mercosur is a major investor in the EU, with stocks of €52 billion in 2017.

The FTA would eliminate customs duties on 91% of EU goods exports to Mercosur. Mercosur would remove high import duties on industrial products from the EU such as cars, car parts, machinery, chemicals, clothing, pharmaceuticals, leather shoes, and textiles. Import duties on EU food and drink exports such as wine, chocolate, whiskey and other spirits, biscuits, canned peaches, and soft drinks would be eliminated progressively[29]. The FTA would also protect about 350 of the EU's geographical indications (GIs) on the Mercosur market. Moreover, the Mercosur countries would open their government procurement market to EU companies. The EU would remove import duties on 92% of Mercosur goods exported to the EU. For sensitive agricultural goods limited tariff rate quotas (TRQs), in-quota duties and long staging periods as well as a safeguard instrument have been incorporated. The FTA would contain a chapter on sanitary and phytosanitary (SPS) measures, trade and sustainable

[28] For the following trade statistics, see: https://ec.europa.eu/trade/policy/countries-and-regions/regions/mercosur/

[29] See: https://www.europarl.europa.eu/legislative-train/api/stages/report/current/theme/a-balanced-and-progressive-trade-policy-to-harness-globalisation/file/eu-mercosur-association-agreement; and: https://ec.europa.eu/trade/policy/in-focus/eu-mercosur-association-agreement/

development, bilateral safeguards, e-commerce, small and medium-sized enterprises (SMEs), dispute settlement, and others.

The "agreement in principle" is the result of compromises and hence it presents benefits and challenges. While it has been highly welcomed by many EU industrial associations and agricultural associations of the Mercosur countries, it has also prompted significant criticism. Some EU agricultural associations have been outspoken in their negative assessment of the FTA, including in terms of food security standards. This is mostly the case in EU Member States that could be affected by the envisaged liberalisation steps in favour of imports of highly competitive agricultural goods from Mercosur such as beef. Civil society groups have expressed their strong opposition to the FTA arguing that it would foster large-scale deforestation and an expansion of agricultural land in the Mercosur countries, which would be incompatible with the climate change goals under the Paris Agreement and would also have serious implications for indigenous people.

In June 2020, five NGOs submitted a complaint to the European Ombudsman criticising that the external sustainability impact assessment for the trade pillar negotiations was finalised only after the "agreement in principle" was reached and that it does not contain up-to-date environmental data, notably on deforestation.

Several EU members states oppose the FTA with the Mercosur: Austria, the Netherlands, and Wallonia in Belgium. Also, the agricultural lobby in France and Germany is strongly against this agreement. Like the Austrian Federal Government, German's Federal Environment Minister Svenja Schulze criticizes the environmental regulations of the planned EU treaty with Mercosur and calls for improvements and re-negotiations of the EU-Mercosur trade agreement. "One of the weaknesses of the agreement is that violations of environmental rules are not sanctioned as strictly as violations of trade rules." (see: DIE ZEIT online, 10 October 2020[30]).

As in the case of other FTAs of the "New Generation" type, the European Commission commissioned also in the case of the EU-Mercosur trade agreement a Sustainability Impact Assessment (SIA). The latest report was carried out by the London School of Economics (LSE, 2020) in July 2020[31]. The LSE study applies the dynamic GTAP model GDyn with the dataset of 2011 (GTAP-9). Two scenarios are simulated, a conservative scenario and an ambitious scenario (LSE, 2020, p. 25). In both scenarios, on the EU side full liberalisation for all industrial goods sectors is assumed. For Mercosur they assume full liberalisation of 90% of

[30] https://www.zeit.de/politik/ausland/2020-10/eu-mercosur-abkommen-svenja-schulze-spd-amazonas-abholzung-nachverhandlungen

[31] For a review of previous literature on the topic EU-Mercosur FTA, see LSE (2020), pp. 26-30.

industrial goods in the conservative scenario, 100% in the ambitious scenario. As regards agricultural goods, for the EU, partial tariff cuts will apply for rice, sugar, ruminant meat, other meat of 15% in the conservative scenario and 30% in the ambitious scenario. For cereals and dairy, a partial tariff cut of 15% will apply in the conservative scenario, whereas 100% cuts will apply in the ambitious scenario. For the remaining products, 100% tariff cuts would apply. For Mercosur, full liberalisation for 80% of tariff lines takes place under the conservative scenario and 100% under the ambitious scenario. The "agreement in principle" corresponds more to the ambitious scenario of the LSE study.

In the conservative scenario, GDP in the EU expands by 10.9 billion Euros (0.1%) and in Mercosur by 7.4 billion Euros (0.3%) by 2032, in comparison to the modelling baseline without the FTA. In the ambitious scenario, GDP in the EU expands by 15 billion Euros (0.1%) and in Mercosur by 11.4 billion Euros (or +0.5%; LSE, 2020, pp. 31-36). Reiter and Grübler (2020, p. 34) with a structural gravity model estimate that the EU-Mercosur trade agreement would result in higher welfare gains in Mercosur than in the EU. Accordingly, real GDP would increase by 0.12% in Germany, 0.13% in Austria, and faster in the Mercosur countries: Argentina +0.17%, Brazil +0.16%, Paraguay +0.29% and Uruguay +0.30%.

According to LSE (2020), EU's total exports to the world (extra-EU) would expand by 0.4% in the conservative scenario and by 0.6% in the ambitious scenario. In Mercosur, total exports to the world expand by between 0.5% in Paraguay and 4.5% in Brazil in the conservative scenario and by between 0.7% in Uruguay and 6.1% in Brazil in the ambitious scenario. EU imports increase by 0.9% (1.1% in the ambitious scenario). In Mercosur, imports expand between 0.1% in Paraguay and 1.3% in Brazil in the conservative scenario and by between 0.0% in Paraguay and 1.4% in Brazil in the ambitious scenario.

**Table 9:** The impact of zero tariffs and subsidies in EU-Mercosur

| | Real GDP %-chg | | Welfare: USD change pc | | Current account, chg, Bio$ | |
|---|---|---|---|---|---|---|
| | Armington | Melitz | Armington | Melitz | Armington | Melitz |
| **EU27** | **0.05** | **0.18** | **23.45** | **55.80** | -2.30 | -15.60 |
| **MERCOSUR** | 0.02 | 0.10 | 12.82 | 4.59 | -11.48 | -6.54 |
| | Bilateral exports, %-chg | | Total exports, %-chg | | Total imports, %-chg | |
| **EU27**-->Mercosur | 53.00 | 37.39 | 0.27 | 0.53 | 0.41 | 0.83 |
| **Mercosur**-->EU27 | 52.22 | 40.88 | 3.63 | 5.88 | 6.28 | 7.51 |

Our simulations assume a maximum liberalization of all goods and hence, are more comparable to LSE's ambitious scenario. We simulate the impact of zero tariffs and subsidies. In contrast to LSE, in our simulations the EU27 would gain more (in terms of real GDP and Welfare) than Mercosur. Bilateral exports would increase in quite similar dimensions (see

Table 9). The EU-Mercosur FTA, however, would increase total trade more in the Mercosur countries than in EU27. All third countries would be negatively affected by trade diversion (see Table A9 in the Appendix).

### 4.2.8 EFTA-MERCOSUR

On 23 August 2019, Member States of the European Free Trade Association (Iceland, Liechtenstein, Norway, and Switzerland) and of Mercosur (Argentina, Brazil, Paraguay, and Uruguay) concluded in substance the negotiations on a comprehensive Free Trade Agreement[32]. As a comprehensive and broad-based Free Trade Agreement, the EFTA-Mercosur Agreement covers trade in goods, trade in services, investment, intellectual property rights, government procurement, competition, trade and sustainable development, legal and horizontal issues including dispute settlement.

Mercosur is an interesting trading partner for EFTA and will allow EFTA companies to benefit from privileged access to a market of over 260 million consumers. Current EFTA bilateral trade in goods with Mercosur totalled €5,8 billion in 2018, with EFTA exports worth €3,7 billion and Mercosur imports for €2,1 billion. Thus, the new Free Trade Agreement will allow EFTA exporters to gain from progressive tariff cuts and ensure a level playing field with its main competitors in this important market.

Negotiations towards the comprehensive Free Trade Agreement were preceded by a Joint Declaration on Cooperation, signed in December 2000, under which an exploratory dialogue with a view to possible future trade negotiations was initiated in March 2015 and concluded in January 2017. This was followed by the launch of negotiations with a first round in June 2017 in Buenos Aires, Argentina. Since then, 9 rounds of negotiations were held.

Due to the COVID-19 crisis, the process of coordinating an agreement about the final text of the EFTA-Mercosur FTA has been delayed (see Neue Zürcher Zeitung, 27.08.2020, p. 1). This FTA may come into effect only in 2021. In the medium-term, with this agreement almost 95 Percent of Swiss exports to the Countries Argentina, Brazil, Uruguay, and Paraguay should become duty-free.

Our simulation with a maximum liberalization scenario would result in gains only for the EFTA (see Table 10). However, bilateral trade would improve considerably. Overall, trade between EFTA and Mercosur is negligible because it amounts only to 1.3% of both parties's total trade. Therefore, also the losses for third countries are minimal (see Table A10 in the Appendix).

[32] See: https://www.efta.int/free-trade/ongoing-negotiations-talks/mercosur

**Table 10:** The impact of zero tariffs and subsidies in EFTA-Mercosur

| | Real GDP %-chg | | Welfare: USD change pc | | Current account, chg, Bio$ | |
|---|---|---|---|---|---|---|
| | Armington | Melitz | Armington | Melitz | Armington | Melitz |
| **EFTA** | **0.01** | **0.14** | **40.57** | **86.92** | **-0.30** | -0.75 |
| **MERCOSUR** | 0.00 | 0.00 | -0.61 | -0.87 | -0.46 | **-0.36** |
| | Bilateral exports, %-chg | | Total exports, %-chg | | Total imports, %-chg | |
| **EFTA**-->Mercosur | 48.61 | 30.45 | 0.13 | 0.49 | 0.32 | 0.63 |
| **Mercosur**-->EFTA | 26.65 | 16.19 | 0.24 | 0.29 | 0.26 | 0.29 |

### 4.2.9 TTIP light

The United States are for EU27 the most important trading partner. In 2019, EU27 exported goods to the USA amounting to 384 bn EUR (or 18% of total EU27 exports) and imported from the USA goods worth 232 bn EUR (a share of 12% of total EU27 imports), resulting in a trade surplus of 152.5 bn EUR. In 2018, the EU27 imported more services (196.2 bn EUR) from the USA than it exported services to the USA (179.4 bn EUR), resulting in a services trade deficit of -16.8 bn EUR. US firms invested less in the EU (FDI stocks: 1806 bn EUR) than the EU firms invested directly in the USA (2181.42 bn EUR), giving a positive FDI balance of -375.4 bn EUR[33].

**Box 3: The failed TTIP**

*Negotiations for TTIP*

After many years of approaches towards a free trade agreement with the United States of America, in 2013 the EU embarked into negotiations on the Transatlantic Trade and Investment Partnership (TTIP), the most comprehensive and ambitious "New Generation" trade agreement. The steps for more trade integration between the two parties have already been taken earlier. At the EU-US Summit in Washington, 30 April 2007 a "Framework for Advancing Transatlantic Integration between the European Union and the United States of America" has been proposed. For this purpose, a Transatlantic Economic Council was set up[1]. The TTIP project failed for various reasons. On the European side because of massive critiques by NGOs and the public (especially in Germany and Austria) and on the US side because the newly elected president Trump cancelled the TTIP negotiations. A new attempt is being made for a follower agreement.

TPP (Trans-Pacific Partnership) suffered the same fate as TTIP. On 24 January 2017, Trump declared that the USA would withdraw from the TPP negotiations. Without the USA, the remaining 11 partners substituted this agreement by naming in CPTTP (Comprehensive and Progressive Agreement for Trans-Pacific-Partnership).

[1] See: See: https://ec.europa.eu/trade/policy/countries-and-regions/countries/united-states/

[33] See: https://ec.europa.eu/trade/policy/countries-and-regions/countries/united-states/

**Box 3** ***(continued)***

On 17 June 2013, the European Council gave the European Commission the mandate for negotiations on the TTIP between the European Union and the United States of America[2]. Like CETA, it should be a progressive "New Generation" FTA.

The Agreement should exclusively contain provisions on trade and trade-related areas applicable (*market access*) between the Parties. It should confirm that the transatlantic trade and investment partnership (*investment protection*) is based on common values, including the protection and promotion of human rights and international security. It should be ambitious, comprehensive, balanced, and fully consistent with World Trade Organisation (WTO) rules and obligations. It should provide for the reciprocal *liberalisation of trade in goods* (tariff cuts) and *services* as well as rules on trade-related issues (NTBs), with a high level of ambition going beyond existing WTO commitments. Also, *public procurement* should be opened by both Parties. The obligations of the Agreement should be binding on all levels of government.

After seven years of negotiations, the TTIP negotiations ended without conclusion at the end of 2016. After the announcement of US president Donald Trump that the TTIP negotiations will no longer be pursued on 24 January 2017, the European Council in a decision of 15 April 2019 states that the negotiating directives for the TTIP are obsolete and no longer relevant[3].

*A lot of studies, thanks to Trump for the trash*

TTIP was certainly the most analysed regional FTA. After Trump's stop of TTIP, it seems that the enormous efforts put in TTIP studies was pure waste of time! Different methodology (CGE models, structural gravity trade model, models based on the new quantitative trade models – NQTM[4]) were applied and with a variety of assumptions concerning the content of the agreement (elimination of tariffs and NTBs; investment liberalizations) these studies tried to quantify an FTA which was never finished[5].

Before the TTIP negotiations started, ECORYS (2009b) estimated the potential welfare effects of a TTIP comprising tariff reductions and eliminations of NTBs. Accordingly, real GDP would increase up to 2018 by 0.32-0.72 percentage points in the EU and by 0.13-0.28 percentage points in the USA. However, trade increase would be higher in the USA. Erixon and Bauer (2010) come already to the opposite conclusion, namely, that the USA (0.15-1.33 pp) would gain more real GDP than the EU (0.01-0.47 pp). Nevertheless, trade increase is seen higher in the EU. In the following years, many other studies with different methodology came to similar divergent results. Studies with a certain proximity to the EU found that the EU would be the winner:

Francois et al. (2013) found that the EU could increase real GDP in the long run by 0.10-0.48 pp, whereas the USA would gain only by 0.04-0.39 pp. Fontagné et al. (2013) find that both partners of TTIP will gain the same amount of real GDP, namely 0.00-0.05 pp in the long run. In contrast, studies by ifo see the USA always in the lead.

[2] See: https://data.consilium.europa.eu/doc/document/ST-11103-2013-DCL-1/en/pdf

[3] See the Website of the European Commission: https://ec.europa.eu/trade/policy/in-focus/ttip/. "EU negotiating texts in TTIP" can be found on the website: ttps://trade.ec.europa.eu/doclib/press/index.cfm?id=1230

[4] The ifo trade model is based on Costinot et al. (2014); see Felbermayr et al. (2018).

[5] For an overview, see Breuss (2014).

**Box 3** ***(continued)***

Felbermayr et al. (2013) estimated with the ifo trade model that real GDP will increase in the long run by 0.35-4.82 pp in the USA and by 0.42-1.14 pp in the EU. Similar results are found by Aichele et al (2014), namely an increase of real GDP by 3.58 pp in the USA and by 2.60 pp in the EU. Also, Felbermayr and Kohler (2015) estimate that the USA (+2.68 pp) would gain more real GDP than the EU (+2.12 pp) in the long run. Anderson et al (2015) with a dynamic gravity model with capital accumulation again see the USA (capital increase after 20 years by 9.9 pp.) in front of EU countries (e.g. Germany would increase its capital stock by 7.8 pp in the same time). In all these studies where the USA gains more welfare than the EU, also the trade increase is higher in the USA.

In all studies, the third countries are the losers form TTIP, both in terms of welfare and trade. Whereas bilateral US-EU trade would increase by 80% in the study by Felbermayr et al. (2013), intra-EU trade would suffer from TTIP. E.g., trade between Germany and the EU would shrink by 30%. In Anderson et al. (2015) total trade of the USA would increase by 24.6% after 20 years, those of Germany only by 10.3%. One of the last great TTIP study is those of Egger et al. (2015, p. 563) which prominently consider the impact of the elimination of NTB hurdles between the USA and the EU. This study sees the EU with an increase of 2.27% of real income as the winner, whereas the USA could stimulate real income only by 0.97%.

A great outlier of the armada of TTIP studies is those of Capaldo (2014) carried out with the United Nations Global Policy Model (GPM). Accordingly, only the USA would profit from TTIP in the long run by a cumulative increase of real GDP by 0.36 pp in 2025. In contrast, all EU countries would lose from TTIP: Germany -0.29%, France – 0.48%. Net exports would only increase in the USA but decline in the EU countries. Similarly, are the prospects for jobs: the USA wins 784.000, the EU would lose 583.000. Given this rather implausible results it is not understandable why the EU pushed the finalization of TTIP whereas Trump's USA refused to profit from this welfare gift.

Although TTIP is dead, the US trade representative is still interested in a post-TTIP arrangement. Before this happens, the Europeans are confronted with more protectionism. Trump introduced tariffs on Aluminium and Steel (see Breuss and Christen, 2019). Further threats on taxing car imports from Europe have announced. Only the visit of EU Commission President Jean-Claude Juncker to President Trump on July 25, 2018 resulted in a pause of the US-EU trade conflicts when they agreed on starting negotiations for a new bilateral trade deal. In the meantime, Juncker offered Trump to buy more soya beans and liquefied natural gas.

On April 15, 2019, the European Council gave the European Commission a mandate for new trade negotiations with the USA. This "FTA-light" aims at liberalising industrial goods only. The USA, however, still insist on including the agricultural sector in the trade talks which makes speedy progress unlikely. After one year of EU-US trade talks progress has been made in some areas. In a "Joint Statement of the United States and the European Union on a

Tariff Agreement" as of 21 August 2020[34] United States Trade Representative Robert Lighthizer and European Union Trade Commissioner Phil Hogan announced an agreement on a package of tariff reductions that will increase market access for hundreds of millions of dollars in U.S. and EU exports (e.g. frozen lobster). These tariff reductions are the first U.S.-EU negotiated reductions in duties in more than two decades. The EU will eliminate these tariffs on a Most Favoured Nation (MFN) basis, retroactive to begin 1 August 2020. The EU tariffs will be eliminated for a period of five years and the European Commission will promptly initiate procedures aimed at making the tariff changes permanent. The United States will reduce by 50% its tariff rates on certain products exported by the EU worth an average annual trade value of $160 million, including certain prepared meals, certain crystal glassware, surface preparations, propellant powders, cigarette lighters and lighter parts. The U.S. tariff reductions will also be made on an MFN basis and retroactive to begin 1 August 2020. All these steps could lead to a more comprehensive trade deal EU-USA in the near future. We call it "TTIP light".

In our first TTIP light simulation with the maximum liberalization scenario - zero tariffs and subsidies - results in modest GDP and welfare gains (see Table 11a). In the Melitz version the trade gains are nearly the same for the EU27 (+0.04%) and for the USA (+0.05%). The welfare gains are higher in the USA. Both partners can expect a deterioration of the current account, stronger in the USA. Bilateral exports increase similarly in the USA (+6.2%) and in the EU27 (+5.1%). Total exports and imports are nearly unchanged in the EU but increase somewhat in the USA. Both parties are of similar size (population in million: EU27 443, USA 319), but the US trade more with EU27 (export share 20.6%) than EU27 with the USA (15.4%). Most of the third countries of a TTIP light lose – although in a small dimension - welfare and trade (see Table A11a in the Appendix).

**Table 11a:** The impact of zero tariffs and subsidies in a TTIP light

| | Real GDP %-chg | | Welfare: USD change pc | | Current account, chg, Bio$ | |
|---|---|---|---|---|---|---|
| | Armington | Melitz | Armington | Melitz | Armington | Melitz |
| **EU27** | 0.01 | 0.04 | 5.94 | 13.50 | **-2.10** | **-3.63** |
| **USA** | **0.00** | **0.05** | **20.31** | **23.45** | -12.01 | -13.16 |
| | Bilateral exports, %-chg | | Total exports, %-chg | | Total imports, %-chg | |
| **EU27**-->USA | 6.74 | 5.11 | 0.14 | 0.27 | 0.20 | 0.33 |
| **USA**-->EU27 | 8.35 | 6.16 | 0.00 | 0.90 | 1.16 | 1.16 |

[34] See the Website of the European Commission: https://trade.ec.europa.eu/doclib/press/index.cfm?id=2178

With TTIP, many NTBs would have been eliminated or adjusted. As it is unknown how NTBs would be dealt with in a TTIP light we make our standard assumption: cut of 50% of the existing NTBs. We refer to the estimated NTBs between the USA and the EU by Egger et al. (2015, p. 559) Taking all liberalization steps together (zero tariffs and subsidies plus 50% cut of NTs) the results of Table 11b show that in both versions (Armington and Melitz), real GDP would increase in the USA between 1.9% and 3.9%, but in the EU27 only between 0.05% and 0.06%. The United States would considerably improve their welfare. The current account in the USA would deteriorate, whereas it improves in the EU27. The EU27 could increase bilateral exports to the USA (+38%) at a higher rate than the USA to the EU27 (+24%). The strong import increase in the USA explains the deterioration in the current account. The strong trade creation between the two parties are contrasted with trade diversion vis à vis third countries. The UK and EFTA would suffer the most (see Table A11b in the Appendix).

**Table 11b:** The impact of zero tariffs and subsidies plus 50% cut of NTBs in a TTIP light

| | Real GDP %-chg | | Welfare: USD change pc | | Current account, chg, Bio$ | |
|---|---|---|---|---|---|---|
| | Armington | Melitz | Armington | Melitz | Armington | Melitz |
| **EU27** | 0.05 | 0.06 | 32.90 | 41.36 | **25.28** | **62.32** |
| **USA** | **1.92** | **3.89** | **1176.23** | **1909.65** | -210.16 | -396.12 |
| | Bilateral exports, %-chg | | Total exports, %-chg | | Total imports, %-chg | |
| **EU27**-->USA | 40.42 | 37.96 | 1.19 | 2.39 | 0.99 | 1.48 |
| **USA**-->EU27 | 31.44 | 24.00 | -1.49 | -0.50 | 9.06 | 12.43 |

## 5. Global Free Trade vs Trade Wars

Global free trade under WTO rules would be the first best solution for the world. Due to several impediments the Doha Round negotiations, starting in November 2001 were unable until today, to conclude with further worldwide liberalization steps like those of the Uruguay Round in 1995. Therefore, a boom of regional FTAs must service as a substitute. Although – as discussed earlier – this strategy is only a second-best solution.

### *5.1 Global Free Trade under WTO rules*

A full global liberalization with zero tariffs and subsidies would result in the highest gains in GDP, welfare (see Table 12) and trade (see Table 13). The gains, however, are not distributed evenly between the 164 WTO member states. Our regional aggregation shows that China, Japan and the EU27 would be the greatest profiteers of a global free trade constellation. Although the United States would belong to the losers, this scenario would reduce their chronic current account deficit considerably.

**Table 12:** The impact of global free trade (zero tariffs and subsidies) under WTO rules: Real GDP, Welfare, and Current account

| | Real GDP %-chg | | Welfare: USD change pc | | Current account, chg Bio$ | |
|---|---|---|---|---|---|---|
| | Armington | Melitz | Armington | Melitz | Armington | Melitz |
| EU27 | 0.20 | 1.18 | 234.35 | 504.51 | 2.70 | -133.05 |
| UK | 0.16 | 0.85 | 87.51 | 423.68 | 10.90 | -18.61 |
| USA | 0.01 | -0.71 | -50.90 | 1669.62 | **105.18** | **522.89** |
| Canada | 0.01 | -0.77 | -26.78 | 68.14 | 11.50 | 18.90 |
| China | **0.54** | **2.96** | 38.08 | 164.00 | -46.46 | -129.83 |
| Japan | 0.17 | 1.82 | **303.05** | **727.52** | -11.33 | -77.63 |
| MERCOSUR | 0.11 | 0.16 | 12.82 | 15.72 | -12.82 | -16.35 |
| **World** | 0.19 | 0.87 | 17.88 | 170.62 | 0.00 | 0.00 |
| EFTA | -0.01 | 0.31 | -550.53 | -27.06 | 5.21 | 3.44 |
| Mexcico | 0.12 | -0.16 | -25.39 | -12.42 | 10.37 | 11.06 |
| ROW | 0.22 | 0.94 | -13.55 | 22.60 | -60.56 | -139.50 |
| AfCFTA | 0.27 | 0.90 | -14.65 | 5.58 | -2.88 | -27.32 |
| RCEP | 0.35 | 2.73 | 23.35 | 171.88 | -25.57 | -106.49 |
| CPTPP | 0.05 | -0.67 | -10.35 | 46.99 | 5.13 | 27.77 |

These results are the arithmetic average of the simulations A, B and C, mentioned in Table A1 in the Appendix.

**Table 13:** The impact of global free trade (zero tariffs and subsidies) under WTO rules: Exports and Imports

| | Total exports, %-chg | | Total imports, %-chg | |
|---|---|---|---|---|
| | Armington | Melitz | Armington | Melitz |
| EU27 | 0.58 | 1.13 | 1.58 | 4.22 |
| UK | 2.40 | 2.73 | 1.48 | 5.97 |
| USA | 4.82 | **18.60** | 0.84 | -0.54 |
| Canada | 1.16 | -0.08 | -0.10 | 1.39 |
| China | 8.20 | 13.78 | 11.90 | 20.68 |
| Japan | 1.61 | 5.41 | 5.37 | 14.26 |
| MERCOSUR | 10.84 | 15.49 | **12.38** | **20.71** |
| **World** | 4.42 | 7.76 | 4.79 | 8.90 |
| EFTA | 2.74 | 4.05 | 0.85 | 4.14 |
| Mexcico | 3.00 | 3.99 | -0.13 | 2.28 |
| ROW | 11.85 | 16.00 | 12.06 | 19.13 |
| AfCFTA | **12.25** | 15.20 | 9.31 | 18.03 |
| RCEP | 5.65 | 11.52 | 7.93 | 20.26 |
| CPTPP | 1.76 | 1.80 | 1.61 | 3.90 |

These results are the arithmetic average of the simulations A, B and C, mentioned in Table A1 in the Appendix.

## *5.2 The US-China Trade War*

Since the Great Recession of 2009 trade restrictive measures have generally increased (see Breuss and Christen, 2019). China (37 barriers) leads in the Report on Trade and Investment Barriers of the European Commission (2019), followed by Russia (34), India (25), Indonesia (25) and the USA (23).

When President Donald Trump took office on January 20, 2017 the US trade policy became dramatically more aggressive. With the slogans "Make America Great Again" and "America First" and his focus on trade deficits he embarked on a trade policy which very quickly led to trade wars. Instead of relying on multilateral cooperation within the framework of the WTO, he is playing a very dangerous non-cooperative game against almost all trading partners with whom the USA have a trade deficit (Breuss, 2018). The US-China trade conflict is not just about unfair trade practices (resulting in trade and current account imbalances), but also about the battle for IT supremacy. Therefore, the trade war is not only fought with tariffs, but also with various other types of protective measures like export restrictions (bans on exports to Chinese IT companies such as Huawei) or the prohibition of collaborations between US and Chines firms (see Breuss and Christen, 2019, p. 13).

Although, both the EU and China seem to be the greatest enemies of the USA, China's importance for the US foreign trade in goods is not overwhelming. The USA trade more with the EU (export share of 19%) and with its neighbours in the NAFTA (Canada, 18%; Mexico 16%) than with China (7%). On the other hand, China trades more with the USA (19%) than with the EU (7%).

Starting in 2018 and in addition to the underlying MFN tariffs on imports the Trump administration imposed five sets of tariffs (Breuss and Christen, 2019, pp. 3-4)[35]:

- Under Section 201 of the Trade Act of 1974, safeguard tariffs of 30% on imports of solar panels and of 20% on washing machines in January 2018.
- Under national security grounds (Section 232 of the Trade Expansion Act of 1962), Trump applied tariffs of 25% on steel and 10% on aluminium in March 2018.
- Under unfair trade practices (Section 301 of the Trade Act of 1974) the USA imposed tariffs of 25% on specific Chinese products (machinery, mechanical and electrical equipment) in July 2018. Between December 2018 and May 2019 both Presidents of the USA and China agreed to negotiate on trade concerns and temporarily paused the introduction of a new set of tariffs. In May 2019, however, the US-China trade war escalated further as Trump raised the tariff rate from 10% to 25% and in response

[35] For an up-date of US-China trade war issues, see: Bown and Kolb (2020).

China increased retaliatory tariffs up to 25%. In total US tariff actions against China under Section 301 sum up to $ 250 bn (or 46% of total US imports from China), while China imposed retaliatory tariffs on US goods covering $ 110 bn (or 70.3% of total imports from the US).

On 15 January 2020, US President Donald Trump and the Chinese Vice Premier Liu He signed an "Economic and Trade Agreement" (ETA), usually referred to as the Phase-I-Deal. On 14 February 2020 it went into effect. China agreed to expand purchases of certain US goods and services by a combined $200 billion over 2020 and 2021 from 2017 levels. The ETA does not mention tariffs at all. Itis a highly asymmetric treaty which commits China to open its markets and to purchase large quantities of US products in order for the US to refrain from imposing additional punitive tariffs[36]. While the ETA contains provisions that will also benefit producers from third countries, it is highly discriminatory in the area of goods trade. The Phase-I-Deal roughly requires Chinese imports of certain US goods to increase by about 95 bn USD (or +48%) in 2021 relative to the 2017 baseline. This amounts to a doubling of imports of these goods from the USA. Compared to a 2021 benchmark without a US-China trade war and without the ETA, the EU is likely to lose about 11 bn USD (or -5%) in exports to China; this is about a sixth of the overall trade diversion caused by the ETA. According to Bown's (2020) US-China phase-I tracker, so far in 2020, China's purchases of all covered products were only at 50 percent (US exports) or 49 percent (Chinese imports) of their year-to-date targets.

The largest negative effects for the EU are expected in aircraft, vehicles, industrial machinery, optical and medical machinery, pharmaceuticals, and other agricultural goods. The country in the EU most strongly affected by the possible trade diversion effects is Germany. The ETA is very unlikely to be compatible with WTO law, because it violates the most-favoured nations principle and engages in managed trade. By signing up to this agreement, both parties seriously undermine the multilateral trading system.

Our simulations assume a maximum scenario with 25% extra tariff on all bilateral Imports (USA vs China). China is the bigger loser in this trade war (see Table 14)[37]. Bilateral trade would shrink by around 70%. The United States could draw as the only advantage an improvement in its current account deficit with China. The US-China trade war would, however, lead to positive trade diversion to third countries (see Table A12 in the Appendix).

[36] See Chowdhry and Felbermayr (2020).
[37] For similar simulations of the US-China trade war, see Breuss and Christen (2019)

**Table 14:** The impact of the US-China Trade War

| | Real GDP %-chg | | Welfare: USD change pc | | Current account, chg, Bio$ | |
|---|---|---|---|---|---|---|
| | Armington | Melitz | Armington | Melitz | Armington | Melitz |
| **USA** | **-0.24** | **-0.36** | -187.86 | **-116.11** | **86.12** | 53.47 |
| **China** | -0.45 | -1.64 | **-64.66** | -124.19 | 34.18 | **60.88** |
| | Bilateral exports, %-chg | | Total exports, %-chg | | Total imports, %-chg | |
| **USA**-->China | -70.59 | -68.39 | -3.69 | -7.54 | -8.06 | -7.47 |
| **China**-->USA | -71.18 | -61.59 | -3.27 | -7.29 | -8.38 | -10.97 |

25% extra tariffs on all imports.

## 6. Summing-up: Who profits most from pro-globalization?

The implementation of the nine regional FTAs analysed above is an alternative strategy to foster globalization in times of the COVID-19 crisis. It is, however, only a second-best solution and a substitute for the first-best solution of a global free trade solution. Because the Doha Round negotiations stall, only the FTA solution remains, if one is willing to advance globalization and not turn it back.

The starting hypothesis was that the country that has the most overlaps from the FTAs should be the winner. We consider in this comparison only the results of zero tariffs and subsidies because NTB scenarios are only carried out four CETA, EU-Japan and USA-Japan and TTIP-light trade agreements. Japan and EU27 have both four overlaps (see Table A2 in the Appendix). Nevertheless, Japan is the overall winner.

The EU27 which has also four overlaps, however, would gain only welfare but rarely more GDP from the implementation of all nine FTAs (see Table 15). The EU27 can expect the biggest GDP gains only from the controversial EU-Mercosur trade agreement. China (and RCEP) would be the second-best performer when all nine FTAs would come into effect simultaneously.

The United States are besides the UK (as long as it does not conclude FTAs similar to those of the EU27) lose from globalization via FTAs. But as we saw from the global free trade scenario (Table 12) the UK would benefit from global liberalization, but not the United States. This may explain the hesitant attitude of the Trump administration vis à vis a further multilateralization of world trade. Given the ongoing US-China trade war, the results are even worse for the USA. If one adds the impact of the US-China trade ware to the results of the nine FTAs, China will lose three times more than the United States (see Table 16). The only positive effect for the United States would be a considerable improvement of the current account balance.

**Table 15:** Summing-up: The impact of nine FTAs when all are in effect simultaneously

| | Real GDP %-chg | | Welfare: USD change pc | | Current account, chg Bio$ | |
|---|---|---|---|---|---|---|
| | Armington | Melitz | Armington | Melitz | Armington | Melitz |
| EU27 | 0.03 | -0.10 | 4.60 | 17.72 | 15.79 | 24.79 |
| UK | -0.03 | -0.24 | -54.52 | -70.15 | 9.05 | 12.61 |
| USA | -0.01 | -0.09 | -24.06 | -14.89 | 26.46 | 43.42 |
| Canada | -0.01 | -0.12 | -6.24 | 7.99 | 1.17 | 5.56 |
| China | 0.09 | 0.43 | -4.51 | 21.38 | -12.43 | -13.39 |
| Japan | **0.15** | **1.78** | **271.10** | **545.96** | -32.76 | -75.24 |
| MERCOSUR | -0.02 | -0.06 | -0.38 | -10.66 | -5.46 | 1.04 |
| **World** | 0.02 | 0.16 | 2.16 | 17.41 | 0.00 | 0.00 |
| EFTA | -0.02 | -0.35 | -45.14 | -48.66 | 20.65 | 38.23 |
| Mexcico | -0.02 | -0.18 | -31.42 | -35.98 | 4.45 | 6.74 |
| ROW | -0.03 | -0.25 | -6.64 | -8.44 | **30.01** | **44.33** |
| CPTPP | 0.02 | 0.09 | 14.29 | 15.03 | -2.98 | -0.43 |
| AfCFTA | 0.00 | 0.37 | 1.79 | 7.54 | -4.54 | -6.06 |
| RCEP | 0.06 | 0.97 | 21.56 | 68.06 | -25.95 | -38.98 |

**Table 16:** The impact of nine FTAs when all are in effect plus US-China trade war

| | Real GDP %-chg | | Welfare: USD change pc | | Current account, chg Bio$ | |
|---|---|---|---|---|---|---|
| | Armington | Melitz | Armington | Melitz | Armington | Melitz |
| EU27 | 0.07 | 0.03 | 47.34 | 56.60 | -13.52 | -9.64 |
| UK | 0.02 | -0.11 | 13.25 | -25.74 | 0.46 | 4.50 |
| USA | -0.25 | -0.44 | -211.92 | -130.99 | **112.57** | **96.90** |
| Canada | 0.10 | 0.32 | 283.36 | 187.74 | -14.74 | -7.23 |
| China | -0.36 | -1.20 | -69.17 | -102.81 | 21.75 | 47.49 |
| Japan | **0.17** | **1.91** | **328.57** | **579.01** | -46.52 | -88.44 |
| MERCOSUR | 0.03 | 0.07 | 15.43 | 1.31 | -12.08 | -5.12 |
| **World** | -0.07 | -0.04 | -6.42 | -3.41 | 0.00 | 0.00 |
| EFTA | -0.01 | -0.30 | -5.23 | -32.96 | 19.13 | 36.47 |
| Mexcico | 0.03 | 0.23 | 38.07 | 6.66 | -6.48 | -0.30 |
| ROW | 0.00 | -0.14 | 0.41 | -4.82 | -3.64 | 13.49 |

## 7. Conclusions

This analysis was an attempt to offer a counter strategy to the anti-globalization and de-growth mood that had flared up again since the COVID-19 crisis. Of course, it makes sense to shrink some value-added chains of medical products (mouth and nose mask) which are urgently needed in case of a pandemic. All international forecasts expect for the year 2020 the deepest slump in economic activity since the Great Depression. All countries which can afford it, run a super-Keynesian fiscal policy in the crisis, which is accompanied by an extremely expansionary monetary policy in the United States (Fed) and in the Eurozone (ECB). The fiscal policy without limit leads to an unsustainable public debt problem if it does continue.

As a third policy instrument besides fiscal and monetary policy, an aggressive pro-globalization trade policy could relieve and strengthen the crisis macro policy. To demonstrate which options are available we analyze nine mega free trade agreements (FTAs), some of them are already in effect, others will be enacted soon. As mentioned earlier, FTAs are only a second-best solution, but an important alternative to the first-best solution of global liberalization of trade via the WTO. Since 2001 the WTO was not able to bring the Doha Round to a successful end.

Overall, not the big players in world trade, the EU and the United States are the winners of a simultaneous implementation of the nine FTAs. Japan would be the winner because it participates in four combinations (overlaps) of FTAs: EU-Japan, USA-Japan, CPTPP and RCEP. The United States hardly gains from further globalization. Similarly, the EU27 cannot profit much from further globalization.

## 8. References


Aichele, R., Felbermayr, G. (2014), "CETA: Welche Effekte hat das EU-Kanada-Freihandelsabkommen auf Deutschland?", ifo Schnelldienst 24/2014 – 67. Jahrgang – 22. Dezember 2014.

Aichele, R. Felbermayr, G., Heiland, I. (2014): *Gains from Deep Trade Integration: The Case of the Transatlantic Trade and In-vestment Partnership*, Vortrag im FIW Seminar in International Economics, Wien, 17. September 2014.

Anderson, J.E., Larch, M., Yotov, Y.V. (2015), On the Effects of the Transatlantic Trade and Investment Partnership on Trade and Capital Accumulation, unpublished paper, University of Bayreuth, August 28, 2015.

Armington, P. S. (1969), "A Theory of Demand for Products Distinguished by Place of Production", International Monetary Fund, Staff Papers, 16, 1969, 159–178.

Bhagwati, J. N., (1995), "US Trade Policy: The Infatuation with FTAs", Columbia University, Discussion Paper Series, No. 726, April 1995.

Bown, Ch.P. (2020), "US-China phase one tracker: China's purchase of US goods", PIIE: Peterson Institute for International Economics, 6 October 2020.

Bown, Ch.P. and Kolb, M. (2020), "Trump's Trade War Timeline: An Up-to Date Guide", PIIE: Peterson Institute for International Economics, 28 September 2020.

Breuss, F. (2014), „TTIP und ihre Auswirkungen auf Österreich", FIW Policy Brief, Nr. 24, November 2014.

Breuss, F. (2018), "Trumps Handelspolitik – ein gefährliches nicht-kooperatives Spiel", ifo Schnelldienst, 71(11), 10-13.

Breuss, F. and Christen, E. (2019), "Trump's Trade Wars. Implications for the EU and China", WIFO Policy Brief, August 2019.

Britz, W. (2019), CGEBox—a flexible and modular toolkit for CGE modelling with a GUI, University of Bonn, Bonn. https://www.ilr.uni-bonn.de/em/rsrch/cgebox/cgebox_GUI.pdf. November 2019. Website: CGEBox, a CGE toolbox with a Graphical User Interface. https://www.ilr.uni-bonn.de/em/rsrch/cgebox/cgebox_e.htm

Britz, W. and Van der Mensbrugghe, D. (2018), "CGEBox: A Flexible, Modular and Extendable Framework for CGE Analysis in GAMS", Journal of Global Economic Analysis, Vol. 3, 2018, No. 2, 106-177.

Capaldo, J. (2014), "The Trans-Atlantic Trade and Investment Partnership: European Disintegration, Unemployment and Instability", *Global Development and Environment Institute Working Paper* No. 14-03, Tufts University, Medford MA, USA, October 2014.

Chowdhry, S., Felbermayr, G. (2020), "The US-China Phase-I Deal: How the EU and WTO lose from managed trade", EU Trade and Investment Policy ITN (EUTIP) and Kiel Institute for the World Economy (Kiel Institute), 21 January 2020.

Copenhagen Economics (2009), "Assessment of Barriers to Trade and Investment between the Eu and Japan", Report prepared for the European Commission, DG Trade.

Costinot, A., Rodriguez-Clare, A. (2014), "Trade Theory with Numbers: Quantifying the Consequences of Globalization," in G. Gopinath, E. Helpman, and K. Rogoff (eds.), Handbook of International Economics, Vol. 4, Elsevier, 2014, chapter 4,pp. 197–261.

Development Solutions Europe (DS) (2011), A Trade SIA Relating to the Negotiation of a Comprehensive Economic and Trade Agreement (CETA) Between the EU and Canada, Trade 10/B3/B06, Final Report, Brussels, June 2011.

Dür, A., L. Baccini and M. Elsig (2014), 'The design of international trade agreements: Introducing a new dataset', *Review of International Organizations*, Vol. 9, No. 3, pp. 353-375 (Design of Trade Agreements (DESTA) Database: https://www.designoftradeagreements.org/)

ECORYS (2009a), "The Impact of Free Trade Agreements in the OECD, The impact of an EU-US FTA, EU-Japan FTA and EU-Australia/New Zeeland FTA", Rotterdam, 2009.

ECORYS (2009b), "Non-Tariff Measures in EU-US Trade and Investment – An Economic Analysis", Final Report on Behalf of the European Commission (Reference: OJ 2007/S 180-219493), Rotterdam, 11 December 2009.

Egger, P., Francois, J., Manchin, M., Nelson, D. (2015), "Non-tariff barriers, integration and the transatlantic economy", Economic Policy, July 2015, 539-584.

Erixon, F., Bauer, M. (2010): *A Transatlantic Zero Agreement: Estimating the Gains from Transatlantic Free Trade in Goods*, ECIPE (European Centre for International Political Economy), Brussels, Occasional Paper, Nr. 4/2010.

European Commission (2006), Global Europe: Competing in the World. A Contribution to the EU's Growth and Jobs Strategy, Communication from the Commission to the Council, the European Parliament, the European Economic and Social Committee and the Committee of the Regions, COM(2006) 567 final, Brussels, 4.10.2006.

European Commission (2015), Trade for all. Towards a more responsible trade and investment policy, Brussels, 2015.

European Commission (2017), The Economic Impact of the Comprehensive Trade and Investment Agreement (CETA), Brussels, 2017.

European Commission (2019), Report on Trade and Investment Barriers, 1 January 2018 – 31 December 2018, Brussels.

European Commission and Canada (2008): "Assessing the costs and benefits of a closer EU-Canada economic partnership". A Joint Study by the European Commission and the Government of Canada (See: http://trade.ec.europa.eu/doclib/html/141032.htm).

EU-Japan Impact Assessment (2012), Impact Assessment Report on EU-Japan Trade Relations, on the future Economic Partnership Agreement, Accompanying the document Recommendation for a Council Decision authorising the opening of negotiations on a Free Trade Agreement between the European Union and Japan, European Commission, Brussels, 18.7.2012

EU-Japan Analysis (2016), Trade Sustainability Impact Assessment of the Free Trade Agreement between the European Union and Japan, Final Report, European Commission, Brussels, 2016.

EU-Japan Economic Impact Report (2018), The Economic Impact of the EU-Japan Economic Partnership Agreement (EPA), An Analysis prepared by the European Commission's Directorate-General Trade, Brussels, June 2018.

Felbermayr, G., F. Kimura, T. Okubo, M. Steininger and E. Yalcin (2017), 'On the Economics of an EU-Japan Free Trade Agreement', GED Study, Bertelsmann Stiftung, 3 March 2017.

Felbermayr, G., Gröschl, J., Heiland, I. (2018), "Undoing Europe in a New Quantitative Trade Model", ifo Working Papers, No. 250; January 2018.

Felbermayr, G., Kohler, W. (2015), *„TTIP und die Entwicklungsländer: Gefahren, Potenziale und Politikoptionen"*, ifo Schnelldienst 2/2015 – 68. Jahrgang – 29. Januar 2015.

Felbermayr, G. Larch, M., Flach, L., Salcin, E. Benz, S. (2013): *Dimensionen und Auswirkungen eines Freihandelsabkommens zwischen der EU und den USA*, Ifo Institut, München, Studie im Auftrag des Bundesministeriums für Wirtschaft und Technologie, Endbericht, München: 14. Jänner 2013.

Fontagné, L, Gourdon, J., Jean, S (2013): „Transatlantic Trade: Whither Partnership, Which Economic Consequences", *CEPII, Policy Brief*, No. 1, September 2013.

Francois, J., Machin, M., and Norberg, H. (2011), Economic Impact Assessment of an FTA between the EU and Japan, February 2011.

Francois, J. (Project Leader), Manchin, M., Norberg, H., Pindyuk, O, Tomberger, P. (2013): *Reducing Transatlantic Barriers to Trade and Investment. An Economic Assessment*, Final Project Re-port, prepared on behalf of the European Commission under implementing Framework Contract TRADE10/A2/A16, Centre for Economic Policy Research (CEPR), London, March 2013; see: http://trade.ec.europa.eu/doclib/docs/2013/ march/tradoc_150737.pdf)

Grübler, J., Oliver Reiter, O., Stehrer, R. (2018), „The EU-Japan Economic Partnership Agreement and its relevance for the Austrian Economy", FIW-Research Report, No. 1, October 2018.

Head, K. and Mayer, T. (2014), "Gravity Equations: Workhorse, Toolkit, and Cookbook", Chapter 3, Handbook of International Economics, Vol. 4, Elsevier, Amsterdam, 2014, 131–195.

Hertel T.W. (ed) (1997), Global trade analysis: modelling and applications. Cambridge University Press.

IMF (2020), "A Long and Difficult Ascent", World Economic Outlook, October 2020.

Jafari, Y. and Britz, W. (2020), "Brexit: an economy-wide impact assessment on trade, immigration, and foreign direct investment", Empirica – Journal of European Economics, Vol. 47, No. 1, 2020, 17-52.

LSE (2020), Sustainability Impact Assessment in Support of the Association Agreement Negotiations between the European Union and Mercosur, The London School of Economics and Political Science, London, Draft Final Report, July 2020.

Melitz, M.J. (2003), "The impact of trade on intra-industry reallocations and aggregate industry productivity", Econometrica, Vol. 71, Issue 6, November 2003, 1695–1725.

Raza, W., Tröster, B., Rudi von Arnim, R. (2016), „ASSESS_CETA: Assessing the claimed benefits of the EU-Canada Trade Agreement (CETA). CETA: Ökonomische Bewertung der prognostizierten Effekte des EU-Kanada Freihandelsabkommens". Commissioned by the Chamber of Labour Vienna, ÖFSE – Österreichische Forschungsstiftung für Internationale Entwicklung, June 2016 (https://wien.arbeiterkammer.at/service/studien/eu/index.html)

Reiter, O., and Grübler, J. (2020), Greater than the Sum of its Parts? How does Austria Profit from a Widening Network of the EU Free Trade Agreements), wiiw Working Paper 186, September 2020.

USMCA Impact Assessment (2019), "U.S.-Mexico-Canada Trade Agreement: Likely Impact on the U.S. Economy and on Specific Industry Sectors", United States International Trade Commission, Washington DC, April 2019 (https://www.usitc.gov/publications/332/pub4889.pdf)
UNTAD (2012), Classification of Non-Tariff Measures, Geneva, February 2012.
WTO (2020), "Trade shows signs of rebound from COVID-19, recovery still uncertain", Press Release, Geneva, 6 October 2020.

## Appendices: Additional Tables

**Table A1: Sectoral and regional aggregation**

| | **Secotoral aggregation** | | **Regional aggregations** | | | |
|---|---|---|---|---|---|---|
| | | | A | B | C | D |
| 1 | Grains and Crops | 1 | USA | USA | USA | USA |
| 2 | Livestock and meat Products | 2 | Canada | Canada | Canada | Canada |
| 3 | Mining and Extgraction | 3 | Mexico | RCEP | Mexico | Mexico |
| 4 | Processed Food | 4 | EU-27 | EU-27 | EU-27 | EU-27 |
| 5 | Textiles and Clothing | 5 | UK | UK | UK | UK |
| 6 | Light Manufacturing | 6 | EFTA | AfCFTA | CPTPP | AfCFTA |
| 7 | Heavy Manufacturing | 7 | Japan | Japan | Japan | Japan |
| 8 | Utilities and Construction | 8 | China | China | China | China |
| 9 | Transport and Communication | 9 | Mercosur | Mercosur | Mercosur | Mercosur |
| 10 | Other Services | 10 | ROW | ROW | ROW | ROW |

Regional aggregation, used for analysing the following FTAs:
A = CETA, TTIP, EUJPEPA, EU-Mercosur, EFTA-Mercosur, USAJPFTA
B = RCEP: 15 Asian and pacific countries
C = CPTPP: 11 Asian and pacific countries (substitute for TPP).
D =AfCFTA: 54 African states
Source: GTAP 10, data base of 2014. Complete dataset comprises 65 sectors and 121 regions. See GTAP website: https://www.gtap.agecon.purdue.edu/databases/v10/index.aspx

**Table A2: Overlaps of existing and planned FTAs (Spaghetti bowl)**

| No of overlaps | | EU27 | UK | EFTA | CETA | TTIP light | EUJPEPA | EU-MERC | EFTA-MERC | USAJPFTA | CPTPP | RCEP | AfCFTA |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Members | | **27** | **1** | **4** | **2** | **2** | **2** | **5** | **5** | **2** | **11** | **15** | **54** |
| *%-share in world trade* | | 30.24 | 3.27 | 2.67 | 32.74 | 39.81 | 34.47 | 32.00 | 4.43 | 13.80 | 14.62 | 18.07 | 3.13 |
| *(extra-EU27)* | | 17.38 | 3.88 | 3.16 | 20.34 | 28.71 | 22.39 | 19.47 | 5.25 | 16.34 | 17.32 | 21.40 | 3.70 |
| EU27 | 4 | | | | **x** | **x** | **x** | **x** | | | | | |
| UK | 0 | | | | | | | | | | | | |
| USA | 2 | | | | | x | | | | **x** | | | |
| Canada | 2 | | | | **x** | | | | | | **x** | | |
| Mexico | 0 | | | | | | | | | | **x** | | |
| China | 0 | | | | | | | | | | | **x** | |
| Japan | 4 | | | | | | **x** | | | **x** | **x** | **x** | |
| EFTA | 0 | | | | | | | | **x** | | | | |
| Australia | 2 | | | | | | | | | | **x** | **x** | |
| Brunei | 2 | | | | | | | | | | **x** | **x** | |
| Chile | 0 | | | | | | | | | | **x** | | |
| Malaysia | 2 | | | | | | | | | | x | x | |
| New Zealand | 2 | | | | | | | | | | x | x | |
| Peru | 0 | | | | | | | | | | x | | |
| Singapore | 2 | | | | | | | | | | x | x | |
| Vietnam | 2 | | | | | | | | | | x | x | |
| Cambodia | 0 | | | | | | | | | | | x | |
| India | 0 | | | | | | | | | | | | |
| Indonesia | 0 | | | | | | | | | | | x | |
| Laos | 0 | | | | | | | | | | | x | |
| Myanmar | 0 | | | | | | | | | | | x | |
| Philippines | 0 | | | | | | | | | | | x | |
| Thailand | 0 | | | | | | | | | | | x | |
| South Korea | 0 | | | | | | | | | | | x | |
| Argentina | 2 | | | | | | | x | x | | | | |
| Brazil | 2 | | | | | | | x | x | | | | |
| Paraguay | 2 | | | | | | | x | x | | | | |
| Uruguay | 2 | | | | | | | x | x | | | | |

MERC = Mercosur

**Table A3a:** The impact of zero tariffs and subsidies in CETA on partner and third countries

| | Real GDP %-chg | | Welfare: USD change pc | | Current account, chg, Bio$ | |
|---|---|---|---|---|---|---|
| | Armington | Melitz | Armington | Melitz | Armington | Melitz |
| **EU27** | 0.0018 | 0.0130 | 1.9048 | 4.1996 | -0.3923 | -1.0884 |
| UK | -0.0002 | -0.0038 | -0.8408 | -1.1581 | 0.0925 | 0.1429 |
| USA | -0.0001 | -0.0052 | -2.1899 | -2.5397 | **1.1671** | **1.4844** |
| **Canada** | **0.0092** | **0.0632** | **18.4139** | **23.8071** | -1.8116 | -1.8899 |
| China | -0.0007 | -0.0046 | -0.1691 | -0.3001 | 0.2924 | 0.3857 |
| Japan | -0.0002 | -0.0025 | -0.4630 | -0.7244 | 0.1302 | 0.2120 |
| MERCOSUR | -0.0003 | -0.0022 | -0.1131 | -0.2279 | 0.0627 | 0.0921 |
| World | 0.0003 | 0.0010 | 0.0282 | 0.1019 | 0.0000 | 0.0000 |
| EFTA | -0.0003 | -0.0099 | -2.5046 | -3.1684 | 0.0378 | 0.0300 |
| Mexcico | 0.0001 | -0.0030 | -0.1774 | -0.1913 | 0.0722 | 0.0879 |
| ROW | -0.0003 | -0.0028 | -0.0368 | -0.1011 | 0.3488 | 0.5431 |

Bold = best performer
A = Armington; M = Melitz.
EFTA = Iceland, Liechtenstein, Norway, Switzerland.
Mercosur = Argentina, Brazil, Paraguay, Uruguay.

**Table A3b:** The impact of zero tariffs and subsidies plus 50% cut of NTBs in CETA on partners and third countries

| | Real GDP %-chg | | Welfare: USD change pc | | Current account, chg, Bio$ | |
|---|---|---|---|---|---|---|
| | Armington | Melitz | Armington | Melitz | Armington | Melitz |
| **EU27** | 0.0087 | 0.0408 | 8.6200 | 16.0445 | 1.0722 | 3.0400 |
| UK | -0.0034 | -0.0501 | -7.7280 | -14.1597 | 1.3507 | 2.8957 |
| USA | -0.0011 | -0.0409 | -13.0513 | -14.4169 | **10.7737** | **16.8104** |
| **Canada** | **1.6791** | **3.5276** | **954.2130** | **1532.0169** | -27.0821 | -51.6482 |
| China | -0.0044 | -0.0493 | -0.9732 | -2.8185 | 4.2605 | 8.7601 |
| Japan | -0.0013 | -0.0372 | -3.8309 | -9.4681 | 1.9482 | 4.1673 |
| MERCOSUR | -0.0039 | -0.0336 | -1.0528 | -2.7932 | 0.9662 | 2.0076 |
| World | 0.0379 | 0.0572 | 4.0692 | 6.2039 | 0.0000 | 0.0000 |
| EFTA | -0.0034 | -0.0512 | -17.7541 | -28.0651 | 0.4605 | 0.8910 |
| Mexcico | 0.0027 | 0.0098 | 0.5672 | -0.1373 | 0.4760 | 0.9049 |
| ROW | -0.0035 | -0.0362 | -0.2930 | -1.0906 | 5.7738 | 12.1709 |

**Table A4:** The impact of zero tariffs and subsidies in CPTPP on partner and third countries

| | Real GDP %-chg | | Welfare: USD change pc | | Current account, chg Bio$ | |
|---|---|---|---|---|---|---|
| | Armington | Melitz | Armington | Melitz | Armington | Melitz |
| EU27 | -0.0009 | -0.1320 | -1.8583 | -3.6102 | 1.6417 | 3.1758 |
| UK | -0.0019 | -0.0118 | -2.9329 | -4.2527 | 0.4338 | 0.8593 |
| USA | -0.0001 | -0.0105 | -10.2944 | -5.4531 | **5.4894** | **5.0683** |
| **Canada** | 0.0214 | 0.0371 | **63.3433** | 60.4816 | -3.8791 | -0.7788 |
| China | -0.0060 | -0.0322 | -1.5729 | -2.0315 | 1.7467 | 2.6717 |
| **Japan** | **0.0284** | **0.3471** | 29.7916 | **89.8256** | -4.1428 | -13.6064 |
| MERCOSUR | -0.0025 | -0.0117 | -1.2741 | -1.1982 | 0.5382 | 0.6217 |
| World | 0.0013 | 0.0133 | 0.1337 | 1.4278 | 0.0000 | 0.0000 |
| EFTA=EU27 | -0.0009 | -0.132 | -1.8583 | -3.6102 | 1.6417 | 3.1758 |
| **Mexico** | -0.0013 | 0.0183 | 5.8912 | 8.5788 | -0.7253 | -0.0746 |
| ROW | -0.0023 | -0.0058 | -0.4507 | -0.1524 | 1.8810 | 2.4968 |
| **CPTPP** | 0.0238 | 0.0862 | 14.2901 | 15.0298 | -2.9837 | -0.4340 |
| **CPTTP11** | 0.0181 | 0.1222 | 28.3291 | 43.4790 | -2.9327 | -3.7235 |

CPTTP11 = CPTPP+Canada+Mexico+Japan

**Table A5a:** The impact of zero tariffs and subsidies in EUJPEPA on partner and third countries

| | Real GDP %-chg | | Welfare: USD change pc | | Current account, chg Bio$ | |
|---|---|---|---|---|---|---|
| | Armington | Melitz | Armington | Melitz | Armington | Melitz |
| **EU27** | -0.0060 | -0.0240 | 2.0630 | -0.9278 | -2.1102 | **3.8264** |
| UK | -0.0012 | 0.0008 | -3.9786 | -2.1616 | 0.3475 | 0.1570 |
| USA | 0.0001 | -0.0058 | -3.1864 | -1.9287 | **2.4302** | 2.1771 |
| Canada | -0.0018 | -0.0086 | -5.5800 | -3.1356 | 0.4169 | 0.2970 |
| China | -0.0027 | -0.0051 | -0.7650 | -0.0767 | 0.7156 | 0.6711 |
| **Japan** | **0.0307** | **0.2557** | **23.0747** | **55.7231** | -3.5050 | -9.2655 |
| MERCOSUR | -0.0018 | -0.0076 | -0.9636 | -0.8603 | 0.3553 | 0.3284 |
| World | -0.0002 | 0.0058 | -0.0575 | 0.6094 | 0.0000 | 0.0000 |
| EFTA | -0.0020 | -0.0171 | -12.5932 | -20.6058 | 0.1182 | 0.2229 |
| Mexcico | 0.0013 | -0.0034 | -0.3560 | -0.1226 | 0.1435 | 0.1377 |
| ROW | -0.0012 | -0.0066 | -0.2851 | -0.1702 | 1.0878 | 1.5477 |

**Table A5b:** The impact of zero tariffs and subsidies plus 50% cut of NTBs in EUJPEPA on partners and third countries

| | Real GDP %-chg | | Welfare: USD change pc | | Current account, chg, Bio$ | |
|---|---|---|---|---|---|---|
| | Armington | Melitz | Armington | Melitz | Armington | Melitz |
| **EU27** | 0.0065 | -0.0026 | 11.8373 | 10.1174 | -0.9136 | 9.9389 |
| UK | -0.0069 | -0.0654 | -15.7262 | -21.2073 | 2.4493 | 4.1746 |
| USA | -0.0010 | -0.0556 | -11.4370 | -18.4283 | **13.1852** | **23.4607** |
| Canada | -0.0062 | -0.0673 | -10.3374 | -20.3507 | 1.5845 | 3.0418 |
| China | -0.0148 | -0.0949 | -3.2913 | -5.2977 | 7.4270 | 13.2634 |
| **Japan** | **1.3070** | **2.9563** | **523.2974** | **929.0224** | -37.2833 | -77.5396 |
| MERCOSUR | -0.0077 | -0.0565 | -2.6010 | -4.9602 | 1.8223 | 3.1703 |
| World | 0.0741 | 0.1275 | 7.8981 | 13.7392 | 0.0000 | 0.0000 |
| EFTA | -0.0065 | -0.0646 | -30.7328 | -45.6247 | 0.7378 | 1.3406 |
| Mexcico | 0.0025 | 0.0407 | -0.8371 | -2.9664 | 0.8567 | 1.6442 |
| ROW | -0.0042 | -0.0498 | -0.8453 | -1.2283 | 10.1340 | 17.6050 |

**Table A6:** The impact of zero tariffs and subsidies in AfCFTA on partner and third countries

| | Real GDP %-chg | | Welfare: USD change pc | | Current account, chg Bio$ | |
|---|---|---|---|---|---|---|
| | Armington | Melitz | Armington | Melitz | Armington | Melitz |
| EU27 | -0.0028 | -0.0233 | -3.8897 | -7.5718 | 1.3968 | **2.7693** |
| UK | -0.0018 | -0.0093 | -3.2076 | -4.2689 | 0.3260 | 0.3795 |
| USA | -0.0002 | -0.0043 | -1.9271 | -2.3227 | **1.6457** | 1.5304 |
| Canada | 0.0000 | -0.0065 | 2.6504 | -1.3913 | 0.0894 | 0.2311 |
| China | -0.0031 | -0.0192 | -0.8109 | -1.5348 | 1.2090 | 1.5180 |
| Japan | -0.0003 | -0.0043 | -2.5081 | -2.0127 | 0.4972 | 0.3133 |
| MERCOSUR | -0.0013 | -0.0050 | -0.1819 | -0.4769 | 0.2122 | 0.2036 |
| World | -0.0005 | 0.0006 | 0.0044 | 0.0298 | 0.0000 | 0.0000 |
| EFTA=EU27 | -0.0028 | -0.0233 | -3.8897 | -7.5718 | 1.3968 | 2.7693 |
| Mexico | 0.0019 | -0.0009 | 0.4654 | -0.0660 | 0.0936 | 0.1010 |
| ROW | -0.0003 | -0.0179 | 0.0621 | -0.7214 | 1.6182 | 2.3947 |
| **AfCFTA** | **0.0230** | **0.4443** | **3.2196** | **8.3348** | -7.0879 | -9.4408 |

**Table A7:** The impact of zero tariffs and subsidies in USAJPTA on partner and third countries

| | Real GDP %-chg | | Welfare: USD change pc | | Current account, chg Bio$ | |
|---|---|---|---|---|---|---|
| | Armington | Melitz | Armington | Melitz | Armington | Melitz |
| EU27 | -0.0008 | -0.0136 | -1.8593 | -3.5680 | 2.5429 | **3.4600** |
| UK | -0.0011 | -0.0119 | -1.8274 | -3.3961 | 0.5986 | 0.8045 |
| **USA** | -0.0017 | 0.0203 | 14.5995 | 19.9487 | -7.6578 | -2.0874 |
| Canada | -0.0081 | -0.0011 | -27.0355 | -9.1888 | 1.2610 | 0.2417 |
| China | -0.0032 | -0.0164 | -0.8009 | -0.7022 | 1.6182 | 2.0488 |
| **Japan** | **0.0335** | **0.2581** | **15.2943** | **58.4329** | -2.3859 | -8.8764 |
| MERCOSUR | -0.0027 | -0.0103 | -1.5490 | -1.0508 | 0.7360 | 0.6227 |
| World | 0.0002 | 0.0098 | 0.1400 | 1.1455 | 0.0000 | 0.0000 |
| EFTA | -0.0009 | -0.0125 | -4.1103 | -9.0996 | 0.1684 | 0.2354 |
| Mexcico | -0.0014 | -0.014 | -3.4187 | -1.5666 | 0.5017 | 0.2099 |
| ROW | -0.0015 | -0.0143 | -0.3790 | -0.4025 | **2.6169** | 3.3407 |

**Table A8:** The impact of zero tariffs and subsidies in RCEP on partner and third countries

| | Real GDP %-chg | | Welfare: USD change pc | | Current account, chg Bio$ | |
|---|---|---|---|---|---|---|
| | Armington | Melitz | Armington | Melitz | Armington | Melitz |
| EU27 | -0.0177 | -0.1495 | -20.8277 | -39.7195 | 16.9276 | 31.5722 |
| UK | -0.0194 | -0.1145 | -27.7729 | -34.4772 | 4.6073 | 7.2718 |
| USA | -0.0048 | -0.1128 | -36.7374 | -38.5079 | **30.6507** | **40.7717** |
| Canada | -0.0175 | -0.1318 | -26.9556 | -38.9992 | 2.9762 | 5.2088 |
| **China** | 0.1176 | 0.5940 | 2.5981 | 31.4016 | -23.8051 | -29.1102 |
| **Japan** | **0.0641** | **0.9690** | **211.8655** | **356.5416** | -26.0518 | -48.0197 |
| MERCOSUR | -0.0226 | -0.1039 | -7.1557 | -8.7802 | 3.7455 | 5.1128 |
| World | 0.0131 | 0.1093 | 0.8909 | 11.7533 | 0.0000 | 0.0000 |
| EFTA=EU27 | -0.0177 | -0.1495 | -20.8277 | -39.7195 | 16.9276 | 31.5722 |
| Mexico=Canada | -0.0175 | -0.1318 | -26.9556 | -38.9992 | 2.9762 | 5.2088 |
| ROW | -0.0181 | -0.1476 | -4.3011 | -5.0759 | 14.3584 | 22.7865 |
| AfCFTA | -0.0268 | -0.0717 | -1.4311 | -0.7925 | 2.5450 | 3.3849 |
| **RCEP** | 0.0639 | 0.9732 | 21.5576 | 68.0594 | -25.9536 | -38.9787 |
| **RCEP15** | 0.0819 | 0.8454 | 78.6737 | 152.0009 | -25.2702 | -38.7029 |

RCEP15 = RCEP+China+Japan

**Table A9:** The impact of zero tariffs and subsidies in EU-Mercosur on partner and third countries

| | Real GDP %-chg | | Welfare: USD change pc | | Current account, chg Bio$ | |
|---|---|---|---|---|---|---|
| | Armington | Melitz | Armington | Melitz | Armington | Melitz |
| **EU27** | **0.0476** | **0.1849** | **23.4475** | **55.7971** | -2.3022 | -15.6047 |
| UK | -0.0009 | -0.0461 | -5.4203 | -8.8774 | 1.3858 | 1.2987 |
| USA | -0.0008 | -0.0211 | -4.2927 | -7.1171 | **4.5142** | **7.2826** |
| Canada | -0.0013 | -0.0278 | -2.9673 | -10.8672 | 0.4210 | 0.9307 |
| China | -0.0087 | -0.0491 | -1.6530 | -3.2670 | 2.6428 | 4.3555 |
| Japan | 0.0001 | -0.0228 | -2.1100 | -5.8203 | 1.1258 | 1.9035 |
| **MERCOSUR** | 0.0190 | 0.0992 | 12.8199 | 4.5856 | -11.4758 | -6.5363 |
| World | 0.0077 | 0.0169 | 0.8117 | 1.7747 | 0.0000 | 0.0000 |
| EFTA | -0.0010 | -0.0601 | -18.0378 | -16.5312 | 0.3190 | 0.4529 |
| Mexcico | -0.0029 | -0.0229 | -1.6479 | -1.9747 | 0.4330 | 0.5232 |
| ROW | -0.0040 | -0.0290 | -0.6712 | -0.9186 | 3.4513 | 5.1956 |

**Table A10:** The impact of zero tariffs and subsidies in EFTA-Mercosur on partner and third countries

| | Real GDP %-chg | | Welfare: USD change pc | | Current account, chg Bio$ | |
|---|---|---|---|---|---|---|
| | Armington | Melitz | Armington | Melitz | Armington | Melitz |
| EU27 | 0.0000 | -0.0032 | -0.3279 | -0.3870 | 0.1835 | 0.3073 |
| UK | 0.0000 | -0.0007 | -0.0845 | 0.1144 | 0.0233 | 0.0268 |
| USA | 0.0000 | -0.0013 | -0.3391 | -0.4114 | **0.2297** | **0.3570** |
| Canada | 0.0000 | -0.0011 | -0.1540 | -0.4339 | 0.0157 | 0.0291 |
| China | -0.0005 | -0.0017 | -0.0982 | -0.0846 | 0.1149 | 0.1150 |
| Japan | 0.0000 | -0.0011 | -0.0787 | -0.1788 | 0.0401 | 0.0740 |
| **MERCOSUR** | -0.0017 | 0.0006 | -0.6074 | -0.8714 | -0.4623 | -0.3638 |
| World | -0.0001 | 0.0005 | -0.0235 | 0.0429 | 0.0000 | 0.0000 |
| **EFTA** | **0.0050** | **0.1387** | **40.5657** | **86.9203** | -0.3007 | -0.7499 |
| Mexcico | 0.0000 | -0.0011 | -0.0580 | -0.1183 | 0.0167 | 0.0233 |
| ROW | -0.0001 | -0.0016 | -0.0340 | -0.0423 | 0.1389 | 0.1811 |

**Table A11a:** The impact of zero tariffs and subsidies in a TTIP light on partner and third countries

| | Real GDP %-chg | | Welfare: USD change pc | | Current account, chg, Bio$ | |
|---|---|---|---|---|---|---|
| | Armington | Melitz | Armington | Melitz | Armington | Melitz |
| **EU27** | **0.0090** | 0.0444 | 5.9443 | 13.5031 | -2.0977 | -3.6272 |
| UK | -0.0036 | -0.0384 | -8.4546 | -11.6698 | 1.2342 | 1.6712 |
| **USA** | 0.0025 | **0.0544** | **20.3088** | **23.4468** | -12.0136 | -13.1594 |
| Canada | -0.0073 | -0.0400 | -27.9548 | -12.2793 | 1.6854 | 1.2901 |
| China | -0.0059 | -0.0319 | -1.2358 | -2.0255 | 3.0375 | 3.9572 |
| Japan | -0.0016 | -0.0218 | -3.7649 | -5.8271 | 1.5334 | 2.0253 |
| MERCOSUR | -0.0035 | -0.0195 | -1.3566 | -1.7808 | 0.8320 | 0.9589 |
| World | 0.0003 | 0.0044 | 0.2307 | 0.5226 | 0.0000 | 0.0000 |
| EFTA | -0.0030 | -0.0797 | -21.8803 | -35.2787 | 0.3449 | 0.5170 |
| Mexcico | -0.0016 | -0.0248 | -5.1648 | -1.5227 | 0.9358 | 0.5210 |
| ROW | -0.0026 | -0.0243 | -0.5461 | -0.8537 | **4.5080** | **5.8459** |

**Table A11b:** The impact of zero tariffs and subsidies plus 50% cut of NTBs in a TTIP light on partners and third countries

| | Real GDP %-chg | | Welfare: USD change pc | | *Current account, chg, Bio$* | |
|---|---|---|---|---|---|---|
| | Armington | Melitz | Armington | Melitz | Armington | Melitz |
| **EU27** | 0.0539 | 0.0649 | 32.8973 | 41.3601 | 25.2831 | 62.3151 |
| UK | -0.0412 | -0.5039 | -78.7764 | -139.0008 | 15.6265 | 30.2389 |
| **USA** | **1.9176** | **3.8854** | **1176.2299** | **1909.6538** | -210.1617 | -396.1208 |
| Canada | -0.0578 | -0.2536 | -178.0066 | -45.2216 | 14.9216 | 15.3862 |
| China | -0.0435 | -0.4509 | -8.9111 | -24.3919 | 44.8223 | 86.5895 |
| Japan | -0.0119 | -0.3546 | -35.5611 | -81.6503 | 21.3028 | 41.3233 |
| MERCOSUR | -0.0409 | -0.3507 | -13.2369 | -28.9624 | 11.2794 | 21.0078 |
| World | 0.4187 | 0.6560 | 46.3329 | 71.3479 | 0.0000 | 0.0000 |
| EFTA | -0.0330 | -0.5388 | -153.5804 | -275.1408 | 4.7150 | 9.0432 |
| Mexcico | -0.0031 | -0.1951 | 16.4972 | -1.0321 | 7.6337 | 7.1346 |
| ROW | -0.0225 | -0.3423 | -3.7522 | -9.9006 | **64.5772** | **123.0819** |

**Table A12:** The impact of the US-China Trade War on partner and third countries

| | Real GDP %-chg | | Welfare: USD change pc | | Current account, chg Bio$ | |
|---|---|---|---|---|---|---|
| | Armington | Melitz | Armington | Melitz | Armington | Melitz |
| EU27 | 0.0387 | 0.1376 | 42.7427 | 38.8803 | -29.3103 | -34.4288 |
| UK | 0.0455 | 0.1230 | 67.7736 | 44.4096 | -8.5844 | -8.1159 |
| **USA** | -0.2411 | -0.3567 | -187.8606 | -116.1093 | **86.1182** | 53.4706 |
| Canada | **0.1011** | **0.4400** | **289.5984** | **179.7459** | -15.9103 | -12.7935 |
| **China** | -0.4459 | -1.6362 | -64.6649 | -124.1885 | 34.1768 | **60.8795** |
| Japan | 0.0125 | 0.1318 | 57.4694 | 33.0489 | -13.7586 | -13.2026 |
| MERCOSUR | 0.0496 | 0.1347 | 15.8087 | 11.9699 | -6.6279 | -6.1647 |
| World | -0.0885 | -0.2044 | -8.5778 | -20.8133 | 0.0000 | 0.0000 |
| EFTA | 0.0113 | 0.0432 | 39.9045 | 15.7068 | -1.5262 | -1.7600 |
| Mexcico | 0.0556 | 0.4165 | 69.4890 | 42.6465 | -10.9232 | -7.0420 |
| ROW | 0.0332 | 0.1115 | 7.0485 | 3.6146 | -33.6542 | -30.8425 |

25% extra tariffs on all imports