



New EU-MERCOSUR Association Agreement: Quantitative Assessment of its Impacts on Global Trade in Agricultural Commodities

New EU-MERCOSUR Association Agreement: Quantitative Assessment of its Impacts on Global Trade in Agricultural Commodities

Antonia Ngavozafy and Maria C. Latorre

Abstract

On 28 June 2019, the European Union (EU) and Mercosur countries announced the conclusion of the Association Agreement between the two regions, after over 20 years of negotiations. The trade pillar of the agreement draws our interest because of the systemic implications it may have on global trade of goods, particularly on agricultural markets, and services. To evaluate the impacts of the EU-Mercosur AA, we use a standard Computable General Equilibrium (CGE) model with 8 regions and 36 sectors aggregated from the GTAP10 sectoral and regional classifications, which incorporate non-tariff measures and tariff-rate quotas. We expect a trade creation effect between the EU and Mercosur countries, which will be associated with welfare gains in both sides. The agreement will also have significant impacts on third parties: suppliers of agricultural commodities on the EU market and suppliers of manufactured products on the Mercosur markets will suffer from trade diversion.

Keywords: EU-Mercosur, Computable General Equilibrium (CGE), Tariffs, Non-tariff Barriers (NTB), Ad Valorem Equivalents (AVE), Most Favoured Nation (MFN), Trade diversion, Preference erosion, Customs Union (CU), Trade Integration, Tariff Rate Quota (TRQ).

DRAFT - NOT FOR PUBLICATION

Executive summary

On 28 June 2019, the European Union (EU) and Mercosur countries announced the conclusion of the Association Agreement between the two regions, after over 20 years of negotiations.

On the one side, Mercosur or the Southern Common Market (Mercado Común del Sur in Spanish or Mercado Comum do Sol in Portuguese) is a regional economic community (REC) that groups four¹ Latin American countries, namely Argentina, Brazil, Paraguay and Uruguay since 1991. Although the region applies a common nomenclature and a common external tariff², Mercosur has not yet achieved the status of a customs union. Indeed, intra-Mercosur trade is also governed by a set of partial trade agreements. On the other side, the European single market (EU) is composed of 27 countries and forms one territory where goods and services can be traded freely without any tariffs or regulatory barriers. The EU is by definition a customs union.

Together, the EU-Mercosur bloc accounts for 32% of world trade and open a market of 9% of the world population. Mercosur total imports amounted to USD 252 billion in 2019, and the EU's equalled USD 5316 billion the same year. Exchanges between EU and Mercosur countries are significant and bear great potential. In the trade in goods alone for example, 17% of Mercosur's Imports are from the EU. Additionally, the trade structure among the bloc reflects each region's comparative advantage: 45% of EU imports from Mercosur countries are agricultural commodities while 94% of Mercosur's imports from the EU are industrial goods. On either side, the trade barriers on these groups of products are high: average MFN tariff of 11.4% applied by the EU on agricultural goods along with stringent NTM regulations and average tariff of 9.7% to 14% applied by Mercosur countries on industrial goods. This made clear where lay the strategic interests of each party if a treaty is to be concluded: industry and services for the EU and agriculture and agro-food for Mercosur.

The initiation of trade cooperation between the EU and Mercosur is as old as Mercosur itself and can be tracked back in 1995 when the EU-Mercosur Framework Cooperation Agreement (FCA) was signed. The FCA entered into force on 1 July 1999 and negotiations began. The parties exchanged their market access offers in September 2004, but they could not reach an agreement. Therefore, the negotiations stopped. Negotiations resumed in 2010 on the EU's initiative. After several rounds, the negotiation stagnated in 2013. In May 2016, both parties exchanged new market access offers, which marked the beginning of the final stage of the negotiation that successfully closes with the conclusion of the Association Agreement between the EU and Mercosur in 2019.

The current EU-Mercosur Association agreement has three components: trade, political dialogue, and economic cooperation. Our study focuses on the trade pillar of the agreement, which draws our interest because of the systemic implications it may have on global trade of goods, particularly on agricultural markets, and services as well as on FDI flows. Since the AA is the first agreement that Mercosur has concluded with a major trade partner, significant changes in the structure of the Mercosur market are expected. Moreover, trade diversion is going to happen in the detriment of other EU's suppliers of agricultural goods who are mostly developing countries.

To date, few studies attempt quantitative assessments of the potential impacts of the EU-Mercosur agreement. These studies have in common that they used scenarios which make broad assumptions of the tariffs cut, neglected or missed the quantification of NTMs, and did not include the treatment of Tariff Rate Quotas (TRQ), which is a key component of the treaty.

¹ Venezuela's memberships and rights are suspended.

² The common external tariff does not apply to certain industries: cars, sugar, textiles, etc.

Our study contributes to the literature related to the EU-Mercosur AA and quantitative assessments of FTA by addressing these points. In fact, our study is the first to use the tariffs reduction schedules as stated in each party's concession offer to build our experimental scenarios. We also pay particular attention to include the AVEs of NTMs in goods and services in our model. Finally, this is the first study on EU-Mercosur which provides comprehensive analysis of TRQ and incorporate them in the model.

To evaluate the impacts of the EU-Mercosur AA, we use a standard Computable General Equilibrium (CGE) model with 8 regions, including Mercosur4, EU27, the United States and China, and 36 sectors aggregated from the GTAP10 sectoral and regional classifications, which incorporate NTMs and TRQ. A CGE model is a multi-country, multi-region economy-wide model, which describes an economy as whole and its interaction among its parts simultaneously. We choose the CGE modelling for our assessment because it is a cornerstone method to evaluate the effects of economic integration³. The attraction of a CGE model lies in the fact that it arrives at a numerically exact answer while ensuring theoretically consistent results.

We experiment the CGE model for a baseline scenario (a world without EU-Mercosur) and for FTA scenarios where the treaty is implemented at different points in time: on the date of entry into force, five, ten, and 15 years later. The quantitative impacts of the agreement are obtained by comparing the projections under the baseline and the FTA scenarios.

In line with the literature, we expect a trade creation effect between the EU and Mercosur countries, which will be associated with welfare gains in both sides. The agreement will also have significant impacts on third parties: suppliers of agricultural commodities on the EU market and suppliers of manufactured products on the Mercosur markets will suffer from trade diversion.

³ Often used by the World Bank, the World Trade Organization (WTO) or the U.S. International Trade Commission, the GTAP community to estimate the welfare effects of economic partnerships agreements.

Contents

Abstract	1
Executive summary	2
Introduction.....	5
1. BACKGROUND	5
1.1. History of negotiation.....	5
1.2. Market analysis – Descriptive statistics.....	6
1.3. Liberalization commitments for goods.....	10
2. LITERATURE REVIEW	14
3. MODEL AND EXPERIMENT DESIGN	16
3.1. A primer on CGE modelling and Simulation	16
3.2. Our model.....	17
3.3. Our experiment design and simulations	18
4. RESULTS.....	18
5. CONCLUSION	19
6. REFERENCES	20
ANNEXES.....	22
ANNEX 1 – Active Preferential Trade Agreements involving Mercosur countries.....	22
ANNEX 2 – Tariff reduction Schedules under the EU-Mercosur Association Agreement.....	23
ANNEX 3 – TRQ granted by EU to Mercosur countries in 2021, prior to the EU-Mercosur AA agreement	26
ANNEX 4 – TRQ granted by EU to Mercosur countries under the EU-Mercosur AA agreement	27

Introduction

On 28 June 2019, the European Union (EU) and Mercosur (Southern Common Market) countries announced the conclusion of the Association Agreement between the two regions, after over 20 years of negotiations. Exchanges between the partners are significant and bear immense potential. Once created, the EU-Mercosur trade bloc will account for 32% of world trade.

To date, few studies attempt quantitative assessments of the potential impacts of the EU-Mercosur agreement. However, they have in common that they used scenarios which make broad assumptions of the tariffs cut, neglected or missed the quantification of NTMs, and did not include the treatment of Tariff Rate Quotas (TRQ), which is a key component of the treaty. Our study contributes to the literature related to the EU-Mercosur AA and quantitative assessments of FTA by addressing these three points. In fact, our study is the first to use the tariffs reduction schedules as stated in each party's concession offer to build our experimental scenarios. We also pay particular attention to include the AVEs of NTMs in goods and services in our model. Furthermore, this is the first study on EU-Mercosur which provides comprehensive analysis of TRQ and incorporate them in the model.

To evaluate the impacts of the EU-Mercosur AA, we use a standard Computable General Equilibrium (CGE) model with 8 regions, including Mercosur4, EU27, the United States and China, and 36 sectors aggregated from the GTAP10 sectoral and regional classifications, which incorporate NTMs and TRQ.

We experiment the CGE model for a baseline scenario (a world without EU-Mercosur) and for FTA scenarios where the treaty is implemented at different points in time: on the date of entry into force, five, ten, and 15 years later. The quantitative impacts of the agreement are obtained by comparing the projections under the baseline and the FTA scenarios.

Our results show that [WILL BE ADDED].

The remainder of this paper is organized as the following. Section 2 sets the background. Section 3 presents a review of the most relevant literature related to the quantitative assessment of the EU-Mercosur agreement. In section 4, we describe our model and simulation strategies. In section 5, we present and discuss our results. Finally, section 6 concludes.

1. BACKGROUND

1.1. History of negotiation

On 28 June 2019, the European Union (EU) and Mercosur countries announced the conclusion of the Association Agreement between the two regions, after over 20 years of negotiations.

On the one side, Mercosur or the Southern Common Market (Mercado Común del Sur in Spanish or Mercado Comum do Sol in Portuguese) is a regional economic community (REC) that groups four⁴ Latin American countries, namely Argentina, Brazil, Paraguay and Uruguay since 1991. Although the region applies a common nomenclature and a common external tariff (CET), Mercosur has not yet achieved the status of a customs union. Indeed, the CET excludes 32% of its tariff schedule and does not apply to certain industries such as cars, sugar and textiles, for which Members impose different imports duties on third countries. The intra-Mercosur trade is also governed by a set of partial trade agreements (Annex 1), the application of which requires compliance to intra-regional rules of origin. On the other side, the European single market (EU) is composed of 27 countries and forms one territory

⁴ Venezuela's memberships and rights are suspended.

where goods and services can be traded freely without any tariffs or regulatory barriers. The EU is by definition a customs union.

The initiation of trade cooperation between the EU and Mercosur is as old as Mercosur itself and can be tracked back in 1995 when the EU-Mercosur Framework Cooperation Agreement (FCA) was signed. The FCA entered into force on 1 July 1999 and negotiations began. The parties exchanged their market access offers in September 2004, but they could not reach an agreement. Therefore, the negotiations stopped. Negotiations resumed in 2010 on the EU's initiative. After several rounds, the negotiation stagnated in 2013. In May 2016, both parties exchanged new market access offers, which marked the beginning of the final stage of the negotiation that successfully closes with the conclusion of the Association Agreement between the EU and Mercosur in June 2019. Although the agreement is not signed yet, the partners have reiterated their willingness to implement it at the EU27-lac Informal Ministerial Meeting in December 2020. **Figure 1** summarises the main milestones of the negotiation process.

Figure 1: EU-Mercosur AA Negotiation History



1.2. Market analysis – Descriptive statistics

The EU-Mercosur region accounts for 20% of the world GDP and opens a market of 8% of the world population or 647 million of people with GDP per capita ranging between 9,742 USD and 35,946 USD. Mercosur countries imports 247 Billion USD and exports 304.6 Billion USD worth of goods in 2019. The EU's imports and exports of commodities amounted respectively to 5,370 Billion USD and 5,640 Billion USD the same year. Accordingly, the EU-Mercosur AA will bring about the second biggest trade-bloc ever created⁵.

⁵ The Regional Comprehensive Economic Partnership (RCEP) accounts for 30% of world GDP and 30% of world population.

In 2019, EU countries mostly trade among themselves (58% of world trade), with the United States (15.4% of extra-EU trade), China (15% of extra-EU trade) and the United Kingdom (12.1% of extra-EU trade). Comparatively, intra-Mercosur commercial exchange is lower (11.8% of world trade) although still significant. Mercosur's main trade partners are China (26% of extra-Mercosur trade), the EU (17.3% of extra-Mercosur trade) and the United States (15.7% of extra-Mercosur trade). With a GDP per capita of USD 35,946, the productive capacity of the EU is nearly four times that of Mercosur. These initial market structures partly motivate our choice of regional aggregation in the model as they impact our assessment.

Table 1: Macroeconomic Indicators, 2019

	Mercosur	European Union 27
Population, total (Million)	Argentina	44.90
	Brazil	221.30
	Paraguay	7.00
	Uruguay	3.50
	266.49	380.68
GDP (Billion constant 2010 USD)	Argentina	437.80
	Brazil	2 347.20
	Paraguay	37.40
	Uruguay	50.50
	2 873.00	13 683.90
GDP per capita (constant 2010 USD)	Argentina	9 742.50
	Brazil	11 121.70
	Paraguay	5 310.40
	Uruguay	14 597.30
	10 780.68	35 946.18
Exports of goods (Billion USD)	Argentina	65.12
	Brazil	224.00
	Paraguay	7.65
	Uruguay	7.82
	304.58	5 640.03
Imports of goods (Billion USD)	Argentina	49.13
	Brazil	177.34
	Paraguay	12.19
	Uruguay	8.31
	246.97	5 370.73

Source: World Development Indicators (for population and GDP data), Trademap.org (for trade statistics), April 2021.

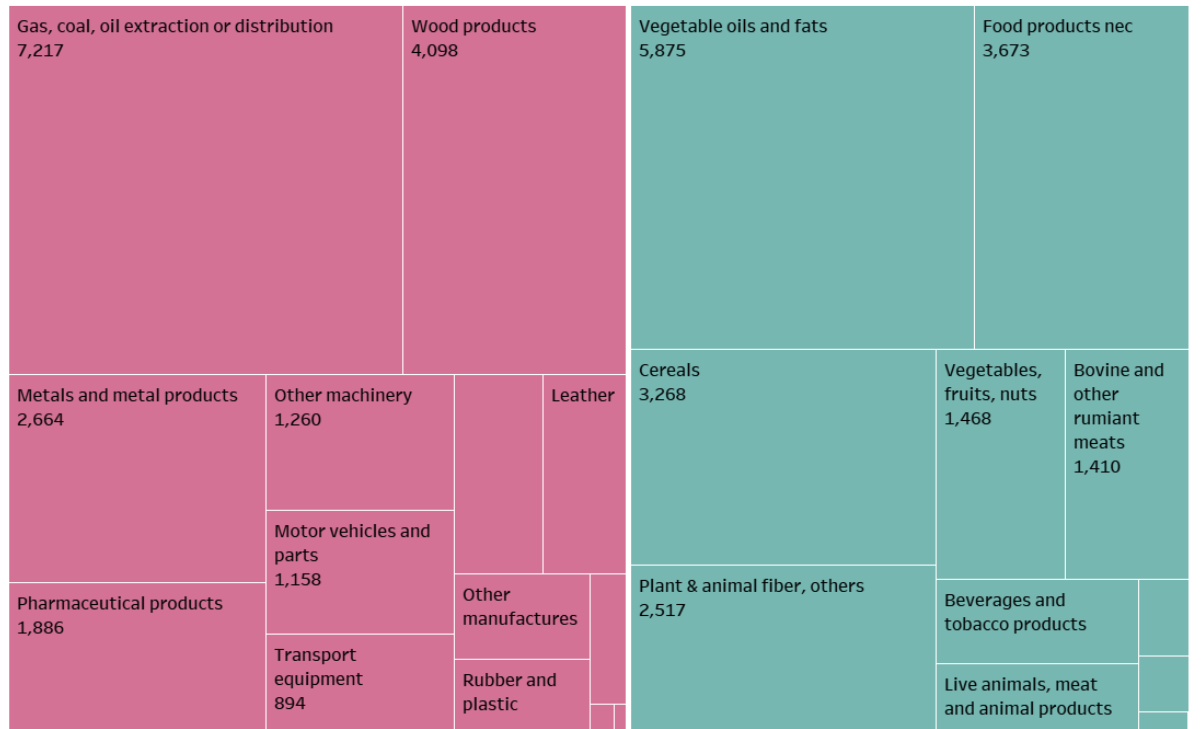
Note: Imports and exports include intra-regional trade.

Exchanges between EU and Mercosur countries are significant and bear immense potential. In 2019, the EU imports USD 42.9 billion worth of goods from its South American partners, while Mercosur imports USD 40.4 billion from Europe. The most interesting feature in the pattern of exchanges among the partners is their asymmetric structure. In fact, Mercosur countries' exports to the EU are intensively specialized in agricultural commodities, agro-food products and raw materials. In the opposite, the EU mostly sells manufactured products in the Mercosur markets (Figure 2).

The asymmetric trade relationship has significantly influenced the outcomes of the negotiations of the EU-Mercosur AA agreement as it demonstrates each partners’ strategic interests, especially in the light of the trade barriers that prevail in each sector.

Figure 2: Bilateral trade among EU27 and Mercosur countries in 2019, by sector

European Union 27 imports (USD million) from the Mercosur in 2019



Mercosur’s Imports (USD million) from the EU27 in 2019



Source: Authors’ calculation based on imports data from Trade Map, April 2021

Tariffs barriers between Mercosur and EU countries are in average high with peaks in some sectors (Figure 3). Additionally, the average tariffs applied by Mercosur countries on products imported from the EU are generally higher than the customs duties applied in the other direction. EU27 applies an average tariff of 4.2%, while Argentina, Brazil, Paraguay and Uruguay apply 11.6%, 10.1%, 7.2% and 9.7%, respectively. In fact, trade between the two regions mostly happens under the Most-Favoured Nation (MFN) regime⁶.

Customs duties on agricultural and agri-food products are significant in the EU: the average is equal to 13.2%, which differs from Mercosur countries' average by up to 2 percentage points. However, this average tariff is four times than what is applied on industrial goods. We notice peaks in sectors such as meat, animal products, sugar and dairy products.

At the aggregate, Mercosur countries seem to apply relatively uniform tariffs on both agricultural and manufacturing goods. However, tariff peaks appear clearly at the disaggregated sectoral level. Customs duties are in average higher on manufacturing than on agricultural and agri-food-related sectors. The most protected industries are wearing apparel and textiles, leather products, motors vehicles and parts, and other manufactures. It is striking to see that Mercosur countries also apply high tariffs on agricultural and agro-industrial products such as sugar, beverages and tobacco, vegetable oils and dairy products.

Non-tariff measures (NTM) add up to the trade barriers. According to a study by UNCTAD (2016), Mercosur markets are characterised by the regulatory disparities within the regions on the one hand, while requirements are harmonized across EU countries on the other hand. Additionally, the regulatory distance between the EU and Mercosur countries is immense.

In Mercosur, the most prevailing NTMs are quantitative restrictions such as non-automatic licences and quotas. These measures mostly affect textile and clothing, machinery, motor vehicles, chemicals and sugar. For instance, such restrictions affect 8% of Brazil's tariff lines that is equivalent to 42% of Brazil's total imports. Other regulations concerning terms of payment for imports are also widely applied when trade involves foreign exchange transactions. These are serious barriers especially for imports of vehicles and certain capital goods in Argentina where 180-day and 360-day prior authorizations are required when their values are respectively below and above USD 200,000. Furthermore, agriculture-related sectors are highly regulated by technical regulations, mostly Sanitary and Phytosanitary measures (SPS) but also outright prohibitions and discretionary measures.

The EU is well-recognized for its stringent requirements and lofty standards imposed on goods imported into its market. Measures on agri-food products sold and consumed in the EU include inspections and prior-approval of potential exporters, control of documents and physical checks at the border, sampling of products already at sale. Additionally, genetically modified organisms (GMO) are strictly regulated. Finally, meats from Brazil are subjected to a series of restrictions.

⁶ Except for a subset of products which can enter the EU market under special TRQ. Will be detailed in the next section.

Figure 3: Average* MFN Tariffs applied by Mercosur and EU27 countries in 2019.

Sectors	Argentina	Brazil	Paraguay	Uruguay	EU27
Beverages and tobacco products	21%	17%	17%	16%	13%
Cereals	8%	1%	1%	6%	8%
Bovine and other ruminant meats	7%	8%	8%	11%	34%
Forestry	5%	5%	5%	3%	0%
Dairy products	19%	16%	16%	20%	32%
Other animal products	2%	2%	2%	3%	4%
Plant & animal fiber, others	9%	8%	8%	7%	4%
Food products nec	15%	13%	13%	13%	11%
Live animals, meat and animal products	10%	15%	15%	10%	21%
Sugar	15%	26%	26%	23%	33%
Vegetables, fruits, nuts	9%	8%	8%	9%	11%
Vegetable oils and fats	18%	11%	11%	10%	8%
Pharmaceutical products	9%	7%	7%	8%	5%
Electronic products	6%	3%	3%	5%	1%
Gas, coal, oil extraction or distribution	0%	3%	3%	0%	0%
Wood products	10%	11%	11%	10%	1%
Leather products	32%	18%	18%	23%	9%
Metals and metal products	12%	13%	13%	11%	2%
Motor vehicles and parts	18%	12%	12%	17%	8%
Other machinery	13%	5%	5%	8%	2%
Other manufactures	17%	10%	10%	15%	3%
Transport equipment	11%	11%	11%	12%	2%
Petroleum, coal and other chemical products	1%	1%	1%	0%	2%
Rubber and plastic products	7%	7%	7%	7%	0%
Textiles	23%	11%	11%	16%	7%
Wearing apparel	34%	21%	21%	20%	11%

Source: Authors' calculation based on Tariffs data from Market Access Map and Imports from Trade Map, April 2021.

(*) Aggregation methodology: World trade weighted (2017-2019)

1.3. Liberalization commitments for goods

The current EU-Mercosur Association Agreement has three components: trade, political dialogue, and economic cooperation. Our study focuses on the trade pillar of the agreement and this subsection specifically analyses the liberalization commitments of each Parties on market access for goods: tariff dismantling schedules, tariff-rate quota (TRQ) and non-tariff measures (NTM).

By the end of its implementation, the EU-Mercosur agreement will significantly liberalize trade in goods. On the Mercosur side, 91% of NTLC will be duty-free 15 years after the date of entry into force (EIF). Tariffs will be gradually reduced from the base rates starting from EIF, even those applied on most sensitive products, which initially bear tariffs above 30% AVE. Taking the example of Brazil, the share of NTLC with international tariff peaks is 28% pre-EIF, will drop to 21% at EIF, and only 5% will remain after five years. On the EU27 side, tariffs reduction is faster. More than 48% of NTLC will already be duty-free at EIF, that is 27p.p. more than its pre-EIF level and 37 p.p. more than the share of NTLC liberalized by Mercosur countries at the same period. Additionally, 91% of EU's tariff lines will be fully liberalized in fifteen years. Part of the remaining 9% will also liberalized by TRQ. Figure 4 and Figure 5 illustrate the dismantling schedules of Brazil and the EU, respectively. Similar figures for each of the Mercosur countries individually are also available in Annex 2.

Figure 4: Tariff Reduction schedule of Brazil under the EU-Mercosur Association Agreement

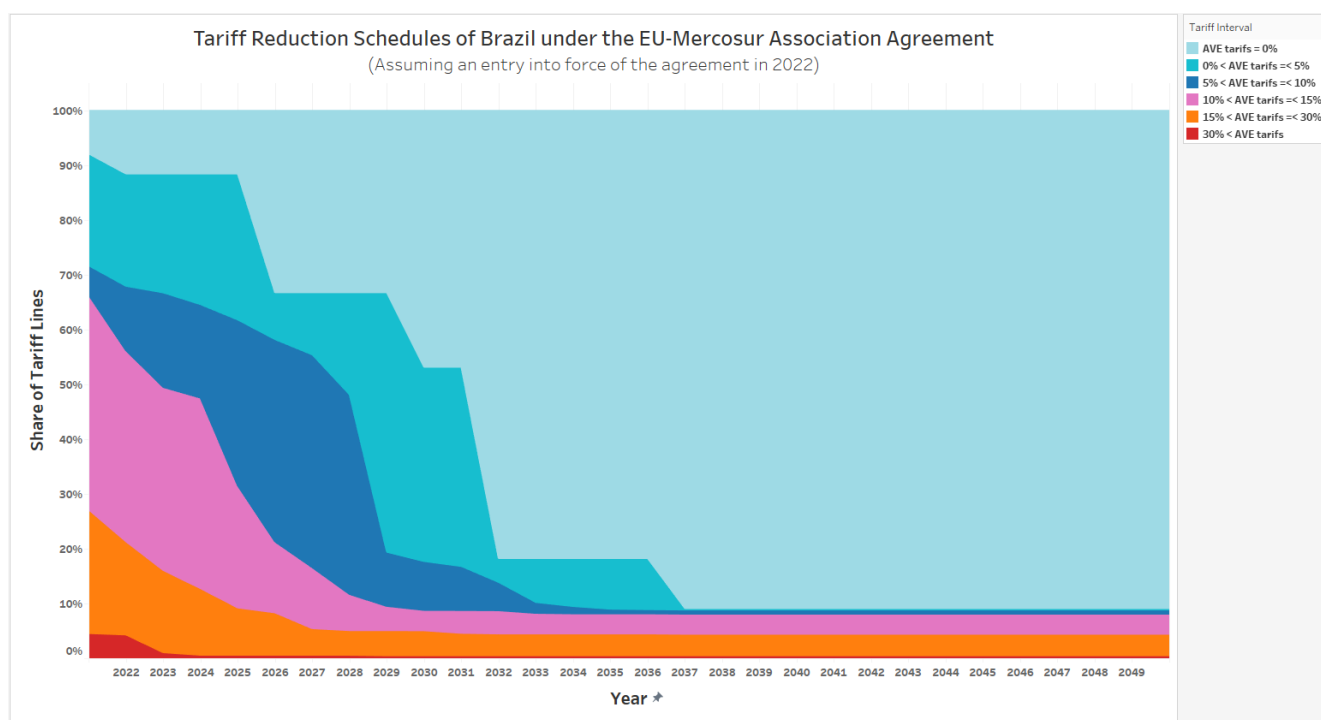
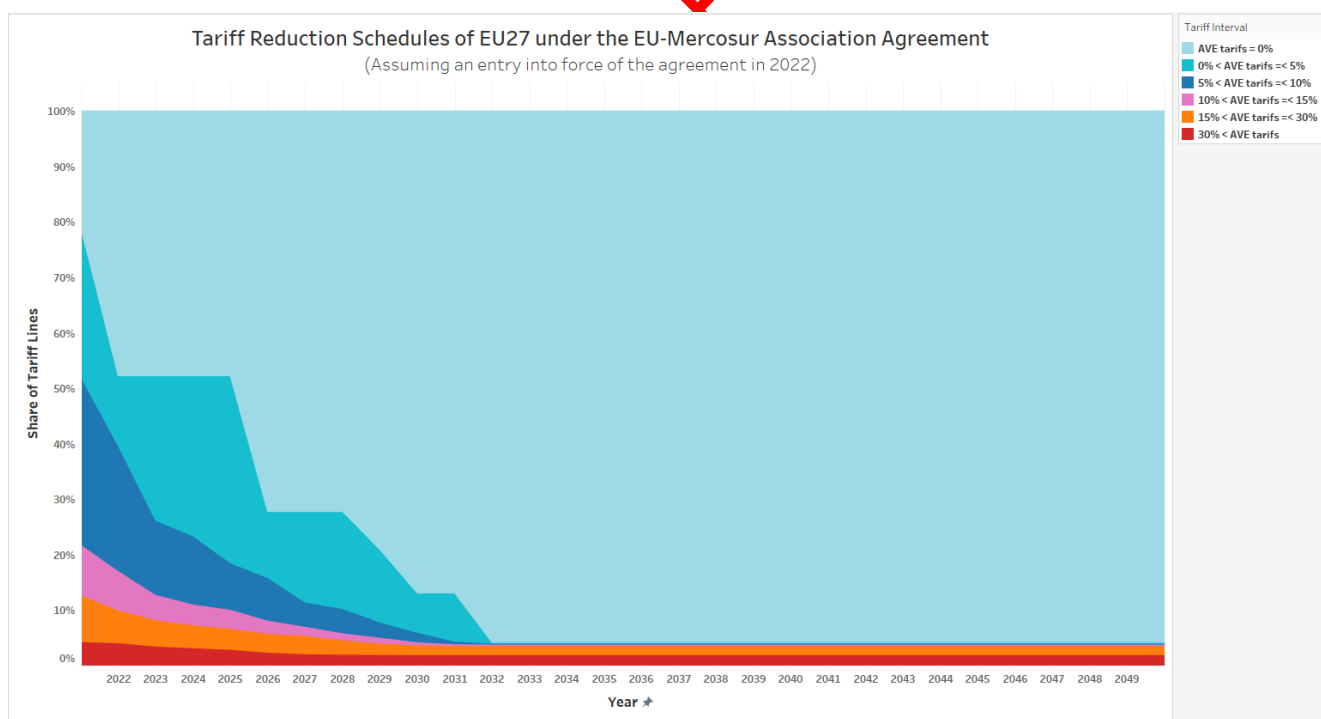


Figure 5: Tariff Reduction Schedule of EU27 under the EU-Mercosur Association Agreement



Tariff reductions often take the form of linear cuts where both Parties will eliminate or reduce base rates in equal stages from the EIF until the final years of implementation. Tariff-rate quotas (TRQ), either reciprocal or transitional, and specific treatments for some sensitive agri-food products are exceptions to these staging. Transitional TRQs are in place pending liberalization while reciprocal TRQs remain in application as long as the agreement is active. Specific treatments for agri-food commodities,

especially for the EU, include the non-elimination of the entry price system and the non-ad valorem and agricultural components of the customs duty.

To date, no Mercosur country grants market access to EU27 through TRQ under any regime. Once the agreement will enter into force, Mercosur will open two categories of TRQ to their European counterpart: transitional and reciprocal TRQs. Transitional TRQs concern motor vehicles, sugar confectionery and chocolate and other food preparations containing cocoa, and tomatoes prepared or preserved otherwise than by vinegar or acetic acid (whole or in pieces). Contingents under this category of TRQ are phase out while both the inside- and outside-quota duties are eliminated gradually over the implementation periods. Additionally, Mercosur countries will operate the liberalization of products such as powdered milk, cheese, infant formula and garlic through reciprocal system of preferential TRQ. Access quantities are gradually increased over the implementation period then stay in application as long as the agreement is active or unless being renegotiated. Inside-quota rates are phased in 11 stages while the outside-quota tariffs stay at the base rates. [Figure 5](#) illustrates the dynamics of transitional and reciprocal TRQ in Mercosur's concession schedules, assuming the agreement will enter into force in 2022.

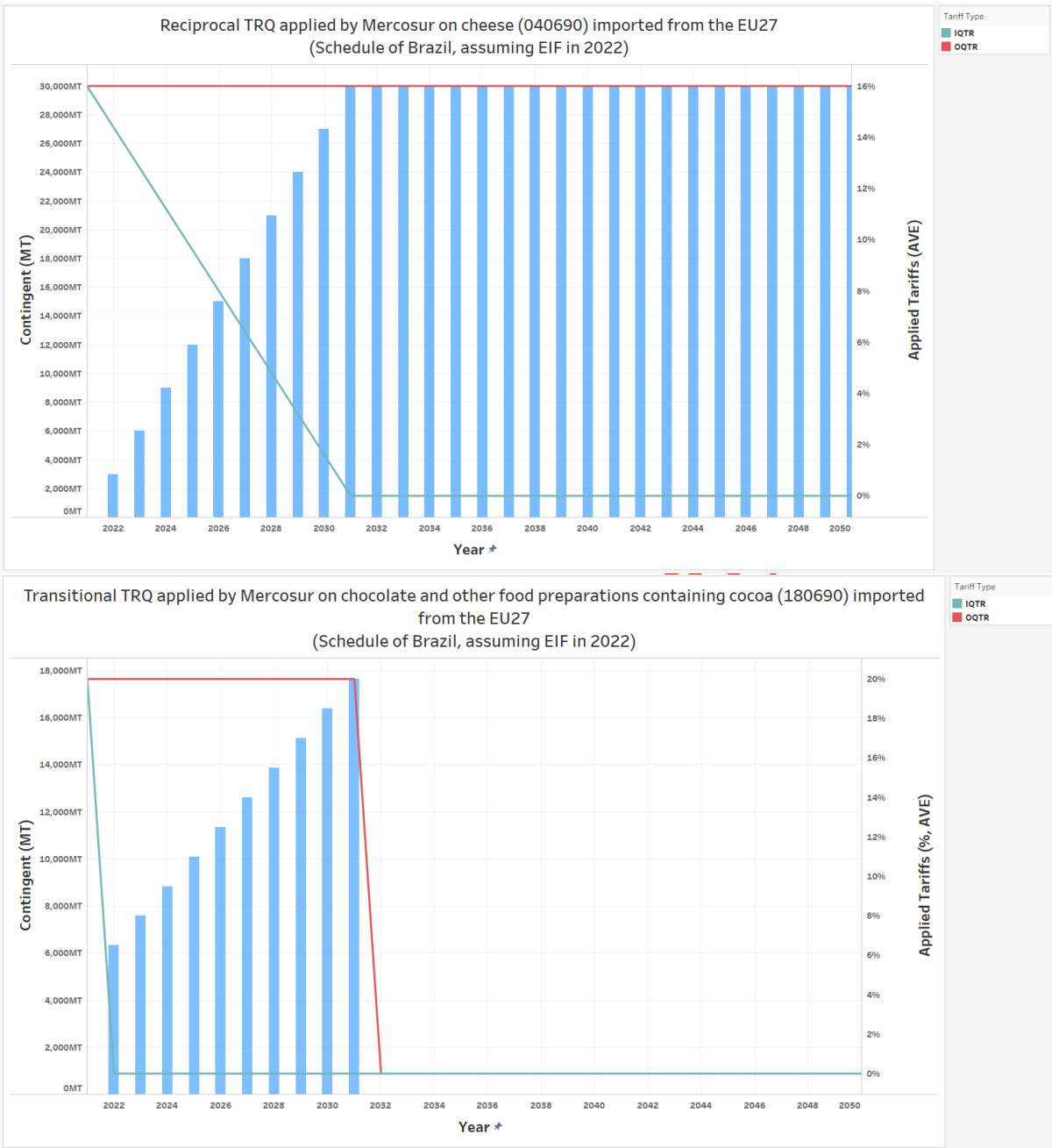
As of 2021, the EU grants TRQ to Mercosur countries under the WTO regime and bilaterally. The WTO TRQ cover products such as lamb and goat meat, high quality beef and veal, high quality bovine meat, poultry and preparation of poultry, garlic, or raw cane sugar⁷. Data from the EU tariff quota consultation database⁸ in 2020 show that TRQ balance did not exceed the initial allocation in most TRQ. When the EU-Mercosur agreement will begin to apply, the EU will concede preferential TRQ, both transitional and reciprocal, to its American counterparts. Reciprocal TRQ concern comparable products as in Mercosur's concession, while transitional TRQ cover a wider range of sensitive agricultural products such as meat products, cereals, honey, sugar or ethanol⁹. In the case of EU concession, contingent of transitional TRQ are phase out over the transitory period, then stay in application as long as the agreement is active. Additionally, the inside-quota duties are phase-in while the outside-quota tariffs remain at the base rate or reduced by some preferential margin. As a result, products subject to TRQ in the EU concession list (317 hs8 code) will not be fully liberalized at the end of the implementation period. [Figure 7](#) shows examples of transitional and reciprocal TRQ as conceded by the EU.

⁷ The EU TRQ allocation by product group and Mercosur country are listed in [Annex 4](#)

⁸ https://ec.europa.eu/taxation_customs/dds2/taric/quota_consultation.jsp?Lang=en

⁹ An exhaustive list of EU TRQ concession is summarized in the [Annex 5](#)

Figure 6: Reciprocal vs Transitional TRQ in Mercosur' Schedule



DRAFT

Figure 7: Reciprocal vs Transitional TRQ in EU27' Schedule



2. LITERATURE REVIEW

To date, few studies attempt quantitative assessments of the potential impacts of the EU-Mercosur agreement.

In 2012, Carmen Estrades presented an impact assessment of the EU-Mercosur AA, with a special focus on Uruguay for which she analysed the poverty and inequality effects of the agreement. Estrades (2012) uses a MIRAGE-HH model that incorporates an extension of a “Modelling International in Applied General Equilibrium model” with household heterogeneity. Her model consists of 19 regions (including Mercosur- 4, the EU as one, China, USA, Andean communities, EFTA and Asian countries),

30 sectors (13 agri-food, 3 primary, 9 industry, and 5 services), and 411 representative households in Uruguay. She evaluates the potential effects of the agreement under the assumptions of complete elimination of tariffs between 2011 and 2015 (scenario 1) and liberalization of tariffs on non-sensitive goods (scenarios 2 to 4). Her findings show significant welfare gains in the EU and Mercosur. Additionally, the EU's imports of agricultural goods from Mercosur will surge, especially on dairy products, cereals, meat, and rice (+11.4% from Argentina, +89.2% from Brazil, +52.8% from Paraguay, and +67.4% from Uruguay). However, third country's exports will decline up to -2% and intra-Mercosur trade flows in industrial commodities will decline.

In 2020, the London School of Economics (LSE) Consulting reported the qualitative and quantitative results of analyses of the economic, environmental, social, and human rights impacts of the EU-MERCOSUR Association Agreement in a Sustainability Impact Assessment (SIA). The study also presents the impact of the treaty on consumers, small and medium-sized enterprises (SMEs), least developed countries (LDCs) and the EU's outermost regions (ORs). The SIA uses a Dynamic Computable General Equilibrium (CGE) model (GDyn) of 31 sectors and 16 regions aggregated from the 57 sectors and 140 regions in GTAP9. In addition to MERCOSUR-4 countries, the SIA separates EU28, Turkey, Mexico, Central America, Andean, the USA and China (and Hong Kong). The remaining regions are grouped into other high-income countries, LDCs, other developing countries, and rest of the world. Labour are divided into skilled and unskilled. LSE considered two scenarios: the conservative scenario and the ambitious scenario. In the first scenario, Mercosur tariffs are eliminated for 90% of industrial goods and 80% of agricultural goods whereas the EU fully liberalize most tariffs lines except for rice, sugar, beef, meat, cereals and dairy for which tariffs are reduced by 15%. Under the ambitious scenarios, Mercosur fully eliminates tariffs and cuts NTBs on non-agricultural goods and services by 10%, while the EU will cut the tariffs on the sensitive goods by 30%. In both scenarios, trade in services will be liberalized by 3%, NTBs of the EU will not change, and so are NTBs of Mercosur in Agricultural goods. Similar to Estrades (2012), LSE found positive effects of the agreement on EU and MERCOSUR GDP under all scenarios. EU GDP increases by USD 15.1 billion (0.1%) under the conservative scenario and by USD 20.9 billion (0.1%) under the ambitious scenario. For MERCOSUR countries, the positive impact on the GDP under the conservative scenarios equals USD4.6 billion (0.5%) for Argentina, USD5.5 billion (0.2%) for Brazil, USD0.0 billion (0.1%) for Paraguay, and USD0.2 billion (0.2%) for Uruguay. The impacts are higher under the ambitious scenario: USD6.4 billion (0.7%) for Argentina, USD9.0 billion (0.3%) for Brazil, USD0.1 billion (0.1%) for Paraguay, USD0.4 billion (0.4%) for Uruguay. LDCs and other developing countries lose in both scenarios, so do major trade partners of MERCOSUR such as the USA and Mexico.

Calil and Ribera (2020) used a different methodology to quantify the possible impacts of an EU-Mercosur trade agreement on agricultural trade. The authors used a gravity model of international trade in a general equilibrium model framework following Larch and Wanner (2017), Heid and Larch (2016), Donaldson (2018), and Anderson and van Wincoop (2003) to test the hypothesis that the removal of the EU tariffs barriers through an FTA will create gains to both the EU and Mercosur because trade in agricultural products will increase once the distortionary measures applied on Mercosur's exports to the EU market will be removed. They test the hypothesis on selected agricultural products: chicken, cattle, pig, cotton, soya bean, wheat and maize. Their results are in line with other studies: positive effects on trade volume (+106.5% on trade in cattle, +341.1% for chicken, and +85.2% for pork) and on Mercosur's exports to the EU (+45% on chicken and cattle exports from Brazil and Argentina). However, the welfare effects are small: 0.14% on average.

The aforementioned studies have in common that:

- They used scenarios which make broad assumptions of the tariffs cut.

- They neglected or missed the quantification of NTMs.
- They did not include the treatment of Tariff Rate Quotas (TRQ), which is a key component of the treaty.

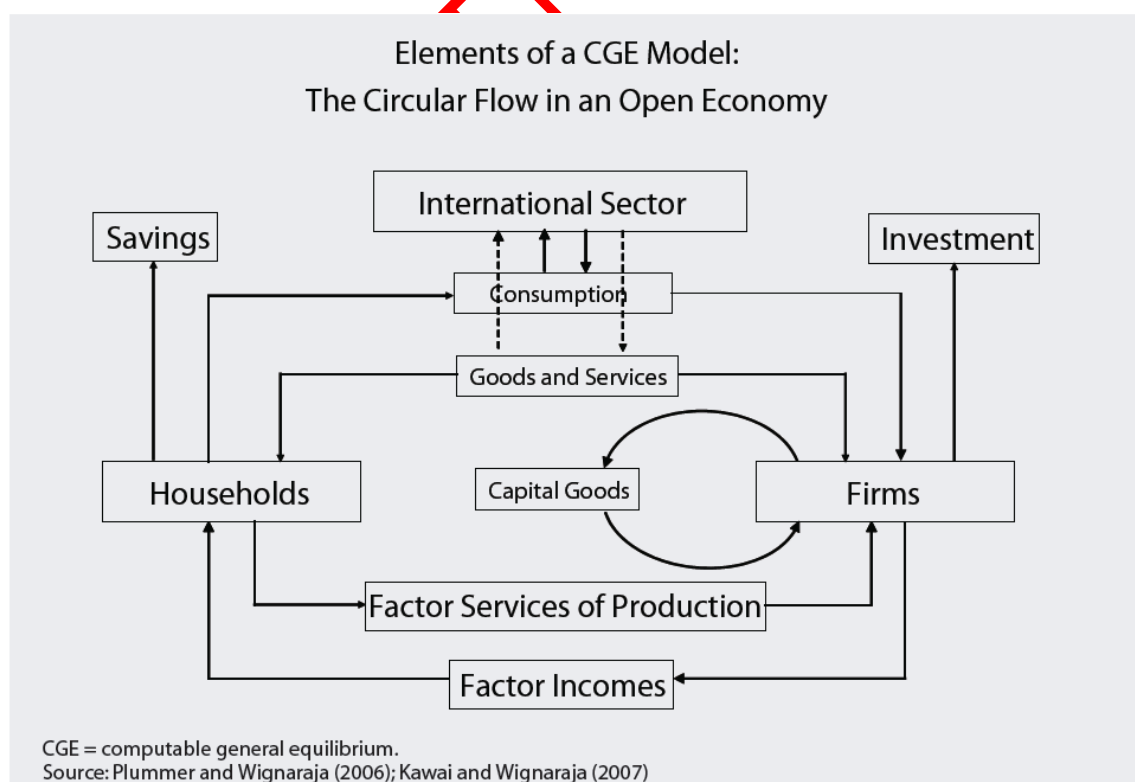
Our study contributes to the literature related to the EU-Mercosur AA and quantitative assessments of FTA by addressing these points. In fact, our study is the first to use the tariffs reduction schedules as stated in each party's concession offer to build our experimental scenarios. We also pay particular attention to include the AVEs of NTMs in goods and services in our model. Finally, this is the first study on EU-Mercosur which provides comprehensive analysis of TRQ and incorporate them in the model.

3. MODEL AND EXPERIMENT DESIGN

3.1. A primer on CGE modelling and Simulation

A Computable General Equilibrium (CGE) model is an economy-wide model that describes an economy as a whole and the interactions among its parts simultaneously. Equilibrium occurs at that set of prices at which all producers, consumers, workers and investors are satisfied with the quantities of goods they produce and consume, the industry in which they work, the amount of capital they save and invest, and so forth. CGE models are increasingly useful tools to quantitatively evaluate the effects of economic integration. They are often used by the World Bank, the World Trade Organization (WTO), the U.S. International Trade Commission, and the GTAP community to estimate the welfare effects of economic partnerships agreements. The attraction of a CGE model is that its capability to quantify the effects of a shock (i.e. change) on an economy and that it arrives at a numerically exact answer while ensuring theoretically consistent results. Figure 8 depicts the basic structure of a CGE model.

Figure 8: Elements of a CGE Model



3.2. Our model

To evaluate the impacts of the EU-Mercosur AA, we use a standard Computable General Equilibrium (CGE) model with 8 regions (Table 2) and 36 sectors (Table 3) aggregated from the GTAP10 sectoral and regional classifications, which incorporate NTMs and TRQ. A standard CGE model consist of a before-after comparison of an economy when a shock, in this case the decrease of trade protection measures induced by the trade agreement, causes it to reallocate its productive resources in more or less efficient ways. Thanks to this model, we can tell which countries will be the ultimate winners and losers from the implementation of the EU-Mercosur AA.

Table 2: Regional Aggregation

Region	Description
Argentina	Argentina
Brazil	Brazil
Paraguay	Paraguay
Uruguay	Uruguay
EUR	European Union 28 without the UK
China	China
United States of America	United States
ROW	Rest of the world

Table 3: Sectoral Aggregation

Sector Number	Code	Description	Group
1	CER	Cereals	Agricultural and agro-industry products
2	V_F	Vegetables, fruits, nuts	Agricultural and agro-industry products
3	SGR	Sugar	Agricultural and agro-industry products
4	OCR	Plant & animal fiber, others	Agricultural and agro-industry products
5	CMT	Bovine and other ruminant meats	Agricultural and agro-industry products
6	OAP	Other animal products	Agricultural and agro-industry products
7	MIL	Dairy products	Agricultural and agro-industry products
8	FRS	Forestry	Agricultural and agro-industry products
9	GAS	Gas, coal, oil extraction or distribution	Manufacturing
10	OMT	Live animals, meat and animal products	Agricultural and agro-industry products
11	VOL	Vegetable oils and fats	Agricultural and agro-industry products
12	OFD	Food products nec	Agricultural and agro-industry products
13	B_T	Beverages and tobacco products	Agricultural and agro-industry products
14	TEX	Textiles	Manufacturing
15	WAP	Wearing apparel	Manufacturing
16	LEA	Leather products	Manufacturing
17	L_P	Wood products	Manufacturing
18	PCH	Petroleum, coal and other chemical products	Manufacturing
19	BPH	Pharmaceutical products	Manufacturing
20	RPP	Rubber and plastic products	Manufacturing
21	OMF	Other manufactures	Manufacturing
22	MMP	Metals and metal products	Manufacturing
23	ELQ	Electronic products	Manufacturing
24	OMA	Other machinery	Manufacturing
25	MVH	Motor vehicles and parts	Manufacturing
26	OTN	Transport equipment	Manufacturing
27	OSE	Other services	Services
28	CNS	Construction	Services
29	AFS	Hotels and Restaurants	Services
30	WTP	Maritime Transport	Services
31	ATP	Air Transport	Services
32	CMN	Communication	Services
33	OFI	Banking	Services
34	INS	Insurance	Services
35	OBR	Business Services	Services
36	ROS	Personal Services	Services

3.3. Our experiment design and simulations

We experiment the CGE model for a baseline scenario (a world without EU-Mercosur) and for FTA scenarios where the treaty is implemented at different points in time: on the date of entry into force (assumed to be in 2022), five, ten, and 15 years later. Shocks stem from tariff and NTM reduction. The quantitative impacts of the agreement are obtained by comparing the projections under the baseline and the FTA scenarios.

3.3.1. Construction of the tariff reduction schedules

We construct the tariff reduction schedules of both parties under the EU-Mercosur AA by combining information extracted from the “EU-Mercosur trade agreement: The Agreement in Principle and its texts”¹⁰ published by the European Commission on 1 July 2019 and the detailed tariff offers made publicly available by Argentina¹¹. For each NTLC, preferential tariffs applicable each year result from the dismantling of the base duties according to the corresponding staging categories. Both ad valorem (AV) and non-ad valorem (NAV) duties are phase-in accordingly. When NAV duties apply, we compute the ad valorem equivalent (AVE) of the staged tariffs following the World Tariff Profile Methodology¹² i.e., using unit values, taking 2014 as a reference year.

As set up in the background section, liberalization through TRQ is a key element of the EU-Mercosur AA. TRQ are two-tiered tariffs and have four components: inside-quota tariff or IQTR, outside-quota tariff or OQTR, Contingent and the Administration Method. The first level of tariff (IQTR) applies to a specified quantity of import (Contingent or quota). Once this quantity limit is reached, a relatively higher customs duty (OQTR) is levied on the imported goods.

To evaluate the extent of TRQ, we opt for an estimation of their AVE for each of the NTLC impacted following the methodology developed by Anderson and Neary (2005) who consider three possible equilibria situation:

- Regime-1: Demand with supply below the quota;
- Regime-2: Demand with supply at the quota;
- Regime-3: Demand with supply over the quota.

In regime-1, the AVE is equal to the IQTR, in regime-3 it is equal to the OQTR, and in regime-2 it is equal to the IQTR plus a quota premium that depends on the quota administration method. In our study, TRQ applied by Mercosur countries mostly fall in Regime-1 while those granted by the EU fall mainly in Regime-3.

The AVE of the staged rates at the NTLC are first aggregated at the HS6 level by simple average, then aggregated at the model sectoral level using GTAP-10 methodology using three-year (2012,2013,2014) bilateral imports average as weight.

3.3.2. Assumption on NTM reductions

4. RESULTS

[...].

¹⁰ <https://trade.ec.europa.eu/doclib/press/index.cfm?id=2048>

¹¹ <https://www.cancilleria.gob.ar/en/node/101016>

¹² World Tariff Profile 2006, Technical Annexes A-C, pp. 179-204.

(https://www.wto.org/english/res_e/publications_e/world_tariff_profiles06_e.htm)

5. CONCLUSION

[...].

DRAFT - NOT FOR PUBLICATION

6. REFERENCES

- Anderson, James E. and Neary, J. Peter.** "Measuring the restrictiveness of international trade policy." MIT Press, Cambridge, Mass, 2005.
- Arita, Shawn; Beckman, Jayson and Mitchell, Lorraine.** "Reducing transatlantic barriers on US-EU agri-food trade: What are the possible gains?", Elsevier Food Policy 68 (2017) 233-247, 2016.
- Burfisher, Mary.** "Introduction to Computable General Equilibrium Models." Cambridge: Cambridge University Press. doi:10.1017/CBO9780511975004, 2011.
- Cadot, Olivier and Gourdon, Julien.** "NTMs, Preferential Trade Agreements, and Prices: New evidence." CEPII Working Paper, 2015.
- Cadot, Olivier; Gourdon, Julien and Van Tongeren, Frank.** "Estimating Ad Valorem Equivalents of Non-Tariff Measures: Combining Price-Based and Quantity-Based Approaches." OECD Trade Policy Papers, 2018.
- Calil, Yuri Clements Daglia and Ribera, Luis A.** "EU–Mercosur Free Trade Agreement: Implications for Agriculture." 2020 Annual Meeting, July 26-28, Kansas City, Missouri 304548, Agricultural and Applied Economics Association, 2020.
- Carrère, Céline and De Melo, Jaime.** « Notes on Detecting the Effects of Non-Tariff Measures." Journal of Economic Integration 26, 136–168, 2011.
- Decreux, Yvan and Ramos, Maria Priscila.** "How does Tariff-rate quota modelling affect CGE results? An application for MIRAGE." Working paper No. 1423-2016-117716, 2007.
- Döbeling, Tatjana and Pelikan, Janine.** "Searching for an Appropriate Ad Valorem Equivalent for TRQs: The Case of CETA." 59th Annual Conference, Braunschweig, Germany, September 25-27, 2019. No. 292302. German Association of Agricultural Economists (GEWISOLA), 2019.
- Estrades Carmen.** "Is MERCOSUR's external Agenda Pro-Poor? An Assessment of the European Union-MERCOSUR Free-Trade agreement on poverty in Uruguay applying MIRAGE." IFPRI Discussion Paper 01219, October 2012.
- Grübler, Julia; Ghodsi, Mahdi and Stehrer, Robert.** «Assessing the Impact of Non-Tariff Measures on Imports." 2016.
- Gubarev, Maxim; Khalilova, Narmin; Peters, Ralf and Shirotori, Miho.** "How to Encode Non-Tariff Measures in Regional Trade Agreements? The case of the Comprehensive and Progressive Agreement for Trans-Pacific Partnership (CPTPP)." UNCTAD/DITC/TAB/2020/2. United Nations Publication, 2020.
- Ing, Lili Yan and Cadot, Olivier.** "Ad valorem equivalents of non-tariff measures in ASEAN." ERIA Discussion Paper series, 2017.
- Kee, Hiau Looi and Nicita, Alessandro.** "Trade Frauds, Trade Elasticities and Non-Tariff Measures." World Bank, 2016.
- Kee, Hiau Looi; Nicita, Alessandro and Olarreaga, Marcelo.** "Estimating Trade Restrictiveness Indices." The Economic Journal 119, 172–199, 2019.
- LSE Consulting.** "Sustainability Impact Assessment in Support of the Association Agreement Negotiations between the European Union and Mercosur." Draft Final Report. July 2020.

Mattoo, Aaditya; Peters, Ralf; De Cordoba, Santiago Fernandez; Knebel, Christian; Penello Rial, Denise; Rosenow, Samuel; Kee, Hiau Looi and Nicita, Alessandro. “The Unseen Impact of Non-Tariff Measures: Insights from a new database.” United Nations (UNCTAD) and World Bank joint publication, 2018.

Penello Rial, Denise. “Computing Non-tariff Measures Indicators: Analysis with UNCTAD TRAINS data.” UNCTAD Research Paper No.41, 2019.

Sanjuán López, Ana Isabel; Rau, Marie-Luise Rau and Woltjer, Geert. “Exploring Alternative Approaches to Estimate the Impact of Non-Tariff Measures and Further Implementation in Simulation Models”. JCR Technical Reports, 2019.

UNCTAD. “Non-Tariff Measures in Mercosur: Deepening Regional Integration and Looking Beyond.” UNCTAD/DITC/TAB/2016/1, 2016.

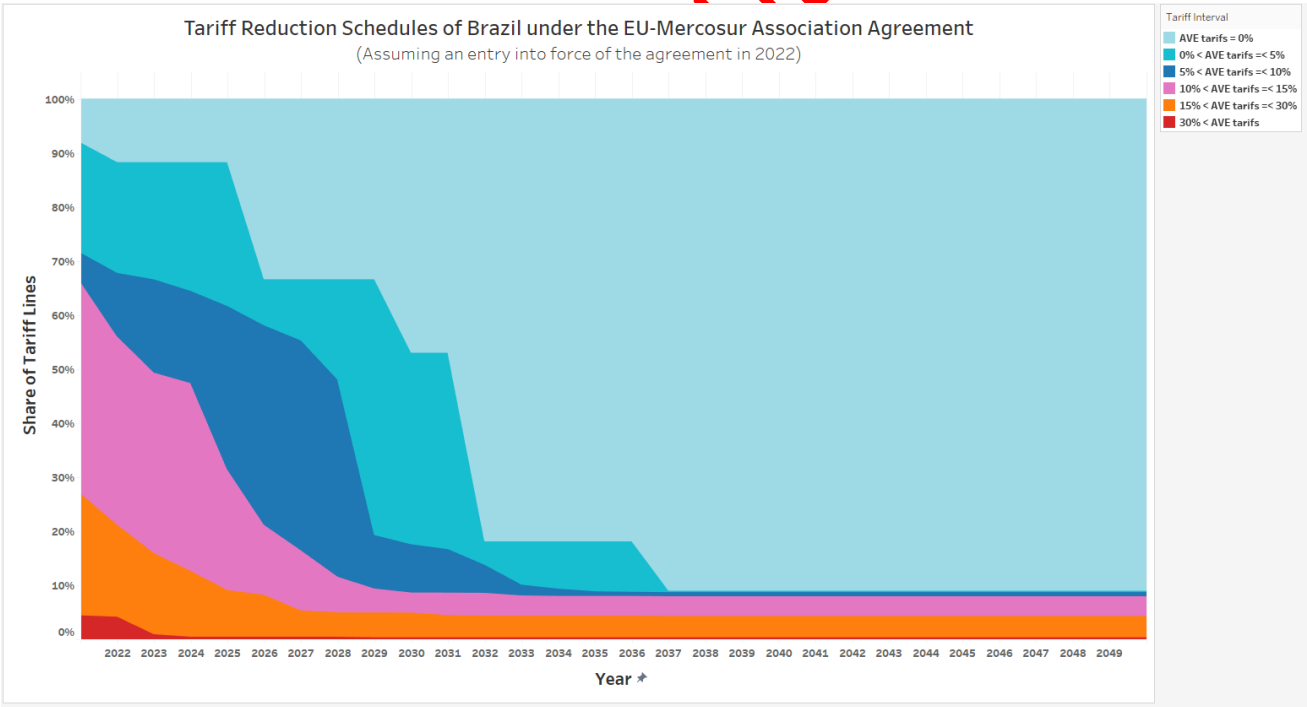
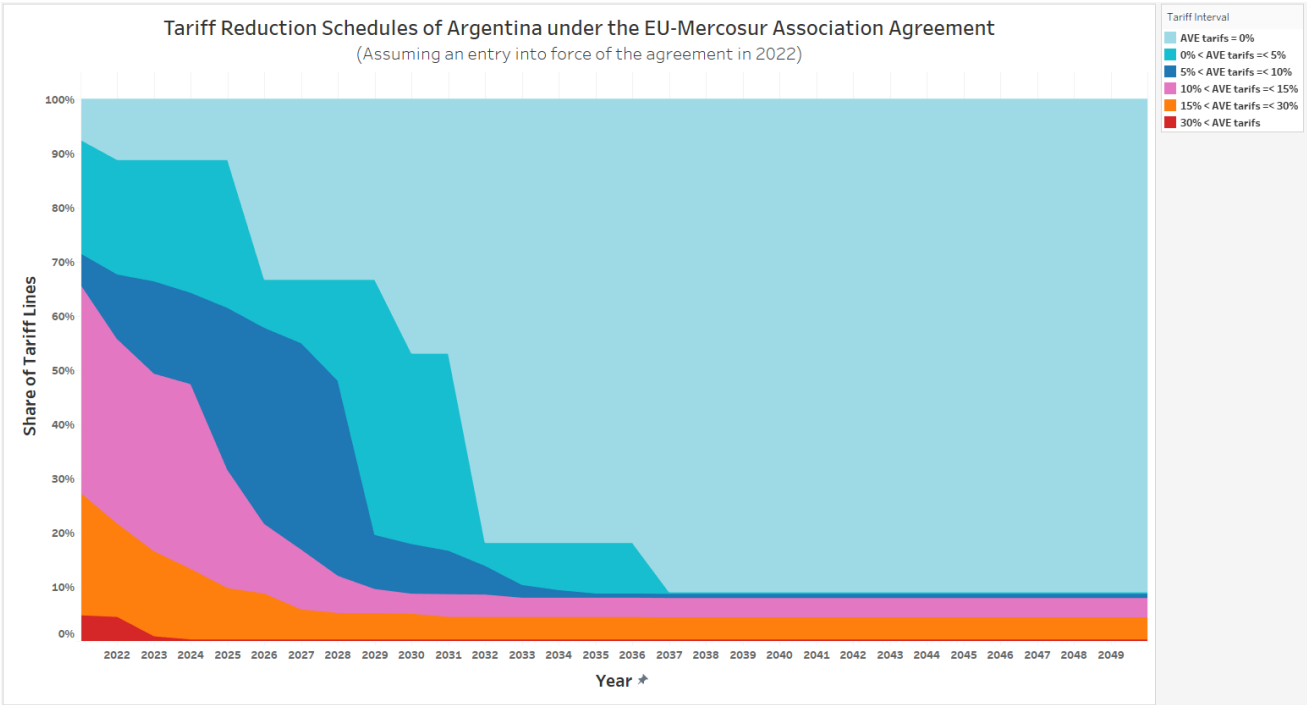
DRAFT - NOT FOR PUBLICATION

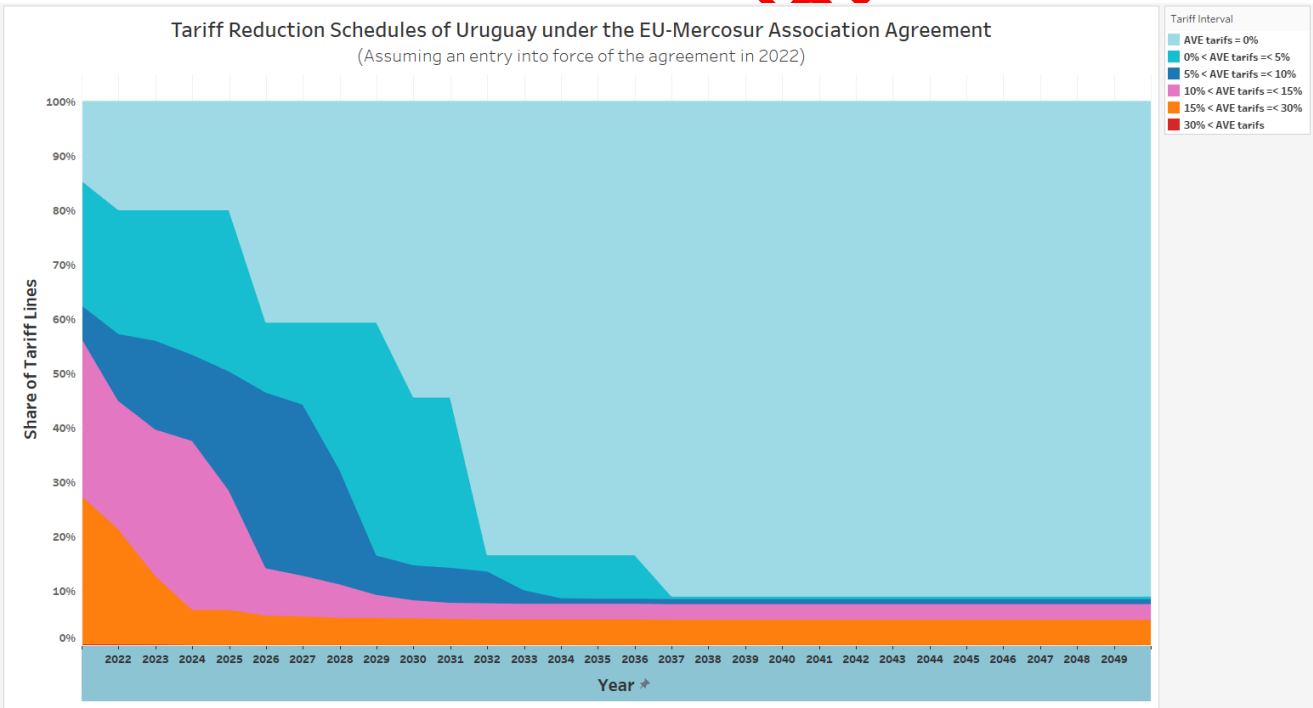
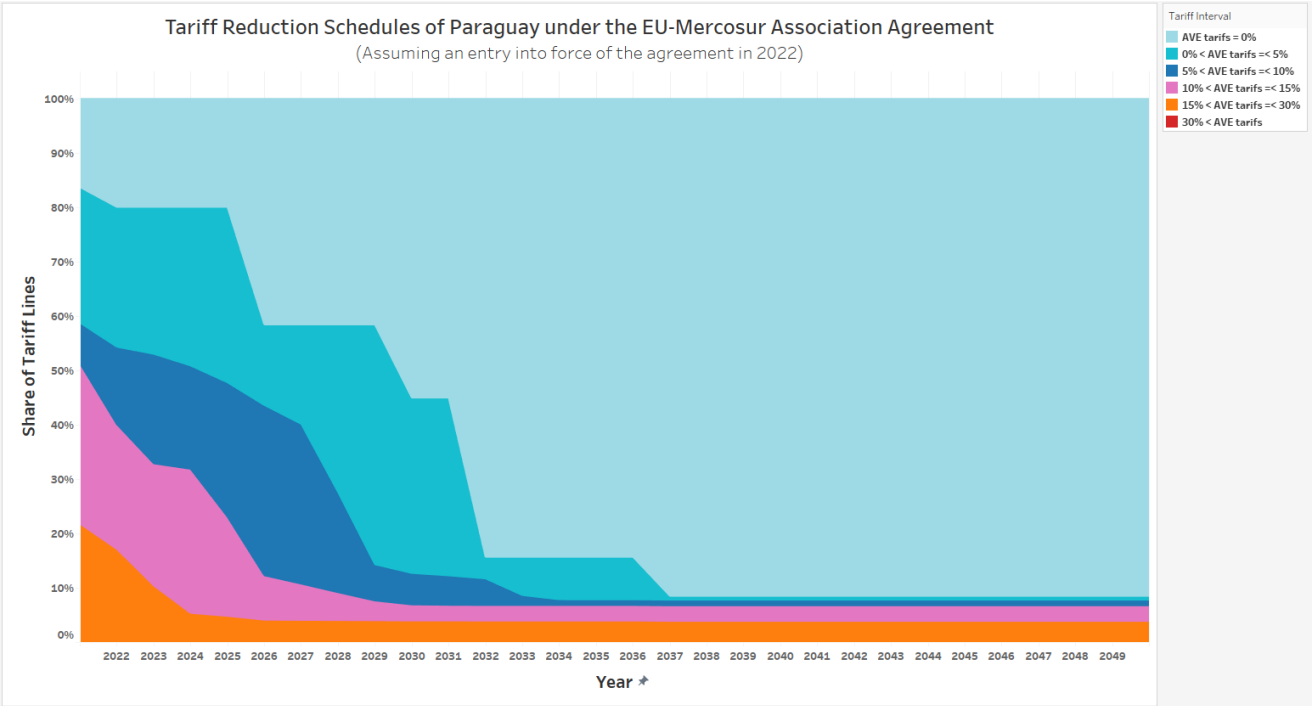
ANNEXES

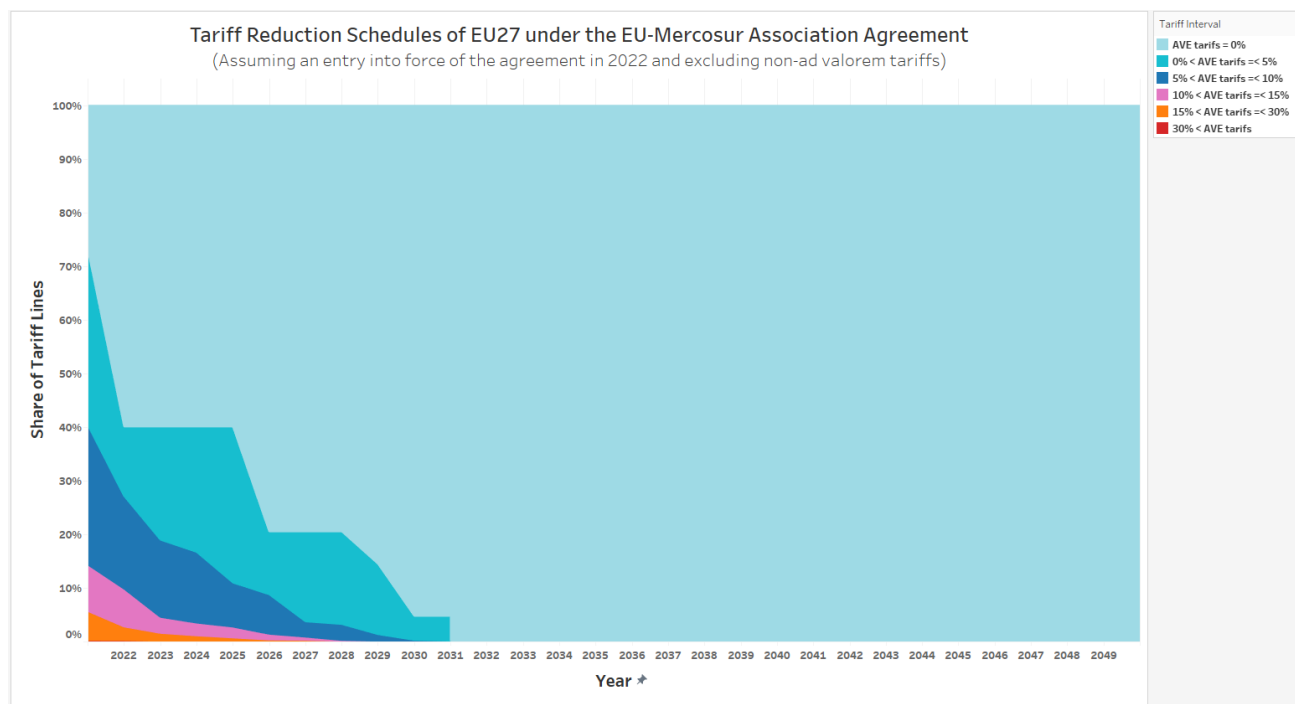
ANNEX 1 – Active Preferential Trade Agreements involving Mercosur countries

Scope	Agreements involving Argentina	Agreements involving Brazil	Agreements involving Paraguay	Agreements involving Uruguay
I n t e r a - M e r c o s u r	AAP.A14TM 06: Argentina-Brazil-Uruguay AAP.AG 01: Argentina-Uruguay	AAP.A14TM 06: Argentina-Brazil-Uruguay AAP.A14TM 07: Brazil-Uruguay AAP.CE 02: Brazil-Uruguay AAP.CE 14: Argentina-Brazil		AAP.A14TM 06: Argentina-Brazil-Uruguay AAP.AG 01: Argentina-Uruguay AAP.A14TM 07: Brazil-Uruguay AAP.CE 02: Brazil-Uruguay
	AAP.CE 13: Argentina-Paraguay AAP.CE 57: Argentina-Uruguay Regional group, Aladi: A.REG 04 Regional group, Aladi: A.REG 07 (Cultural goods)	Regional group, Aladi: A.REG 04 Regional group, Aladi: A.REG 07 (Cultural goods)	AAP.CE 13: Argentina-Paraguay Regional group, Aladi: A.REG 04 Regional group, Aladi: A.REG 07 (Cultural goods)	AAP.CE 57: Argentina-Uruguay Regional group, Aladi: A.REG 04 Regional group, Aladi: A.REG 07 (Cultural goods)
	Regional group, Aladi: AAP.AG 02 (Seeds) Regional group, MERCOSUR (AAP.CE 18) Regional group, Aladi: A.REG 01 Regional group, Aladi: A.REG 02 Regional group, Aladi: A.REG 03	Regional group, Aladi: AAP.AG 02 (Seeds) Regional group, MERCOSUR (AAP.CE 18) Regional group, Aladi: A.REG 01 Regional group, Aladi: A.REG 02	Regional group, Aladi: AAP.AG 02 (Seeds) Regional group, MERCOSUR (AAP.CE 18) Regional group, Aladi: A.REG 01 Regional group, Aladi: A.REG 02	Regional group, Aladi: AAP.AG 02 (Seeds) Regional group, MERCOSUR (AAP.CE 18) Regional group, Aladi: A.REG 01 Regional group, Aladi: A.REG 02 Regional group, Aladi: A.REG 03
	AAP.CE 35: MERCOSUR-Chile AAP.CE 36: MERCOSUR-Bolivia AAP.CE 55: MERCOSUR-Mexico AAP.CE 58: MERCOSUR-Peru AAP.CE 59: MERCOSUR-Colombia, Ecuador, Venezuela	AAP.CE 35: MERCOSUR-Chile AAP.CE 36: MERCOSUR-Bolivia AAP.CE 55: MERCOSUR-Mexico AAP.CE 58: MERCOSUR-Peru AAP.CE 59: MERCOSUR-Colombia, Ecuador, Venezuela	AAP.CE 35: MERCOSUR-Chile AAP.CE 36: MERCOSUR-Bolivia AAP.CE 58: MERCOSUR-Peru AAP.CE 59: MERCOSUR-Colombia, Ecuador, Venezuela	AAP.CE 35: MERCOSUR-Chile AAP.CE 36: MERCOSUR-Bolivia AAP.CE 55: MERCOSUR-Mexico AAP.CE 58: MERCOSUR-Peru AAP.CE 59: MERCOSUR-Colombia, Ecuador, Venezuela
	AAP.CE 62: MERCOSUR-Cuba FTA, MERCOSUR-Egypt FTA, MERCOSUR-India FTA, MERCOSUR-Israel FTA, MERCOSUR-SACU ECA, Colombia-MERCOSUR GSTP	AAP.CE 62: MERCOSUR-Cuba FTA, MERCOSUR-Egypt FTA, MERCOSUR-India FTA, MERCOSUR-Israel FTA, MERCOSUR-SACU ECA, Colombia-MERCOSUR GSTP	AAP.CE 62: MERCOSUR-Cuba FTA, MERCOSUR-Egypt FTA, MERCOSUR-India FTA, MERCOSUR-Israel FTA, MERCOSUR-SACU ECA, Colombia-MERCOSUR	AAP.CE 62: MERCOSUR-Cuba FTA, MERCOSUR-Egypt FTA, MERCOSUR-India FTA, MERCOSUR-Israel FTA, MERCOSUR-SACU ECA, Colombia-MERCOSUR
	AAP.CE 06: Argentina-Mexico	AAP.CE 53: Brazil-Mexico	AAP.R 38: Mexico-Paraguay	FTA, AAP.CE 60: Mexico-Uruguay
		Brazil-Guyana Brazil-Suriname (Rice)	FTA, Chinese Taipei-Paraguay	
				FTA, Chile-Uruguay

ANNEX 2 – Tariff reduction Schedules under the EU-Mercosur Association Agreement







DRAFT - NOT FOR PUBLICATION

ANNEX 3 – TRQ granted by EU to Mercosur countries in 2021, prior to the EU-Mercosur AA agreement

Product group	Beneficiary	Quota Volume (Tonne)
Lamb and goat meat (bone in)	Argentina	17006
Lamb and goat meat (bone in)	Uruguay	4759
Lamb and goat meat (boneless)	Argentina	33949
Lamb and goat meat (boneless)	Uruguay	9518
High quality beef and veal (bone-in)	Argentina and Uruguay	48200
Buffalo meat (Boneless)	Argentina	200
Poultry ("70% chickens and "65%" chickens)	Argentina and Brazil	6249
Poultry (Boneless, Frozen)	Argentina and Brazil	2305
Garlic	Argentina	13700
Poultrymeat (salted or in brine)	Brazil	170807
Preparation of poultry, turkey and other fowls meat or offal	Brazil	579192
Raw cane sugar	Brazil	412054
Dried birds' eggs	Argentina	7000
Frozen cuts and breasts of fowls of the species Gallus domesticus	Brazil	9432
Frozen cuts and breasts of fowls of the species Gallus domesticus	Argentina	3300
Frozen cuts, halves and quarters of turkey (bone-in and boneless)	Brazil	4285
Fresh,chilled, frozen bovine meat, thick and thin skirt (High quality)	Argentina	30700
Fresh,chilled, frozen bovine meat, thick and thin skirt (High quality)	Uruguay	6300
Fresh,chilled, frozen bovine meat, thick and thin skirt (High quality)	Brazil	10000
Fresh,chilled, frozen bovine meat (High quality)	Paraguay	1000

Source: Aggregated data from ITC Market Access Map (<https://macmap.org>) and EU Tariff Quota Consultation Database (https://ec.europa.eu/taxation_customs/dds2/taric/quota_consultation.jsp?Lang=en), accessed april 2021

DRAFT - NOT FOR

ANNEX 4 – TRQ granted by EU to Mercosur countries under the EU-Mercosur AA agreement

EU's TRQ concession under the EU-Mercosur association Agreement	Number of HS8 code affected (CN2013)	Category of TRQ
A quota of 54 450 t (cwe – carcass weight equivalent) for fresh beef , phased in in six equal stages, with in-quota duty of 7.5%.	7	Transitional TRQ
A quota of 44 550 t (cwe) for frozen beef, including for processing , phased in in six equal stages, with in-quota duty of 7.5%.	15	Transitional TRQ
A quota of 30 000 t for cheeses , with in quota duties and volumes phased out/in over a 10 year period	43	Reciprocal TRQ
A quota of 30 000 t for cheeses , with in quota duties and volumes phased out/in over a 10 year period /E	1	Reciprocal TRQ
A quota of 3 000 t (egg equivalent) for egg products , phased in over six equal stages, duty-free	5	Transitional TRQ
A quota of 3 000 t (egg equivalent) for egg albumins , phased in over six equal stages, duty-free	2	Transitional TRQ
A quota of 650 000 t for ethanol , phased in in six equal stages. 450 000 t of this quantity are reserved for the chemical industry, duty-free. For the remaining 200,000 t, the in-quota duty for the undenatured ethyl alcohol imported under sub-heading 2207.10 and tariff items 2208.90.91 and 2208.90.99 is 6.4 €/hl. The in-quota duty for the denatured ethyl alcohol imported under sub-heading 2207.20 is 3.4 €/hl.	4	Transitional TRQ
A quota of 15 000 t for garlic , with in quota duties and volumes phased out/in over a 7 year period	1	Transitional TRQ
A quota of 45 000 t for honey phased in over six equal stages, duty free	1	Transitional TRQ
A quota of 5 000 t for infant formula , with in quota duties and volumes phased out/in over a 10 year period	1	Reciprocal TRQ
A quota of 1 000 000 t for maize phased in in six equal stages, duty free	4	Transitional TRQ
A quota of 10 000 t for milk powder , with in quota duties and volumes phased out/in over a 10 year period	13	Reciprocal TRQ
A quota of 2 000 t for other sugars (Headings 1702 and 1806) with a 50% MFN tariff preference	16	Transitional TRQ
A quota of 25 000 t (cwe) for fresh and chilled, frozen and prepared pigmeat phased in in six equal stages. The in-quota duty shall be 83 €/t	42	Transitional TRQ
A quota of 90 000 t (cwe) for boneless poultry meat, including poultry preparations , phased in in six equal stages, duty free	25	Transitional TRQ
A quota of 90 000 t (cwe) for bone-in poultry meat phased in in six equal stages, duty free	85	Transitional TRQ
A quota of 60 000 t for rice phased in in six equal stages, duty free	32	Transitional TRQ
A quota of 2 400 t (pure alcohol equivalent) for rum in bulk, phased in over six equal stages, duty free,	2	Transitional TRQ
A quota of 1 000 t for sweetcorn , duty free	3	Transitional TRQ
A quota of 1 500 t for maize starch and manioc starch with a 50% MFN tariff preference (83 €/t)	2	Transitional TRQ
A quota of 600 t for starch derivatives , phased in in six equal stages, duty free	11	Transitional TRQ
A quota of 10 000 t for sugar for refining for Paraguay, duty free + lowering the in-quota of the EU WTO quota for Brazil from 98 €/t to zero for 180 000 t	2	Transitional TRQ

Source: New EU-Mercosur trade agreement, The agreement in principle, published on 1 July 2019