

## JRC TECHNICAL REPORTS

# Cumulative economic impact of future trade agreements on EU agriculture

*Extended summary*

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2016



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**JRC Science Hub**

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JRC103838

EUR 28200 EN

PDF	ISBN 978-92-79-63490-1	ISSN 1831-9424	doi:10.2788/918897
Print	ISBN 978-92-79-63491-8	ISSN 1018-5593	doi:10.2788/6212

Luxembourg: Publications Office of the European Union, 2016

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How to cite: Boulanger, P., Dudu, H., Ferrari, E., Himics, M., and M'barek, R.; Cumulative economic impact of future trade agreements on EU agriculture, Extended summary; EUR 28200 EN; 10.2788/918897

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**Abstract**

This extended summary presents the main findings of the potential effects of twelve free trade agreements (FTAs) under the current EU FTA agenda. It sheds some light on relatively balanced cumulated impacts in terms of trade, production and price for the EU agricultural sector as a whole, while quantifying also the market development for specific agricultural sectors. In contrast to a forecasting exercise, it compares a conservative and an ambitious FTA scenario with a business as usual (reference) scenario.

For the full set of results and analysis, please see the JRC Science for Policy Report:

Boulanger, P., Dudu, H., Ferrari, E., Himics, M., and M'barek, R.; Cumulative economic impact of future trade agreements on EU agriculture; EUR 28206 EN; doi10.2788/194880

## **Table of contents**

1	Introduction.....	1
2	Scope of the study.....	2
3	Methodology.....	4
4	Caveats and limitations.....	4
5	Main results.....	6
6	Focus on specific sectors.....	9
6.1	Dairy.....	9
6.2	Beef and sheep.....	10
6.3	Pigmeat and poultry.....	12
6.4	Arable crops.....	13
6.5	Rice.....	13
6.6	Sugar.....	13
6.7	Beverages and tobacco.....	15
6.8	On the effect of the Trans-Pacific Partnership.....	15
7	Conclusion.....	16
	List of abbreviations.....	17
	List of figures.....	18

## 1 Introduction

Trade is important to the European economy. The European Union (EU) exports nearly as many goods as China, and more than the United States of America (USA) or any other country. For agri-food trade in particular, the EU is also a key player on global markets. For many years, the EU has been the leading importer of agri-food products, underpinned by large imports of raw materials for the EU meat and food sectors. Since 2013, the EU has become the biggest global exporter of agri-food products. In 2010, the EU became for the first time a net exporter of agri-food products and since then has consistently run a trade surplus. Apart from the setback in 2009 (in the wake of the global economic and financial crisis), export values has been continuously increasing since 2005, at an average pace of 8% per year and outpacing growth of non-agricultural exports.

In 2015, EU agri-food exports totalled 129 billion euros, with a growth of 6% compared to 2014, despite the significant export losses to one of its most important export markets, following the import ban imposed by the Russian authorities on a large number of the EU products, notably meats, dairy products and fruit & vegetables. EU agri-food imports in 2015 amounted to 113 billion euros, also showing a rising trend compared to the previous year (+9%). Hence, the trade balance showed a positive surplus of 16 billion euros. Agri-food trade represented about 7% of the EU trade value, and made up 25% of the positive EU trade balance.

International markets are becoming more and more essential for the growth of EU agriculture and farmers' incomes, and are an important source for jobs creation. On one hand, expansion opportunities on the internal market appear to be limited in the context of slower economic growth, an ageing population, saturation of food consumption and changing diet preferences. On the other hand, market projections indicate a favourable development for food export demand: while developed countries remain an important outlet, emerging economies and a growing middle class in many developing countries in Asia and Sub-Saharan Africa are expected to open up promising opportunities for agricultural exporters, with growth rates in population and purchasing power outpacing the EU and other advanced economies, and with nutrition patterns shifting to include more dairy products and meat -based diets.

Against this background, the European Commission (EC) is committed to further promote trade relationships that bring value to European society, while safeguarding the European social and regulatory model, which notably includes appropriate protection of highly sensitive agricultural products.

Over recent years, there has been a significant evolution in global trade policies: while multilateral negotiations mediated by the World Trade Organization (WTO) have been struggling to achieve concrete results as regards a possible deal to boost market access, most countries have engaged in a number of bilateral and regional trade agreements with various trade partners, to achieve a higher degree of reciprocal tariff liberalisation and thus improved access to third country markets. These trade agreements are now generally more ambitious and comprehensive in scope compared to only a decade ago. The EU has followed this global trend in trade policy, with the number of preferential trade negotiations expanding over the past years.

In order to build a coherent EU trade policy for the EU agri-food sector, EU policymakers and negotiators need to ensure consistency between all trade agreements, and in particular to limit their possible negative impacts on sensitive EU agricultural products. To this end, the joint effects of all bilateral concessions that are granted to the EU's trade partners need to be understood and balanced against concessions obtained from these partners in market access and beyond, and the effects in other sectors in the economy.

For each agreement, the EC regularly carries out impact assessments before the launch of the negotiation and sustainability impact assessments (SIAs) while they are ongoing,

but a study that takes account of different trade negotiations simultaneously – at least for the agricultural sector – has never been carried out. Furthermore, a more disaggregated analysis of the agricultural sector than is typically carried out in the Commission impact assessments is needed to complete the picture.

At the Agricultural Council meeting of 15 February 2016, Commissioner Hogan announced that the Commission would carry out a study to analyse the economic cumulative effects of ongoing and upcoming trade negotiations on the EU agricultural sector. The present report is an extended summary of the report that is the result of Commissioner Hogan's commitment to the EU Council of Ministers.

## 2 Scope of the study

The aim of the study is to provide policy-makers and negotiators with insights into the economic impact of a selection of potential future EU trade agreements on the agricultural sector in the EU28. The study aims to single out sensitive products and indicate potentially offensive interests of the EU going into the bilateral negotiations. Detailed knowledge of the potential impacts will allow the Commission to make informed choices during the negotiation process.

The analysis will solely focus on the market access arrangements of the trade agreements, i.e. on the effects produced by reciprocal liberalisation of import tariffs between the EU and the relevant trade partners. This means that other provisions in the trade agreements that could potentially also have an economic impact on the EU agricultural sector (e.g. the reduction of non-tariff measures (NTMs), in particular sanitary and phytosanitary measures (SPS), or the protection of geographical indications) are not taken into account in the present assessment.

This study intends to cover ongoing and upcoming Free Trade Agreements (FTAs) that could be concluded by the EU and come into operation over the next decade. Since the list of potential negotiations to be considered would be quite long, only the agreements with the most significant expected impacts for EU agriculture are analysed. First, the study considers trade agreements recently concluded but not yet implemented, i.e. those with **Canada** and **Vietnam**. A second category consists of major trade agreements under negotiation (**USA, Mercosur, Japan, Thailand, Indonesia** and the **Philippines**). The study also addresses negotiations likely to start in the near future, i.e. with **Australia** and **New Zealand**. Finally, the modernisation of the older agreements with **Turkey** and **Mexico** are included to complete the picture. In total, 12 trade negotiations are covered. They represent a selection of the most important initiatives under the current EU FTA agenda.

Agreements concluded in the past and already applied are not covered, since their effects are already accounted for in the medium-term prospects of the EU agricultural sector and integrated into the reference scenario (the "baseline") until 2025<sup>1</sup>.

For most of the ongoing negotiations, offers of market access between the EU and the relevant trade partners have not yet been exchanged, or at least they do not cover the treatment of sensitive products, for which reciprocal concessions are usually granted under the form of Tariff Rate Quotas (TRQs). Talks have not been launched for other agreements. This implies that the actual outcome of the majority of EU free trade negotiations considered in this study is largely unknown at this stage. In particular, it would be extremely challenging to speculate about possible realistic volumes of reciprocal TRQ concessions for a large number of sensitive products.

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<sup>1</sup> The baseline is documented in the annual report "Prospects for Agricultural Markets and Income in the EU, 2015-2025" available at the DG AGRI website: <http://ec.europa.eu/agriculture>

Given the early stage status of most of the negotiations analysed in this study, it is not possible to model the precise negotiation outcomes. Instead, consideration is given to theoretical scenarios that can provide a range of possible cumulated impacts of EU trade policy.

The study considers two trade scenarios with different levels of ambition in the negotiations: a conservative and an ambitious scenario. For the trade agreements with Canada and Vietnam, both the conservative and the ambitious scenarios are based on the actual outcome of the respective trade negotiations as regards tariff liberalisation. This includes the modelling of bilateral TRQs granted under the two agreements. For the remaining ten trade negotiations, the two scenarios are based on full tariff liberalisation for a large majority of tariff lines and on a partial tariff cut for the few remaining lines, which represent the sensitive products. The conservative and the ambitious scenarios differ in terms of their assumptions regarding the percentage of tariff lines that will be fully liberalised under the agreements and the size of the tariff cut for the sensitive products.

- **Conservative:** Full liberalisation of 97% of the World Customs Organization's Harmonized System (HS) 6-digit lines and a partial cut of 25% for the remaining 3% of lines.
- **Ambitious:** Full liberalisation of 98.5% of HS 6-digit lines and a partial cut of 50% for the remaining 1.5% of lines<sup>2</sup>.

The assumptions are applied identically to all considered trade agreements and symmetrically for both the EU and the relevant trade partners. However, the selection of sensitive products varies as a function of the trade agreement considered and can be different for the EU and the relevant trade partners. The precise list of sensitive products for each agreement and trade partner has been established based on two criteria, applied in the following order of priority:

1. Expert judgement of the relevant trade negotiators of the European Commission, based on the evidence of ongoing negotiations with trade partners or on the analysis of the respective sensitivities, carried out prior to the launch of the trade talks;
2. Objective statistical indicators, notably the tariff revenue associated with each tariff line.

As far as EU trade partners are concerned, beyond well-known sensitivities that emerged from trade negotiations or preliminary talks, the degree of knowledge about products potentially eligible for exemption from full tariff cuts is somewhat more limited; therefore, the use of statistical indicators for the compilation of the sensitive products' list is more extensive for third countries than for the EU.

Given the theoretical scenarios applied for the study, the results clearly do not represent a forecast of the likely outcome of the trade negotiations covered in the study. In the actual negotiations, the level of TRQs agreed will be the key factor determining the impact on agricultural markets.

Finally, a sensitivity analysis is run to take into account the impact of the Trans-Pacific Partnership (TPP) agreement, a mega regional FTA concluded between 12 countries of

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<sup>2</sup> It is worth noting that the percentage of liberalised lines must be dealt with at HS6 rather than at CN8 level, since global trade models work with HS6, which is the most disaggregated level for the harmonised world trade nomenclature. The margin of manoeuvre to shield sensitive agricultural products is not identical when working at HS6 or CN8 level, since the share of agricultural lines on the total tariff lines is different in the two product nomenclatures. 97% liberalisation at HS6 level leaves room for up to 21% of potentially sensitive agri codes to be excluded from full liberalisation, and is thus roughly equivalent to only 95.4% liberalisation at CN8 level for the EU. 98.5% liberalisation at HS6 level allows for the exclusion of up to 10.5% of agri codes, which roughly corresponds to 97.7% liberalisation at CN8 level.

the Pacific Rim (the United States, Australia, Brunei Darussalam, Canada, Chile, Japan, Malaysia, Mexico, New Zealand, Peru, Singapore and Vietnam) and that is expected to have major importance on the global trade arena. This sensitivity analysis consists of implementing the two scenarios, ambitious and conservative, in combination with the TPP.

### 3 Methodology

Economic models represent the main tools for the analysis of complex trade relations and have been applied in several occasions to assess EU trade agreements with third countries. Although many studies have focused on specific trade agreements independently, here the analytical question at stake (i.e. the cumulative effect of trade agreements), creates even more complexity and requires a specific approach that responds to the multitude of agreements and, at the same time, the particularity of the agri-food sector. In order to provide an answer to both aspects, this study applies a two-tier modelling approach.

The first part of the analysis is carried out using a multi-region neoclassical computable general equilibrium model (CGE) named MAGNET (Modular Applied GeNeral Equilibrium Tool). MAGNET provides a comprehensive picture of the world economy at sector level, and disaggregated at country level. This model takes into account the interactions of individual economic sectors through domestic and international linkages. It provides highly relevant information about trade-offs between different (agri-food) sectors in the event of multiple bilateral trade liberalisation agreements.

As a model of the global economy, the relatively aggregated commodity structure of CGE models and the somewhat standardised treatment across commodities and countries can omit certain sectorial particularities or policy constraints. This is where partial equilibrium models (PE) introduce complementary features, in particular through a more disaggregated commodity structure within agriculture and the incorporation of commodity specific interrelations. Hence, for a detailed analysis of the impacts on EU agriculture at product-specific level the AGLINK-COSIMO model was applied<sup>3</sup>.

The two models are interlinked, i.e. the results of MAGNET simulations on EU exports and imports are transferred to the AGLINK-COSIMO model, which is not designed to deal with bilateral trade flows. Conversely, the latter model has higher product disaggregation for EU agriculture and provides more details on production and trade volumes as well as on producer prices.

### 4 Caveats and limitations

This study is based on simulations performed using economic models. These models provide a conceptual framework that allows for a representation of the economy in an effective but schematic and simplified manner. Since they cannot reproduce the reality in its full complexity, they often have significant shortcomings and limitations that affect the results of the study.

One of the main limitations relates to the coverage and the disaggregation of the agricultural products in the models used: the CGE model MAGNET has a comprehensive coverage of the economy, and thus of the agri-food sector. However, some of the most important processed agricultural products that fall under the product category named "*other food*" cannot be included in this analysis for technical reasons. In fact, this

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<sup>3</sup> The results of any analysis based on the use of the AGLINK-COSIMO model by parties outside the OECD are outside the responsibility of the OECD Secretariat. Conclusions derived by third-party users of AGLINK-COSIMO should not be attributed to the OECD or its member governments.

category is very large and heterogeneous and contains at the same time a variety of food preparations and a very significant share (about 50% for EU imports) of non-agricultural products, namely fishery products. Given that the database doesn't allow for a separation between agricultural and fishery products, simulations on this category provide misleading results, so they are not included in the analysis. It should however be pointed out that the processed agricultural products falling under the *other food* category, which include e.g. sugar confectionery, cocoa preparations, preparations of cereals, bakers' wares and preparations of fruit and vegetables, are typical flagship exports products, representing EU key offensive interest in bilateral trade negotiations, and for which the EU normally expects to derive large benefits. Therefore, this limitation leads to an underestimation the trade gains for the EU agri-food sector in a broad sense.

Given that the level of product disaggregation in any global CGE model is quite limited as is its capacity to model detailed sectorial linkages and policy constraints, the partial equilibrium model AGLINK-COSIMO is used to overcome these shortcomings of the CGE models and to provide much more detailed and realistic results at agricultural commodity level, even though it cannot provide results for the specific dynamics relating to certain product segments (e.g. specialty cheeses vs. industrial cheeses). However, the product coverage of the AGLINK-COSIMO model is lower than CGE models: although it includes all major agricultural commodities, it does not model some important agricultural products such as fruit and vegetables, wine and olive oil, as well as processed agricultural products in general. Given the very high value of processed products, the AGLINK-COSIMO model does not represent a significant share of the total EU agri-food export value (70%).

As regards the geographical disaggregation of the study, results are provided only for the EU as a whole. This simplification was necessary given the complexity of the analysis and the limited reliability of the modelling tools at sub-EU level. This means that this exercise is not able to provide indications on the impact of trade agreements at Member State or at regional level, and thus even less for outermost regions, which are generally explicitly covered in the standard Commission impact assessments.

Another limitation of the study lies in the theoretical character of the scenarios, where possible trade concessions for sensitive products are not implemented under the form of TRQs – as is usually the case in trade negotiations – but rather in terms of partial tariff liberalisation (the exception being represented by the two FTAs concluded with Canada and Vietnam). The reason for this choice and its implications were explained in the section on the scope of the study.

Furthermore, the considered trade scenarios only investigate the effects of tariff liberalisation, but do not factor in the analysis of the possible reduction of NTMs. In fact, since there are currently no reliable estimates of NTMs for the agricultural sector at disaggregated level, and given the limited time available to complete the exercise, it was decided to omit them from the study. The non-quantification of potential gains in the NTMs area may hide important benefits for EU exporters, as several trade partners impose cumbersome and unjustified procedures that are usually streamlined in an FTA. On the other hand, regarding EU imports, past experience shows that the EU does not compromise its standards of consumer protection in any FTA chapter, for example on authorising 'growth promoters', or modifying its science-based Genetically Modified Organism (GMO) approval process. These barriers to EU imports remain in place (e.g. the Comprehensive Economic and Trade Agreement (CETA)) even when tariffs are removed or reduced.

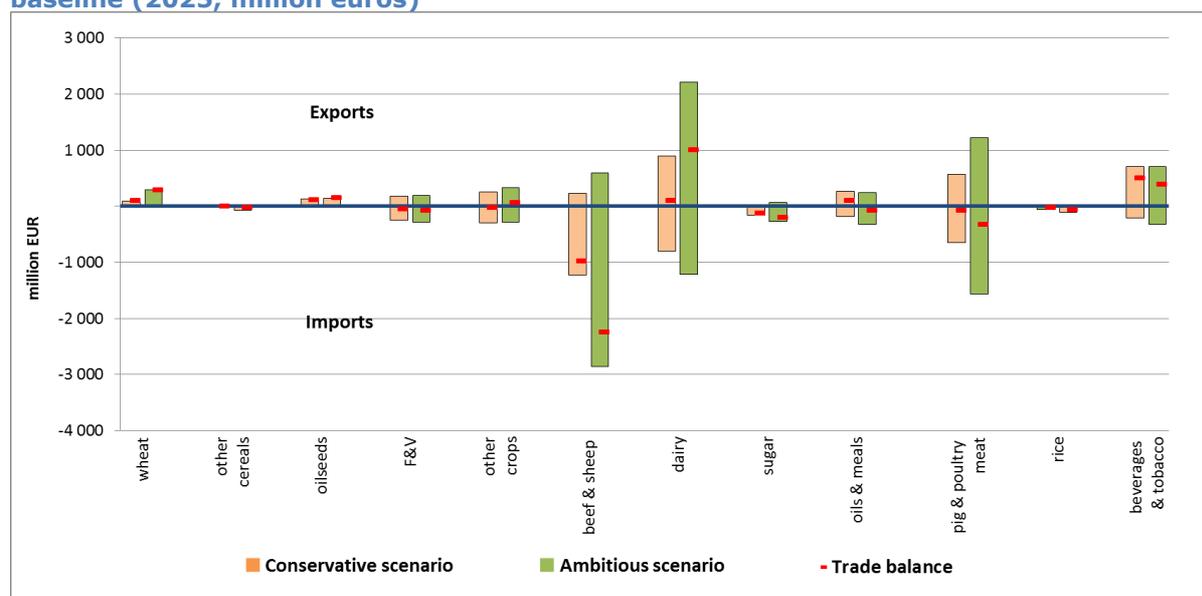
Finally, another issue that the study was unable to take into account, although it could certainly have huge implications on the EU free trade negotiations, is the possible impact future developments related to the UK.

## 5 Main results

Unless otherwise stated, all results of this analysis refer to 2025, the year for which it is assumed there is a full implementation of all the trade agreements. The impacts are expressed as the difference between the scenario in which the set of considered agreements is implemented, with respect to a reference scenario (or baseline) representing the status quo situation (i.e. with no application of the trade agreements).

Figure 1 shows the trade impact of both scenarios in million euros, as determined by the MAGNET model.

**Figure 1: Change in EU trade value of agri-food products by scenarios compared to the baseline (2025, million euros)**

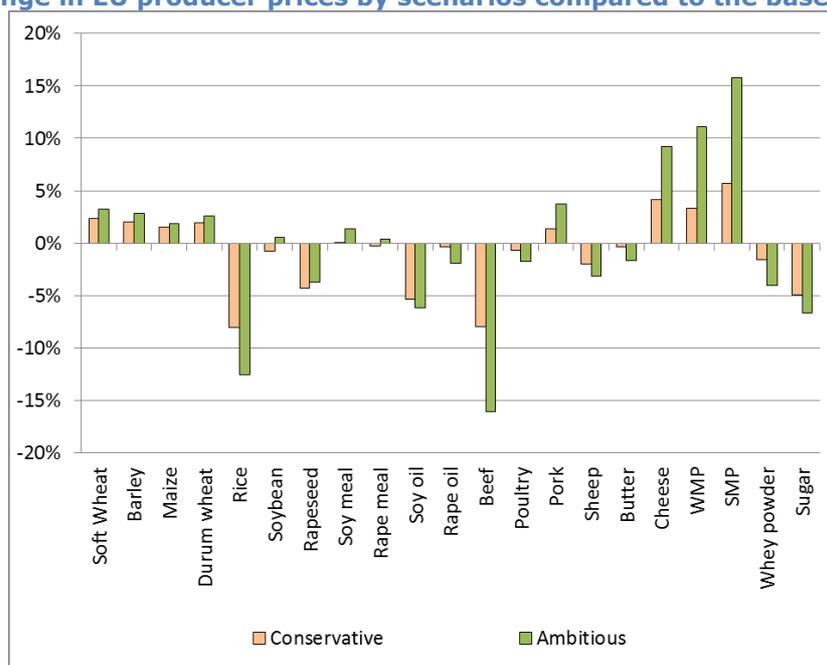


Source: Authors' calculation from MAGNET results

The dairy sector displays net trade gains, which are particularly sizeable under the ambitious scenario. On the contrary, trade impacts for beef & sheep meat are characterised by a significant increase in imports and a much more modest growth in exports, with an overall negative impact on the net trade position. In the pig & poultry meat category, mixed impacts are registered, with net trade gains for pigmeat and losses for poultry. Further, significant net trade gains are registered for the beverages and tobacco category, whereas overall changes are quite limited for the fruit & vegetable (F&V) sector as a whole. With the latter two sectors not being covered by the partial equilibrium model, the presented impacts on trade flows are the only results available.

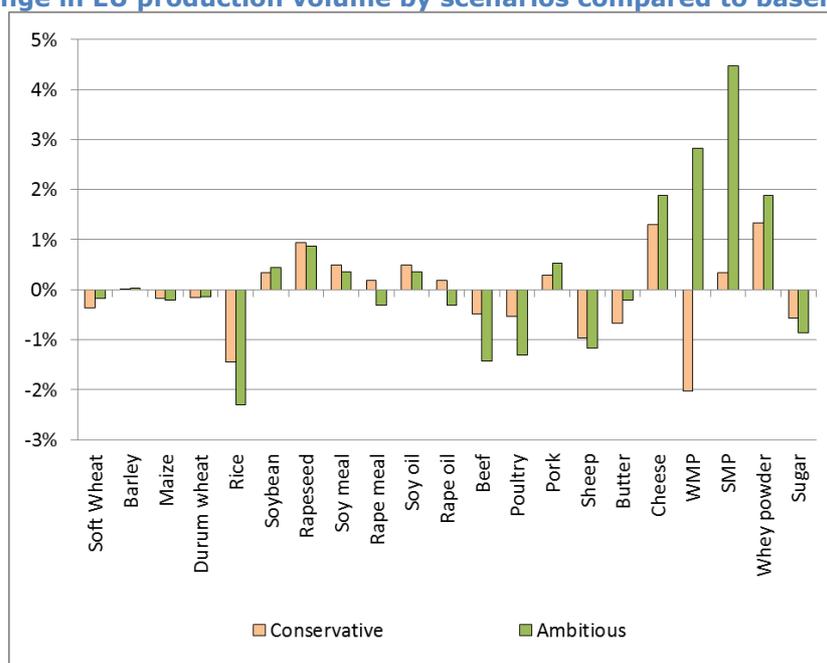
Except for the fruit & vegetables and beverages and tobacco sectors, the trade impacts at sector level are "translated" into detailed production and price effects by the AGLINK-COSIMO model (Figure 2 and Figure 3).

**Figure 2: Change in EU producer prices by scenarios compared to the baseline (2025, %)**



Source: Authors' calculation from AGLINK-COSIMO results

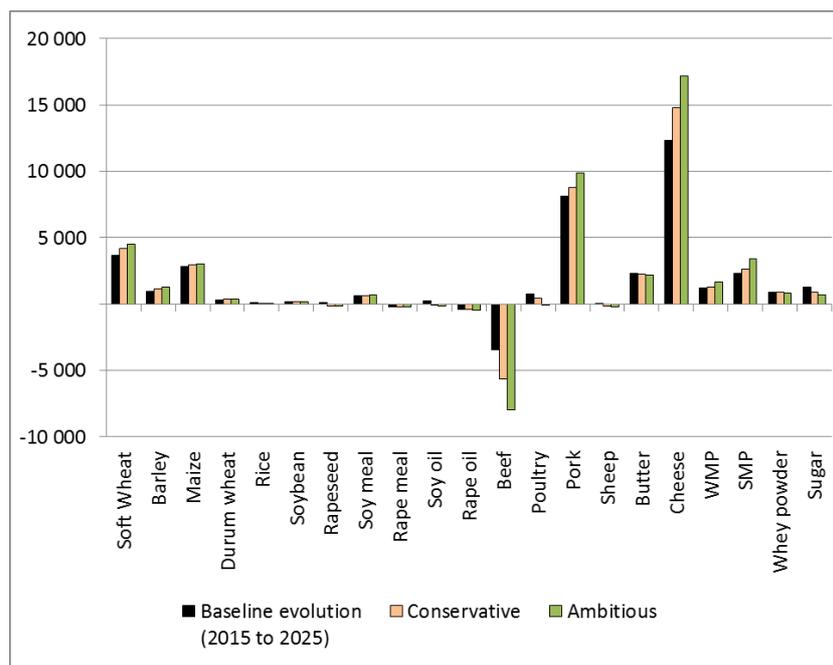
**Figure 3: Change in EU production volume by scenarios compared to baseline (2025, %)**



Source: Authors' calculation from AGLINK-COSIMO results

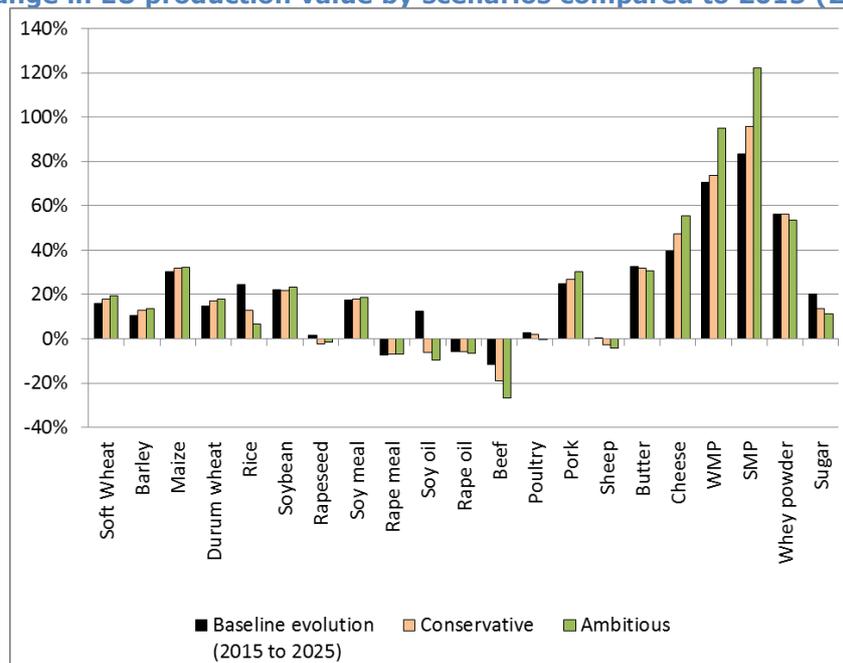
Despite the relatively balanced impacts on EU agriculture as a whole, significant differences in the overall joint impact of the considered trade agreements exist between specific commodities. On the up side of the equation, significant gains are expected to be achieved in the EU dairy sector and, to a slightly lesser degree, in the pigmeat and wheat-producing sectors. Significant losses are registered for beef meat and rice, both in terms of trade effects and of decline in producer price. The sugar and sheep meat sectors are also affected, although to a lesser extent. For all other sectors, the respective gains or losses are more moderate. The size of the sector-specific impacts is obviously magnified when moving from the conservative to the ambitious scenario, even though the direction of the impact does not generally change.

**Figure 4: Change in EU production value by scenarios compared to 2015 (2025, million euros)**



Source: Authors' calculation from AGLINK-COSIMO results

**Figure 5: Change in EU production value by scenarios compared to 2015 (2025, %)**



Source: Authors' calculation from AGLINK-COSIMO results

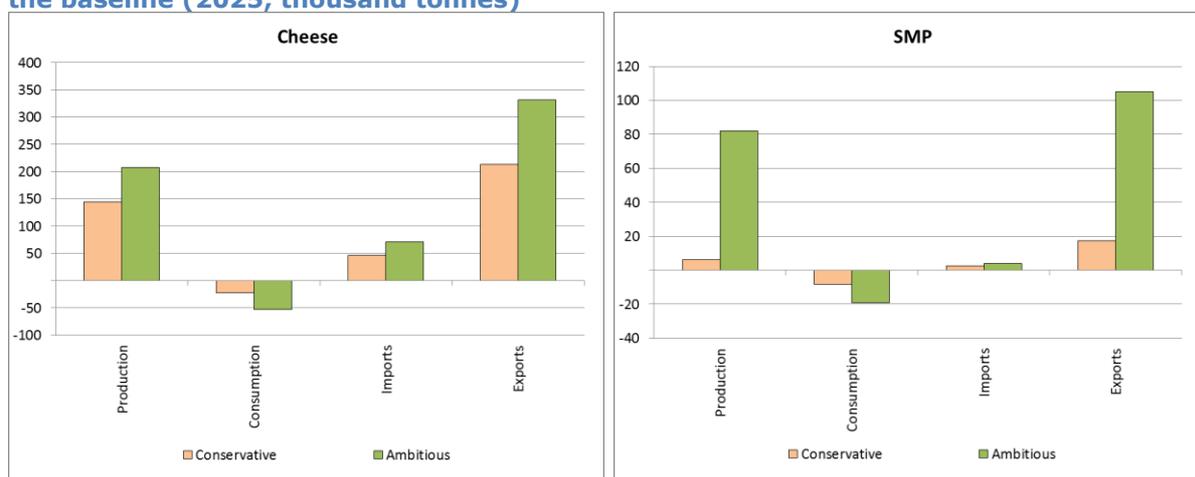
Comparing the situation in 2025 (after the implementation of all considered agreements) with the current situation (2015) provides interesting indications. The black bar in Figure 4 and Figure 5 shows the projected change in the EU production value for the main agricultural commodities between 2015 and 2025 based on DG AGRI outlook. The coloured bars represent the situation in 2025 under the ambitious and conservative scenarios. For the great majority of sectors, the expected evolution over the ten-year period is strongly positive and more significant than the incremental effect of the trade scenarios. For most dairy products, the expansion under the status quo is enhanced by positive trade opening, while for sugar and rice the positive market outlook is slightly reduced due to additional imports under both trade scenarios. Only for beef does the effect of the trade scenarios outweigh the projected decline in production and price.

## 6 Focus on specific sectors

### 6.1 Dairy

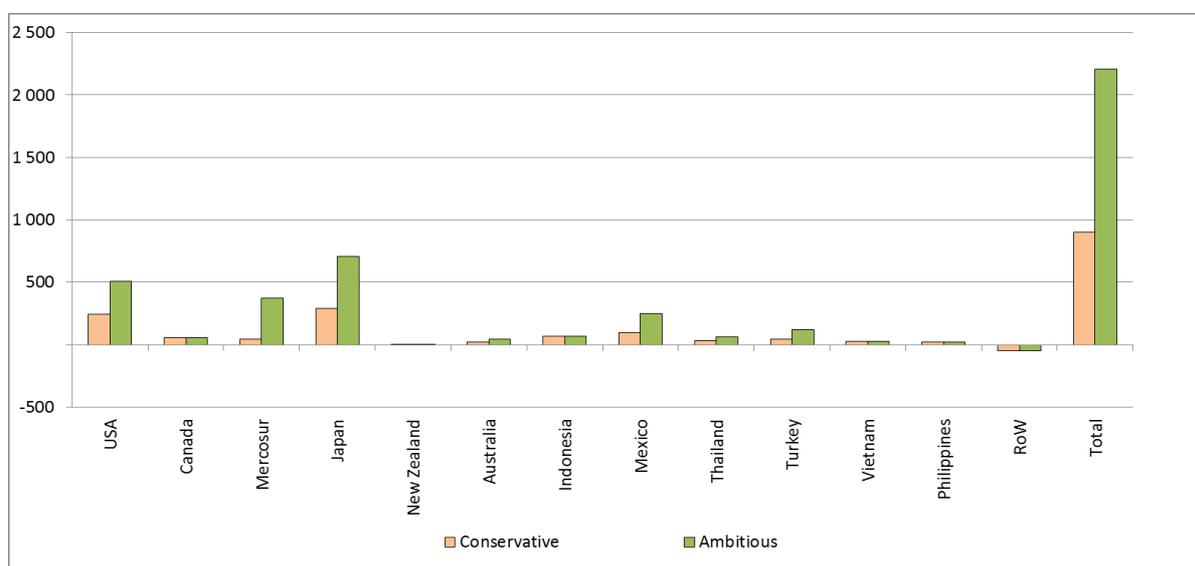
Although dairy imports are expected to increase significantly from their current low levels, they are dominated by export opportunities following easier access to the FTA countries. Export opportunities are diverse, but particularly good in Japan, the USA, Mercosur and Mexico. Within the dairy output mix, cheeses and skimmed milk powder (SMP) are the major sources of export growth. The extra demand on international markets leads to increases in both price (+9% and +16% respectively under the ambitious scenario) and in production +2% and +4% respectively (see Figures 6 and 7). While the price of whole milk powder (WMP) increases, the price for butter and whey powder is expected to drop slightly following the increase in availability, due to the relation of production complementarity with SMP and cheese. The combined trade effects of all dairy products lead to an increase in EU milk production of 0.7% under the ambitious scenario and 0.2% under the conservative scenario at a significantly increased milk price level by 7% and 2% respectively. This leads to an annual increase of around 5.6 billion euros in market receipts for dairy farmers under the ambitious scenario.

**Figures 6 and 7: Change in EU cheese and SMP balance sheet by scenarios compared to the baseline (2025, thousand tonnes)**



Source: Authors' calculation from AGLINK-COSIMO results

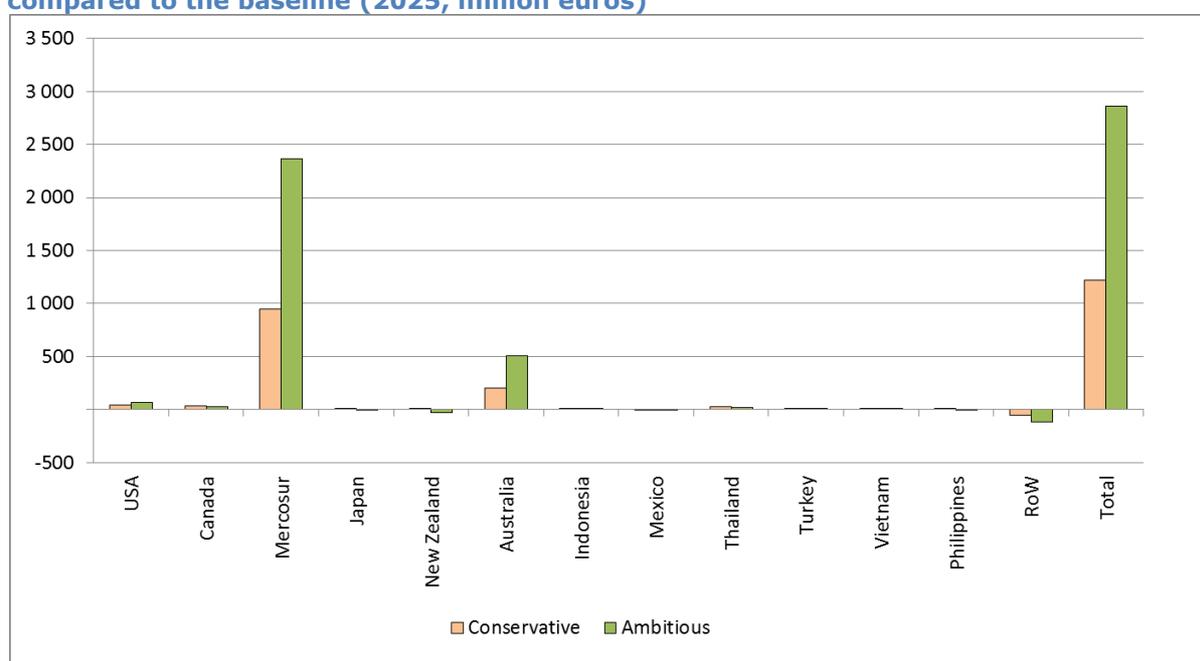
**Figure 8: Change in EU exports value of dairy by destinations and scenarios compared to the baseline (2025, million euros)**



## 6.2 Beef and sheep

The red meat sector is potentially the most affected by further trade liberalisation following the set of bilateral trade agreements. Under the specific settings of the ambitious and conservative scenarios designed for this study, EU beef imports could increase by about 146 and 356 thousand tonnes under the conservative and ambitious scenarios, respectively. The additional imports are dominated by Mercosur (essentially beef) and to a lesser extent Australia (beef and sheep). The additional imports from New Zealand are negligible, although this is likely to be the result of a slight decline in sheep meat imports, due to the preference erosion to Australia, combined with a slight increase in beef imports. It is important to highlight the fact that this reflects the joint impact of all trade agreements considered. The country-specific trade flows should not be interpreted as a proxy for the impact of the different individual trade agreements. In this particular study, the absence of TRQs reserved to individual trade partners allows Mercosur to overshadow imports from other less competitive exporters.

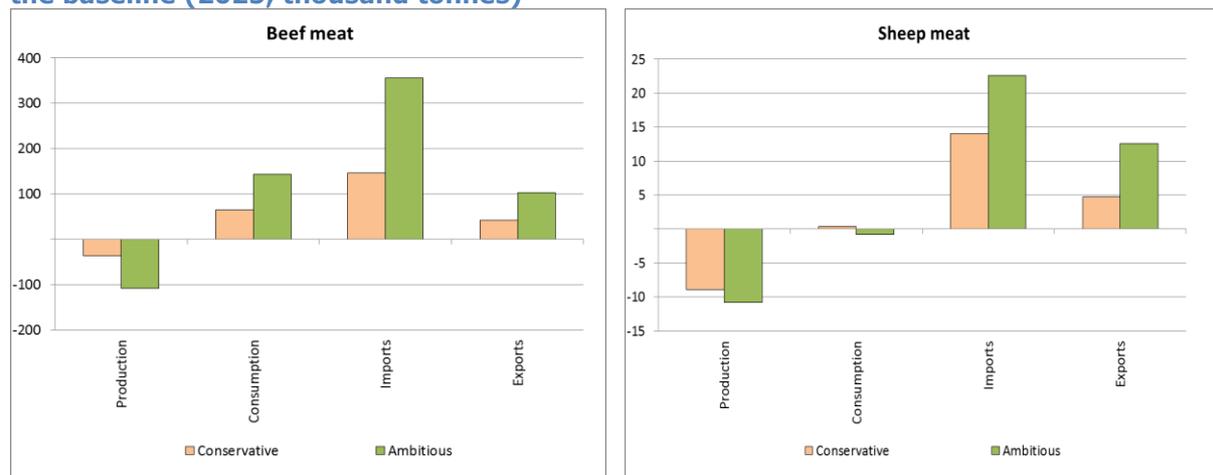
**Figure 9: Change in EU imports value of beef & sheep meat by origins and scenarios compared to the baseline (2025, million euros)**



Source: Authors' calculation from MAGNET results

The additional volume of EU beef imports creates a direct downward pressure on EU producer prices. Moreover, the beef market is under additional pressure from the positive developments in the dairy market. In the EU, about two thirds of beef production stems from dairy herds. The positive price and production effect of the trade scenario on the EU dairy market indirectly leads to a higher availability of meat from the dairy herd at lower prices. The combined pressures on the EU market lead to a steep drop in beef meat prices, by 8% under the conservative scenario and 16% under the ambitious scenario. The lower beef price shifts EU meat consumption from other meats towards beef. Increased consumption, combined with additional exports, relieves the effect on EU beef production, which only declines by 1.4% under the most ambitious scenario and 0.5% under the conservative one.

**Figures 10 and 11: Change in EU beef & sheep balance sheet by scenarios compared to the baseline (2025, thousand tonnes)**



Source: Authors' calculation from AGLINK-COSIMO results

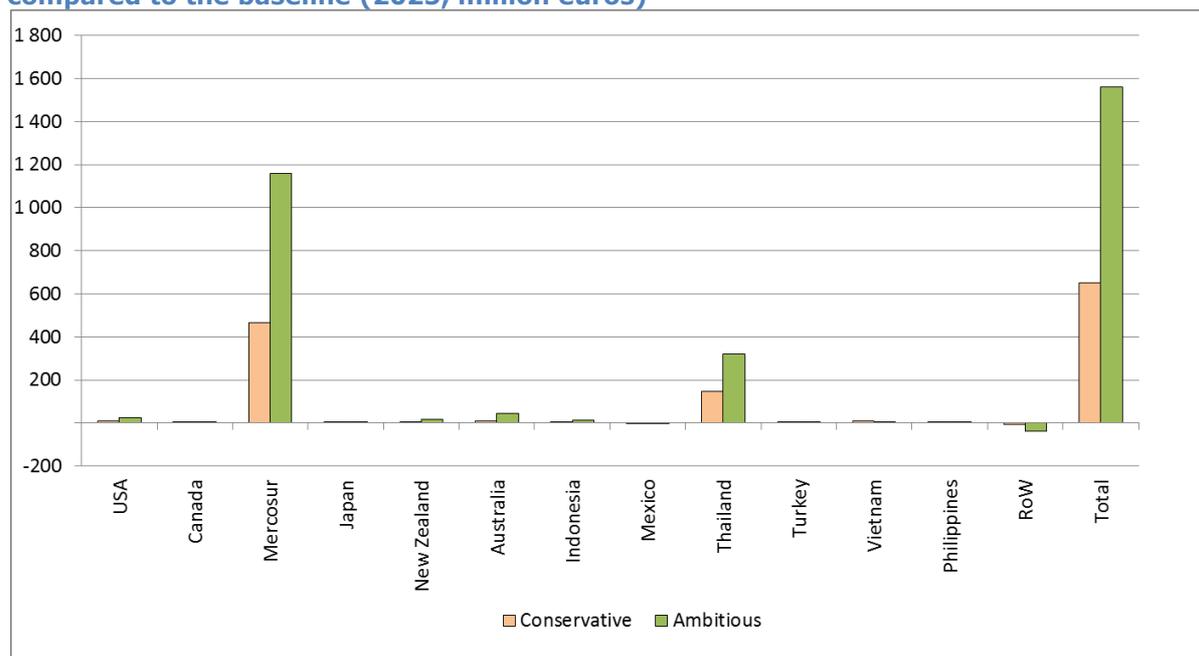
Although not explicitly considered in the modelling framework, it is reasonable to assume that most of this production decrease will be even stronger in specialised beef production, while partly it is offset by an increase in the production of meat originating from the expanding dairy herd.

EU sheep imports are dominated by New Zealand and Australia. The impact of both scenarios for New Zealand is limited if not negative, given the fact New Zealand already imports at zero duty below the TRQ in the baseline. Most of the impact is expected to come instead from Australia, which will improve its competitive position vis-à-vis New Zealand. The combined impact is estimated at a 10% increase in sheep meat imports under the ambitious scenario and a 6% increase under the conservative scenario. EU sheep prices drop by -3% and -2% respectively leading to a production contraction of about -1% under both scenarios.

### 6.3 Pigmeat and poultry

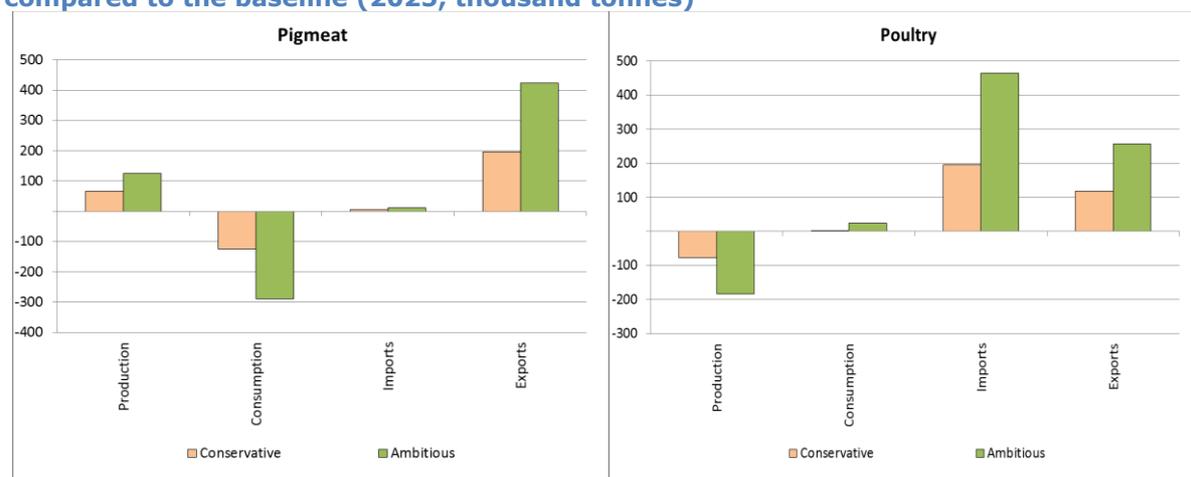
The MAGNET model shows a diverse trade impact on this aggregate commodity group, which contains both strong export potential and sensitivities towards increased imports. While the net effect on the trade balance is almost neutral under the conservative scenario, the impact becomes slightly more negative when fewer EU tariff lines can be protected under the ambitious trade scenario. In general, the EU's interest in an offensive trade strategy lies within the pork sector. The most promising export markets include Japan, Mercosur and the USA. The poultry sector, on the other hand, is sensitive to additional imports. These imports are dominated by Mercosur and Thailand.

**Figure 12: Change in EU imports value of pigmeat and poultry by origins and scenarios compared to the baseline (2025, million euros)**



Source: Authors' calculation from MAGNET results

**Figures 13 and 14: Change in EU pigmeat and poultry balance sheet by scenarios compared to the baseline (2025, thousand tonnes)**



Source: Authors' calculation from AGLINK-COSIMO results

Additional imports are the driving factor in the EU poultry balance. Imports increase by 48% and 20% under the ambitious and conservative scenarios, respectively, compared to the baseline in 2025. However, the effect on production is limited to -1.3% and -0.5% respectively. Firstly, the additional imports are limited to about 3% of EU domestic consumption. Secondly, EU exports also increase, further alleviating the effect on the EU domestic market. While the EU is less competitive in cuts such as breast fillets it is successful in exporting other cuts to nearby markets in the Middle East and Africa.

## **6.4 Arable crops**

The impact on the major arable crops can be summarised in two main events on the EU market. Exports of durum and soft wheat have the potential to increase by 957 thousand tonnes under the ambitious scenario and by 307 thousand tonnes under the conservative scenario, mainly to Turkey. EU barley exports increase under both scenarios. This additional demand leads to increased EU domestic prices of 3% in the ambitious scenario and 1% under the conservative scenario for wheat. The other driver of the cereal and oilseed market is the internal demand for feed. The changes in the animal sector towards pork and milk, and away from beef and poultry, modify the demand composition. The resulting effect is a shift from wheat and barley towards maize and protein meals. This results in an increase in soymeal imports by 3% under the ambitious scenario and 1% under the conservative scenario. The increased imports of soybean (meal) lead to a reduced rapeseed price for EU farmers.

Overall, the impact is positive for the arable crops sector. Only the value of rapeseed production declines.

## **6.5 Rice**

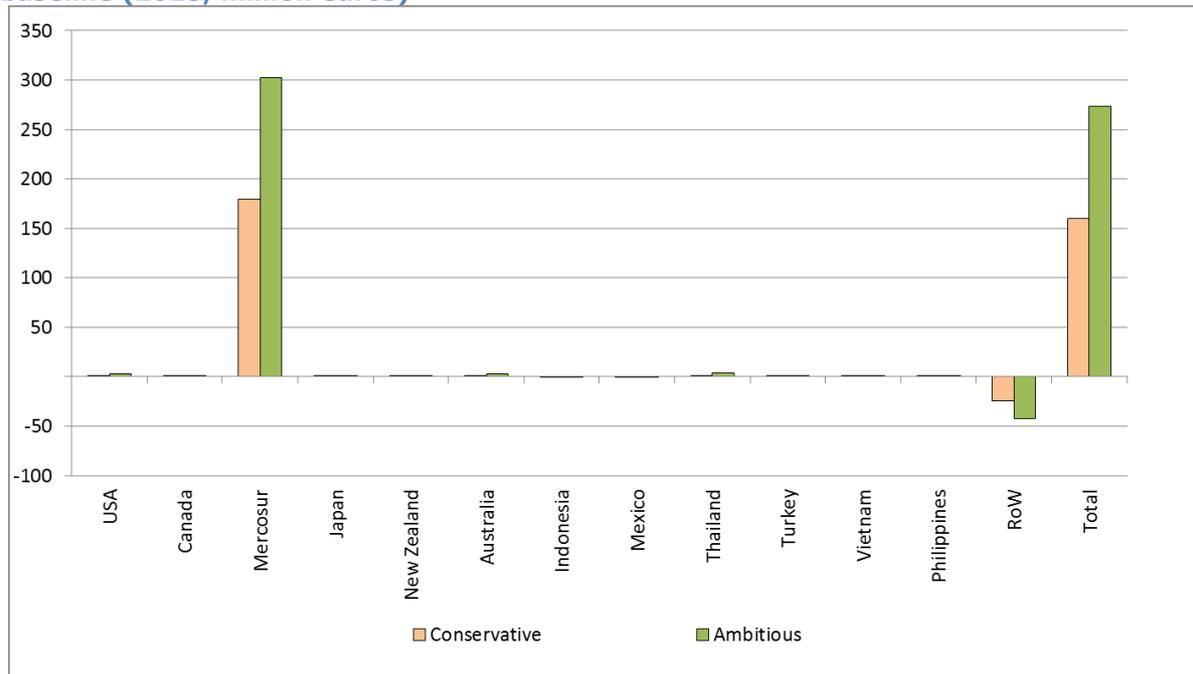
Rice imports increase under both the ambitious and conservative scenarios. The additional imports are dominated by Thailand, but the USA and Mercosur would also increase slightly their exports to the EU. The additional trade from the 12 trade agreements amounts to 165 million euros under the ambitious scenario. However, total imports only increase by 111 million euros (+9%) as about one third of the imports replace current imports. Rice production is very specialised. In some production areas (e.g. Spain), conversion to alternative crops is not straightforward, due to a variety of reasons such as the specialized machinery and salinity of the soil in deltas. This leads to an inelastic response to price changes. Under the ambitious scenario EU rice production decreases by 2% while the EU rice price falls by 13%. The reduction is less pronounced under the conservative scenario, but still amounts to 1% and 8% under each scenario respectively.

## **6.6 Sugar**

The expiration of the sugar quota in 2017 is expected to increase the competitiveness of European sugar production on the world market, potentially leading the sector to change from being a net importer to a net exporter by 2025. This new market environment significantly changes the impact of trade agreements compared to earlier studies, assuming a quota market environment.

Additional EU sugar imports are dominated by imports from Brazil, the world's biggest sugar exporter. While sugar imports from other destinations decrease slightly, the trade diversion is limited.

**Figure 15: Change in EU imports value of sugar by origin by scenarios compared to the baseline (2025, million euros)**

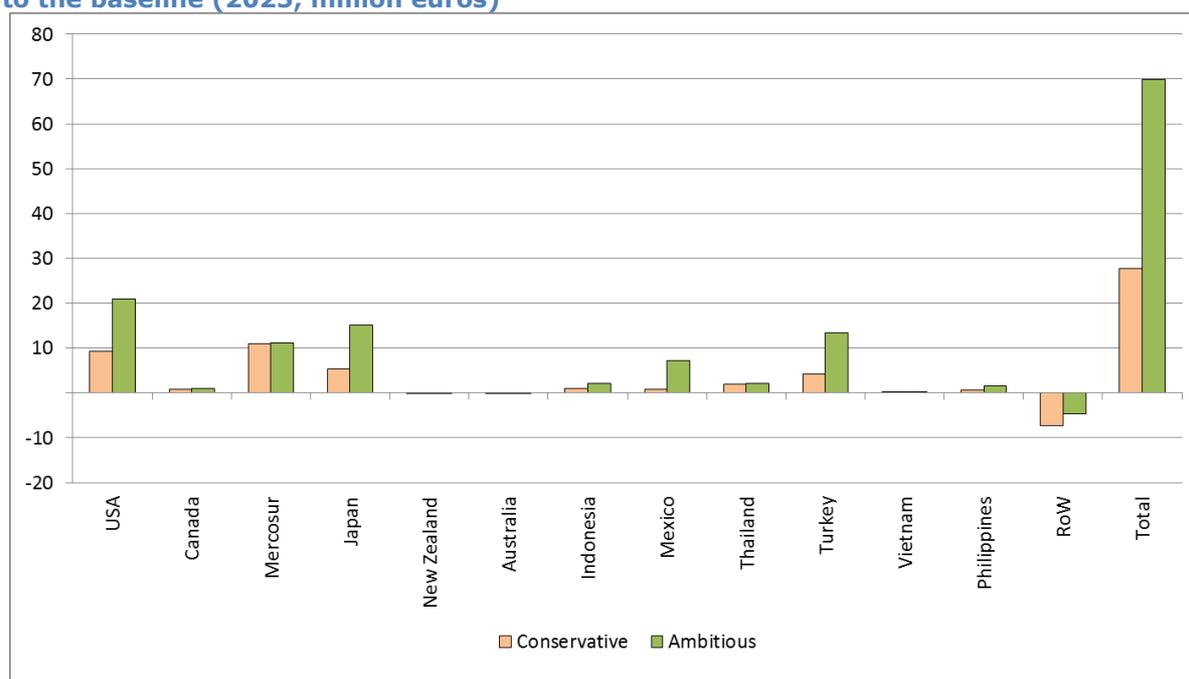


Source: Authors' calculation from MAGNET results

The EU, a competitive refined sugar producer, is able to compensate a substantial part of the additional imports through exports to Japan, Turkey and the USA.

Overall, the effect on the EU white sugar production is limited to a fall of 1% under both scenarios. The impact on the EU white sugar price is differentiated, decreasing by 7% under the ambitious scenario and 5% under the conservative scenario. However, taking into account the strong development in sugar production value expected over the coming decade, notably due to the abolition of sugar quotas, the net effect on sugar production compared to the current situation (2015) would remain largely positive (+14% and +11% under the conservative and ambitious scenarios, respectively), despite the effects of trade agreements.

**Figure 16: Change in EU exports value of sugar by destinations and scenarios compared to the baseline (2025, million euros)**



Source: Authors' calculation from MAGNET results

## 6.7 Beverages and tobacco

Within this aggregated product category, for which the EU has a large positive trade surplus, the beverage sector (primarily wine and spirits) represents the main share of EU trade flows (almost 70% in 2015) and more than 85% for exports only. As this product category is not covered by the partial equilibrium model, the study only provides the cumulative impact of the considered FTAs on trade flows.

In line with expectations, results show that this sector would reap significant cumulative gains from trade agreements, as total EU exports would increase by 700 million euros under either scenario, with the trade surplus growing by 400-500 million euros.

The most interesting export opportunities are represented by Mercosur (+300 million euros), Japan (+150) and Vietnam (+100). Exports to the USA are also expected to increase slightly, but the growth prospects are limited, given the already low level of tariffs.

## 6.8 On the effect of the Trans-Pacific Partnership

The TPP potentially affects the impact of the EU trade negotiations with partners taking part in this regional agreement. This is in particular the case for the EU export markets such as Japan, where competitive pigmeat and dairy producers such as the USA, New Zealand and Australia also gain preferential market access.

The results show that the TPP, in combination with the trade scenarios, only affects the EU pigmeat market. The preference erosion in Asian markets, in particular Japan, due to the concessions obtained by the USA and Canada, even leads to a decrease in EU pigmeat exports compared to the baseline, despite the increased market access for the EU. Indeed, the preferential treatment accorded by Japan to these two important exporters under the TPP is larger than the 25% and 50% for the EU, as modelled in the two trade scenarios.

However, the impact of the TPP on the scenario results is limited for dairy. This sensitivity analysis scenario therefore shows the importance of EU trade agreements to get market access conditions that are at least similar to those of the partners within the TPP, in order to ensure a level playing field for EU products on the Pacific markets.

## **7 Conclusion**

This study fills a knowledge gap highlighted by EU Member States with regard to the state of the agri-food sectors in the light of EU trade negotiations and agreements. Although economic models do not reflect all aspects of trade in agricultural products, it provides insights for policy makers and negotiators, as a contribution to finding a good balance in further trade liberalisation.

The study clearly illustrates the great potential for European agricultural products on the world market. The potential gains for the dairy and the pigmeat sectors are particularly sizeable, but a number of other products benefit from trade opening, ranging from commodities such as wheat to more high value/processed products of the agri-food industry, such as alcoholic beverages (notably wine and spirits). The additional export demand enhanced by trade agreements could translate into an important source of growth, jobs and value added for the European agricultural and food sectors.

On the other hand, the study also shows the vulnerability of specific agricultural sectors in the face of growing imports following increased market access. This is in particular the case for beef, rice and, to a lesser extent, poultry and sugar. This confirms EU position regarding the sensitive character of these products in trade negotiations. However, it is important to recall that the results for these sectors as set out in this study represent the impact of theoretical scenarios (tariff cuts of 50% and 25%) not of the introduction of TRQs, which are commonly included in trade agreements for these sectors.

A successful conclusion of bilateral trade agreements, for both parties, will have to strike a balance between the protection of sensitive products and the achieved market access for offensive agricultural products.

## List of abbreviations

CETA	Comprehensive Economic and Trade Agreement
CGE	Computable General Equilibrium
DG AGRI	Directorate-General for Agriculture and Rural Development
EC	European Commission
EU	European Union
FTA	Free Trade Agreement
F&V	Fruit and Vegetable
GMO	Genetically Modified Organism
HS	Harmonised System (tariff nomenclature)
JRC	Joint Research Centre
MAGNET	Modular Applied GeNeral Equilibrium Tool
MERCOSUR	Mercado Común del Sur
NTM	Non-Tariff Measure
OECD	Organisation for Economic Co-operation and Development
PE	Partial Equilibrium
SIA	Sustainability Impact Assessment
SMP	Skimmed Milk Powder
SPS	Sanitary and Phytosanitary Measures
TPP	Trans-Pacific Partnership
TRQ	Tariff Rate Quota
TTIP	Transatlantic Trade and Investment Partnership
USA	United States of America
WMP	Whole Milk Powder
WTO	World Trade Organisation

## List of figures

Figure 1: Change in EU trade value of agri-food products by scenarios compared to the baseline (2025, million euros).....	6
Figure 2: Change in EU producer prices by scenarios compared to the baseline (2025, %).....	7
Figure 3: Change in EU production volume by scenarios compared to baseline (2025, %).....	7
Figure 4: Change in EU production value by scenarios compared to 2015 (2025, million euros) .....	8
Figure 5: Change in EU production value by scenarios compared to 2015 (2025, %).....	8
Figures 6 and 7: Change in EU cheese and SMP balance sheet by scenarios compared to the baseline (2025, thousand tonnes) .....	9
Figure 8: Change in EU exports value of dairy by destinations and scenarios compared to the baseline (2025, million euros) .....	9
Figure 9: Change in EU imports value of beef & sheep meat by origins and scenarios compared to the baseline (2025, million euros) .....	10
Figures 10 and 11: Change in EU beef & sheep balance sheet by scenarios compared to the baseline (2025, thousand tonnes) .....	11
Figure 12: Change in EU imports value of pigmeat and poultry by origins and scenarios compared to the baseline (2025, million euros) .....	12
Figures 13 and 14: Change in EU pigmeat and poultry balance sheet by scenarios compared to the baseline (2025, thousand tonnes).....	12
Figure 15: Change in EU imports value of sugar by origin by scenarios compared to the baseline (2025, million euros).....	14
Figure 16: Change in EU exports value of sugar by destinations and scenarios compared to the baseline (2025, million euros).....	15



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