The impacts of the Transatlantic Trade and Investment Partnership (TTIP) agreement on the EU agri-food sector

Conference Paper · June 2016

READS

8

3 authors:

Ellen Huan-Niemi

Natural Resources Institute Finland (Luke)

38 PUBLICATIONS **52** CITATIONS

SEE PROFILE

Janne Niemi

Government Institute of Economic Researc…

12 PUBLICATIONS **12** CITATIONS

SEE PROFILE

Jyrki Niemi

MTT Agrifood Research

73 PUBLICATIONS **122** CITATIONS

SEE PROFILE

The impacts of the Transatlantic Trade and Investment Partnership (TTIP) agreement on the EU agri-food sector

Ellen Huan-Niemi
Economics and Society Unit
Natural Resources Institute Finland (Luke)
Koetilantie 5
00790 Helsinki, Finland
email: ellen.huan-niemi@luke.fi

Janne Niemi
VATT Institute for Economic Research
Arkadiankatu 7
00100 Helsinki, Finland
email: janne.niemi@vatt.fi

Jyrki Niemi
Economics and Society Unit
Natural Resources Institute Finland (Luke)
Koetilantie 5
00790 Helsinki, Finland
email: jyrki.niemi@luke.fi

Paper presented at the 26th Annual International Food and Agribusiness Management Association [IFAMA] World Conference in Aarhus, Denmark on June 19-23, 2016.

Introduction

The Transatlantic Trade and Investment Partnership (TTIP) agreement has the intention to remove both tariff and non-tariff barriers in the bilateral trade between the United States (US) and the European Union (EU) despite agriculture has been a difficult area in trade negotiations, either under the multilateral trade negotiations of the World Trade Organization (WTO) or regional/bilateral trade negotiations. The EU and the US have very different food and agricultural policies, thus many trade policy disputes have arisen between them in recent decades under the WTO. For example, the beef hormones conflict and the use of the growth promoter ractopamine, the application of antimicrobial rinses in the processing of poultry meat in the slaughter houses (pathogen reduction treatments: PRTs), differences over genetically engineered crops and food products (GMOs), cloning of food animals, and the EU's system of protecting geographical indications (GIs) such as champagne and parmesan. Therefore, food safety regulations and standards are the hardest part of the negotiations concerning agriculture.

The EU primary concern is that any trade agreement with the US must include the protection of geographical indications (GIs) in the agreement and better access to the US market for dairy products. The EU wants to address issues such as animal welfare, sustainable development, including goods that are the subject of schemes such as fair and ethical trade and those involving corporate social responsibility and accountability. Furthermore, there is the issue of the "precautionary principle" practiced in the EU to protect human, animal and plant life or health. In addition, the amount of sensitive agricultural and food products to be allowed under the TTIP will be an important issue for the EU.

The US primary concern is that any free-trade agreement with the EU must be comprehensive in its coverage, meaning that not only the agriculture sector have to be included, but also no sensitive agricultural products are allowed in the agreement. The US wants the trade agreement to effectively address the many outstanding issues in the sanitary and phytosanitary (SPS) area as well as create a foundation for avoiding future problems.

The main focus of this paper is to study the impacts of the Transatlantic Trade and Investment Partnership (TTIP) agreement between the US and EU on the agricultural and agri-food sector in the EU. Additional analysis will be made to compare the impact on small countries like Finland and Sweden to the impact on large EU member countries like Germany, United Kingdom and Poland, thus the impacts can be differentiated between the various EU countries and regions. This paper will also attempt to estimate the impact of removing non-tariff measures in the bilateral trade between the EU and US.

EU-US agricultural trade and tariffs

Both the EU and the US are the top agricultural exporters and importers in the world. As trade partners according to the EU Commission (2015), the United States is the top destination for EU agricultural exports and the second most important origin for EU agricultural imports. However,

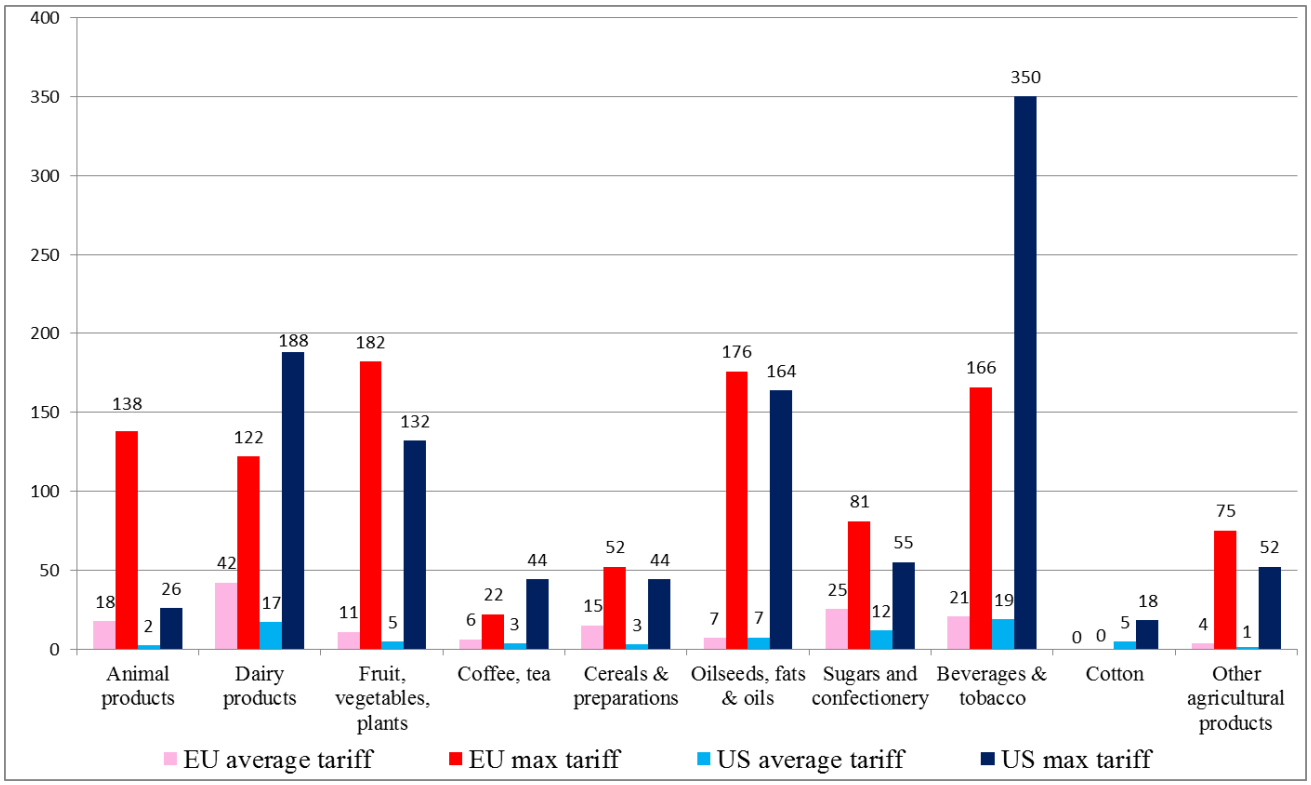
the EU is only the fourth export destination together with Japan (both 9%) for US agricultural and food products, following behind Canada (the top destination --17%), China (16%), and Mexico (13%). The EU has been increasing the agricultural trade surplus with the US since 1999 (USDA 2016). In contrast, the situation was different during most of the 1990s, when the EU had a bilateral trade deficit in agricultural trade with the US. Thus, the US has become increasingly less important as a source of agricultural imports for the EU: in 2012, only 8% of agricultural imports (raw and processed products) originated from the US, down from 21% in 1992 (European Parliament 2014).

According to Josling and Tangermann (2014), the US is a relatively minor supplier of agricultural and food imports into the EU. The US trails well behind Brazil as a source of the EU's agricultural and food imports: Brazil sells 70% more agricultural and food products to the EU compared to the US. Correspondingly, the EU is a relatively unimportant market for US agricultural and food exports. For the past decade, US exporters have found themselves with a stagnant market for the exports of agricultural and food products to the EU. As a result, the importance of the EU as an agricultural trading partner for the US has declined steadily over time with the growth of the Asian markets. This difference between the EU and the US in the significance of transatlantic agricultural trade could prove an important aspect of the political backdrop to the TTIP negotiations.

According to the World Trade Organization (WTO), Table 1 shows the Most Favoured Nation (MFN) applied tariffs for agricultural products in the EU compared to the US. The applied tariffs for agricultural products are much higher in the EU compared to the tariffs applied in the US. For example on average, EU tariffs (42%) are two to three times as high as US tariffs (17%) for dairy products. Moreover, the tariffs for agricultural products are high in the EU compared to non-agricultural products. According to the WTO Tariff Profiles, the trade-weighted average applied tariff for agricultural products is 22.3% in the EU and 4.1% in the US. In contrast, the trade-weighted average applied tariff for non-agricultural products is 2.3% in the EU and 2.1% in the US. Hence, the applied tariffs for non-agricultural products are close to each other, but there is a big difference in the applied tariffs for agricultural products by comparing the EU with the US. As a result, the elimination of prohibitive tariffs on agricultural products will induce large increase in trade, especially for meat products, dairy products, vegetable oil, beverages & tobacco, and other processed food products.

Tariffs are not the only impediment to trade. Non-tariff barriers can be prohibitive to trade and sometimes can even block trade. Non-tariff measures (NTMs) such as food safety regulations and standards, geographical indications, animal welfare, environment protection, and other conflicting measures are the issues to be resolved in the TTIP negotiations on the transatlantic agricultural trade. Therefore, the removal or even partial removal of the non-tariff measures will stimulate and increase the agricultural trade between the EU and US.

Table 1. EU versus US Most Favoured Nation (MFN) applied tariffs for agricultural products



Source: WTO Tariff Profiles

Methodological Approach

The Global Trade Analysis Project (GTAP) model and database have been applied in numerous studies on regional and bilateral trade agreements. A recursive dynamic computable general equilibrium (CGE) model based on the GTAP model and database are used in this study. The model builds on the GTAP-Dyn model (Ianchovichina and McDougall 2001) and incorporates features from the GTAP-AEZ model (Hertel et al. 2008) and the GTAP-AGR framework (Keeney and Hertel 2005). This modelling framework is recursively dynamic with special features for the agricultural sector (e.g. land use, treatment of subsidies, biofuels) and allows an ambitious and detailed comparative analysis for the different countries in EU and the different regions of the world. The GTAP Database 8 (Narayanan et al. 2012) includes disaggregated data on all EU member countries, hence allowing the analysis of any country of interest.

The database comprises several types of data: behavioural parameters that include elasticities of substitution between domestic and imported goods, and elasticities of substitution between sources of imports via Armington (1969) elasticities. The database represents the world economy as flows of goods and services measured in millions of 2007 US dollars. Additional data are provided for capital stocks, population and savings. The database includes five endowments (i.e. production factors) – land, skilled labour, unskilled labour, natural resources, and capital – with 129 countries/regions and 57 commodities/sectors. In this study, the database is aggregated into 20 countries/regions (Table 2) and 29 commodities/sectors (Table 3), including 16 agricultural commodities/food sectors. Trade policy instruments are represented in the GTAP database as ad

valorem taxes and subsidies. Thus, the GTAP database and model are widely used, particularly in research concerning international trade.

Table 2. Country or region aggregation scheme implemented in the GTAP model

No.	Country/Region	Included GTAP country/regions
1	Finland	fin
2	Denmark	dnk
3	Sweden	swe
4	Baltic	est, lva, ltu
5	Germany	deu
6	Poland	pol
7	UK and Ireland	gbr, irl
8	Benelux	bel, lux, nld
9	Balkan	cyp, grc, mlt, svn, bgr, hrv, rou
10	Mediterranean EU	fra, ita, prt, esp
11	Central Western EU	aut, cze, hun, svk
12	US	usa
13	Canada	can
14	Mexico	mex
15	EFTA	che, nor, xef
16	MERCOSUR	arg, ,bra, pry, ury, ven
17	CIS	blr, rus, ukr, kaz, kgz, xsu, arm, aze, geo
18	Turkey	tur
19	Maghreb	egy, mar, tun, xnf
20	Rest of the world	isr, omn, aus, nzl, xoc, chn, hkg, jpn, kor, mng, twn, xea, khm, idn, lao, mys, phl, sgp, tha, vnm, xse, bgd, ind, npl, pak, lka, xsa, xna, bol, chl, bhr, irn, kwt, qat, sau, are, xws, cmr, civ, gha, nga, sen, xwf, xcf, xac, eth, ken, mdg, mwi, mus, moz, tza, uga, zmb, col, ecu, per, xsm, cri, gtm, hnd, nic, pan, slv, xca, xcb, alb, xee, xer, zwe, xec, bwa, nam, zaf, xsc, xtw

Source: GTAP Database 8: https://www.gtap.agecon.purdue.edu/databases/regions.asp?Version=8.211

The GTAP model and database have been applied in other comprehensive studies on the TTIP (Beckman et al. 2015; European Parliament 2014; CEPR 2013; Fontagne et al. 2013; Erixon and Bauer 2010). This study distinguishes itself by implementing the steps below:

1) Historical trade data from 2007 to 2014 has been inserted into the baseline simulation in order to close the gap with the current recorded trade statistics; therefore the GTAP dataset on the global trade has first been extrapolated to 2014, which is the base year for simulations, and then projected until 2025;

2) The GTAP model has been modified to incorporate non-tariff measures (NTMs), different types of arable land (Agri-economic zones, AEZ), and decoupled agricultural subsidies;

3) “Shadow tariffs” (Table 4) corresponding to the non-tariff measures (NTMs) levels estimated in other studies (European Parliament 2014; Fontagne et al. 2011) have been built into the database explicitly; and

4) In order to reflect EU consumers' preference for domestically produced products and labels, the trade substitution elasticities used in the standard version of GTAP model have been refined in three ways: (i) The top-level substitution: the two sources - domestic and foreign - has been augmented to three different sources by dividing the foreign sources into "within trading bloc" and "outside trading bloc", and this has been done primarily to allow the analysis of the European trade with third countries as a whole, which facilitates better comparison with the other studies on the TTIP; (ii) The top-level substitution: the elasticities are defined separately according to the final user – private consumption, government consumption or intermediate use; (iii) All trade elasticities, including the top-level substitution and substitution between different regional sources, have been calculated separately for each importing country, using the GTAP database standard elasticities for disaggregated commodities weighted by each commodity's share in the imported commodity or sector aggregation implemented in the GTAP model shown in the Table 3 below.

Table 3. Commodity or sector aggregation scheme implemented in the GTAP model

No.	Commodity/Sector	Included GTAP commodity/sector
1	Cereals	gro, pdr, wht
2	Fruit and Vegetables	v_f
3	Oilseeds	osd
4	Sugar Cane and Beet	c_b
5	Fibre Crops	pfb
6	Other crops	ocr
7	Cattle	ctl
8	Animal Products	oap, wol
9	Raw Milk	rmk
10	Bovine Meat	cmt
11	Poultry & Pig Meat	omt
12	Vegetable Oil	vol
13	Dairy products	mil
14	Sugar	sgr
15	Other Food Products	ofd, pcr
16	Beverages and Tobacco	b_t
17	Forestry	frs
18	Fishing	fsh
19	Other Primary Products	omn
20	Energy	coa, ely, gas, gdt, oil, p_c
21	Textile	lea, tex, wap
22	Machinery	ome
23	Chemicals	crp
24	Metals	fmp, i_s, nfm
25	Transport Equipments	mvh, otn
26	Electronics	ele
27	Other Manufactured Products	lum, nmm, omf, ppp
28	Transport Services	atp, otp, wtp
29	Other Services	cmn, cns, dwe, isr, obs, ofi, osg, ros, trd, wtr

Source: GTAP Database 8: https://www.gtap.agecon.purdue.edu/databases/v8/v8_sectors.asp

Table 4. Estimation of ad valorem equivalent (AVE) tariffs in percentage (%) for the non-tariff measures (NTMs) by commodity/sector

No.	Commodity/Sector	to the EU	to the USA	to the ROW
1	Cereals	89,5	62,6	50,8
2	Fruit and Vegetables	77,0	78,7	44,3
3	Oilseeds	19,9	13,3	11,7
4	Sugar Cane and Beet	32,5	21,1	17,6
5	Fibre Crops	52,9	27,5	27,3
6	Other crops	13,4	13,3	8,8
7	Cattle	38,0	22,2	18,5
8	Animal Products	15,7	12,6	8,6
9	Raw Milk	92,2	68,1	54,5
10	Bovine Meat	102,7	94,5	59,2
11	Poultry & Pig Meat	81,8	75,7	45,7
12	Vegetable Oil	57,4	40,5	34,1
13	Dairy products	92,2	68,1	54,5
14	Sugar	32,5	21,1	17,6
15	Other Food Products	59,4	53,4	34,7
16	Beverages and Tobacco	25,0	18,3	14,4
17	Forestry	17,2	16,0	9,7
18	Fishing	60,1	54,4	34,2
19	Other Primary Products	29,2	23,0	14,0
20	Energy	7,0	17,0	3,8
21	Textile	17,2	13,4	8,9
22	Machinery	7,3	3,8	4,1
23	Chemicals	4,8	5,1	2,7
24	Metals	25,2	21,0	11,5
25	Transport Equipments	25,3	22,1	13,4
26	Electronics	42,1	32,2	26,3
27	Other Manufactured Products	10,4	10,6	5,7
28	Transport Services	29,1	17,5	17,5
29	Other Services	32,0	47,3	32,0

Source: European Parliament 2014; Fontagne et al. 2011, Fontagne et al. 2013

Five different scenarios are modelled for the TTIP until 2025 from the base year of 2014. The five scenarios are

1) Business as usual with no TTIP agreement and serves as a baseline for comparison;

2) A complete removal of bilateral import tariffs between the EU and US in 2016, but all the non-tariff measures (NTMs) are still in place;

3) A complete removal of bilateral import tariffs between the EU and US in 2016, but only part (excluding beef and dairy products) of the non-tariff measures (NTMs) are removed, whereby the

difference in food safety standards are considered as genuine food safety issues in obstructing trade. The NTMs are lowered gradually by 25% from 2017 to 2021;

4) A complete removal of bilateral import tariffs between the EU and US in 2016, in addition, the non-tariff measures are lowered gradually by 25% from 2017 to 2021 for all agricultural products;

5) A complete removal of bilateral import tariffs between the EU and US in 2016 and non-tariff measures are lowered gradually by 25% from 2017 to 2021 for all agricultural products; however, trade substitution elasticities for imports into EU are halved, thus decreasing the willingness to deviate from the existing high shares of consumption in domestic products. This assumption is executed to reflect a strong preference for domestically produced products and labels by EU consumers.

Results

Figure 1 and Figure 2 will demonstrate the differences in the exports of agricultural and food products from US to the EU and vice-versa.

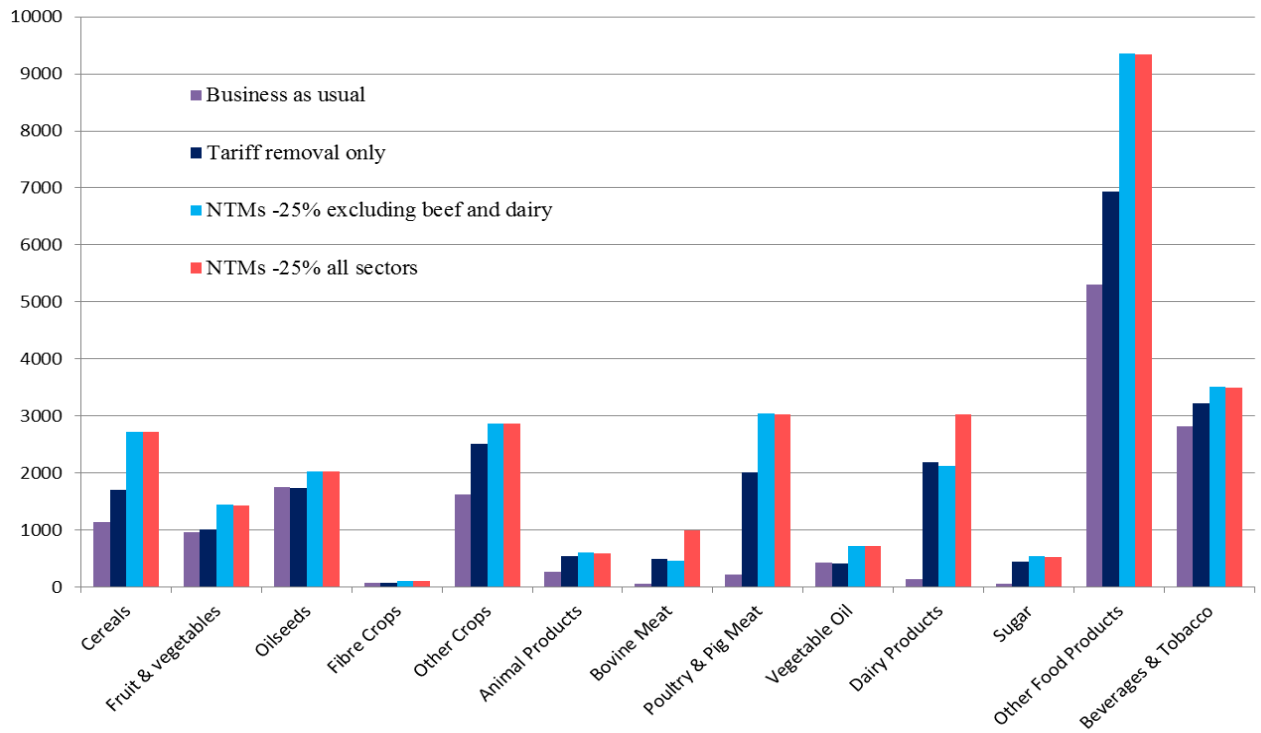


Figure 1. US total exports (in million US dollars) of agricultural products to the EU in 2025

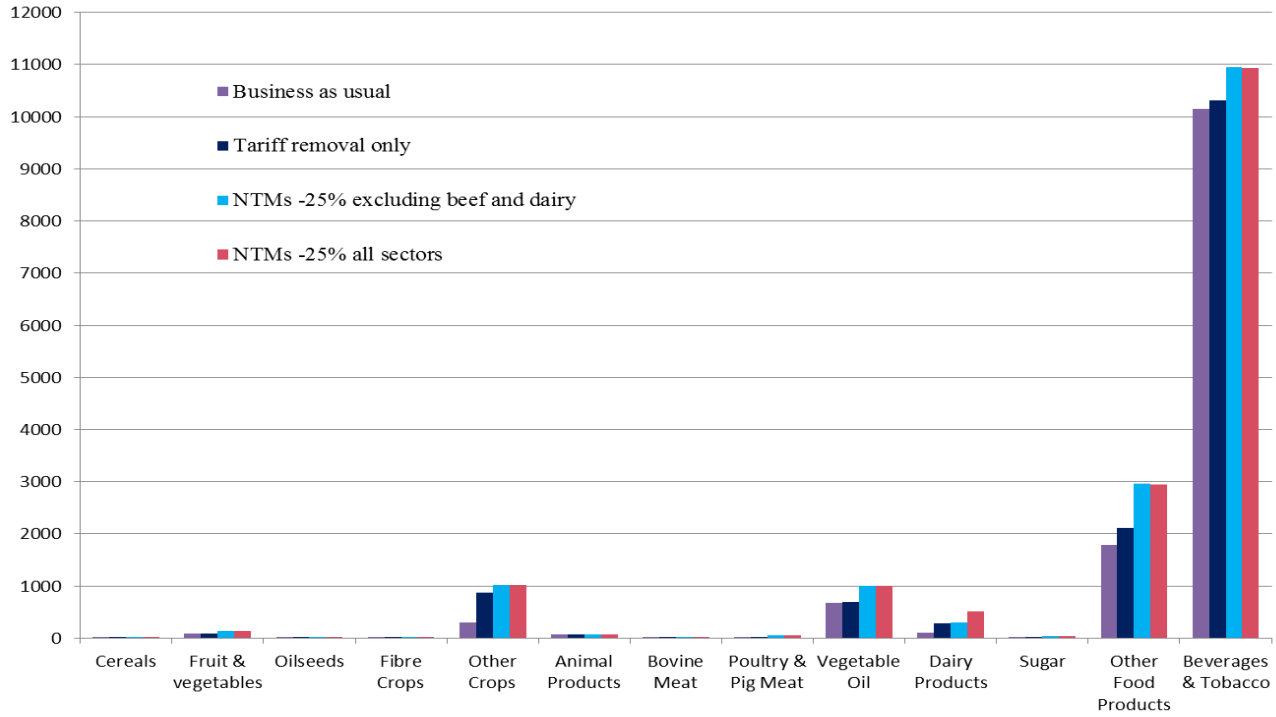


Figure 2. EU total exports (in million US dollars) of agricultural products to the US in 2025

Figure 1 shows that US exports of food and agricultural products to the EU in 2025 will increase tremendously with a complete removal of bilateral import tariffs, in addition to the non-tariff measures (NTMs) being lowered by 25% for the bilateral trade between the EU and the US. The exports of bovine meat from the US to the EU will increase by 17 times. The exports of poultry and pig meat from the US to the EU will increase by 14 times. Furthermore, the exports of dairy products from the US to the EU will increase by 22 times. However, other food products are the largest amount exported by the US to the EU and the exports will increase by almost twice the amount for business as usual.

In contrast, Figure 2 shows that EU exports of food and agricultural products to the US in 2025 will increase at a much slower pace compared to the US with a complete removal of bilateral import tariffs and partial removal of the non-tariff measures (NTMs). The exports of dairy products from the EU to the US will increase by only 5 times compared to 22 times increase from the US to the EU. The exports of vegetable oil from the EU to the US will increase by one and half times the amount for business as usual. In comparison, beverages & tobacco are the largest amount exported by the EU to the US and the exports will increase by merely 8%.

Figure 3 shows that US exports of food and agricultural products to the EU in 2025 will decelerate under the assumption of a strong preference for domestically produced products and labels by EU consumers with a complete removal of bilateral import tariffs and partial removal of the non-tariff measures (NTMs). The exports of bovine meat from the US to the EU will increase by 10 times, poultry and pig meat by 5 times, dairy products by 7 times and, other food products by only 30% compared to business as usual.

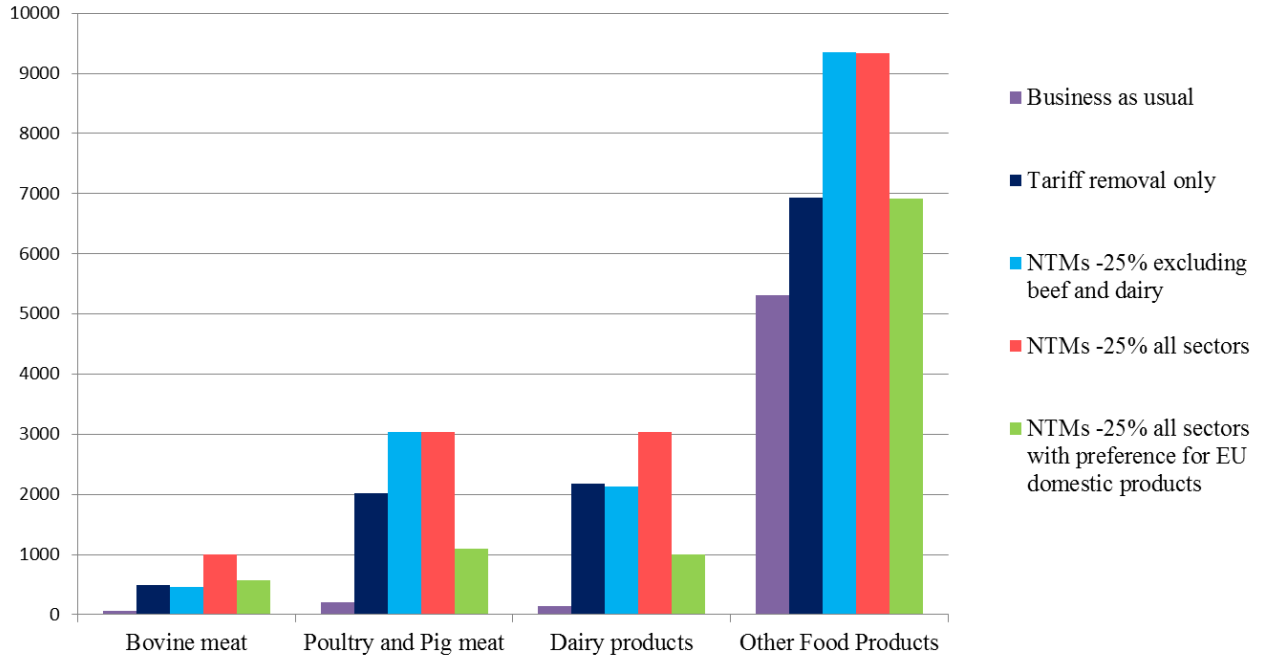


Figure 3. US total exports (in million US dollars) of bovine meat, poultry & pig meat, dairy products, and other food products to the EU in 2025

Figure 4 shows that the United Kingdom, Ireland and Benelux countries will have large inflows of bovine meat products from the US. However, there are hardly any influxes of bovine meat from the US to Finland, Denmark, Poland, Baltic and Central Western EU countries. On the contrary, these countries may be affected through intra-trade by imports from the EU member countries that are experiencing the large inflows and exporting their domestic production to the internal EU market. Figure 5 shows that that the United Kingdom, Ireland and Mediterranean countries will have large inflows of poultry and pig meat products from the US compared to the rest of the EU member countries. However, US poultry and pig meat products may flow to the rest of the EU countries via intra-trade within the internal EU market. Figure 6 shows that the Benelux countries, United Kingdom, Ireland, and Germany will have large inflows of dairy products from the US, and there is an increase in the trade of dairy products between the EU countries and the US with trade liberalisation. Figure 7 shows that the United Kingdom, Ireland, Germany, Benelux and Mediterranean countries will have large inflows of other food products from the US, whereby there is also a considerable increase in the exports from the US to all EU member countries with trade liberalisation. It is also evident that there may be a significant reduction in the growth of food exports from the US to the EU countries under the assumption of EU consumers' strong preference for domestically produced products and labels, hence limiting the export potential of the US to the EU market. The strong preferences for domestically produced products and labels in the EU can be manifested in the specific food safety regulations and standards for EU domestic production (for example, the practice of the "farm to fork" traceability system, animal welfare, and the "precautionary principle") and geographical indications for food products and beverages with widespread and well-known reputation in the EU and produced specifically in the different regions of the EU.

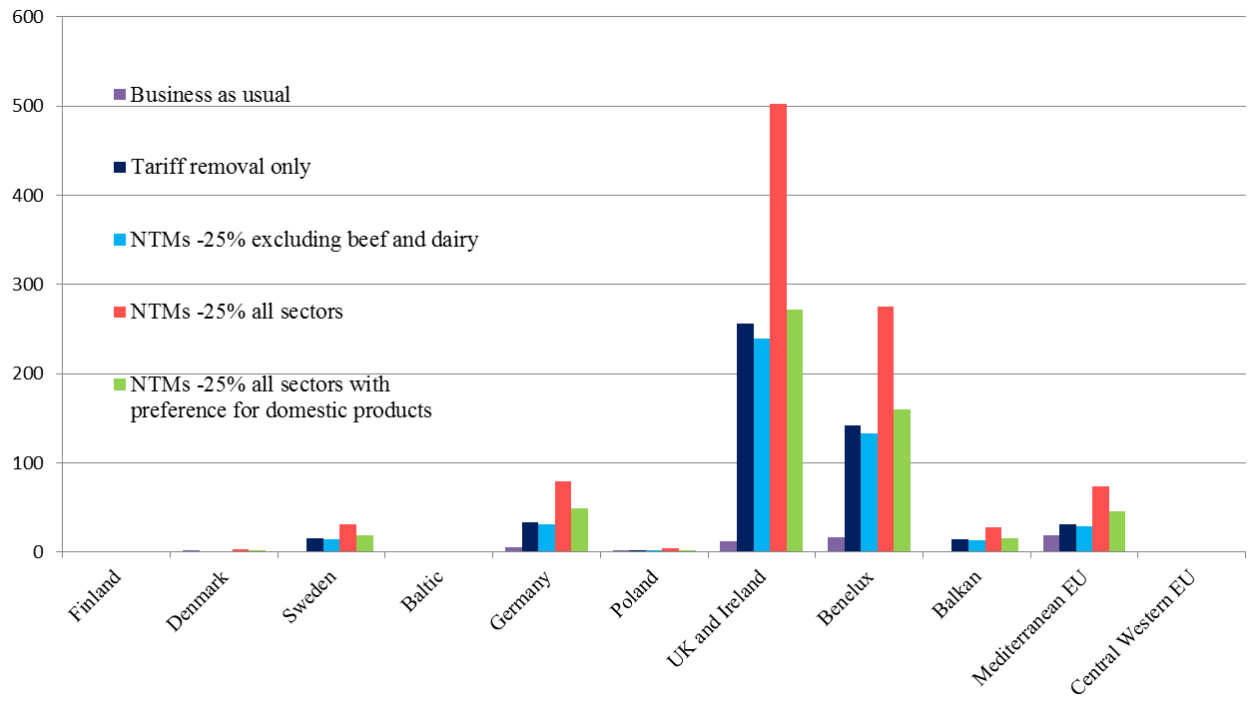


Figure 4. US total exports (in million US dollars) of bovine meat to the different EU countries and regions in 2025

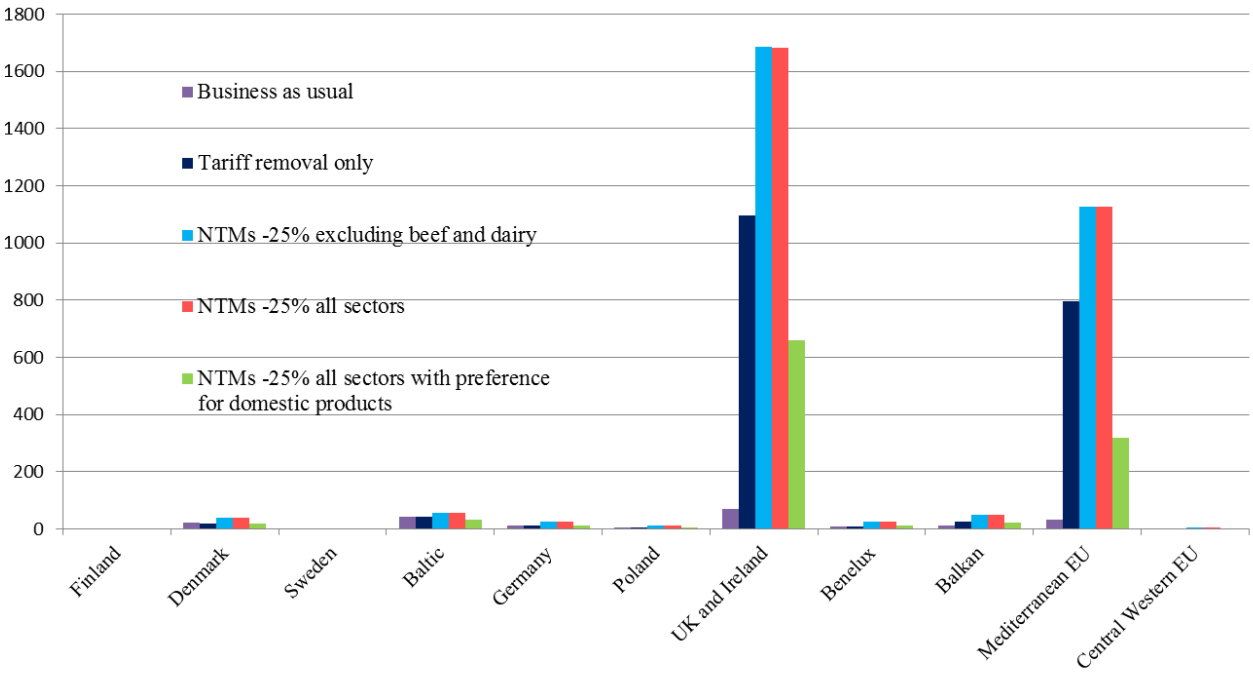


Figure 5. US total exports (in million US dollars) of poultry and pig meat to the different EU countries and regions in 2025

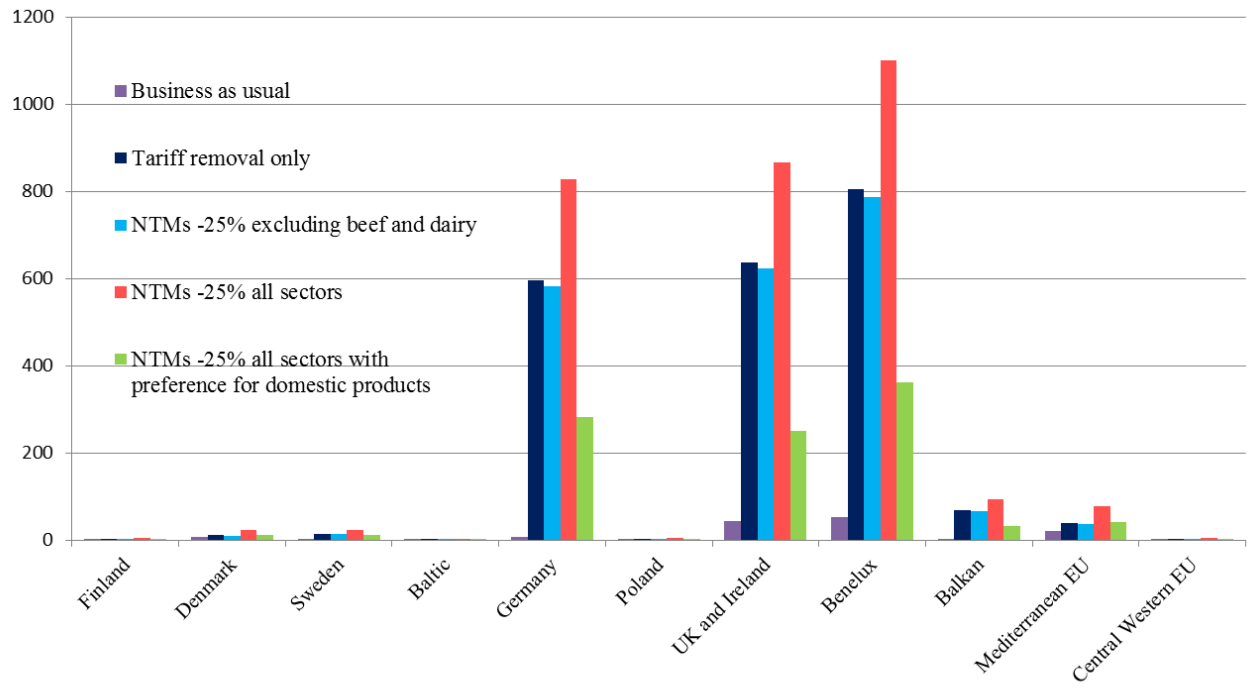


Figure 6. US total exports (in million US dollars) of dairy products to the different EU countries and regions in 2025

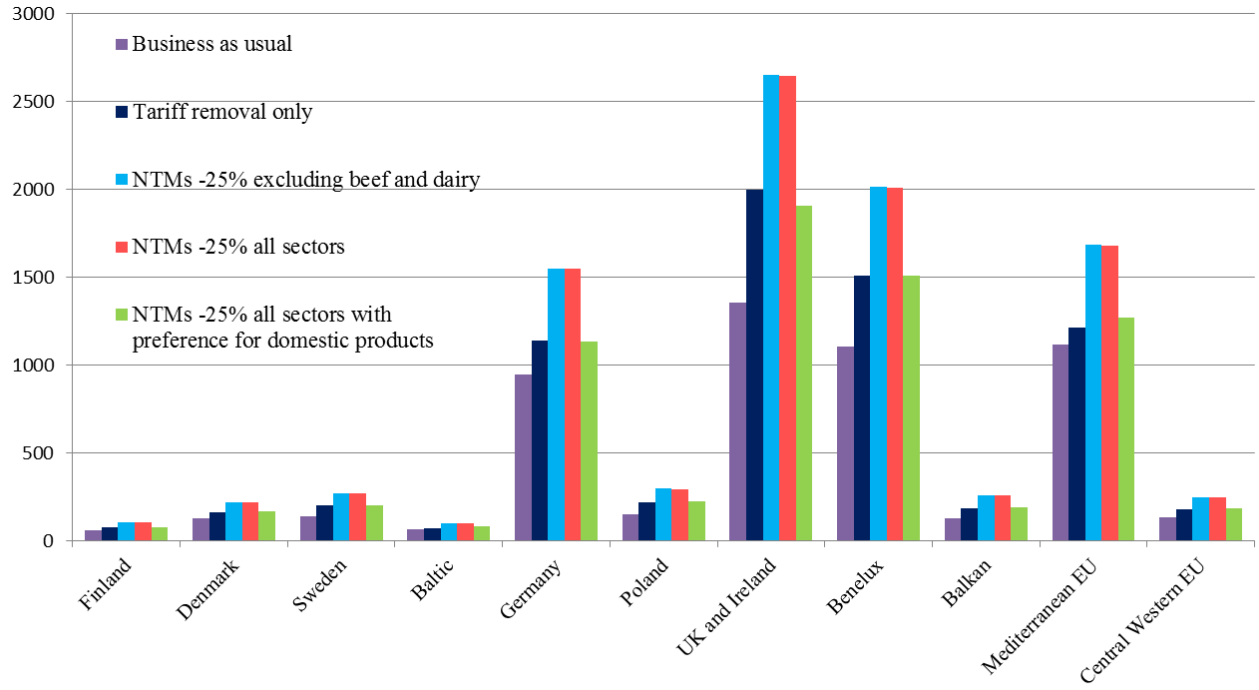


Figure 7. US total exports (in million US dollars) of other food products to the different EU countries and regions in 2025

The presented results are similar to the results from an earlier research report commissioned by the European Parliament (2014) on the possible EU-US trade agreement. The European Parliament (2014) report indicated that the US will experience a tremendous increase in the exports of agricultural products to the EU under the TTIP, especially for meat, dairy and other processed food products. Furthermore, these results are supported by a study (Beckman et al. 2015) published by the Economic Research Service of the United States Department of Agriculture (USDA), showing a large increase in the amount of food and agricultural exports to the EU from the US when all bilateral import tariffs and non-tariff measures (NTMs) for certain agricultural products are removed from the bilateral trade between the EU and US. In addition, the USDA study indicated that the US agricultural trade deficit will decline from USD 7.3 billion in the base year (2011) to USD 0.1 billion when bilateral import tariffs and non-tariff measures (NTMs) are removed. In the same direction, the results in Figure 8 demonstrate that the US agricultural trade deficit with the EU will decline from USD 8 billion under "Business as usual" to only USD 33 million under "Tariffs removal only", and moreover the US will also proceed to have an agricultural trade surplus of USD 5.2 billion under bilateral import tariffs and partial NTMs removal for all agricultural products. Under the trade liberalisation scenarios, the US may be able to revert back to the situation in the 1990s, whereby the EU had a bilateral agricultural trade deficit with the US. Therefore, the US may become a very important source of agricultural imports for the EU under the TTIP agreement, and the US stakeholders may find a growing and promising market for the exports of agricultural and food products to the immense and lucrative EU market. However, under the assumption of a strong preference for domestically produced products and labels by EU consumers, the export potential of the US will be limited. Hence, the EU may be able to sustain a USD 6 billion agricultural trade surplus with the US under this scenario.

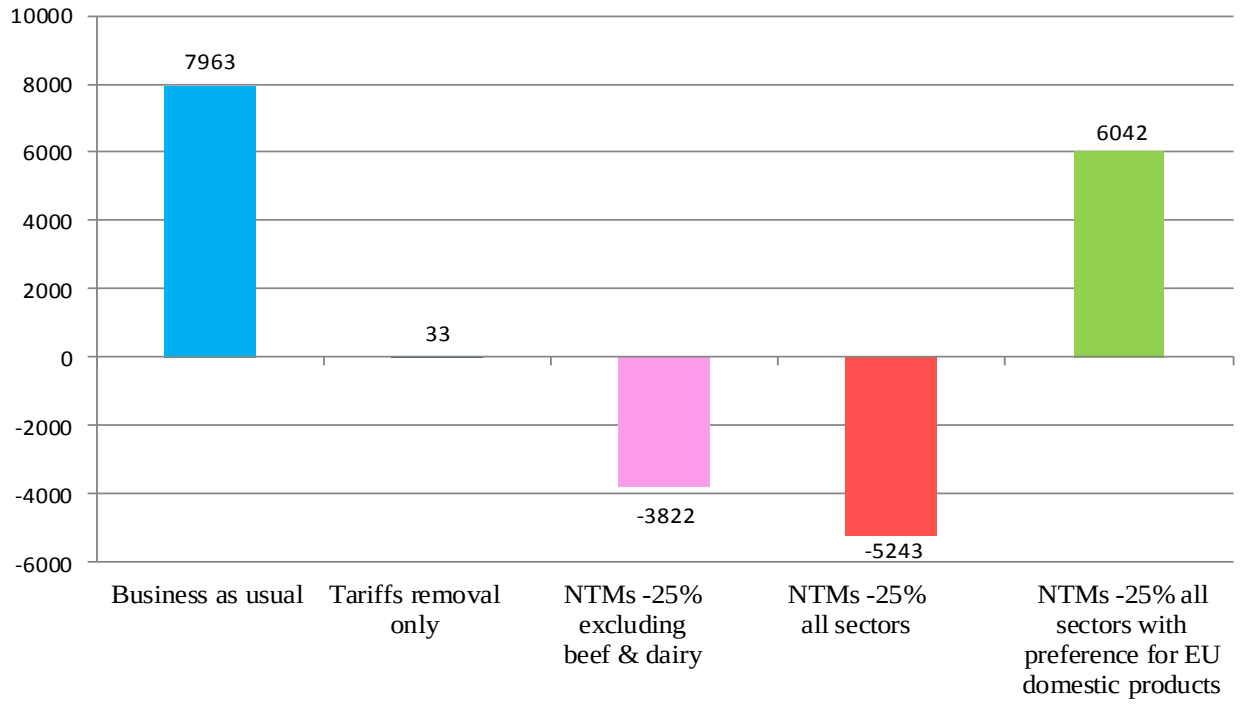


Figure 8. EU agricultural trade balance with the US (in million US dollars) according to the five different scenarios in 2025

Discussions

Agriculture is one of the most controversial of the 27 chapters currently under negotiation in the TTIP talks. Both the EU and the US are under intense pressure from strong domestic lobbies to protect their specific interests on both sides of the Atlantic. The TTIP negotiating drafts and internal positions leaked by Greenpeace (2016) indicated that the US was using the issue of export controls on European cars to push the EU into opening up its market to the exports of US agricultural and food products. It is evident that the US has much lower tariff barriers for agricultural and food products compared to the EU, thus the EU has been very successful in exporting consumer food products to the US, especially beverages such as spirits & liqueurs, wine & vermouth, beer, and waters that are accounting for half of the EU agricultural and food exports to the US. As a result, the EU has been experiencing a trade surplus in agricultural and food products with the US for the past 17 years, and the trade surplus has been growing continuously since 1999 with concentrated growth in high value consumer products.

EU exports high value products subject to low or zero tariffs in the US, and thus the EU argues that the food trade surplus with the US is a reflection of the US consumer demand. The continuous EU trade surplus with the US is essentially a result of wines, spirits and beer exports to the US. When these beverages are disregarded, the agricultural and food trade between the US and EU is more balanced. The US indicates that EU cheese exports to the US are sky-rocketing with EU exports of romano, reggiano, provolone categories increased by over 200 percent in 2013 and at the same time sustaining a price premium in the US over the past two decades. US statistics show that in 2015, the US had a staggering USD 966 million trade deficit in cheese with the EU. There is no wonder why the EU is pushing hard on the US to accept the EU system of protecting geographical indications. This study demonstrates that there may be a significant reduction in the growth of food exports from the US to the EU under the assumption of EU consumers' strong preference for domestically produced products and labels, hence limiting the export potential of the US to the EU market. The strong preferences for domestically produced products and labels in the EU can be manifested in the form of geographical indications for food products and beverages with widespread and well-known reputation in the EU and produced specifically in the different regions of the EU.

According to the USDA (2016), the US faced a record of USD 12 billion trade deficit in agricultural and food products with the EU in 2015; meanwhile the US had a USD 16 billion agricultural trade surplus with the rest of the world. Therefore, there is no doubt that the US has an aggressive position in opening up the lucrative EU market for agricultural and food products in order to balance the success achieved by the EU exporters in the US market. The US agenda in the TTIP negotiations will definitely include the total liberalisation of agricultural tariffs and the removal of non-tariff measures (NTMs) in order to propel the export growth of consumer-oriented agricultural and food products to the EU. For example, the US National Milk Producers Federation (an influential association) is opposing the continuation of the TTIP negotiations unless dairy export concerns are fully addressed. Therefore, the US is eager to eliminate tariffs in the dairy sector because EU tariffs (42%) are two to three times as high as US tariffs (17%) on average. The US is also claiming that the high tariffs and non-tariffs barriers in the EU have virtually eliminated many key agricultural exports from the US. Therefore, US stakeholders have been at a clear disadvantage

for many years. This is reflected in the US agricultural and food trade deficit with the EU for the past 17 years.

According to US statistics, US total agricultural exports reached over USD 155 billion in 2014, but US agricultural exports to the EU was merely USD 13.5 billion. In inflation adjusted terms, US agricultural exports to the EU are only one-third of the level in 1980. In comparison, US agricultural exports to the rest of the world are growing fast. Consequently, the US is offensive in dismantling the prohibitive tariffs on food products such as meat, dairy, cereals, fruits & vegetables and other processed food products. The main reason is that the US will experience a tremendous increase in the exports of agricultural and food products to the EU under total trade liberalisation in agriculture under the TTIP. In stark contrast, EU agricultural exports to the US will grow at a slower pace compared to the US under the TTIP, and the growth is concentrated on beverages, vegetable oil, dairy and other processed food products. These results are similar to the results published by the European Parliament and the USDA on the TTIP, whereby the US is a clear winner in agriculture with free trade under the TTIP.

Meanwhile, the EU is insisting that there will be no full liberalization in agriculture and there should be alternative approaches to full liberalization for import-sensitive products such as meat and dairy products. It is important for the EU to minimize losses that may affect EU farmers and to seek gains in areas other than tariffs such as enhanced protection of EU geographical indications. The EU insists that EU gains on dairy and wine exports would only be effective if other non-tariffs elements are addressed, however, there has been very little progress on non-tariff measures such as geographical indications for wine and cheese and Sanitary and Phytosanitary Measures (SPS).

Both the EU and the US are part of the SPS agreement, under the WTO, specifying the measures applied to protect human, animal or plant life and health must be based on science. However, the precautionary principle applies if there are suspected risks of causing harm to the public or to the environment, in the absence of scientific consensus. The EU has made this principle a cornerstone of its risk management on issues of health and plant protection. In the US, the precautionary principle is seen as an excuse to build barriers to trade and the science-based method is the preferred policy. At the heart of the disputes are the use of growth-enhancers in animal breeding; the use of pathogen reduction treatments, especially all poultry production facilities in the US are washing poultry with chlorine; and particularly EU's negative stance concerning genetically modified products and foods is also seen as a threat to US agricultural exports and an obstruction to trade. As a result, the non-tariff measures (NTMs) such as food safety regulations and standards in combination with geographical indications are the hardest part of the TTIP negotiations in addition to the elimination of all tariffs in agriculture.

References

Armington, Paul S. 1969. A theory of demand for products distinguished by place of production. International Monetary Fund Staff Papers 16:159-178.

Beckman, Jayson, Shawn Arita, Lorraine Mitchell, and Mary Burfisher. 2015. Agriculture in the Transatlantic Trade and Investment Partnership: Tariffs, Tariff-Rate Quotas, and Non-Tariff Measures. Economic Research Service, United States Department of Agriculture. http://www.ers.usda.gov/media/1937478/err198.pdf [accessed February 23, 2016]

CEPR. 2013. Reducing Trans-Atlantic Barriers to Trade and Investment. Centre for Economic Policy Research (CEPR), London. http://trade.ec.europa.eu/doclib/docs/2013/march/tradoc_150737.pdf [accessed May 5, 2014]

European Commission. 2015. Agri-food trade in 2014: EU-US interaction strengthened. Monitoring Agri-trade Policy, MAP 2015–1, Agriculture and Rural Development. http://ec.europa.eu/agriculture/trade-analysis/map/2015-1_en.pdf [accessed June 17, 2015]

European Parliament. 2014. "Risks and Opportunities for the EU Agri-Food Sector in a Possible EU-US Trade Agreement." IP/B/AGRI/IC/2013_129. http://www.europarl.europa.eu/RegData/etudes/STUD/2014/514007/AGRI_IPOL_STU%282014%29514007_EN.pdf [accessed June 17, 2015]

Erixon, Fredrik, and Matthias Bauer. 2010. Transatlantic Zero Agreement: Estimating the Gains from Transatlantic Free Trade in Goods. ECIPE Occasional Paper No. 4, European Centre For International Political Economy. https://www.vci.de/vci/downloads-vci/ecipe-taza-study-20101001.pdf [accessed February 23, 2016]

Fontagne, Lionel, Julien Gourdon, and Sebastien Jean. 2013. Transatlantic Trade: Whither Partnership, Which Economic Consequences? CEPII Policy Brief No 2013-01. http://www.cepii.fr/PDF_PUB/pb/2013/pb2013-01.pdf [accessed May 5, 2014]

Fontagne, Lionel, Amelie Guillin, and Cristina Mitaritonna. 2011. Estimations of Tariff Equivalents for the Services Sectors, CEPII Working Paper, No 2011-24, December 2011. Centre d'Études Prospectives et d'Informations Internationales (CEPII). http://www.cepii.com/PDF_PUB/wp/2011/wp2011-24.pdf [accessed May 5, 2014]

Greenpeace. 2016. Greenpeace Netherlands releases TTIP documents, Press release - 2 May, 2016. http://www.greenpeace.org/international/en/press/releases/2016/Greenpeace-Netherlands-releases-TTIP-documents/ [accessed May 3, 2016]

Hertel, Thomas, Huey-Lin Lee, Steven Rose, and Brent Sohngen. 2008. Modeling Land-Use Related Greenhouse Gas Sources and Sinks and Their Mitigation Potential. GTAP Working

Paper No. 44. http://www.gtap.agecon.purdue.edu/resources/res_display.asp?RecordID=2605 [accessed May 3, 2009]

Josling, Tim, and Stefan Tangermann. 2014. Agriculture, Food and the T-TIP: Possibilities and Pitfalls. CEPS Special Report No. 99, Centre for European Policy Studies (CEPS). https://www.ceps.eu/system/files/SP%20No_99%20TTIP%20and%20Agriculture%20%281%29.pdf [accessed June 17, 2015]

Keeney, Roman, and Thomas Hertel. 2005. GTAP-AGR: A Framework for Assessing the Implications of Multilateral Changes in Agricultural Policies. GTAP Technical Paper No. 24. http://www.gtap.agecon.purdue.edu/resources/res_display.asp?RecordID=1869 [accessed June 17, 2006]

Narayanan, Badri G., Angel Aguiar and Robert McDougall, Eds. 2012. Global Trade, Assistance, and Production: The GTAP 8 Data Base, Center for Global Trade Analysis, Purdue University.

USDA. 2016. EU Agricultural Exports, Trade Surplus with U.S. Reach Record Levels in 2015. International Agricultural Trade Report, Foreign Agricultural Service, United States Department of Agriculture. http://www.fas.usda.gov/data/eu-agricultural-exports-trade-surplus-us-reach-record-levels-2015 [accessed February 23, 2016]

WTO Tariff Profiles. Trade Profiles, Statistics Database, Statistics, Documents and Resources, World Trade Organization. http://stat.wto.org/CountryProfile/WSDBCountryPFReporter.aspx?Language=E [accessed February 23, 2016]