

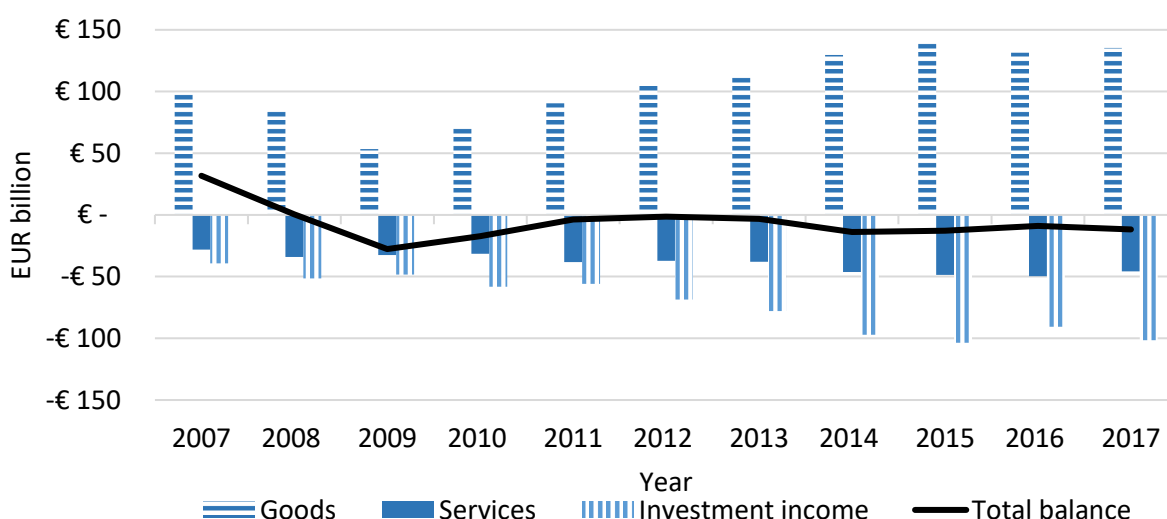
# Liberalization of tariffs on industrial goods between the United States of America and the European Union: An economic analysis

## 1. Trade relations between the EU and the US

The Commission adopted on 18 January 2019 two proposals to the Council recommending opening negotiations with the US for agreements on the elimination of industrial goods tariffs and on the facilitation of conformity assessment.<sup>1</sup> They are part of a work programme agreed between President Juncker and Trump in July 2018. These negotiation directives echo the Commission's conviction that international trade can deliver on the promise of new economic opportunities, be conducted in a transparent way, and be in line with and support the EU's high regulatory standards and level of protection. DG TRADE has conducted this economic analysis to allow for an assessment of an EU-US agreement limited to the reciprocal elimination of tariffs for industrial goods. This economic analysis will be complemented during 2019 with a Sustainability Impact Assessment (SIA) that will be conducted by independent experts. The SIA will focus on the environmental and social aspects of the envisioned EU-US agreement, including its impact on greenhouse gas emissions related to climate change.

The EU and the US are the two largest economies in the world, representing over 46% of global GDP. The EU-US trade and economic relationship is amongst the most open in the world with relatively low barriers and deep investment links unrivalled in any other trade and investment relationship. This is reflected in the continuously growing trade and investments between the EU and US (see Figure 1).

**Figure 1 – EU trade and investment balance with the US**



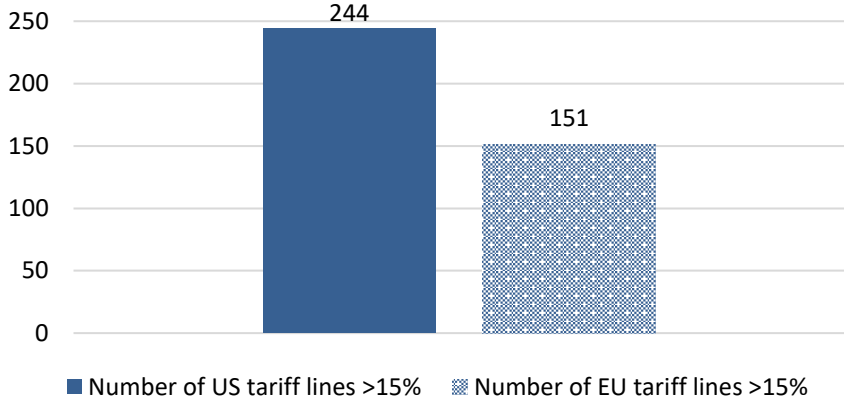
Source: US Bureau of Economic Analysis and Eurostat.

<sup>1</sup> Industrial goods encompass all goods other than those included in Annex I of the WTO Agreement on Agriculture. The proposals and accompanying draft negotiating mandates as well as more information can be found here: [http://europa.eu/rapid/press-release\\_IP-19-502\\_en.htm](http://europa.eu/rapid/press-release_IP-19-502_en.htm)

A full picture of EU-US trade, including trade in goods, trade in services, investments and resulting profit flows, shows a rather balanced economic relationship with a small total surplus in favour of the US during the last decade, reaching EUR 12 billion in 2017 according to US government data. Total two-way trade in goods reached an all-time high in 2017 of EUR 633 billion, and generated an EU trade in goods surplus of around EUR 120 billion. As regards industrial goods, the EU imported EUR 242 billion from and exported EUR 338 billion to the US in 2017. The US is the main destination worldwide of EU industrial goods with over one-fifth of all EU exports going to the US. Imports from the US represent almost 15% of all EU imports, second only to imports from China.

The strong EU and US commitment to open economies is characterised by generally low tariff rates and the fact that all tariffs are bound in WTO schedules; the simple average applied EU import tariff is 4.3% on industrial goods and the US import tariff is 3.8% (detailed tariff structures are presented in Annex 1).<sup>2</sup> Nevertheless, tariffs still impose significant actual costs given the magnitude of trade between the EU and the US, and the existence of tariffs above 15% that are usually the boundary for “tariff peaks”, signalling a protected goods category. Those are most restrictive to trade and exist for a number of products on each side. Figure 2 gives a comparative overview of tariff peaks.

**Figure 2 - Overview of industrial good tariffs above the 15%-tariff peak line**



Source: Eurostat COMEXT, TARIC and DG Trade.

The EU and US trade on a non-preferential, most-favoured nation basis. This leaves the EU’s economic operators with comparably less favourable conditions to access the US market than competitors from countries with preferential access to the US under Free Trade Agreements. The same is true for US exporters to the EU. In addition, since many EU and US companies are deeply interlinked, either through intra-company supply chains of multinationals or supply chains with specialised small- and medium-sized enterprises (SMEs), any tariff on industrial

<sup>2</sup> Average tariff means the simple average ad valorem import tariff over all harmonized system (HS) customs codes based on the applicable EU and US tariff schedules on industrial goods throughout this document if not specified otherwise.

goods leads to a direct increase in costs for these companies. In turn, this means a loss of competitiveness on the world market for EU and US companies. Higher costs also discourage EU companies from accessing US market and vice versa. In that sense, even low tariffs are in practice equal to a tax on transatlantic trade. Therefore, economic operators on both sides of the Atlantic stand to benefit from the proposed elimination of tariffs on industrial goods.

## **2. Trade in industrial goods: a closer sectoral analysis**

### *Machinery*

Mechanical engineering is one of the largest industrial sectors in the EU economy in terms of the number of enterprises, employment, production as well as generation of added value. The sector is characterised by relatively small family-owned companies. In 2017, European companies generated aggregated revenues of EUR 690 billion, of which EUR 71 billion stemmed from sales in the US (equivalent to 20% of all exports). When exporting their products to the US, EU firms are faced with tariffs of up to 15%.

### *Chemicals*

The chemicals sector is one of the largest sectors in terms of employment, turnover and value added, producing and consuming industrial products, including petrochemicals, polymers, basic inorganic chemicals and specialty chemicals, and fuels such as liquefied natural gas (LNG) that are important to the EU's Energy Union strategy for reaching its energy and climate goals. The global turnover of the chemicals industry was valued at EUR 3,475 billion in 2017 with the EU chemical industry ranking second (after China) with a share of 16% followed by the US. The chemicals sector is dominated by large players operating globally: over half of the EU-US trade in chemicals is intra-firm trade. These companies will directly benefit from the elimination of tariffs currently applied at 5.5% and 6.5% in the EU and the US. The EU chemicals sales in 2017 were valued at EUR 542 billion. Over a quarter of the EU chemicals production is exported, and the US is by far the biggest export destination for the EU. In return, the EU imported 30% of all chemicals from the US worth EUR 50 billion. The EU has a trade surplus in chemicals with the US of around EUR 5 billion.

### *Passenger cars and trucks*

The automotive sector is one of the largest manufacturing sectors in the EU; it produced almost 19 million of passenger cars and light trucks in 2017. The globalisation of supply chains had one of the strongest impacts on the automotive industry. From mostly localised businesses, manufacturers in the EU and, to a lower extent, the US transformed into globally operating companies with large production facilities in both economies; these supply chains help them in producing higher quality products at a lower cost. In light of these deeply interlinked supply chains, tariff liberalisation will help to provide reciprocity and a level-playing field. The EU-US automotive trade represents more than one-sixth of all trade in industrial goods. Some EU manufacturers have located in particular the production of pick-up trucks and sport utility vehicles (SUVs) in the US of which a large share is then exported to the EU or to China. The EU imported passenger cars and trucks worth almost EUR 7 billion

from the US while the US imports of EU cars and trucks reached EUR 40 billion in 2017. This accounted for 14% and 29% of all EU passenger car imports and exports respectively. US exports of passenger cars to the EU face a tariff of 10% and EU exports to the US face tariffs of 2.5%. But exports of pick-ups and trucks popular in the US face a 25% import tariff. US producers face 10% to 22% in the other direction, depending on engine size. Average tariffs on core motor vehicle parts stand at 1.7% in the US to 4% in the EU.

### *Textiles, leather and clothing*

While much smaller than the automotive or chemicals sector, the EU has a highly competitive industry for high-quality apparel, textiles and leather that mostly consists of SMEs that have a strong interest in EU-US trade but are facing relatively high tariff barriers. The turnover for EU textiles and clothing companies represented EUR 181 billion in 2017. Apparel and textiles represented EUR 7 billion of EU-US trade in industrial goods in 2017. The EU imported 1.4% of its total textiles and clothing imports from the US, while the US took in 12.4% of all EU textile and clothing exports. Tariffs on textiles and clothing are much higher, both in the EU and US, compared to the average tariff on industrial goods: the EU has tariff protection of 4% for fabrics, 8% for semi-finished garments and 12% for clothing with no duties higher than 12%. In contrast, US imports from the EU face an average tariff of 8.9% with a much larger spread in applicable tariffs, resulting in some EU exported textiles subject to 0% tariff and many others facing tariffs of up to 32%. This is indicative of a stronger protection for certain products where there exists an intense price competition from third countries with lower labour and environmental standards. The EU leather industry, while comparatively smaller with a combined trade volume of EUR 3 billion, sold almost one-sixth of all its exports to the US. However, leather goods still face high US tariffs of up to 20%, impeding trade significantly.

### *Fishery and fishery products*

Fisheries and fishery products represent a small share of overall trade in industrial goods. The EU imported fisheries worth less than EUR 1 billion from the US in 2017, representing under 4% of all EU imports of fisheries. In turn, US imports of EU fisheries reached almost EUR 0.7 billion, equalling 15% of all EU exports of fisheries. Transatlantic trade in fishery and fishery products is therefore very modest – it represents only EUR 1.8 billion out of a total of EUR 598 billion of non-agricultural trade in 2017. The EU applies an average import tariff of 11.8% that is higher than the US' average tariff of 1.4%. However, as for textiles, the spread of tariffs in the US is higher with a peak tariff of 35% for a few products as compared to the EU's maximum of 26%.

### *Glass and ceramics*

The EU is the world's biggest producer of high-quality glass with a market share of around one third of total world production. In addition, the EU ceramics sector generates around EUR 10 billion turnover, out of which 30% is for exports and mostly produced by SMEs. US imports of ceramics and glass from the EU represent over a fifth of all EU exports of these

products worth over EUR 4 billion in 2017, making it the industry's most important export destination. The average US tariff on glass is 5.1% with a maximum of 38% on certain decorated glassware. The average US tariff on ceramic imports are 4.1% and range from 8.5% to 10% for ceramic tiles with a maximum of up to 28% for ceramic tableware. US exports to the EU accounted for 17.6% of all EU imports, worth well over EUR 2 billion at an average EU tariff of 4% or 12% at maximum.

### **3. The role of SMEs in EU-US trade**

SMEs in particular stand to gain from the proposed initiative. Based on available data from 25 EU Member States,<sup>3</sup> we can conclude that the majority of firms exporting to the US were SMEs. Recent data show that SMEs account for 28% (EUR 77 billion) of the total value of EU exports to the US and represent 88% of total EU firms that exported to the US. The participation of SMEs in exports to the US varies across EU Member States. Table 1 presents the number of SMEs exporting to the US and their export value. It also highlights the relative contribution of SMEs to Member States total exports to the US in terms of number of firms and value.

Tariffs and costs of conformity assessment are likely to have a greater impact on these SMEs than on larger companies as they generally have more limited financial resources and human resource capacities compared to larger companies. Hence, they are less equipped to handle differing regulatory frameworks, deal with diverse national regulatory bodies and absorb risks. This is especially the case when operating in diversely regulated, intensely competitive markets, particularly those dominated by large and long-established companies like in the EU and US markets.

As a consequence, many SMEs are effectively hampered in engaging in international trade. This has adverse impact on intra-industry competition, cross-country innovation spill-overs, and economic convergence. Tariff elimination is therefore particularly valuable for SMEs as it not only reduces costs but also helps speed-up and simplify customs procedures and paperwork. Lower costs and red tape disproportionately impacts small exporters. SMEs will also benefit from the parallel proposal to negotiate an agreement with the US to reduce the costs of conformity assessments.

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<sup>3</sup> No data is available for Slovenia, Luxembourg and Croatia.

**Table 1 - Share of SMEs (<249 employees) to total goods exporting enterprises (number and value)**

Member State	SMEs exporting to the US		SMEs exporting to the US as a proportion of all enterprises exporting to the US	
	Number of exporting enterprises ('000)	Export Value (EUR billion)	Share of exporting enterprises (%)	Export value (%)
Italy	30.0	11.2	96%	44%
United Kingdom	26.8	11.7	93%	27%
Germany	20.7	12.4	77%	15%
France	19.3	8.3	92%	32%
Spain	15.5	3.0	93%	35%
Netherlands	6.1	9.4	94%	59%
Sweden	5.9	1.8	93%	21%
Poland	3.6	0.6	81%	25%
Belgium	3.2	4.5	69%	23%
Denmark	2.8	1.2	85%	22%
Austria	2.6	2.1	86%	33%
Finland	2.3	0.7	88%	20%
Portugal	2.2	0.5	90%	29%
Czech Republic	1.9	0.4	63%	14%
Ireland	1.8	7.3	90%	44%
Hungary	1.1	0.3	80%	17%
Greece	0.9	0.2	59%	22%
Bulgaria	0.7	0.1	87%	40%
Romania	0.6	0.2	61%	24%
Slovakia	0.4	0.1	75%	9%
Lithuania	0.3	0.1	86%	22%
Latvia	0.3	0.1	88%	58%
Estonia	0.2	0.4	86%	65%
Malta	0.1	0.0	86%	13%
Cyprus	0.1	0.0	79%	28%
<b>Total EU*</b>	<b>150</b>	<b>77</b>	<b>88%</b>	<b>28%</b>

Source: US-TEC database breakdown by MS.

\* Croatia, Luxembourg and Slovenia are not included in the total.

#### **4. Economic analysis**

The following analysis of the impact of a transatlantic accord on the liberalization of industrial tariffs is based on a Computable General Equilibrium (CGE) model (the details of the model are included at the end of this section). The proposed policy initiative is simulated by eliminating bilateral tariffs on industrial products. The main results are presented for the

EU27<sup>4</sup> and the US by sector. Total exports of industrial goods of the EU27 to the US in 2033 are projected to be EUR 345 billion under status quo policies. A full tariff elimination of industrial goods would increase EU exports to the US by 8% or about EUR 27 billion. US exports of industrial goods to the EU are estimated at EUR 287 billion at the end of the baseline and are simulated to increase by 9% (EUR 26 billion) as a result of tariff abolition.

In relative terms, EU 27 exports to the US increase most strongly in the sectors of processed fish, leather products and textiles, in this order, with percentage changes in trade flows between 58% and 110% (see Table 2). However, these are not the most traded sectors in the baseline, which is why their absolute increases in exports are only in the low to medium range of sectors. The sectors for which exports increase most significantly in absolute terms are motor vehicles and parts, non-transport machinery and equipment and chemicals.<sup>5</sup> Their exports increase by EUR 3.6 billion, EUR 3.3 billion and EUR 7.4 billion, respectively.

On the US side, exports increase most significantly in the sectors of apparel, motor vehicles and parts and textiles, where bilateral exports increase by 46% to 109% (see Table 3). In absolute terms, two of these play a minor role. Motor vehicles and parts together with non-transport machinery and equipment and chemicals are the three sectors in which exports increase considerably. These increases are EUR 3.1 billion for transport equipment (other than motor vehicles), EUR 5.8 billion for motor vehicles and parts and EUR 8.6 billion for chemicals.<sup>6</sup>

The estimated import increase of US fishery into the EU is EUR 56 million. Processed fish products are expected to increase by EUR 694 million. This would bring the US share from 4% to just over 5% of total EU fishery imports; given that this is a modest change compared to the overall market size, it is reasonable to assume that this small increase will have only negligible price effects. In turn, EU exports to the US would increase by EUR 1 million for fishery products and EUR 739 million for processed fish. It is worth noting that the highest tariff in the sector is maintained by the US, i.e. 32% on canned tuna. The total expected increase in fish and processed fish exports to each other is almost equal for both the EU and the US in value, increasing the fishery sector exports in the EU and US.

When interpreting these results, it should not be forgotten that this scenario does not cover the entire EU-US bilateral agenda, which itself is less ambitious than recent deep and comprehensive trade agreements concluded by the EU. In particular, the component of the ongoing discussions on regulatory cooperation could have further positive impacts and increase the resulting economic benefits presented and discussed so far.

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<sup>4</sup> The model results are taking into account the United Kingdom's withdrawal from the EU. The historical data presented in sections 1-3 is for the EU28, thus including the United Kingdom.

<sup>5</sup> The full sector composition is chemicals, rubber and plastic products.

<sup>6</sup> The sectoral simulation results imply a full preference utilization, which on account of e.g. rules of origin, may not be achieved.

**Table 2 - EU27 industrial goods exports to the US in 2033, EUR million**

	Baseline	Simulation	Change	% Change
Fishery	63	65	1	2%
Forestry	56	56	0	0%
Processed fish*	1,267	2,007	739	58%
Textiles	1,953	2,836	882	45%
Wearing apparel	2,126	4,454	2,328	110%
Leather products	2,346	3,975	1,629	69%
Paper sector	3,666	3,694	28	1%
Wood products	1,058	1,150	92	9%
Chemicals & pharmaceuticals	99,679	107,069	7,390	7%
Petrochemicals, coke and gas	20,851	23,139	2,288	11%
Minerals	4,995	5,621	626	13%
Motor vehicles	57,069	60,673	3,604	6%
Transport equipment	28,155	28,611	456	2%
Electronic products	16,885	17,753	868	5%
Metals	7,202	8,084	882	12%
Non-ferrous metal products	5,343	6,084	741	14%
Machinery	49,566	52,828	3,262	7%
Iron and steel	8,339	8,444	105	1%
Other manufacturing products	16,860	17,592	732	4%
<b>Industrial goods total</b>	<b>327,478</b>	<b>354,133</b>	<b>26,655</b>	<b>8%</b>

Source: DG Trade simulations; \*Separated out from the “processed food” sector in GTAP, which otherwise will not be liberalized.



**Table 3 - US industrial goods exports to the EU27 in 2033, EUR million**

	Baseline	Simulation	Change	% Change
Fishery	202	258	56	28%
Forestry	233	233	0	0%
Processed fish*	1,752	2,446	694	40%
Textiles	982	1,429	448	46%
Wearing apparel	387	809	422	109%
Leather products	319	415	96	30%
Paper sector	3,001	3,003	2	0%
Wood products	796	840	44	5%
Chemicals & pharmaceuticals	57,965	66,598	8,633	15%
Petrochemicals, coke and gas	101,939	103,201	1,262	1%
Minerals	3,799	4,061	262	7%
Motor vehicles	12,479	18,277	5,798	46%
Transport equipment	32,352	35,420	3,067	9%
Electronic products	19,499	20,892	1,393	7%
Metals	3,044	3,628	584	19%
Non-ferrous metal products	4,111	4,839	728	18%
Machinery	25,639	28,105	2,467	10%
Iron and steel	1,475	1,519	44	3%
Other manufacturing products	12,864	13,086	222	2%
<b>Industrial goods total</b>	<b>282,838</b>	<b>309,059</b>	<b>26,221</b>	<b>9%</b>

Source: DG Trade simulations; \*Separated out from the “processed food” sector in GTAP, which otherwise will not be liberalized.

Standard CGE models such as the one used do not typically capture all the important benefits of EU-US trade in full granularity. One important element characterising EU-US trade is the large number of SMEs engaged in trade. Many sectors with significant economic benefits presented in Table 2 have a large share of SMEs in terms of the number of exporters and total trade values, for example the apparel, leather, chemicals and machinery sectors.

Another limitation is the single focus on trade in goods without secondary effects. Given the large share of intra-firm trade in the tightly interlinked EU and US economies, the estimated increase in EU-US trade will offer an additional incentive for increased foreign direct investment activity.

### **Box 1: Technical and theoretical description of the model**

To evaluate the possible impact of a transatlantic accord on the liberalization of industrial tariffs, we have used a Computable General Equilibrium (CGE) model. The CGE framework builds on general equilibrium theory and rests on consistent microeconomic foundations in which intersectoral linkages, resource constraints (for instance, fixed employment) and policy distortions as the principal focus. The main advantages of the CGE approach are its solid micro-foundation and its economy-wide scope, as well as its complete and consistent coverage of all bilateral trade flows. Furthermore, changes in welfare can be traced back to the different sectors by performing a welfare decomposition exercise to identify what is generating the gains and losses. Hence a CGE model is an appropriate tool when the policy changes being analysed simultaneously affect many countries and many sectors and have effects on terms-of-trade, factor prices and income.

The GTAP model used for this analysis is a perfectly competitive comparative static CGE framework (Hertel, 1997). The structure of demand and supply in GTAP, which is homogeneous across regions and products, is built upon the Social Accounting Matrices of individual countries and regions, while its parameters are mostly drawn from the literature.

The GTAP model assumes the presence of representative consumers and producers together with a government sector, and all incomes are assumed to accrue to a single “regional household”. Therefore, distributional aspects are disregarded, and all consumers are assumed to have identical preferences. By the same token, government costs and revenues do not need to balance, as it is assumed that any discrepancy accrues directly to the households (i.e. the single “regional household”). Government’s consumption behaviour is endogenous, while policies are exogenous (Hertel, 1997).

In the GTAP model, the substitutability among primary factors and with intermediate consumption is modelled through a set of nested Constant Elasticity of Substitution systems, while the production of final goods is aggregated through a fixed coefficient function of the Leontief type. On the demand side, the representative agent allocates income among savings, government and private consumption through a Cobb-Douglas utility function, while the allocation within different private goods is modelled through a non-homothetic Constant Difference of Elasticity demand system. Bilateral trade flows are modelled through product differentiation on the demand side, with the assumption of imperfect substitutability between similar goods produced in different countries and regions (Armington, 1969). Transaction costs are also accounted for in the model, as transport services are explicitly considered among the activities in the economy.

The most recent available GTAP database version – known as version 10P2 – includes data on up to a maximum of 141 regions and countries, 57 industries and 8 endowments, and has 2014 as a base period. In general, there are two groups of data of particular relevance for global models: those on border protection, and those on bilateral trade flows. The GTAP database is built, for imports and exports flows, from the COMTRADE data, supplied by the United Nations Statistical Office, through an ad hoc reconciliation procedure based on a reliability indicator of the information supplied by each importing and exporting country. Tariff data is retrieved from the MacMap database (<http://www.macmap.org>), while data on domestic support in agriculture is based on the OECD Producer Support Estimates (PSE). Export subsidies are directly derived from countries' notifications to the WTO.

The time horizon we have used is 2014 – 2033. The “*business as usual*” baseline was built by shocking the macro variables, GDP, population and labour supply. The baseline projections are based on the latest available data from the IMF, for GDP, from the ILO and CEPII for population trends and labour supply. Further, all the policy changes that could be relevant for the analysis are also included in the baseline.

The dynamic version of the model, which has been used for the simulations presented here, extends the comparative static framework of the standard GTAP model developed by Hertel (1997) to a dynamic framework by incorporating international capital mobility and capital accumulation. The dynamic GTAP model allows international capital mobility and capital accumulation, while preserving all the features of the standard GTAP, such as a constant returns to scale production technology, perfectly competitive markets, and product differentiation by countries of origin, in keeping with the Armington framework, which assumes that domestic and imported goods are not perfectly substitutes. The dynamic framework also takes into account international investment. By incorporating international capital mobility and ownership, it captures important FTA effects on investment and wealth that by a static model would miss (Ianchovichina and McDougall, 2000). In the dynamic GTAP model, each of the regions is endowed with fixed physical capital stock owned by domestic firms. The physical capital is accumulated over time with new investment. The dynamics are driven by net investment, which is sourced from regional households' savings. The savings in one region are invested directly in domestic firms and indirectly in foreign firms, which are in turn reinvested in all regions. The dynamics arising from positive savings in one region are related to the dynamics from the net investment in other regions. Overall, at global level, it must hold that all the savings across regions are completely invested in home and overseas markets. To sum up, dynamics of investment and capital accumulation and also of saving and wealth accumulation are key features distinguishing the dynamic from the static version of model.

## **5. Conclusions**

The transatlantic bilateral trade relationship is extremely important for both partners. It has been, and will remain, a central artery of the world economy. The elimination of tariffs, even if most are moderately low, will lead to cost reductions for economic operators and an increase of bilateral EU and US exports of 8% (EUR 26.7 billion) and 9% (EUR 26.2 billion) respectively. In contrast, stagnating bilateral trade relations undermine the competitiveness of EU and US firms. Many industrial sectors on both sides of the Atlantic operate with small profit margins due to the size and efficiency of the EU and US markets. A limited but meaningful EU-US agreement eliminating industrial tariffs would give transatlantic companies of all sizes a comparative advantage, and support their global capacity to compete.

## Annex 1

**Table A.1 US tariffs and imports from EU in 2017 by HS section**

Sector	US imports from EU (EUR million)	Share of total EU exports (%)	Total Tariff Lines	Maximum Ad Valorem (%)	Average Ad Valorem (%)
Non-Agricultural products	338,163	20.6%	8,308	48.0%	3.8%
Fisheries	624	15.0%	224	35.0%	1.4%
Industrial products	337,539	20.6%	8,084	48.0%	3.8%
Mineral products	10,901	12.0%	158	7.0%	0.4%
Chemicals	85,067	27.7%	1,450	6.5%	3.5%
Plastics, rubber	10,462	15.1%	374	14.0%	3.7%
Hides, leather	2,199	14.1%	185	20.0%	5.7%
<i>Leather articles</i>	1,851	14.6%	89	20.0%	8.9%
Wood	1,515	12.1%	222	18.0%	2.2%
Paper	3,578	11.8%	253	0.0%	0.0%
Textiles and clothing	4,617	12.4%	1,530	32.0%	8.9%
<i>Apparel and make-up</i>	2,433	12.3%	706	32.0%	10.1%
Footwear, headgear	1,953	17.6%	176	48.0%	10.2%
Stone, ceramics, glass	4,135	21.7%	305	30.0%	5.4%
<i>Ceramics</i>	1,325	19.6%	81	28.0%	6.5%
Pearls, jewellery	7,713	8.8%	101	13.5%	3.1%
Base metals	16,406	16.5%	951	15.0%	1.7%
Machinery, appliances	86,599	19.5%	1,339	15.0%	1.5%
Vehicles, aircraft, vessels	61,924	23.0%	252	25.0%	2.2%
<i>Passenger cars</i>	38,213	29.1%	15	2.5%	2.5%
<i>Trucks</i>	1,065	6.7%	9	25.0%	17.1%
Instruments	26,187	28.5%	470	16.0%	1.6%
Arms and ammunition	1,379	29.4%	31	5.7%	1.4%
Miscellaneous manufactures	5,659	18.1%	280	16.0%	3.0%
Arts and antiques	7,245	48.1%	7	0.0%	0.0%

**Table A.2 EU tariffs and imports from US in 2017 by HS section**

Sector	EU imports from US (million €)	Share of total EU imports	Total Tariff Lines	Maximum Ad Valorem (%)	Average Ad Valorem (%)
Non-Agricultural products	241,769	14.3%	7,432	26.0%	4.3%
Fisheries	981	3.8%	529	26.0%	11.8%
Industrial products	240,787	14.5%	6,903	22.0%	3.7%
Mineral products	16,719	4.9%	234	8.0%	0.8%
Chemicals	50,341	30.0%	1,152	12.8%	4.3%
Plastics, rubber	9,587	15.9%	301	6.5%	4.6%
Hides, leather	416	2.8%	109	9.7%	3.9%
<i>Leather articles</i>	146	1.2%	36	9.7%	5.0%
Wood	1,548	12.3%	234	10.0%	2.2%
Paper	3,551	22.3%	195	0.0%	0.0%
Textiles and clothing	1,596	1.4%	1,117	12.0%	8.2%
<i>Apparel and make-up</i>	625	0.7%	418	12.0%	11.3%
Footwear, headgear	177	0.7%	106	17.0%	8.2%
Stone, ceramics, glass	2,458	17.6%	234	12.0%	4.0%
<i>Ceramics</i>	345	9.3%	43	12.0%	4.8%
Pearls, jewellery	8,147	11.3%	56	4.0%	0.6%
Base metals	8,474	7.5%	953	10.0%	1.8%
Machinery, appliances	71,669	15.8%	1,370	14.0%	2.1%
Vehicles, aircraft, vessels	38,809	27.2%	286	22.0%	5.2%
<i>Passenger cars</i>	6,489	14.4%	28	10.0%	9.8%
<i>Trucks</i>	235	3.6%	22	22.0%	13.1%
Instruments	22,422	31.6%	313	6.7%	1.9%
Arms and ammunition	223	24.4%	22	3.2%	2.2%
Misc manufactures	2,330	4.7%	214	10.5%	2.6%
Arts and antiques	2,318	56.4%	7	0.0%	0.0%