

In One Bound We Can Be Free

How a UK-US free trade deal can boost national output by £80 billion and cut UK consumer prices by 8 per cent

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The key promise of Brexit is free trade with the world, while we continue to trade freely via a trade agreement with the EU.

In the internal Brexit debate, attention has been monopolised so far by our talks with the EU over how we can go on trading with them without hindrance. Since we start from an initial state of doing so, many of us have argued that reaching a mutually beneficial continuation should not, in fact, be a problem. That it has been suggests we and the EU need to try harder – or think smarter. For example, we (and EU President Tusk) have suggested agreeing a standard free trade agreement, such as Canada+ or the recently concluded EU FTA with Japan, as a promising avenue, together with agreement on using existing customs procedures as a solution to the Irish border question, as currently practised at borders around the world.

But in this short report, I want to concentrate on how we can achieve free trade gains with the rest of the world. My key point is that there is single trade agreement that promises to be both (1) quick to agree and (2) can also deliver, on its own, virtually all the free trade gains that we hope to receive from the non-EU world. This is agreeing an FTA with the US, which could deliver virtually all the economic benefits we are seeking.

Of course, there might be some subsequent sweeping up to deliver additional economic benefits that might still be missing and there would be other benefits accruing from achieving FTAs with our Commonwealth friends and with such multilateral agreements as the recently agreed Trans Pacific Partnership (CPTPP).

To gain a grip on this free trade aspect, we need to recap how the UK gains from free trade. It is by removing trade barriers against suppliers from the rest of the world so that our consumers can buy from them at world prices. This in turn lowers home UK prices and forces home producers to raise productivity to compete. Any jobs squeezed out by higher productivity are replaced by jobs in expanding sectors, with domestic demand being supported through fiscal and monetary policy so that it is equal to available supply. Rising productivity raises wages, which increases the supply of people wishing to work and so raises employment.

These gains can be achieved via unilateral free trade, or otherwise by numerous free trade agreements (FTAs) around the world, which, between them, open up our markets to world suppliers - equivalent to implementing unilateral free trade. In practice, the FTA approach is what the UK Government plans, since – politically – it is easier to offer opening our markets in return for other countries opening their markets to us.

In addition, there can be economic gains from other countries lowering their trade barriers against the UK. However, even though substantial gains may accrue to individual UK producers, the macroeconomic gains to the UK in aggregate are likely to be small because of the way world competition works.

For example, suppose a new market is opened up by country Y letting in £X million of a UK product tariff free, while keeping tariffs on other countries. Increased UK sales in this market will displace other countries' sales there, driving these sales into other world markets where the UK also competes. The balance of world supply and demand for this product does not change therefore, nor does the world price. So, overall UK production, which is sold around the world at the average world price, will not expand. Nevertheless, there are gains to individual firms due to the widening market access, which keeps politicians happy, even if the macroeconomic gains to the economy are small or negligible.

In sum then, the main macroeconomic gains we realise from many bilateral trade agreements result from removal of OUR trade barriers on foreign suppliers. This means we can estimate the major gains from many FTAs as approximately equal to those from unilateral free trade. In addition, we have the microeconomic gains to individual producers from wider access to world markets, plus some small macroeconomic gains from this that we cannot easily estimate.

Now consider the possible gains from a UK-US free trade agreement. Suppose we give the US full tariff-free access to our food and manufactures markets in return for them giving us tariff-free access to their markets – eg, services. The US, as a very large economy, can easily provide all our import demands. Therefore the US price will be the dominant supply price for UK consumers, and home producers will have to match this US price. To the extent that US prices are the same as world prices, our consumers will have access to world prices so that the gains we make will be equal to the gains we would have made by doing a whole raft of FTAs with world producers – ie, approximately the full gains we would make from implementing unilateral free trade.

Therefore, the gains we make from a US FTA boil down to a calculation of how close US export prices are to world prices. Let us begin with food. The US exports about 10 per cent of total world food exports. Plainly the US could not do so unless it matched world prices, food being a commodity in perfect competition.

Turning to manufactures, how competitive are US producers? On this we have extensive data, a summary of which is shown in the Table below that shows global prices of manufactured goods. The Table is based on very detailed price data collected for each country on exactly comparable products (so avoiding issues of quality) in order to carry out international purchasing power comparisons, (details can be found in Minford et al, 2015, Chapter 4). Appendix A of this report, from which this Table is taken, is reproduced at the end of the report.

Table: Export Prices

	AUT	BEL	FIN	FRA	GER	IRL	ITA	NLD	PRT	SPA	DK	SWE	UK	KOR	US	EU*
Textiles	0.87	0.87	0.41	0.58	0.58	0.7	0.6	0.83	0.33	0.55	0.62	0.45	0.83	0.46	0.78	0.64
Printing, publishing and allied industries	0.84	0.99	0.51	1.2	0.59	0.93	0.77	0.94	0.78	0.88	0.75	0.71	0.69	0.84	0.94	0.82
Machinery except electrical	1.14	1.21	1.15	1.35	1.23	1.33	1.09	1.13	0.98	1.12	1.22	1.47	1.31	1.03	0.84	1.22
Electrical machinery apparatus, appliances and supplies	1.09	1.12	1.02	1.21	1.24	1.33	0.92	1.39	1.19	1.06	1.24	0.96	1.16	1.21	0.82	1.15
Medical, precision and optical instruments, watches and clocks	0.83	0.84	0.96	1.09	0.97	1.16	1.03	0.96	1.84	0.92	0.93	1.01	1.09	0.99	0.92	1.03
Transport equipment*	0.86	0.84	0.83	0.88	0.89	0.82	0.75	1.02	0.81	0.82	0.98	0.88	0.88	0.63	0.88	0.86
Furniture and other	1.01	1.19	0.82	1.11	1.07	0.74	1.14	1.2	0.97	0.89	0.83	0.87	0.91	0.55	0.59	1.03

Export Price = Producer Price * Export Margin

Notes:

EU weighted by GDP

Transport excludes aircraft, helicopters, hovercraft, and other aeronautical equipment due to unclear data

What this Table shows is how US export prices at the border compare with the major world suppliers, Korea and the EU weighted average supply. The EU is generally more expensive than Korea, which can be thought of as the default OECD manufacturing source of competitive supply.

When we add international transport margins, we find that the US matches or nearly matches these competing world prices in all categories of manufactures, except textiles and transport equipment.

While these price figures are from 1992, they are consistent with later data from tariffs and non-tariff barriers (Berden et al, 2009), which provide an alternative way of estimating price differences due to trade policy.

So, when we compare a UK-US FTA with a full-range of global FTAs that between them drive UK prices fully to world prices, in practice there is little difference. Thus, achieving a US FTA effectively - in one bound - would bring to the UK gains equal to those from unilateral free trade.

We estimate the benefit of the UK implementing unilateral free trade to be an increase in long-term GDP of 4 per cent, or an ongoing and increasing boost to the UK economy of £80 billion. Furthermore, average consumer prices would drop by 8 per cent. We can easily envisage that a UK-US FTA would reduce protection against US food and manufactures by enough to achieve similar trade gains.

It might be asked whether the US has sufficient product availability to supply the UK's import needs. This is overwhelmingly probable since the US economy is some seven times the size of the UK's. Furthermore, an analysis of 100 product categories (ie, all HS 2-digit product codes) found none where the US was not a substantial exporter to the UK. Furthermore, an analysis of the more detailed HS 4 digit level (10,000 product categories) found only a handful where the UK does not already import from the US – and these were primarily food products with high EU tariffs or that have been excluded by the EU's Precautionary Principle of food safety, most notably GM vegetables.

In spite of the oft-repeated comments about President Trump being a 'protectionist', it is evident that he – backed up by his Trade and State Department officials, as well as frequent commentary from himself and the American Ambassador to the UK – is eager to proceed with a UK-US FTA. The Office of the US Trade Representative has recommended doing so, the US Congress has passed enabling legislation, and UK-US Working Parties have been meeting for the past two years in 'scoping' exercises to prepare for the day (March 30th, 2019) when the UK can legally begin formal negotiations.

Consequently, we potentially could achieve a UK-US FTA relatively quickly and therefore the major trade gains of Brexit very rapidly and in full on leaving the EU; for example, under a WTO-rules exit. In one bound we would have achieved the gains from the free trade agenda, leaving further FTAs to consolidate these gains with other good world supply sources, and also to bring with them any further macro and micro gains from wider world market access.

References

Berden, K., Francois, J., Tamminen, S., Thelle, M., & Wymenga, P. (2009) 'Non-Tariff Measures in EU-US Trade and Investment: An Economic Analysis,' Final report, Ecorys; cited in Breinlich et al (2016) [Table of ntbs on p 123.]

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ANNEX: REPRODUCTION OF APPENDIX A FROM SHOULD BRITAIN LEAVE THE EU? AN ECONOMIC ANALYSIS OF A TROUBLED RELATIONSHIP*

APPENDIX A: Price Comparison to Calculate Protection

Bradford (2003) presented new measures of final goods trade protections in eight developed countries. He argued that the barriers to arbitrage between countries are barriers to trade. To measure the trade barriers, one needs to allow for unavoidable costs associated with shipping goods between countries. Once this is done, if there is a price gap for equivalent goods in two different countries, then the higher-price market is protected. To measure the protection barriers, one needs to use the factory prices of the good, not the retail prices. These factory/producer prices show which industries in which countries are most efficient.

DATA

The data is collected by the OECD in order to calculate purchasing-power parity (PPP) estimates. We use the basic-heading price data published for the year 2002. All prices were converted to U.S. dollars. The margins are calculated using the data from the latest national input-output tables, published for the year 2000. Given the list of prices of the goods and services in the OECD PPP data, we have to find the equivalent margins from the national input-output tables, but the two lists are not identical, so we have to find the best match by aggregating different products and services. For example, in the PPP list there are separate categories for engines and turbines, pumps and compressors, other general purpose machinery etc.; we aggregate them all to get the equivalent of manufacture of machinery except electrical in the input-output tables.

CALCULATING PROTECTION LEVELS

The price data obtained for the OECD countries are consumer prices, not producer prices that one needs to measure how much an industry is insulated from the world markets. These consumer prices are converted to producer prices using data on distribution margins, which include wholesale trade, retail trade and transportation costs. The method involves 3 steps.

First, given the consumer prices, one produces estimates of producer prices by peeling off the ad valorem margin, which is defined as the ratio of the value of output in consumer prices to the value of output in producer prices:

$$P_{ij}^p = \frac{P_{ij}^c}{1 + m_{ij}}$$

where

P_{ij}^p = producer price of good i in country j,

P_{ij}^c = consumer price of good i in country j, as taken from the OECD data,

m_{ij} = margin for good i in country j, as taken from the national input-output table.

Second, to insulate the market from foreign competition account must be taken of transport costs from one nation's market to another. The world price is derived using data on the export margin and international transport costs. The idea is that to be sold in the domestic market, a foreign good must

* Minford, P., with Gupta, Le V., Mahambare, V. and Xu, Y. (2015) *Should Britain leave the EU? An economic analysis of a troubled relationship*, second edition, December 2015, pp. 197, (Cheltenham, 2015)

travel from the foreign factory to the foreign border and then to the domestic border. The domestic producer price must be compared with the landed price of the foreign good (world price). Adding the export margins to the producer prices generates the export price for each good in each country,

$$p_{ij}^e = p_{ij}^p(1 + em_{ij}),$$

where

p_{ij}^e = export price of good i for country j,

em_{ij} = export margin of good i for country j.

The world price is found by adding the international transport cost to the lowest export price in the sample:

$$p_i^w = p_{iM}(1 + tm_i),$$

where

p_i^w = world price of good i,

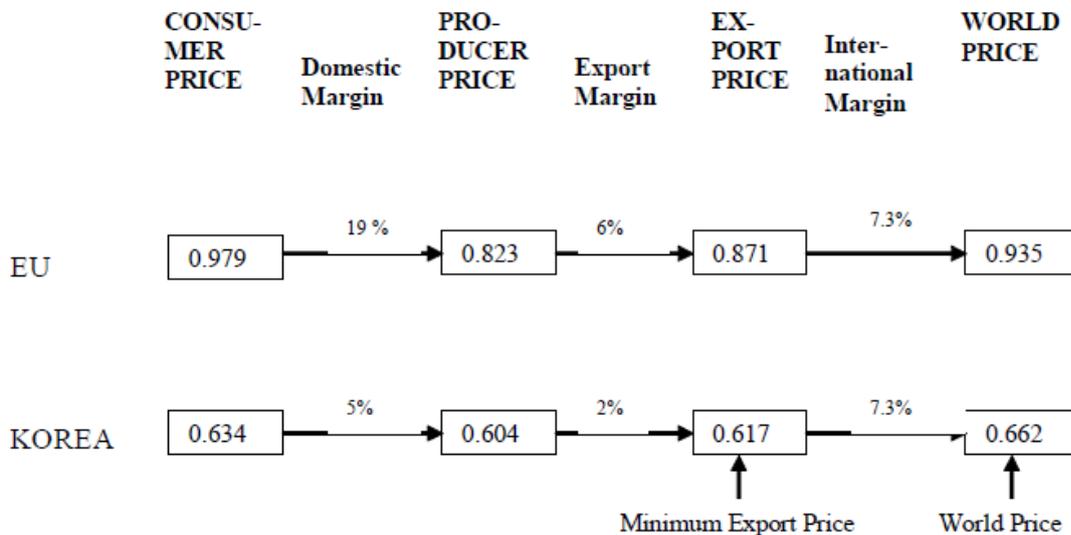
$p_{iM} = \min(p_{i1}^e, \dots, p_{in}^e)$, the minimum of all export prices,

tm_i = the international transport margin for good i.

Finally, the ratio of each country's producer price to the world price indicates a preliminary measure of protection, ppr_{ij}

$$ppr_{ij} = \frac{p_{ij}^p}{p_i^w}.$$

Example: this example illustrates the above calculation procedure for the manufacture of cars and other road equipment in two countries.



To find the world price in the manufacture of cars and other road equipment across the countries, first for each country we turn the consumer price into producer price by dividing the consumer price by the domestic margin plus one. Second, recognising that goods must travel and be transported from one country to another, we use the export margin to calculate the export price of the goods (multiplying the producer price by the export margin plus one) and see which country has the lowest export price in the category. This price is then used in combination with the international transport margin to derive the world price of this manufacturing category. The protection measure of each country is then just the ratio of that country's producer price over the world price. In the example the protection measure for the manufacture of cars and other road equipment in the EU Area is $\frac{0.823}{0.662} = 1.243$ - thus protection of 24.3%.

We apply the above calculation across manufacturing sectors to compare the competitiveness between the EU Area, Korea and the USA. We report all the steps.

Table 4-5: PPP's

	AUT	BEL	FIN	FRA	GER	IRL	ITA	NLD	PRT	SPA	DK	SWE	UK	KOR	US	EU*
Textiles	1.22	0.96	0.62	0.71	0.79	0.87	0.67	1.09	0.4	0.62	0.78	0.68	1.07	0.57	1	0.81
Printing, publishing and allied industries	1.03	1.03	0.83	1.54	0.66	0.97	1	1.08	0.95	0.93	0.86	0.82	0.78	0.95	1	0.97
Machinery except electrical	1.27	1.3	1.31	1.48	1.32	1.39	1.22	1.25	1.23	1.2	1.45	1.35	1.41	1.04	1	1.33
Electrical machinery apparatus, appliances and supplies	1.2	1.21	1.33	1.31	1.34	1.39	1.04	1.33	1.38	1.14	1.34	1.02	1.3	1.25	1	1.25
Medical, precision and optical instruments, watches and clocks	1.08	0.93	1.16	1.24	1.15	1.19	1.26	0.94	2.47	1.08	0.99	1.12	1.18	1.04	1	1.17
Transport equipment*	1	0.92	1.18	0.99	0.96	1.12	0.87	0.98	1.04	0.89	1.39	0.95	1.02	0.65	1	0.97
Furniture and other	1.39	1.33	1.33	1.55	1.6	1.36	1.55	1.33	1.46	1.18	1.05	1.21	1.47	0.6	1	1.47

*excluding Aircraft, helicopters, hovercraft and other aeronautical equipment due to unclear data; *Food, Beverages and Tobacco is excluded from the calculation because we do not have the necessary data for New Zealand who is known as the most efficient producer of processed food.

Table 4-6: Domestic Margins

	AUT	BEL	FIN	FRA	GER	IRL	ITA	NLD	PRT	SPA	DK	SWE	UK
Textiles	1.54	1.19	1.59	1.26	1.45	1.24	1.23	1.28	1.19	1.28	1.41	1.55	1.48
Printing, publishing and allied industries	1.27	1.10	1.33	1.37	1.16	1.05	1.42	0.96	1.22	1.23	1.20	1.17	1.26
Machinery except electrical	1.21	1.21	1.11	1.18	1.14	1.05	1.16	1.24	1.25	1.18	1.30	1.02	1.17
Electrical machinery apparatus, appliances and supplies	1.13	1.17	1.09	1.15	1.13	1.04	1.17	0.88	1.16	1.15	1.22	1.09	1.27
Medical, precision and optical instruments, watches and clocks	1.44	1.22	1.22	1.22	1.27	1.03	1.27	1.52	1.34	1.24	1.29	1.19	1.21
Transport equipment*	1.18	1.15	1.45	1.15	1.10	1.37	1.25	1.33	1.27	1.13	1.60	1.15	1.21
Furniture and other	1.47	1.21	1.67	1.56	1.58	1.85	1.51	1.16	1.50	1.41	1.35	1.51	1.79

Source: National Input-Output tables; Domestic Margin is identified as the ratio of the total use at purchasers' prices in the use table and the total use at basic price

Table 4-7: Producer Prices

	AUT	BEL	FIN	FRA	GER	IRL	ITA	NLD	PRT	SPA	DK	SWE	UK	KOR	US	EU*
Textiles	0.80	0.81	0.39	0.56	0.55	0.70	0.54	0.85	0.33	0.48	0.56	0.44	0.72	0.44	0.72	0.60
Printing, publishing and allied industries	0.81	0.93	0.62	1.13	0.57	0.93	0.70	1.13	0.78	0.75	0.72	0.70	0.62	0.79	0.89	0.78
Machinery except electrical	1.05	1.08	1.18	1.25	1.16	1.33	1.04	1.01	0.98	1.02	1.11	1.32	1.21	0.98	0.78	1.14
Electrical machinery apparatus, appliances and supplies	1.06	1.04	1.23	1.14	1.18	1.33	0.88	1.51	1.19	0.98	1.11	0.93	1.02	1.17	0.78	1.09
Medical, precision and optical instruments, watches and clocks	0.75	0.76	0.95	1.01	0.90	1.16	1.00	0.62	1.84	0.87	0.77	0.94	0.98	0.89	0.84	0.93
Transport equipment*	0.85	0.80	0.81	0.86	0.88	0.82	0.70	0.74	0.81	0.79	0.86	0.82	0.84	0.61	0.83	0.82
Furniture and other	0.95	1.10	0.80	1.00	1.01	0.73	1.03	1.15	0.97	0.83	0.78	0.80	0.82	0.50	0.54	0.95

Producer price = PPP/Domestic Margin; *Weighted by GDP

Table 4-8: Export Margins

	AUT	BEL	FIN	FRA	GER	IRL	ITA	NLD	PRT	SPA	DK	SWE	UK	KOR	US	EU*
Textiles	1.09	1.07	1.05	1.03	1.06	1.00	1.10	0.98	1.00	1.15	1.12	1.03	1.15	1.06	1.07	1.07
Printing, publishing and allied industries	1.04	1.06	0.82	1.06	1.02	1.00	1.10	0.83	1.00	1.17	1.03	1.01	1.12	1.06	1.05	1.05
Machinery except electrical	1.09	1.12	0.97	1.07	1.06	1.00	1.04	1.12	1.00	1.09	1.10	1.11	1.08	1.05	1.07	1.07
Electrical machinery apparatus, appliances and supplies	1.02	1.08	0.83	1.06	1.05	1.00	1.04	0.92	1.00	1.07	1.12	1.03	1.14	1.03	1.05	1.05
Medical, precision and optical instruments, watches and clocks	1.11	1.10	1.01	1.08	1.08	1.00	1.04	1.55	1.00	1.06	1.21	1.08	1.11	1.11	1.10	1.10
Transport equipment*	1.01	1.06	1.02	1.02	1.02	1.00	1.08	1.38	1.00	1.04	1.14	1.06	1.04	1.02	1.06	1.06
Furniture and other	1.06	1.08	1.04	1.12	1.06	1.01	1.10	1.05	1.00	1.07	1.07	1.09	1.10	1.10	1.08	1.08

Source: National Input-Output and Use tables; The export margins are available from national input-output tables-

the difference between exports at purchasers' prices in the use table and exports at basic prices by product in the input-output table;

The EU export margins are used for the US due to unreliable values obtained by using the available data .

Table 4-9: Export Prices

	AUT	BEL	FIN	FRA	GER	IRL	ITA	NLD	PRT	SPA	DK	SWE	UK	KOR	US	EU*
Textiles	0.87	0.87	0.41	0.58	0.58	0.7	0.6	0.83	0.33	0.55	0.62	0.45	0.83	0.46	0.78	0.64
Printing, publishing and allied industries	0.84	0.99	0.51	1.2	0.59	0.93	0.77	0.94	0.78	0.88	0.75	0.71	0.69	0.84	0.94	0.82
Machinery except electrical	1.14	1.21	1.15	1.35	1.23	1.33	1.09	1.13	0.98	1.12	1.22	1.47	1.31	1.03	0.84	1.22
Electrical machinery apparatus, appliances and supplies	1.09	1.12	1.02	1.21	1.24	1.33	0.92	1.39	1.19	1.06	1.24	0.96	1.16	1.21	0.82	1.15
Medical, precision and optical instruments, watches and clocks	0.83	0.84	0.96	1.09	0.97	1.16	1.03	0.96	1.84	0.92	0.93	1.01	1.09	0.99	0.92	1.03
Transport equipment*	0.86	0.84	0.83	0.88	0.89	0.82	0.75	1.02	0.81	0.82	0.98	0.88	0.88	0.63	0.88	0.86
Furniture and other	1.01	1.19	0.82	1.11	1.07	0.74	1.14	1.2	0.97	0.89	0.83	0.87	0.91	0.55	0.59	1.03

Export Price = Producer Price * Export Margin

Table 4-10: Transport Margins

	AUT	BEL	FIN	FRA	GER	IRL	ITA	NLD	PRT	SPA	DK	SWE	UK	KOR	US	EU*
Textiles	1.15	1.15	1.15	1.15	1.15	1.15	1.15	1.15	1.15	1.15	1.15	1.15	1.15	1.15	1.15	1.15
Printing, publishing and allied industries	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2
Machinery except electrical	1.07	1.07	1.07	1.07	1.07	1.07	1.07	1.07	1.07	1.07	1.07	1.07	1.07	1.07	1.07	1.07
Electrical machinery apparatus, appliances and supplies	1.07	1.07	1.07	1.07	1.07	1.07	1.07	1.07	1.07	1.07	1.07	1.07	1.07	1.07	1.07	1.07
Medical, precision and optical instruments, watches and clocks	1.07	1.07	1.07	1.07	1.07	1.07	1.07	1.07	1.07	1.07	1.07	1.07	1.07	1.07	1.07	1.07
Transport equipment*	1.07	1.07	1.07	1.07	1.07	1.07	1.07	1.07	1.07	1.07	1.07	1.07	1.07	1.07	1.07	1.07
Furniture and other	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13

Source: Transport Margin =US cif value of imports /US fob value of imports; The cif values are in the input-output table clearly, but the fob values are in the customs value/international merchandise data; The US transport margin is used as the international transport margin for all countries, where the transport margins in the four equipment manufacturing sectors is the average of international transport margins of machinery except electrical, electrical machinery and transport equipment sectors.

Table 4-11: World Prices

	AUT	BEL	FIN	FRA	GER	IRL	ITA	NLD	PRT	SPA	DK	SWE	UK	KOR	US	EU'
Textiles	1.00	1.00	0.47	0.67	0.67	0.81	0.69	0.96	0.39	0.64	0.72	0.52	0.95	0.53'	0.90	0.74
Printing, publishing and allied industries	1.01	1.18	0.61	1.44	0.70	1.12	0.92	1.12	0.94	1.06	0.89	0.85	0.83	1.01	1.12	0.98'
Machinery except electrical	1.22	1.30	1.23	1.45	1.32	1.43	1.17	1.21	1.05	1.20	1.31	1.58	1.41	1.10	0.90'	1.31
Electrical machinery apparatus, appliances and supplies	1.17	1.21	1.09	1.30	1.33	1.43	0.99	1.49	1.28	1.14	1.33	1.04	1.25	1.30	0.88'	1.23
Medical, precision and optical instruments, watches and clocks	0.89	0.90	1.03	1.17	1.04	1.24	1.11	1.03	1.98	0.99	1.00	1.08	1.17	1.06	0.99'	1.10
Transport equipment*	0.92	0.90	0.89	0.94	0.96	0.88	0.81	1.09	0.87	0.88	1.05	0.94	0.95	0.89'	0.94	0.93
Furniture and other	1.14	1.35	0.93	1.26	1.21	0.84	1.29	1.36	1.10	1.01	0.94	0.99	1.02	0.62'	0.66	1.17

Producer Price after taking off all the Margins=Export Price*International Transport Margin; 'World Price

Table 4-12: Weighted average protection rates for the EU and the US

	US	EU'
Textiles	1.36	1.12
Printing, publishing and allied industries	1.00	1.00
Machinery except electrical	1.00	1.27
Electrical machinery apparatus, appliances and supplies	1.00	1.24
Medical, precision and optical instruments, watches and clocks	1.00	1.00
Transport equipment*	1.23	1.22
Furniture and other	1.00	1.54
Weighted	1.07	1.21

Protection =Domestic Producer Price / World Price