

Additional Taxes and the Indirect Evidence on Trade Protection

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World Trade has grown rapidly in the last decades, but goods do not yet ship freely from place to place. Discussions on trade barriers usually focus on tariffs, but non-tariff measures are increasingly considered to be major obstacles to trade. This is why both types of barriers are included as key components of the Enabling Trade Index (ETI), discussed in Chapter 1.1.

There are different methods of measuring trade barriers. The direct method is to consider tariffs, while indirect methods are to consider either deviations from the Law of One Price (LOP) or from expected trade patterns. The latter method is either based on the residuals derived from augmented gravity equations,¹ or it relies on the methodology of border effects.²

The bottom line of the related empirical literature indicates that the direct evidence of tariff barriers accounts for only a negligible part of actual barriers to trade or, more broadly, of trade costs. Hence, a new strand of literature is progressively addressing non-tariff barriers to trade. Among these non-tariff barriers, “other taxes and charges” levied on imported products are often very high.

To the best of our knowledge, these additional taxes are not compiled on an exhaustive basis at the world level. In this chapter, we propose a classification system, we begin to collect these data, and we compare the magnitude of these additional taxes with that of tariffs. We conclude that such additional taxation may be very large but is concentrated in a limited number of sectors. This evidence suggests that further investment in the collection of this type of data is warranted, and lends support to the comprehensive nature of the ETI.

How trade costs differ from statutory tariffs

Trade costs include all costs incurred in getting a good to a final user. Additional costs incurred when goods are shipped abroad include transportation costs (including both freight costs and costs related to time) and policy barriers (such as tariffs and non-tariff barriers). Costs associated with the use of different currencies as well as legal and regulatory costs have also been shown to affect trade. On top of this come information costs and contract enforcement costs. Last, local distribution costs (wholesale and retail) will greatly increase the total of additional costs. The large majority of these costs are included in the ETI, demonstrating the great variety of issues to be tackled in further enabling trade.

Anderson and van Wincoop (2004) construct a measure of total trade barriers as a representative rich country (the United States) ad valorem tax equivalent estimate.³ This equivalent includes all transport, border-related, and local distribution costs from foreign producer to final user in the domestic country. Their conclusion

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is that direct policy instruments, such as tariffs and the tariff equivalents of quotas, are less important than other policies. A rough estimate of the tax equivalent of typical trade costs for industrialized countries is 170 percent.⁴

This number breaks down as follows: 21 percent transportation costs have to be added to 44 percent border-related trade measures (possibly including additional taxes), plus 55 percent retail and wholesale distribution costs. Transportation costs include both directly measured freight costs and a 9 percent tax equivalent of the time value of goods in transit. The border-related barrier is a combination of direct observation and inferred costs. All in all, total international trade costs are the sum of 44 percent and 21 percent, hence 74 percent.⁵

This is to be compared with the direct evidence on border costs: tariff barriers for a country such as the United States are typically negligible on average; and, more generally, on average are less than 5 percent for rich countries even when the largely protected agricultural sector is taken into account.

Anderson and van Wincoop rely on estimations of ad valorem equivalents of non-tariff barriers when it comes to obtaining the 44 percent border-related trade measures. The traditional means for obtaining such figures relies on a theoretically founded gravity equation in which information on the presence of non-tariff measures (NTMs) as documented in UNCTAD's Trade Analysis and Information System (TRAINS) database is introduced. Using the estimated value of the price elasticity of imports (the sensitivity of imports to changes in price), the impact of the NTMs on the volume of trade can be translated into an ad valorem tariff equivalent. Kee et al. (2006) propose the most extensive computation of such ad valorem equivalents.⁶

Still, NTMs, as partially recorded in TRAINs, are only part of the story. Fontagné et al. (2005) show that deviations from the expected trade patterns are typically large when international trade is compared with domestic trade, which provides the correct benchmark in terms of economic integration.⁷ The very large ad valorem equivalents of border effects are resilient to the introduction of tariffs and TRAINs-type NTMs. This means that additional regulation, charges, and hidden obstacles must hinder trade. Additional charges are one example of hidden charges, and have not been investigated thoroughly so far despite being clearly recognized in the General Agreement on Tariffs and Trade (GATT) part II article III:

The contracting parties recognize that internal taxes and other internal charges, and laws, regulations and requirements affecting the internal sale, offering for sale, purchase, transportation, distribution or use of products, and internal quantitative regulations requiring the mixture, processing or use of products in specified amounts or proportions, should not be applied to imported or domestic products so as to afford protection to domestic production.

In other words, additional taxes are authorized as long as they are not used in a discriminatory manner; however, it is not easy to identify in which cases discrimination occurs. Additional customs charges, for instance, are de facto discriminating against imports. Excise duties on products that are neither exported nor manufactured domestically but imported only (rum in Iceland, for instance) affect imports but not domestic production, and so on. Accordingly, we adopt an approach that is open minded and takes into account all taxes, whatever their purpose.

A tentative classification of additional taxes

In order to shed light on these taxes, extensive information and data have been collected for a series of countries. We propose a tentative classification as follows:

- A first series of charges are collected at the border. This is the group called *customs*. What we group here are typically inspection charges, customs service charges, statistical charges, and so on.
- A second series of charges are very similar to tariffs, even if they are not recorded as such. This group is called *pseudo-tariffs*, and it includes safeguard clause tariffs, temporary additional tariffs, transport equalization taxes, and so on.
- A third category groups all additional charges levied on behalf of regional unions: we call this group *regional taxes*.
- A fourth category corresponds to all excise duties. Very often alcohol and tobacco are affected, but there are other rationales, such as luxury and sin taxes. This is the group we call *excise duties*.
- The next category is used on behalf of the protection of the environment and public health. From recycling fees and taxes on solid wastes and petroleum to charges for national health insurance, the scope of this category is very wide. We group all these charges under the item *environment*.

In addition to these five categories are the following three groups of taxes: one corresponding to "intellectual property" levies, one corresponding to "sales taxes" and a group, designated *not elsewhere specified (NES)*, for additional unclassified taxes.⁸

In the tables and figures of this chapter, *pseudo* stands for pseudo-tariffs, *excise* stands for excise duties, *IPT* stands for intellectual property levies, *sales* stands for sales taxes, and *NES* stands for the unclassified taxes.

Data and country coverage

The data on additional taxes have been collected for a series of countries on their official administrative websites.

These data are then merged with the United Nations Statistics Division COMTRADE data (used for weighting the data) and the International Trade Centre's Market Access Map database of tariffs.

We use the simple Harmonized System, or "HS," classification of the sectors (see the appendix for more details) to present our results, but all calculations are done at the more granular HS-6 level. We include 2

developed countries, 36 developing countries, and 23 least-developed countries.

Sectoral evidence: The most-affected sectors

In Table 1, we consider the different instruments and their average level throughout our sample of countries. We observe that the most-affected sector is prepared foodstuffs, the result of high excise duties in particular. The remaining additional taxes are, on average, negligible, although they may indeed be very high for some sectors or some instruments in certain countries.

Table 1: Average additional taxes for the country sample, by sector (2007), percent

Description	Customs	Environment	Excise	IPT	Pseudo	Regional	Sales	NES	Total additional taxes	VAT
Live Animals; Animal Products	0.0	0.0	0.0	0.0	0.1	0.0	0.2	0.1	0.4	7.7
Vegetable Products	0.2	0.0	0.0	0.0	0.0	0.0	0.2	0.1	0.6	7.4
Animal or Vegetable Fats and Oils and Their Cleavage Products; Prepared Edible Fats; Animal or Vegetable Waxes	0.4	0.0	0.2	0.0	0.0	0.0	0.3	0.2	1.3	10.4
Prepared Foodstuffs; Beverages, Spirits, and Vinegar; Tobacco and Manufactured Tobacco Substitutes	0.1	0.0	36.5	0.0	0.1	0.0	0.2	0.5	37.5	10.5
Mineral Products	0.2	0.1	6.4	0.0	0.0	0.0	0.3	0.1	7.0	13.2
Products of the Chemical or Allied Industries	0.2	0.0	0.2	0.0	0.0	0.0	0.2	0.1	0.7	12.7
Plastics and Articles Thereof; Rubber and Articles Thereof	0.2	0.0	0.0	0.0	0.0	0.0	0.3	0.1	0.6	13.2
Raw Hides and Skins, Leather, Furskins and Articles Thereof; Saddlery and Harness; Travel Goods, Handbags, and Similar Containers; Articles of Animal Gut (Other Than Silk-worm Gut)	0.1	0.0	0.0	0.0	0.0	0.0	0.6	0.0	0.8	13.6
Wood and Articles of Wood; Wood Charcoal; Cork and Articles of Cork; Manufactures of Straw, of Esparto or of Other Plaiting Materials; Basketware and Wickerwork	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.3	12.6
Pulp of Wood or of other Fibrous Cellulosic Material; Recovered (Waste and Scrap) Paper or Paperboard; Paper and Paperboard and Articles Thereof	0.2	0.0	0.0	0.0	0.0	0.0	0.2	0.1	0.5	13.0
Textiles and Textile Articles	0.1	0.0	0.0	0.0	0.0	0.0	0.4	0.1	0.6	14.2
Footwear, Headgear, Umbrellas, Sun Umbrellas, Walking-Sticks, Seat-Sticks, Whips, Riding-Crops and Parts Thereof; Prepared Feathers and Articles Made Therewith; Artificial Flowers; Articles of Human Hair	0.1	0.0	0.0	0.0	0.1	0.0	0.3	0.1	0.6	14.8
Articles of Stone, Plaster, Cement, Asbestos, Mica or Similar Materials; Ceramic Products; Glass and Glassware	0.1	0.0	0.0	0.0	0.1	0.0	0.2	0.1	0.6	12.4
Natural or Cultured Pearls, Precious or Semiprecious Stones, Precious Metals, Metals Clad with Precious Metal, and Articles Thereof; Imitation Jewellery; Coin	0.5	0.0	0.1	0.0	0.0	0.0	0.3	0.1	1.0	11.2
Base Metals and Articles of Base Metal	0.1	0.0	0.0	0.0	0.0	0.0	0.3	0.1	0.5	12.4
Machinery and Mechanical Appliances; Electrical Equipment; Parts Thereof; Sound Recorders and Reproducers, Television Image and Sound Recorders and Reproducers, and Parts and Accessories of Such Articles	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.0	0.5	10.9
Vehicles, Aircraft, Vessels and Associated Transport Equipment	0.1	0.0	1.1	0.0	0.0	0.0	0.1	0.1	1.4	12.7
Optical, Photographic, Cinematographic, Measuring, Checking, Precision, Medical or Surgical Instruments and Apparatus; Clocks and Watches; Musical Instruments; Parts and Accessories Thereof	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.4	13.5
Arms and Ammunition; Parts and Accessories Thereof	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.2	11.4
Miscellaneous Manufactured Articles	0.1	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.4	13.4
Works of Art, Collectors' Pieces and Antiques	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.2	11.3

Source: ITC, based on national data.

Note: *Pseudo* = pseudo-tariffs, *excise* = excise duties, *IPT* = intellectual property levies, *sales* = sales taxes, *regional* = regional taxes, and *NES* = unclassified taxes. *Total additional taxes* includes customs + environment + excise + IPT + pseudo + regional + sales + NES.

Country evidence

What are the most restrictive countries? In Table 2, countries are ranked by decreasing order of the sum of all additional taxes, excluding value-added tax (VAT). Antigua and Barbuda is the prominent country in terms of additional taxes, with an average additional tax of 48.9 percent in 2007. The country is followed by Iceland (26.4 percent) and Morocco (20.2 percent). We find eight additional countries exhibiting an average additional tax above 10 percent.

How do additional taxes compare with statutory protection?

We now compare applied tariffs and the sum of all additional taxes (except VAT) by country and by sector, using an appropriate weighting scheme.⁹

In Table 3, we list the most-affected sectors at the country level and compare them with the level of official tariffs. We also provide the share of the affected sectors in the imports and exports of the countries concerned. Country-sector trading pairs are ranked in Table 3 by decreasing importance of additional taxes.

The highest additional protection is observed for “vehicles” in Antigua and Barbuda: the 234.6 percent additional tax is to be compared with the 17.1 percent statutory applied protection.

The next highest is for Iceland and prepared foodstuffs. The 203.7 percent additional tax is to be com-

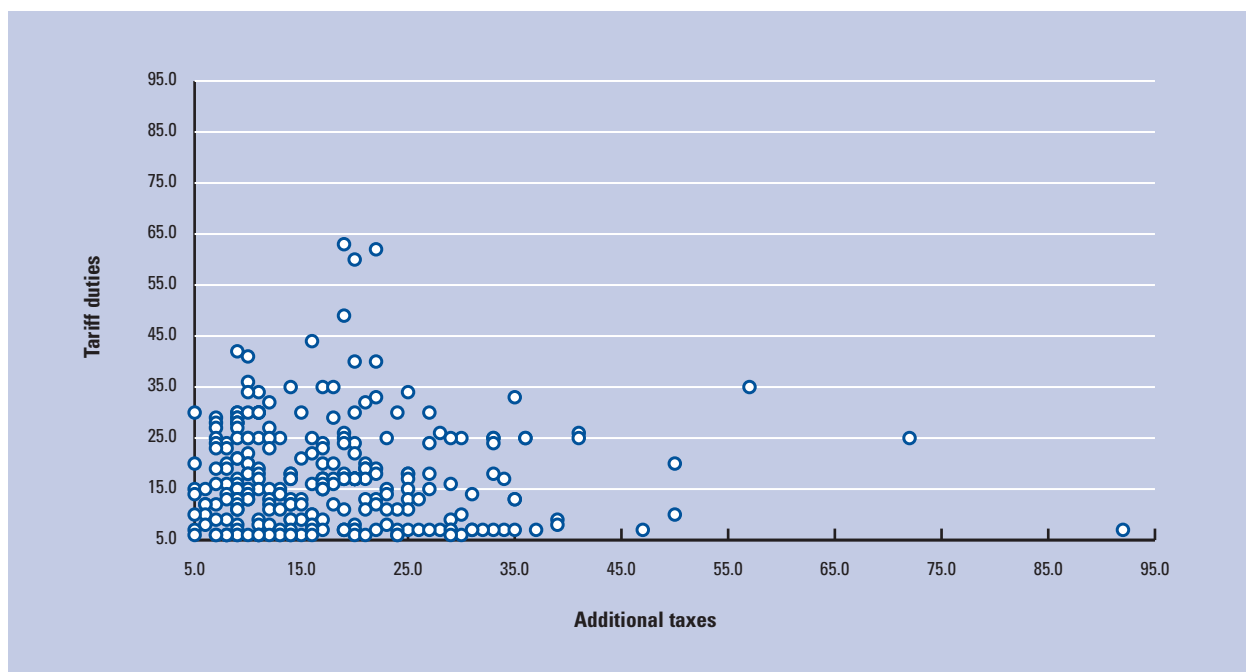
pared with the 20.7 percent statutory protection. In other words, the additional protection of foodstuffs in Iceland is 10 times the statutory protection.

The same observation is to be made for Germany, which has 111.5 percent additional charges for prepared foodstuffs coming on the top of the 17.5 percent statutory protection.

Other affected products include minerals in Iceland; works of art in Mozambique, Antigua and Barbuda, and Mayotte, arms in Papua New Guinea, rawhide in Guinea, machinery in Antigua, vehicles in Ethiopia, and so on.

Last, we ask whether there is a clear relationship of substitution or of complementarity between these two barriers to trade. In other words, do these two types of additional taxes offset each other in some way, being applied to the same goods, or do they complement each other? We do not find evidence of either at the global level here. Using our 1,282 sector-country pairs for 2007, we simply look at the correlation between the two modes of protection in Figure 1. Figure 1 displays this visually: the horizontal axis provides the perspective of tariff duties and the vertical axis is for the additional taxes, both being bounded at 100 percent. Clearly, there is no clear positive or negative relationship between the two modes of protection; rather, the relationship is idiosyncratic in our sample.

Figure 1: The relationship between tariffs and additional taxes, percent



Source: Authors' calculations.

Table 2: Average additional taxes by country, percent (2007)

Country	Customs	Environment	Excise	IPT	Pseudo	Regional	Sales	NES	Total additional taxes	VAT
Antigua and Barbuda	9.8	22.4	16.7	0	0	0	0	0	48.9	0
Iceland	0	11.1	15.2	0	0	0	0	0	26.4	23.5
Morocco	20.2	0	0	0	0	0	0	0	20.2	16.1
Saint Kitts and Nevis	4	0	13.3	0	0	0	0.3	0	17.6	0
Grenada	3.4	0	13.8	0	0	0	0	0	17.2	0
Mayotte	0	0	17.1	0	0	0	0	0	17.1	0
Gambia, The	0	1.1	0	0	0	0	13.8	1.5	16.5	0
Ethiopia	5.1	0	7.6	0	0	0	0	2.9	15.7	12.7
Pakistan	0	0	0.5	0	0	0	12.7	0	13.2	0
Sierra Leone	0	0	0.2	0	0	0	10.5	0	10.7	0
Bangladesh	0	0	0	0	0	0	0	10.6	10.6	14.4
Sri Lanka	0	0	0.4	0	0	0	0	9.1	9.5	7
Jordan	0	0	0	0	0	0	7.4	1.5	8.9	0
Saint Vincent and the Grenadines	8.2	0	0	0	0	0	0	0	8.2	0
Madagascar	0	7.2	0.7	0	0	0	0	0	8	13.6
Bahamas	6.7	0	0	0	0	0	0	0	6.7	0
Dominica	3	1.4	1.8	0	0	0	0	0	6.2	13.4
Bhutan	0	0	0	0	0	0	0	5.8	5.8	0
Singapore	0	0	0.3	0	0	0	4.9	0	5.2	0
Germany	0	0	4.9	0	0	0	0	0	4.9	18.3
Mauritania	1	0.1	0.4	0	0	0	0	2.9	4.4	9.1
Guinea	2	0	0.2	0	0.8	0.9	0	0.4	4.3	14.3
Nicaragua	0	0	3.9	0	0	0	0	0	3.9	12.6
Papua New Guinea	0	0	3.8	0	0	0	0	0	3.8	9.9
Mauritius	0	0	3.4	0	0	0	0	0	3.4	7.6
Zambia	0	0	3.3	0	0	0	0	0	3.3	13.8
Panama	0	0	0.1	0	0	0	0	3.2	3.2	0
Burkina Faso	1	0	0	0	0	1.9	0	0	2.9	0
Côte d'Ivoire	1	0	0	0	0	1.9	0	0	2.9	0
Guinea-Bissau	1	0	0	0	0	1.9	0	0	2.9	0
Mali	1	0	0	0	0	1.9	0	0	2.9	0
Niger	1	0	0	0	0	1.9	0	0	2.9	0
Senegal	1	0	0	0	0	1.9	0	0	2.9	0
Togo	1	0	0	0	0	1.9	0	0	2.9	0
Benin	1	0	0	0	0	1.8	0	0	2.8	0
Lebanon	0	0	2.6	0	0	0	0	0	2.6	6.4
Congo (Democratic Republic)	0	0	1.8	0	0	0	0	0	1.8	11.3
Algeria	0	0	0.2	0	1	0	0	0.2	1.5	7.6
Bosnia and Herzegovina	0	0	1.5	0	0	0	0	0	1.5	17
Mozambique	0	0	1.4	0	0	0	0	0	1.4	13
China	0	0	1.2	0	0	0	0	0	1.2	13.8
Ghana	0	0.5	0.1	0	0	0	0	0.1	0.7	2.4
Ecuador	0	0	0	0	0	0	0	0.5	0.5	0
Argentina	0.3	0	0	0	0	0	0	0	0.3	0
Djibouti	0.3	0	0	0	0	0	0	0	0.3	0
South Africa	0	0	0.3	0	0	0	0	0	0.3	10.9
Uganda	0	0	0.2	0	0	0	0	0	0.2	9
Peru	0	0	0	0	0	0	0	0.1	0.1	0
Angola	0	0	0	0	0	0	0	0	0	10.4
Bahrain	0	0	0	0	0	0	0	0	0	0
Chile	0	0	0	0	0	0	0	0	0	0
Colombia	0	0	0	0	0	0	0	0	0	0
Georgia	0	0	0	0	0	0	0	0	0	15.7
Kosovo	0	0	0	0	0	0	0	0	0	13.9
Kuwait	0	0	0	0	0	0	0	0	0	0
Oman	0	0	0	0	0	0	0	0	0	0
Qatar	0	0	0	0	0	0	0	0	0	0
Saudi Arabia	0	0	0	0	0	0	0	0	0	0
Tanzania	0	0	0	0	0	0	0	0	0	13.5
United Arab Emirates	0	0	0	0	0	0	0	0	0	0
Vanuatu	0	0	0	0	0	0	0	0	0	12.3

Source: ITC, based on national data

Note: *Pseudo* = pseudo-tariffs, *excise* = excise duties, *IPT* = intellectual property levies, *sales* = sales taxes, *regional* = regional taxes, and *NES* = unclassified taxes. *Total additional taxes* includes customs + environment + excise + IPT + pseudo + regional + sales + NES.

Table 3: Statutory and additional protection (all country-sector pairs with additional taxes above 30 percent), percent (2007)

Country	Description	Customs duty	Total additional taxes	VAT	Share of imports	Share of exports
Antigua and Barbuda	Vehicles, Aircraft, Vessels and Associated Transport Equipment	17.1	234.6	0.0	51.1	87.5
Iceland	Prepared Foodstuffs; Beverages, Spirits, and Vinegar; Tobacco and Manufactured Tobacco Substitutes	20.7	203.7	13.2	3.6	7.7
Germany	Prepared Foodstuffs; Beverages, Spirits, and Vinegar; Tobacco and Manufactured Tobacco Substitutes	17.5	111.5	12.2	2.8	2.2
Iceland	Mineral Products	0.1	90.9	24.5	9.8	2.5
Mozambique	Works of Art, Collectors' Pieces and Antiques	19.4	62.6	17.0	0.1	0.0
Bangladesh	Prepared Foodstuffs; Beverages, Spirits, and Vinegar; Tobacco and Manufactured Tobacco Substitutes	21.6	61.5	15.5	3.9	0.3
Antigua and Barbuda	Arms and Ammunition; Parts and Accessories Thereof	19.6	60.0	0.0	0.1	n/a
Papua New Guinea	Arms and Ammunition; Parts and Accessories Thereof	0.0	60.0	10.0	0.0	n/a
Guinea	Raw Hides and Skins, Leather, Furskins and Articles Thereof; Saddlery and Harness; Travel Goods, Handbags, and Similar Containers; Articles of Animal Gut	18.7	48.6	12.9	0.3	0.0
Madagascar	Mineral Products	0.4	44.1	1.1	20.7	10.3
Bangladesh	Arms and Ammunition; Parts and Accessories Thereof	15.8	44.1	19.5	0.0	0.0
Antigua and Barbuda	Machinery and Mechanical Appliances; Electrical Equipment; Parts Thereof; Sound Recorders and Reproducers, Television Image and Sound Recorders and Reproducers, and Parts and Accessories of Such Articles	8.9	42.0	0.0	9.4	0.7
Mayotte	Works of Art, Collectors' Pieces and Antiques	10.0	41.0	0.0	n/a	n/a
Antigua and Barbuda	Natural or Cultured Pearls, Precious or Semiprecious Stones, Precious Metals, Metals Clad with Precious Metal, and Articles Thereof; Imitation Jewellery; Coin	21.6	40.0	0.0	0.6	0.6
Antigua and Barbuda	Works of Art, Collectors' Pieces and Antiques	20.0	40.0	0.0	0.0	0.0
Papua New Guinea	Vehicles, Aircraft, Vessels and Associated Transport Equipment	0.3	36.5	10.0	12.4	0.1
Mayotte	Miscellaneous Manufactured Articles	9.9	35.9	0.0	2.6	3.5
Saint Kitts and Nevis	Articles of Stone, Plaster, Cement, Asbestos, Mica or Similar Materials; Ceramic Products; Glass and Glassware	13.7	35.3	0.0	1.9	n/a
Antigua and Barbuda	Miscellaneous Manufactured Articles	16.9	35.2	0.0	1.1	0.1
Ethiopia	Prepared Foodstuffs; Beverages, Spirits, and Vinegar; Tobacco and Manufactured Tobacco Substitutes	18.4	35.2	14.9	2.9	1.8
Bhutan	Prepared Foodstuffs; Beverages, Spirits, and Vinegar; Tobacco and Manufactured Tobacco Substitutes	57.1	35.1	0.0	2.2	0.1
Sri Lanka	Footwear, Headgear, Umbrellas, Sun Umbrellas, Walking-Sticks, Seat-Sticks, Whips, Riding-Crops and Parts Thereof; Prepared Feathers and Articles Made Therewith; Artificial Flowers; Articles of Human Hair	25.0	33.8	14.3	0.3	0.9
Antigua and Barbuda	Articles of Stone, Plaster, Cement, Asbestos, Mica or Similar Materials; Ceramic Products; Glass and Glassware	11.3	33.6	0.0	0.7	0.0
Mayotte	Footwear, Headgear, Umbrellas, Sun Umbrellas, Walking-Sticks, Seat-Sticks, Whips, Riding-Crops and Parts Thereof; Prepared Feathers and Articles Made Therewith; Artificial Flowers; Articles of Human Hair	10.0	33.5	0.0	0.6	n/a
Ethiopia	Natural or Cultured Pearls, Precious or Semiprecious Stones, Precious Metals, Metals Clad with Precious Metal, and Articles Thereof; Imitation Jewellery; Coin	35.0	32.7	15.0	0.1	0.0
Saint Kitts and Nevis	Prepared Foodstuffs; Beverages, Spirits, and Vinegar; Tobacco and Manufactured Tobacco Substitutes	21.7	32.5	0.0	10.0	5.9
Mozambique	Natural or Cultured Pearls, Precious or Semiprecious Stones, Precious Metals, Metals Clad with Precious Metal, and Articles Thereof; Imitation Jewellery; Coin	12.5	32.4	17.0	0.0	0.1
Ethiopia	Vehicles, Aircraft, Vessels and Associated Transport Equipment	20.5	32.2	12.5	18.6	0.1
Iceland	Wood and Articles of Wood; Wood Charcoal; Cork and Articles of Cork; Manufactures of Straw, of Esparto or of Other Plaiting Materials; Basketware and Wickerwork	1.4	30.4	24.5	1.8	0.0
Antigua and Barbuda	Textiles and Textile Articles	11.1	30.4	0.0	0.4	0.4
Antigua and Barbuda	Plastics and Articles Thereof; Rubber and Articles Thereof	10.5	30.4	0.0	0.9	0.2

Source: ITC, based on national data.

Note: *Pseudo* = pseudo-tariffs; *excise* = excise duties, *IPT* = intellectual property levies, *sales* = sales taxes, and *NES* = unclassified taxes. *Total additional taxes* includes customs + environment + excise + sales + IPT + pseudo + regional + NES. Pairs are sorted by decreasing total additional taxes.

What are the most-affected products?

The use of additional taxes is very much concentrated in sectors in which human health or ethical concerns are predominant. Table 4 shows the most-affected products (in certain markets). The largest product/sector pairs are observed for developed economies and alcohol. A 1,000 percent additional tax is imposed on gin and geneva whiskey in Iceland. Similar levels of taxation are observed for tobacco in Germany. Grape wines face a 354 percent additional taxation in Bangladesh. As illustrated in Table 4, a high taxation level can affect any sector independently of the development level of the applying country.

What are the policy implications of these findings?

The analysis of the data collected so far suggests that multilateral negotiations on tariffs might not be addressing the right issues, at least in certain sectors. It shows that some worries expressed by countries with regard to the impact of trade liberalization on their economies could be beside the point.

In order to illustrate this point, we compute the average cuts of tariffs currently under discussion in the Doha Round for countries considered here, on all products (see the appendix for further details). This computation provides a specific percentage of average reduction of the protection, after proper weighting, across products within sectors and across countries within sectors.

Table 4: Illustrative selection of high additional taxes in our sample (individual importers and HS-6 products)

Country group	Country	HS-6 code	Description	Total additional taxes (%)
Developed	Iceland	220850	Gin and geneva	>1,000
Developed	Germany	240120	Tobacco, unmanufactured, partly or wholly stemmed or stripped	>1,000
Developing	Sri Lanka	240220	Cigarettes containing tobacco	342.9
Developing	Antigua and Barbuda	870323	Automobiles with reciprocating piston engine displacing > 1,500 cc to 3,000 cc	290.0
Developing	China	220600	Fermented beverages NES (for example, cider, perry, mead, etc.)	249.5
Developing	Mauritius	240310	Smoking tobacco, whether or not containing tobacco substitutes in any proportion	230.0
Developing	Mauritius	220720	Ethyl alcohol and other spirits, denatured, of any strength	200.0
Developing	South Africa	382460	Sorbitol (other than D-glucitol)	185.2
Developing	South Africa	240310	Smoking tobacco, whether or not containing tobacco substitutes in any proportion	176.4
Developing	Lebanon	240220	Cigarettes containing tobacco	108.0
Developing	Algeria	220830	Whiskies	104.0
Developing	Nicaragua	271091	Waste oils containing polychlorinated biphenyls (PCBs), polychlorinated terphenyls (PCTs) or polybrominated biphenyls (PBBs)	100.0
Developing	Papua New Guinea	950430	Games, coin or disc-operated, other than bowling alley equipment	100.0
Developing	Algeria	220860	Vodka	100.0
Developing	Colombia	610711	Men's/boys' underpants and briefs, of cotton, knitted	95.0
Least-developed	Bangladesh	220410	Grape wines, sparkling	354.0
Least-developed	Guinea	340119	Organic surface-active agents (other than soap); surface-active preparations, washing preparations (including auxiliary washing preparations) and cleaning preparations, whether or not containing soap, other than those of heading 34.01: Organic surface-active agents, whether or not put up for retail NES.	336.1
Least-developed	Bangladesh	220300	Beer made from malt	254.0
Least-developed	Madagascar	271011	Light oils and preparations	204.0
Least-developed	Djibouti	220410	Grape wines, sparkling	160.0
Least-developed	Uganda	240310	Smoking tobacco, whether or not containing tobacco substitutes in any proportion	150.0
Least-developed	Madagascar	220830	Whiskies	135.0
Least-developed	Zambia	220410	Grape wines, sparkling	125.0
Least-developed	Ethiopia	220840	Rum and tafia	113.0
Least-developed	Mauritania	220410	Grape wines, sparkling	107.0
Least-developed	Ethiopia	842211	Dish washing machines of the household type	93.0

Source: ITC, based on national data.

Note: *Pseudo* = pseudo-tariffs; *excise* = excise duties, *IPT* = intellectual property levies, *sales* = sales taxes. *Total additional taxes* includes customs + environment + excise + sales + IPT + pseudo + regional + NES.

Table 5: Statutory protection and additional taxes before and after liberalization (sectoral average for the country sample), percent

Description	Customs duty	Customs duty after simulation	Total additional taxes	Total additional taxes after simulation
Prepared Foodstuffs; Beverages, Spirits, and Vinegar; Tobacco and Manufactured Tobacco Substitutes	20.7	14.0	37.5	19.4
Mineral Products	2.0	1.8	7.0	3.9
Vehicles, Aircraft, Vessels and Associated Transport Equipment	11.7	6.5	1.4	0.9
Animal or Vegetable Fats and Oils and Their Cleavage Products; Prepared Edible Fats; Animal or Vegetable Waxes	11.7	7.8	1.3	0.9
Natural or Cultured Pearls, Precious or Semiprecious Stones, Precious Metals, Metals Clad with Precious Metal, and Articles Thereof; Imitation Jewellery; Coin	4.0	3.1	1.0	0.7
Raw Hides and Skins, Leather, Furskins and Articles Thereof; Saddlery and Harness; Travel Goods, Handbags, and Similar Containers; Articles of Animal Gut (Other Than Silk-worm Gut)	7.2	4.7	0.8	0.7
Products of the Chemical or Allied Industries	4.5	3.4	0.7	0.5
Textiles and Textile Articles	11.6	6.6	0.6	0.5
Vegetable Products	10.9	6.7	0.6	0.5
Plastics and Articles Thereof; Rubber and Articles Thereof	6.9	4.9	0.6	0.5
Footwear, Headgear, Umbrellas, Sun Umbrellas, Walking-Sticks, Seat-Sticks, Whips, Riding-Crops and Parts Thereof; Prepared Feathers and Articles Made Therewith; Artificial Flowers; Articles of Human Hair	12.2	7.0	0.6	0.5
Articles of Stone, Plaster, Cement, Asbestos, Mica or Similar Materials; Ceramic Products; Glass and Glassware	8.3	5.9	0.6	0.5
Pulp of Wood or of other Fibrous Cellulosic Material; Recovered (Waste and Scrap) Paper or Paperboard; Paper and Paperboard and Articles Thereof	3.7	3.1	0.5	0.4
Base Metals and Articles of Base Metal	4.8	3.8	0.5	0.4
Machinery and Mechanical Appliances; Electrical Equipment; Parts Thereof; Sound Recorders and Reproducers, Television Image and Sound Recorders and Reproducers, and Parts and Accessories of Such Articles	3.8	2.4	0.5	0.5
Live Animals; Animal Products	18.3	9.1	0.4	0.4
Miscellaneous Manufactured Articles	4.5	3.1	0.4	0.3
Optical, Photographic, Cinematographic, Measuring, Checking, Precision, Medical or Surgical Instruments and Apparatus; Clocks and Watches; Musical Instruments; Parts and Accessories Thereof	4.0	3.0	0.4	0.3
Wood and Articles of Wood; Wood Charcoal; Cork and Articles of Cork; Manufactures of Straw, of Esparto or of Other Plaiting Materials; Basketware and Wickerwork	3.2	2.3	0.3	0.2
Works of Art, Collectors' Pieces and Antiques	5.1	3.4	0.2	0.2
Arms and Ammunition; Parts and Accessories Thereof	8.4	6.4	0.2	0.1

Source: ITC, based on national data.

Note: *Pseudo* = pseudo-tariffs, *excise* = excise duties, *IPT* = intellectual property levies, *sales* = sales taxes, *regional* = regional taxes, and *NES* = unclassified taxes. *Total additional taxes* includes customs + environment + excise + sales + IPT + pseudo + regional + NES.

Now we contemplate the impact of a possible trade liberalization extended to additional taxes. We apply to the additional taxes considered, for each country, the national *average* reduction of tariffs.¹⁰ The effects are limited to certain sectors and products, which are usually revealed as being the most sensitive ones.

In Table 5, the data from Table 1 concerning the average additional taxation (excluding VAT) for the different sectors are reproduced in the column entitled "Total additional taxes." After applying the national reduction of tariffs to the total additional taxes, we obtain the figures in the next column.

We observe that additional taxation for foodstuffs would be cut by half, pointing to the fact that tariffs on prepared foodstuffs would be reduced less than the average in the countries of our sample that impose additional taxes in this sector. More importantly, we observe that in this sector, cutting tariffs would reduce protection by 6.7 percentage points, while cutting additional taxes would cut them by an additional 18.1 percentage points, a nearly threefold difference.

Conclusion

Under regional and multilateral negotiations, considerable efforts are being made to reduce tariffs, eliminate non-tariff barriers, and facilitate border measures. However, very little effort is made to reduce additional import taxes that, as this chapter shows, come in various forms and are used for a variety of reasons. These additional taxes can be used to circumvent the commitments made by countries to reduce their tariffs or, for reasons of national preferences, to protect certain categories of products. These measures may result in much higher rates of protection than those imposed by tariffs, thus contributing to a slowdown in international trade for certain categories of products. Including the component of import taxes issues in the next round of trade negotiations may result in relatively lower fiscal revenues, but it will have a significant effect on reducing barriers to trade and thus to enabling the growth of world trade.

Notes

- 1 For a description of gravity equations for assessing the drivers of trade between countries, see Box 1 in Chapter 1.1 of this volume. The residuals derived from traditional gravity equations are the “unexplained” part of trade between trading partners, part of which can be explained by trade barriers.
- 2 This methodology compares external trade flows, by sector and partner, with the corresponding “internal exports” (domestic sales) and control for external/internal distances, production and consumption patterns, and so on. The question is ultimately how much a country trades in a sector with a certain partner as compared to domestic sales, *caeteris paribus*.
- 3 Anderson and van Wincoop 2004.
- 4 170 percent is cumulating the 74 percent trade cost and the 55 percent retail and distribution costs ($2.70 = 1.74 \times 1.55$).
- 5 This is calculated as follows: $1.74 = 1.21 \times 1.44$
- 6 Kee et al. 2006.
- 7 Fontagné et al. 2005.
- 8 We also have information on the VAT but do not treat it because VAT, according to the WTO rules, must in principle be levied exactly in the same way on domestic and imported products.
- 9 We start from the HS-6 level and use a reference group method.
- 10 In order to obtain these figures, we apply for each country the average tariff reduction resulting from the application of the “modalities” (formula of tariff reduction) currently on the negotiation table of the ongoing Doha Development Agenda negotiations at the WTO. Accordingly, a unique coefficient of reduction is applied to every additional tax within a country, calibrated by the average tariff reduction of that country.

References

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- Fontagné L., T. Mayer, and S. Zignago. 2005. “Trade in the Triad: How Easy Is the Access to Large Markets?” *Canadian Journal of Economics* 38(4): 1401–30.
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Appendix A: Data

Sector aggregation

The Harmonized Commodity Description and Coding System, generally referred to as the “Harmonized System” or simply “HS,” is an international product nomenclature developed by the World Customs Organization (WCO). The nomenclature comprises about 5,000 commodity groups/products divided into 21 sections, which (in general) group goods produced in the same sector of the economy:

- Live Animals; Animal Products (Chapters 01–05)
- Vegetable Products (Chapters 6–14)
- Animal or Vegetable Fats and Oils and Their Cleavage Products; Prepared Edible Fats; Animal or Vegetable Waxes (Chapter 15)
- Prepared Foodstuffs; Beverages, Spirits, and Vinegar; Tobacco and Manufactured Tobacco Substitutes (Chapters 16–24)
- Mineral Products (Chapters 25–27)
- Products of the Chemical or Allied Industries (Chapters 28–38)
- Plastics and Articles Thereof; Rubber and Articles Thereof (Chapters 39–40)
- Raw Hides and Skins, Leather, Furskins and Articles Thereof; Saddlery and Harness; Travel Goods, Handbags, and Similar Containers; Articles of Animal Gut (Other Than Silk-worm Gut) (Chapters 41–43)
- Wood and Articles of Wood; Wood Charcoal; Cork and Articles of Cork; Manufactures of Straw, of Esparto or of Other Plaiting Materials; Basketware and Wickerwork (Chapters 44–46)
- Pulp of Wood or of other Fibrous Cellulosic Material; Recovered (Waste and Scrap) Paper or Paperboard; Paper and Paperboard and Articles Thereof (Chapters 47–49);
- Textiles and Textile Articles (Chapters 50–63)
- Footwear, Headgear, Umbrellas, Sun Umbrellas, Walking-Sticks, Seat-Sticks, Whips, Riding-Crops and Parts Thereof; Prepared Feathers and Articles Made Therewith; Artificial Flowers; Articles of Human Hair (Chapters 64–67)
- Articles of Stone, Plaster, Cement, Asbestos, Mica or Similar Materials; Ceramic Products; Glass and Glassware (Chapters 68–70)
- Natural or Cultured Pearls, Precious or Semiprecious Stones, Precious Metals, Metals Clad with Precious Metal, and Articles Thereof; Imitation Jewellery; Coin (Chapter 71)

- Base Metals and Articles of Base Metal (Chapters 72–83)
- Machinery and Mechanical Appliances; Electrical Equipment; Parts Thereof; Sound Recorders and Reproducers, Television Image and Sound Recorders and Reproducers, and Parts and Accessories of Such Articles (Chapters 84–85)
- Vehicles, Aircraft, Vessels and Associated Transport Equipment (Chapters 86–89)
- Optical, Photographic, Cinematographic, Measuring, Checking, Precision, Medical or Surgical Instruments and Apparatus; Clocks and Watches; Musical Instruments; Parts and Accessories Thereof (Chapters 90–92)
- Arms and Ammunition; Parts and Accessories Thereof (Chapter 93)
- Miscellaneous Manufactured Articles (Chapters 94–96)
- Works of Art, Collectors’ Pieces and Antiques (Chapter 97)

Tariff Data

Applied tariffs come from ITC’s version of Market Access Map. This covers customs tariffs applied by 185 importing countries to products from 239 countries and territories. Bound tariffs come from the *WTO Consolidated Tariff Schedule Database*. Import taxes applied by 61 countries—2 developed countries, 36 developing countries, and 23 least-developed countries—were compiled for this chapter.

Our aggregation method starts with a simple average from the tariff line to the HS-6 digit level comprising some 5,000 different products. At any other aggregation level however, it is not a simple average. In calculating average tariffs or taxes for these aggregations, the trade pattern of the importing country’s reference group is used as a weighting.

Tariff simulations use the latest modalities agreed under multilateral negotiations.¹ The reductions were applied to bound tariffs by country and product category. For bound duties not consolidated, a base rate augmented by 20 percent was used. Following the reductions, we use in our calculations the new reduced tariff if the reduced bound tariff is lower than the most-favored nation (MFN) applied tariff rate.

Taking into account that no agreement has been reached so far in the ongoing Doha Development Agenda (DDA) negotiations, concerning the following tariff reduction formulas, we use the average range for the different reductions. Furthermore, we do not take into account potential product-exclusion lists.

Appendix A: Data (cont'd.)

Formula applied

For agricultural products, a tiered formula is used depending on the country group.

Developed country members shall reduce their final bound tariffs in equal annual installments over five years in accordance with the following tiered formula:

Bands	Reduction	Reduction used
0% < FBT or AVE* ≤ 20%	[48–52] %	50%
20% < FBT or AVE* ≤ 50%	[55–60] %	57.5%
50% < FBT or AVE* ≤ 75%	[62–65] %	63.5%
75% < FBT or AVE*	[66–73] %	69.5%

* FBT or AVE: final bound tariff or ad valorem equivalent.

Developing country members shall reduce their final bound tariffs in equal annual installments over eight years in accordance with the following tiered formula:

Bands	Reduction**	Reduction used
0% < FBT or AVE* ≤ 30%	[32–35] %	33.5%
30% < FBT or AVE* ≤ 80%	[37–40] %	38.5%
80% < FBT or AVE* ≤ 130%	[41–43] %	42%
130% < FBT or AVE*	[44–49] %	46.5%

* FBT or AVE: final bound tariff or ad valorem equivalent.

** Corresponding in two-thirds of the cut for developed-country members (rounded off in the closest integer).

Small and vulnerable economies (SVEs) shall reduce their final bound tariffs in equal annual installments over eight years in accordance with the following tiered formula:

Bands	Reduction**	Reduction used
0% < FBT or AVE* ≤ 30%	[22–25] %	23.5%
30% < FBT or AVE* ≤ 80%	[27–30] %	28.5%
80% < FBT or AVE* ≤ 130%	[31–33] %	31%
130% < FBT or AVE*	[34–39] %	36.5%

* FBT or AVE: final bound tariff or ad valorem equivalent.

** Corresponding in 10 points less than for developing-country members.

Least-developed countries (LDCs) members are not required to undertake reductions in bound duties.

For Non-Agriculture Market Access (NAMA) products, developed and developing countries shall apply the following formula on a line-by-line basis:

$$t_1 = \frac{(a \text{ or } b) \times t_0}{(a \text{ or } b) + t_1}$$

where

t_1 = final bound rate of duty

t_0 = base rate of duty

a = [8–9] = coefficient for developed Members
(8.5 used in our simulation)

b = [19–23] = coefficient for developing Members
(21 used in our simulation)

Least-developed country members are not required to undertake reductions in bound duties.

Note

- 1 WTO, Committee on Agriculture (TN/AG/W/4/Rev.1), February 2008. WTO, Negotiating Group on Market Access (TN/MA/W/103), February 2008.