

Trade impacts of LDC graduation

*Insights from country-specific
market access analyses*

A decorative pattern of overlapping hexagons in various colors (light blue, teal, orange, white, dark brown, light green) arranged in a honeycomb-like structure, extending across the bottom half of the page.

Acknowledgments

This compilation of analyses builds on the May 2020 report “Trade impacts of LDC graduation” to include country-specific details on the likely impact of graduation on market access and exports for the 12 graduating least-developed countries (LDCs) in the study.

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Introduction

This report consists of market access analyses for each of the 12 least-developed countries (LDCs) that are on the path towards graduation: Angola and Sao Tomé and Príncipe in Africa; Bangladesh, Bhutan, Lao People's Democratic Republic, Myanmar, Nepal and Timor-Leste in Asia; and Kiribati, the Solomon Islands, Tuvalu and Vanuatu in the Pacific.¹ It should be read in conjunction with the report Trade impacts of LDC graduation², which provides an assessment of the trade impacts of graduation in terms of LDCs' participation in the WTO, market access opportunities and development cooperation.

The analysis for each of the 12 graduating LDCs is based on a common structure. First, the merchandise export structure of each LDC is discussed based its average exports for 2016-18, outlining the main export products and the importance of preference-granting economies as destination markets.

Second, the impact of the LDC's graduation on its preferential market access is analysed, taking into account alternative preferences that may remain available after graduation. In particular, this section discusses the estimated increase in tariff rates and tariff costs that an LDC will face after graduation, as well as its current utilization of preferences, based on data submitted by

preference-granting WTO members to the WTO Integrated Database (IDB).

Tariff increases are computed as the difference between the best available tariff rate after graduation and the tariff rate under LDC schemes, the latter being zero for the majority of tariff lines. The best available tariff rate is often the Generalized System of Preferences (GSP) rate³ for developed country members. While the WTO IDB has good data coverage for preferential trade arrangements (PTAs) such as GSP schemes, it contains little data on regional trade agreements (RTAs) involving graduating LDCs. Therefore, in a number of cases the most-favoured-nation (MFN) rate (i.e. the non-discriminatory tariff imposed on imports from WTO members) has been used as the best available tariff, even though preferences may remain available under RTAs after graduation.

Third, a partial equilibrium model is employed to estimate the impact of the expected tariff increase on exports, based on the LDC's export structure in 2016-18 and its preference utilization. Taking into account preference utilization makes estimated changes in exports more accurate, as the majority of graduating LDCs only utilize LDC schemes to a limited extent. This is for a number of reasons, including lack of awareness of the availability of preferences, the use of alternative preferences under bilateral and plurilateral RTAs, difficulties in complying with rules of origin conditions, or low preference margins on products exported. Projected changes in exports are estimated bilaterally at the Harmonized System (HS) six-digit⁴ product level, providing graduating LDCs with useful information on the products and destination markets that require their attention when preparing for graduation. The

assumptions and methodology of the partial equilibrium model are described in the Annex.

It should be noted that exports from LDCs are measured based on mirrored import statistics as reported by LDCs' trading partners due to the limited availability of reported data by LDCs on bilateral exports at the product level.

Certain trade captured by mirrored import statistics might not be reflected in the reported export statistics of some LDCs. For instance, in the case of Sao Tomé and Príncipe, Tuvalu and Vanuatu mirrored import statistics also cover trade related to vessels sailing under their flags ("flags of convenience").

Endnotes

1. The analysis is based on the LDCs' export structure for 2016-2018, and therefore does not reflect the disruptions in exports caused by the COVID-19 pandemic. The WTO intends to undertake COVID-19 impact analysis for graduating LDCs under the aegis of this project.
2. "Trade impacts of LDC graduation" was published in May 2020 and can be accessed at https://www.wto.org/english/news_e/news20_e/rese_08may20_e.pdf
3. Under the Generalized System of Preferences, developed countries offer non-reciprocal preferential treatment (such as zero or low duties on imports) to products originating in developing countries. Preference-giving countries unilaterally determine which countries and which products are included in their schemes (see https://www.wto.org/english/tratop_e/devel_e/d2legl_e.htm).
4. The Harmonized System is an international nomenclature developed by the World Customs Organization, which is arranged in six-digit codes allowing all participating countries to classify traded goods on a common basis. Beyond the six-digit level, countries are free to introduce national distinctions for tariffs and many other purposes.

Angola

2.1 Export structure

Table 1 provides an overview of the merchandise export structure of Angola and the importance of preference-granting countries as destination markets, at both the aggregate and sectoral levels. Angola exported on average more than US\$ 38 billion of merchandise from 2016 to 2018.

Petroleum oil accounts for 87 per cent of Angola's merchandise exports. Other products worth more than US\$ 100 million in annual exports include minerals and metals (11 per cent), transport equipment (1 per cent), non-electrical machinery (0.5 per cent), and fish and fish products (0.4 per cent).

Angola's most important destination market is China, which accounts for more than half (53 per cent) of Angola's merchandise exports. Other relevant destination markets are the European Union (10 per cent), India (10 per cent), and the United States (7 per cent). About 16 per cent of Angola's exports go to markets with no preferential market access for LDCs ("rest of the world" in Table 1).

More than half of Angola's exports of petroleum oils (59 per cent) go to China, followed by the European Union (10 per cent), India (9 per cent) and the United States (8 per cent). India (20 per cent) and the European Union (13 per cent) are the main destination markets for minerals and metals, in particular diamonds and petroleum gases. The majority of transport equipment (98 per cent), non-electrical machinery (62 per cent) and fish exports (73 per cent) are exported to countries without LDC preference schemes ("rest of the world"). In the case of fish exports, the European Union (15 per cent), Chile (4 per cent), the Republic of Korea (4 per cent) and Japan (2 per cent) are also important markets, while wood exports are mainly destined for China (49 per cent).

2.2 Impact on preferential market access

Table 2 illustrates the loss of tariff preference for Angola's top 12 export products in preference-granting markets at the level of HS headings. The table shows the increase in tariffs that Angola would face in destination markets when using the best available alternative tariff compared to the LDC duty rate. The best alternative tariffs are GSP preferences for Australia, Canada, the European Union, Japan, New Zealand, Norway, the Russian Federation, Switzerland and Turkey; African Growth and Opportunity Act (AGOA) preferences for the United States; and MFN tariffs for Chile, China, India, the Republic of Korea and Thailand.

The 12 most traded products represent 98 per cent of Angola's merchandise exports. Based on its current export structure, Angola would face limited increases in tariffs after graduation.

Crude petroleum oils (HS 2709), which account for 86 per cent of Angola's exports, can enter most markets MFN duty-free and will therefore not experience a tariff increase; exceptions include Chile, which has an MFN duty of 6 per cent, and the Russian Federation, which has an MFN duty rate of 1 per cent. In the United States, Angola will continue to benefit from duty-free access under AGOA.

On diamonds (HS 7102), Angola's second most exported product, Angola will face a tariff increase of 10 per cent in India, whereas tariffs will not increase in other major markets, i.e. the European Union and the United States.

Tariffs will increase in Angola's top three markets – i.e. India (4 per cent), China (5 per cent) and the Republic of Korea (4 per cent) – for petroleum gases (HS 2711).

Figure 1 shows Angola's utilization of LDC-specific preferences by providing a breakdown of imports by

Table 1: Exports of Angola by sector and shares of destination markets in sectoral exports (2016–18 average)

Product	Partner: World		Share of destination markets in product exports (%)						
	% of total	US\$ million	Australia	Canada	Chile	China	European Union	India	Japan
Total	100	38,263	0	0	0	53	10	10	1
Petroleum	87	33,166	0	0	0	59	10	9	1
Minerals and metals	11	4,313	0	0	0	12	13	20	3
Transport equipment	1	318	0	0	0	0	1	0	0
Non-electrical machinery	0	185	0	0	0	0	21	0	0
Fish and fish products	0	164	0	0	4	0	15	0	2
Wood, paper, etc.	0	54	0	0	0	49	13	2	1
Electrical machinery	0	18	0	0	0	0	33	9	0
Manufactures n.e.s.	0	18	0	0	0	0	54	0	0
Other agricultural products	0	8	0	0	0	0	44	0	0
Chemicals	0	7	0	0	0	1	12	12	0
Animal products	0	3	0	0	0	94	0	0	0
Leather, footwear, etc.	0	2	0	1	0	0	52	10	0
Fruits, vegetables, plants	0	2	0	0	0	0	85	0	0
Coffee, tea	0	2	0	0	0	0	62	0	0
Textiles	0	1	0	0	0	9	74	0	0
Beverages and tobacco	0	1	0	0	0	17	19	0	0
Oilseeds, fats and oils	0	1	0	0	10	0	0	0	0
Cereals and preparations	0	0	0	0	0	0	56	0	0
Clothing	0	0	1	0	0	0	39	0	0
Cotton	0	0	0	0	0	0	100	0	0
Sugars and confectionery	0	0	0	1	0	0	12	0	0
Dairy products	0	0	0	0	0	0	11	0	0

Source: UN Comtrade.

Note: Export values and shares are based on mirrored import statistics and represent averages for 2016–18. Blanks indicate missing data. Zeros (0) indicate shares below 0.5 per cent. Green shading indicates share value, with the highest share in dark green. Sectors are shown in terms of multilateral trade negotiations (MTN) categories. The MTN categories' coverage of Harmonized System (HS) codes is included in World Tariff Profiles 2019 (pages 40–41) (available at https://www.wto.org/english/res_e/publications_e/world_tariff_profiles19_e.htm). "n.e.s." indicates "not elsewhere specified".

duty type for preference-granting countries. The first bar ("Total") shows that Angola's dependence on LDC-specific preferences is minimal, as close to 90 per cent

of its exports can enter preference-granting markets MFN duty-free. While less than 1 per cent of exports use LDC-specific preferences, 6 per cent of exports rely on

Republic of Korea	Norway	New Zealand	Russian Federation	Switzerland	Thailand	Turkey	United States	Rest of the world
1	0	0	0	0	1	0	7	16
0	0	0	0	0	2	0	8	11
3	0	0	1	0	0	0	5	43
1	0	0	0	0	0	0	0	98
0	15	0	0	0	0	0	0	62
4	0	0	0	0	1	0	0	73
0	0	0	0	0	0	2	1	32
2	29	0	0	0	0	0	0	26
2	19	0	0	2	0	0	1	22
0	0	0	0	0	0	7	0	48
0	11	0	0	0	0	0	9	55
0	0	0	1	0	0	0	0	5
0	1	0	0	0	0	0	0	35
0	0	0	0	0	0	0	0	15
0	0	0	1	0	0	0	8	29
2	0	0	0	0	0	0	0	15
0	0	0	0	0	0	0	0	64
0	0	0	0	0	0	6	0	84
0	0	1	0	0	0	0	0	43
1	0	0	0	2	0	0	0	56
0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	87
0	0	0	0	0	0	0	0	89

alternative preferences, and 6 per cent of exports do not use LDC-specific preferences despite being eligible. Almost all exports enter China and the European Union – Angola’s

top two markets – duty-free. In the case of the United States, exports either enter under AGOA preferences (73 per cent) or pay MFN duties despite being eligible for

Table 2: Top 12 export products of Angola and increase in tariffs in destination markets following graduation

HS code	Product	Partner: World		Exports in US\$ million towards destination markets (Tariff increase in percentage points due to preference loss)			
		% of total	US\$ million	Australia	Canada	Chile	China
2709	Petroleum oils (crude)	86	32,789	25 (0)	130 (0)	(6)	19617 (0)
7102	Diamonds (not mounted or set)	6	2,368	0 (0)	1 (0)	(6)	40 (3)
2711	Petroleum gases and other gaseous hydrocarbons	4	1,546	10 (0)	(0)	(6)	399 (5)
2710	Petroleum oils (not crude)	1	316	(0)	0 (0)	(6)	(6)
8901	Ships, boats and vessels for the transport of persons or goods	0	185	(0)	(24)	(3)	(8)
8905	Light vessels	0	119	(0)	(14)	(6)	(5)
0303	Fish (frozen) excl. fish fillets	0	90	(0)	(0)	(6)	0 (11)
8419	Machinery (plant or laboratory equipment)	0	81	(0)	(0)	(6)	(12)
4403	Wood in the rough	0	39	(0)	(0)	(6)	24 (0)
2516	Granite, porphyry, basalt, sandstone, other building stone	0	30	(0)	0 (0)	(6)	12 (4)
0306	Crustaceans	0	27	(0)	(3)	(6)	(10)
7308	Structures of iron or steel and parts thereof	0	27	(0)	(0)	(6)	(8)

Source: UN Comtrade (trade flows) and WTO IDB (tariffs).

Note: For every importer-product couple, the first row reports average export values, while the second row reports, in parentheses, the preference loss due to graduation, i.e. the difference between the best available alternative rate and the LDC duty rate. Whenever such a figure is not available, it means that either Angola is not eligible for the LDC duty rate or the tariffs are not ad valorem (i.e. a tariff rate charged as percentage of the price). Export values are based on mirrored import statistics and represent averages for 2016–18. Tariffs are for the year 2019, with the exception of China (2017), India (2016) and Turkey (2016).

GSP-LDC preferences (22 per cent). Preference utilization is relatively high in Chile (59 per cent) and the Republic of Korea (43 per cent), but the value of trade flows is low compared to main destination markets.

Figure 2 provides estimates of the increase in tariff costs for Angola following graduation, obtained by multiplying exports with the percentage point increase in tariffs due to the loss of preferences. In the case of full preference utilization, tariff costs would increase by more than US\$ 80 million, which corresponds to 0.24 per cent of merchandise exports to preference-granting members. Taking preference utilization into account, tariff costs are estimated to increase by only US\$ 5.02 million (0.01 per cent of merchandise exports to preference-granting members).

Table 3 provides estimates of tariff cost increases for the top 12 export products. Assuming full utilization of

preferences, tariff costs are expected to increase the most for diamonds (US\$ 40.9 million) and petroleum gases (US\$ 39.3 million), mainly in India, China and the Republic of Korea. However, cost increases could be lower, as current preference utilization appears to be low. Tariff costs for exports of crustaceans are expected to increase by more than US\$ 1.7 million, reflecting a 4 per cent increase in tariffs in the EU market.

2.3 Impact on exports: partial equilibrium estimates

Table 4 displays the initial exports, projected changes in exports (in dollars and as a percentage of initial exports) and the effective tariff change because of graduation, by country of destination for Angola. The total reduction in exports is projected to be a small share of initial exports (0.07 per cent). For the Republic of Korea and Chile,

European Union	India	Japan	Republic of Korea	Norway	New Zealand	Russian Federation	Switzerland	Thailand	Turkey	United States
3292	3057	202	119	24				452		2505
(0)	(0)	(0)	(0)	(0)	(0)	(1)	(0)	(0)	(0)	(0)
388	398	0				30		0	0	189
(0)	(10)	(0)	(3)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
127	435	66	137						4	7
(0)	(4)	(1)	(4)	(0)	(0)	(3)	(0)	(0)	(0)	(0)
44			0	0						102
(0)	(3)	(1)	(0)	(0)	(1)	(4)	(0)	(5)	(0)	(0)
(0)	(10)	(0)	(0)	(0)	(3)	(4)	(0)	(5)	(0)	(0)
(0)	(8)	(0)	(5)	(0)	(3)	(4)	(0)	(4)	(0)	(0)
0			4							
(7)	(30)	(3)	(3)	(0)	(0)	(5)	(0)	(0)	(0)	(0)
1			0							
(0)	(8)	(0)	(6)	(0)	(4)	(0)	(0)	(1)	(0)	(0)
2	1	0	0						1	
(0)	(5)	(0)	(0)	(0)	(0)	(1)	(0)	(0)	(0)	(0)
13	2					0			0	
(0)	(10)	(0)	(3)	(0)	(0)	(2)	(0)	(0)	(0)	(0)
25		0	0							
(6)	(30)	(4)	(10)	(0)	(1)	(0)	(0)	(7)	(0)	(0)
1				0						
(0)	(10)	(0)	(4)	(0)	(5)	(0)	(0)	(0)	(0)	(0)

exports are projected to fall considerably as a percentage of initial exports. Although the reduction in the value of exports is limited (US\$ 77 million for the Republic of Korea and US\$ 1 million for Chile), as a share of initial exports this is respectively 298 per cent and 18 per cent. Projected reductions to other regions are small. Exports to other regions, such as India and China, are projected to increase because of changes in the direction of trade.

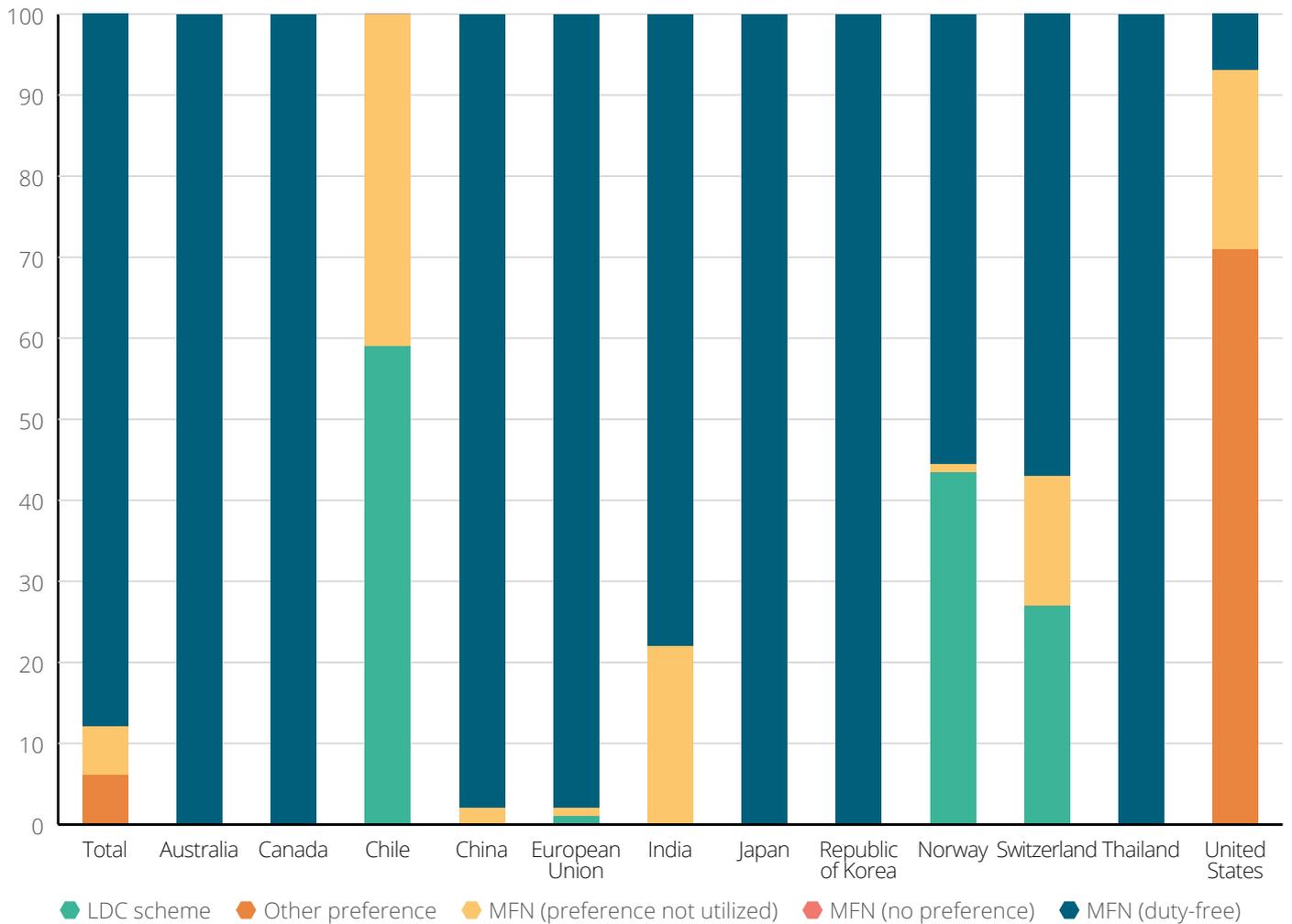
Table 5 shows the projected change in exports by MTN category for Angola. Exports are projected to fall by more than US \$1 million in two categories: minerals and metals (US\$ 16 million), and fish and fish products (US\$ 8 million). As a fraction of initial exports, the largest changes occur for: fruits, vegetables, plants (-31.2 per cent); cereals and preparations (-19.6 per cent); animal products (-7.0 per cent); and fish and fish products (-5.2 per cent) – although

the values are smaller than US\$ 1 million for the first three categories.

Table 6 shows that, of the total expected reduction of exports of US\$ 26 million, US\$ 13 million is expected for natural gas and US\$ 7 million for shrimps and prawns. As a fraction, the change in natural gas exports is very small, due to the fact that the effective change in tariffs to all destinations (preference-granting and non preference-granting countries) is small for this product. For shrimps and prawns, however, the projected reduction of US\$ 7 million constitutes 27 per cent of exports.

To summarize, the projected reduction of exports for Angola is minor as a fraction of initial exports and is concentrated in natural gas. However, for fish and fish products the expected reduction is also sizeable as a share of initial exports.

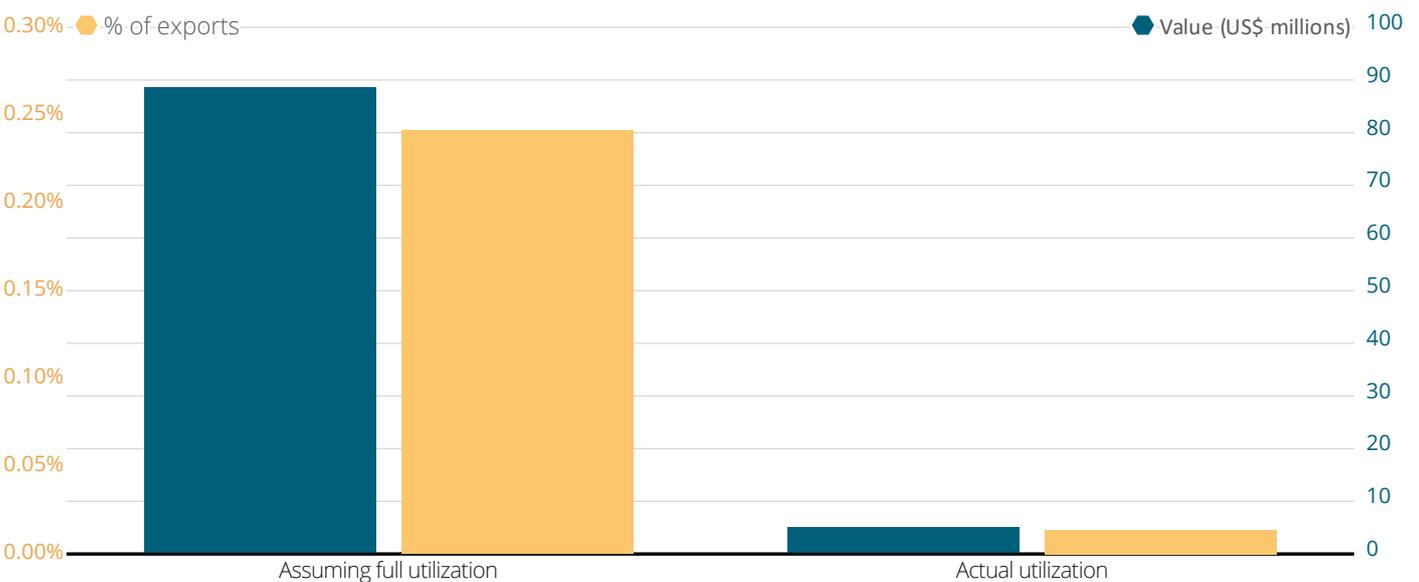
Figure 1: Preference utilization: imports from Angola by duty type



Source: WTO IDB.

Note: The figure is based on disaggregated import data for 2015–16 for Australia, Canada, Chile, China, the European Union, India, Japan, the Republic of Korea, Norway, Switzerland, Thailand and the United States.

Figure 2: Additional tariff costs on exports due to loss of preferences



Source: WTO IDB and UN Comtrade.

Note: The tariff cost increase for a product is estimated by multiplying the expected increase in tariff rates following graduation with the product's average export value during 2016–18.

Table 3: Top 12 export products: additional tariff costs due to loss of preferences

Description	Increase in tariff costs (US\$ thousands)	
	Full utilization	Actual utilization
Petroleum oils (crude)	1,086	0
Diamonds (not mounted or set)	40,989	0
Petroleum gases and other gaseous hydrocarbons	39,340	2,814
Petroleum oils (not crude)	2,088	0
Ships, boats and vessels for the transport of persons or goods	0	0
Light vessels	0	0
Fish (frozen) excl. fish fillets	30	7
Machinery (plant or laboratory equipment)	7	0
Wood in the rough	45	0
Granite, porphyry, basalt, sandstone, other building stone	643	0
Crustaceans	1,727	1,619
Structures of iron or steel and parts thereof	0	0

Source: WTO IDB (tariff and utilization data) and UN Comtrade (exports). Note: The tariff cost increase is computed as the product of exports, tariff rate increases and utilization rates. Exports are 2016–18 averages obtained using mirror data from UN Comtrade; tariff increase is defined as the difference between the LDC rate and the best alternative rate in 2016; utilization rates are computed as the ratio between the exports that enter under the LDCs scheme and the total exports towards the preference-granting members (2015–16 average, where available); for column 1 the utilization rates of the LDC schemes are set to 1.

Table 4: Changes in exports and tariffs of Angola by country of destination

Importer	Initial exports	Change in exports	Percentage change	Effective tariff change*
MARKETS WITH AN EFFECTIVE TARIFF CHANGE				
Republic of Korea	267,438	-77,069	-28.82%	1.31
European Union	3,531,294	-5,129	-0.15%	0.05
Chile	7,197	-1,265	-17.58%	3.50
Russian Federation	30,110	-4	-0.01%	0.00
Switzerland	1,217	-1	-0.05%	0.02
New Zealand	3	0	-4.94%	1.35
Canada	133,600	0	0.00%	0.00
Armenia	88	0	-0.02%	0.01
Japan	316,450	5,151	1.63%	0.01
China	20,175,060	17,368	0.09%	0.00
India	3,903,207	18,543	0.48%	0.00
OTHER REGIONS				
Rest of Asia	787,272	4,794	0.61%	0.00
Africa	1,915,261	4,450	0.23%	0.00
Rest of Americas	599,666	3,382	0.56%	0.00
Middle East	1,531,574	2,027	0.13%	0.00
South Asia	29,013	1,131	3.90%	0.00
Thailand	547,254	718	0.13%	0.00
Australia	34,849	282	0.81%	0.00
United States	2,806,029	198	0.01%	0.00
Norway	70,693	0	0.00%	0.00
Rest of Europe	5	0	0.06%	0.00
Kazakhstan	285	0	0.00%	0.00
Pacific	14	0	0.00%	0.00
CIS	252	0	0.00%	0.00
Total	36,694,340	-25,976	-0.07%	0.02

Note: Change in exports (in thousands of dollars and as a percentage of initial exports). * The effective tariff change is measured in percentage points. It takes into account the increase in tariff rates due to the loss of LDC-specific preferences as well as preference utilization by graduating LDCs. A lower preference utilization will result in a lower effective increase in tariffs as a smaller fraction of exports will be exposed to changes in tariff rates after graduation.

Table 5: Changes in exports and tariffs of Angola by MTN category

MTN category	Initial exports	Change in exports	Percentage change	Effective tariff change*
Minerals and metals	4,137,489	-16,723	-0.40%	0.09
Fish and fish products	161,775	-8,364	-5.17%	1.21
Fruits, vegetables, plants	1,873	-585	-31.23%	8.09
Animal products	3,105	-218	-7.01%	3.55
Cereals and preparations	349	-69	-19.62%	4.99
Beverages and tobacco	1,139	-6	-0.50%	0.16
Wood, paper, etc.	50,991	-4	-0.01%	0.00
Textiles	1,278	-3	-0.20%	0.05
Chemicals	7,125	-2	-0.03%	0.01
Leather, footwear, etc.	1,600	-2	-0.10%	0.04
Clothing	223	-1	-0.40%	0.40
Manufactures n.e.s.	20,233	0	0.00%	0.00
Sugars and confectionery	4	0	-3.10%	0.96
Coffee, tea	1,433	0	0.00%	0.00
Oilseeds, fats and oils	714	0	0.00%	0.00
Transport equipment	375,147	0	0.00%	0.00
Dairy products	1	0	-0.22%	0.11
Electrical machinery	17,047	0	0.00%	0.00
Other agricultural products	7,505	0	0.00%	0.00
Cotton	12	0	0.00%	0.00
Non-electrical machinery	175,472	0	0.00%	0.00
Petroleum	31,729,824	0	0.00%	0.00
Total	36,694,340	-25,976	-0.07%	0.02

Note: Change in exports (in thousands of dollars and as a percentage of initial exports).

* The effective tariff change is measured in percentage points. It takes into account the increase in tariff rates due to the loss of LDC-specific preferences as well as preference utilization by graduating LDCs. A lower preference utilization will result in a lower effective increase in tariffs as a smaller fraction of exports will be exposed to changes in tariff rates after graduation.

Table 6: Change in exports of Angola of the 12 HS lines with the largest change

Product description	Initial exports	Change in exports	Percentage change
Natural gas	1,196,422	-12,563	-1.05%
Shrimps and prawns	25,504	-6,922	-27.14%
Propane	313,786	-2,260	-0.72%
Butanes	90,582	-1,362	-1.50%
Fish oil	8,432	-775	-9.19%
Bananas	1,463	-574	-39.23%
Fish meals	13,931	-455	-3.27%
Aluminium	12,739	-442	-3.47%
Sea mammals	2,954	-217	-7.36%
Frozen crabs	2,460	-168	-6.84%
Malt	198	-68	-34.51%
Wire of refined copper	3,606	-58	-1.60%

Note: Change in exports (in thousands of dollars and as a percentage of initial exports).

Bangladesh

3.1 Export structure

Table 7 provides an overview of the export structure of Bangladesh and the importance of preference-granting countries as destination markets, at both the aggregate and sectoral levels. Bangladesh exported on average more than US\$ 42 billion of merchandise from 2016 to 2018.

Exports from Bangladesh are concentrated in clothing and textile products, which account for 85 per cent and 6 per cent of merchandise exports, respectively. Other main export products include leather and footwear (3 per cent), fish and fish products (1 per cent), and the category “manufactures n.e.s.” (i.e. not elsewhere specified) (1 per cent).

The most important destination market is the European Union, accounting for 58 per cent of Bangladesh’s merchandise exports. The United States (14 per cent) is the second-largest destination market, followed by Canada (3 per cent), Japan (3 per cent), Australia (2 per cent), China (2 per cent), India (2 per cent), the Russian Federation (2 per cent) and Turkey (2 per cent).

More than three-quarters of clothing exports go to the European Union (62 per cent) or the United States (15 per cent). Textile exports are more diversified in terms of markets, with the European Union accounting for a quarter of exports (26 per cent), followed by the United States (18 per cent), India (10 per cent), Turkey (9 per cent) and China (7 per cent). The main markets for fish and fish products are the European Union (61 per cent), followed by China (14 per cent), the United States (7 per cent), Japan (4 per cent), India (3 per cent) and the Russian Federation (3 per cent). India is also an important regional trading partner in a number of other products such as chemicals, metals and transport equipment, as well as fruits, vegetables and plants.

3.2 Impact on preferential market access

Table 8 illustrates the loss of tariff preference for Bangladesh’s main export products in preference-granting markets. For the top 12 export products at the level of HS headings, the table shows the increase in tariffs that Bangladesh will face in destination markets when using the best available alternative tariff compared to the LDC duty rate. The best alternative tariffs are GSP preferences for Australia, Canada, the European Union, Japan, Norway, New Zealand, the Russian Federation, Switzerland and Turkey; Asia-Pacific Trade Agreement (APTA) preferences for the Republic of Korea, and MFN tariffs for Chile, China, India and Thailand. While trade with India reportedly takes place under the South Asian Free Trade Agreement (SAFTA), the WTO IDB does not contain the respective tariff data. The WTO IDB also does not cover data on preferential tariffs in the Chinese and Indian markets under APTA.

Table 8 shows that the top 12 export products comprise only clothing and footwear, and these account for 76 per cent of Bangladesh’s merchandise exports. In the European Union, the main destination market, Bangladesh will face a tariff increase of about 10 per cent for most clothing products when moving from Everything But Arms (EBA) preferences to GSP preferences. Graduation will not lead to a tariff increase in the United States, since Bangladesh is currently not eligible for preferences and already exports under the MFN regime.

The shift to the Canadian GSP will entail substantial tariff increases – between 16 and 18 per cent for 10 of the top 12 export products. Tariff increases in the Japanese market will be around 8 to 11 per cent, with footwear being an outlier (28 per cent). There will not be any tariff increase for the top products in the Australian and Turkish markets,

Table 7: Exports of Bangladesh by sector and shares of destination markets in sectoral exports (2016–18 average)

MTN code	Product	Partner: World		Share of destination markets in product exports (%)						
		% of total	US\$ million	Australia	Canada	Chile	China	European Union	India	Japan
	Total	100	42,142	2	3	0	2	58	2	3
17	Clothing	85	35,815	2	3	0	1	62	1	3
16	Textiles	6	2,582	2	4	0	7	26	10	3
18	Leather, footwear, etc.	3	1,330	1	3	0	5	50	2	10
11	Fish and fish products	1	612	1	1	0	14	61	3	4
22	Manufactures n.e.s.	1	282	1	2	0	11	28	1	7
14	Chemicals	1	275	1	2	0	11	15	15	1
12	Minerals and metals	1	261	0	0	0	3	20	40	7
21	Transport equipment	0	179	0	0	0	0	43	41	0
08	Beverages and tobacco	0	150	0	1	0	0	36	6	1
03	Fruits, vegetables, plants	0	115	0	1	0	0	10	4	1
15	Wood, paper, etc	0	114	1	3	0	12	25	10	10
20	Electrical machinery	0	89	2	0	3	7	17	7	17
13	Petroleum	0	82	0	0	0	0	0	32	0
05	Cereals and preparations	0	68	2	3	0	0	17	12	0
19	Non-electrical machinery	0	68	1	0	0	3	21	11	20
06	Oilseeds, fats and oils	0	49	0	0	0	12	2	45	3
10	Other agricultural products	0	33	1	1	0	3	3	16	2
07	Sugars and confectionery	0	16	4	0	0	0	4	22	1
09	Cotton	0	12	0	0	0	10	15	39	0
04	Coffee, tea	0	7	3	0	0	1	8	8	0
02	Dairy products	0	2	7	0	0	0	0	18	1
01	Animal products	0	2	0	0	0	0	2	0	0

Source: UN Comtrade.

Note: Export values and shares are based on mirrored import statistics and represent averages for 2016–18. Blanks indicate missing data. Zeros (0) indicate shares below 0.5 per cent. Green shading indicates share value, with highest share in dark green. Sectors are shown in terms of MTN categories. The MTN categories' coverage of HS codes is included in World Tariff Profiles 2019 (pages 40–41) (available at https://www.wto.org/english/res_e/publications_e/world_tariff_profiles19_e.htm).

since the LDC rates are the same as the best alternative rates. The shift to APTA will cause tariff increases ranging from 4 to 12 per cent in the Republic of Korea. The difference between the LDC rate and the MFN rate is about

10 per cent in the case of India, and 7 to 13 per cent in the case of China. Bangladesh will also experience tariff increases in other preference-granting markets.

Republic of Korea	Norway	New Zealand	Russian Federation	Switzerland	Thailand	Turkey	United States	Rest of the world
1	1	0	2	1	0	2	14	9
1	1	0	2	1	0	1	15	7
1	1	0	2	0	0	9	18	16
2	0	0	2	2	0	1	12	11
0	0	0	3	1	0	0	7	6
1	0	0	0	0	1	2	29	17
2	0	0	0	0	0	0	8	44
4	2	0	0	0	2	1	3	16
0	0	0	0	1	0	0	0	15
0	0	0	7	0	0	3	9	37
0	0	0	2	0	0	0	1	81
1	2	0	0	1	0	1	12	23
1	0	0	2	0	1	0	1	41
7	0	0	0	0	0	0	0	60
0	0	0	0	0	0	0	11	54
1	0	0	0	6	3	0	1	33
0	0	0	0	0	4	1	0	32
0	0	0	0	0	1	0	4	70
0	0	0	0	0	0	0	2	68
0	0	0	0	0	0	1	1	33
0	0	0	0	0	0	0	8	71
0	0	0	0	0	0	0	13	60
0	0	0	0	0	0	0	0	98

Figure 3 shows Bangladesh's utilization of LDC-specific preferences by providing a breakdown of imports by duty type for preference-granting countries. The first bar ("Total") shows that overall preference utilization is high for

Bangladesh, as 70 per cent of its exports to the 12 markets that feature in Figure 3 use LDC-specific preferences. Preference utilization is high in major destination markets, with 96 per cent of exports to the European Union making

Table 8: Top 12 export products of Bangladesh and increase in tariffs in destination markets following graduation

HS code	Product	Partner: World		Exports in US\$ million towards destination markets (Tariff increase in percentage points due to preference loss)			
		% of total	US\$ million	Australia	Canada	Chile	China
6203	Men's suits, ensembles, jackets, blazers (not knitted)	15	6,444	103	186	17	116
				0	0	(0)	(18)
6109	T-shirts, singlets and other vests (knitted)	15	6,174	162	123	20	98
				0	0	(0)	(18)
6110	Jerseys, pullovers, cardigans (knitted)	12	4,911	54	150	13	53
				0	0	(0)	(17)
6204	Women's suits, ensembles, jackets, blazers (not knitted)	11	4,425	64	158	7	71
				0	0	(0)	(17)
6205	Men's shirts (not knitted)	6	2,433	37	86	6	35
				0	0	(0)	(16)
6104	Women's suits, jackets, dresses, trousers (knitted)	5	1,988	34	52	2	20
				0	0	(0)	(18)
6105	Men's shirts (knitted)	2	1,039	15	17	1	8
				0	0	(0)	(18)
6108	Women's slips, pyjamas, negligees, bathrobes (knitted)	2	926	20	41	1	3
				0	0	(0)	(18)
6206	Women's blouses, shirts and shirt-blouses (not knitted)	2	882	9	25	2	9
				0	0	(0)	(16)
6111	Babies' garments and clothing accessories (knitted)	2	866	22	17	3	10
				0	0	(0)	(0)
6201	Men's coats, wind-jackets (not knitted)	2	702	3	31	3	25
				0	0	(0)	(17)
6403	Footwear (with uppers of leather)	2	679	4	33	3	14
				0	0	(0)	(13)

Source: UN Comtrade (trade flows) and WTO IDB (tariffs).

Note: For every importer-product couple, the first row reports average export values, while the second row reports in parentheses the preference loss due to graduation, i.e. the difference between the best available alternative rate and the LDC duty rate. Whenever such a figure is not available, it means that either Bangladesh is not eligible for the LDC duty rate or the tariffs are not ad valorem. Export values are based on mirrored import statistics and represent averages for 2016–18. Tariffs are for the year 2019, with the exception of China (2017), India (2016) and Turkey (2016).

use of EBA preferences, and with more than 80 per cent of exports to Australia, Japan, Canada and the Republic of Korea using LDC-specific preferences. In contrast, only around 31 per cent of exports to China enter under China's LDC scheme, and Bangladesh does not make use of India's LDC scheme. In the case of the United States, GSP benefits have not been reinstated. Since its suspension in June 2013, the major item exported to the US (i.e. apparels) is not covered under US GSP programme. Hence, while the loss of LDC-specific preferences will result in a significantly higher tariff burden in the European Union and other markets with high preference utilization, the impact on Bangladesh's trade with China, India and the United States will be limited.

Figure 4 provides estimates of the increase in tariff costs of exports for Bangladesh following graduation, obtained by multiplying exports with the percentage point increase in tariffs due to the loss of preferences. In the case of full preference utilization, tariff costs would increase by more than US\$ 2.4 billion, which corresponds to 6.4 per cent of merchandise exports to preference-granting members.

Taking preference utilization into account, tariff costs are estimated to increase by just over US\$ 2.1 billion (5.7 per cent of merchandise exports to preference-granting members).

Table 9 shows that the top 12 export products will account for a large part of the increase in tariff costs. Since Bangladesh has a high utilization of preferences, the predicted cost increase is only slightly lower when taking into account preference utilization.

3.3 Impact on exports: partial equilibrium estimates

Table 10 shows the results for Bangladesh by country of destination. The table displays the initial value of exports, the change in the value of exports (in US dollars and as a percentage of the initial value of exports), and the change in tariff rates (in percentage points). The table clearly shows that the largest change in the value of exports from Bangladesh is projected for exports to the European Union, to the value of about US\$ 5.28 billion, on the basis that more than half of all Bangladeshi exports (about

European Union	India	Japan	Republic of Korea	Norway	New Zealand	Russian Federation	Switzerland	Thailand	Turkey	United States
3480	96	166	47	29	10	110	92	8	48	1574
(6)	(7)	(10)	(10)	(10)	(4)	(0)	(10)		(4)	(5)
4473	19	219	49	42	27	131	60	7	29	209
(6)	(9)	(10)	(10)	(9)	(12)	(0)	(10)		(4)	(0)
3418	12	181	40	48	5	114	105	3	40	413
(6)	(8)	(10)	(10)	(11)	(3)	(0)	(10)		(3)	(5)
2597	26	107	25	27	9	105	41	7	52	827
(6)	(7)	(10)	(10)	(10)	(8)	(0)	(10)		(5)	(5)
1143	44	87	13	8	3	39	20	3	50	678
(6)	(11)	(10)		(8)	(6)	(0)	(10)		(4)	(10)
1491	4	23	8	15	4	36	33	2	9	148
(6)	(9)	(10)	(10)	(10)	(0)	(0)	(10)		(4)	(8)
776	6	9	5	4	1	19	13	1	7	77
(6)	(13)	(10)	(10)	(9)	(3)	(0)	(10)		(3)	(15)
529	3	6	2	7	2	13	11	0	4	212
(6)	(6)	(10)	(10)	(8)	(0)	(0)	(10)		(5)	(15)
538	5	22	2	5	1	25	14	1	25	126
(6)	(9)	(10)	(10)	(9)	(8)	(0)	(10)		(4)	(0)
583	2	7	1	7	2	24	9	0	14	85
(6)	(7)	(9)	(8)	(8)	(2)	(0)	(10)		(6)	(15)
379	2	20	7	6	1	24	8	0	29	120
(6)	(12)	(10)	(10)	(11)	(11)	(0)	(10)		(3)	(10)
350	1	67	4	4	1	14	16	0	1	110
(6)	(13)	(4)	(10)	(28)	(7)	(0)	(7)		(0)	(0)

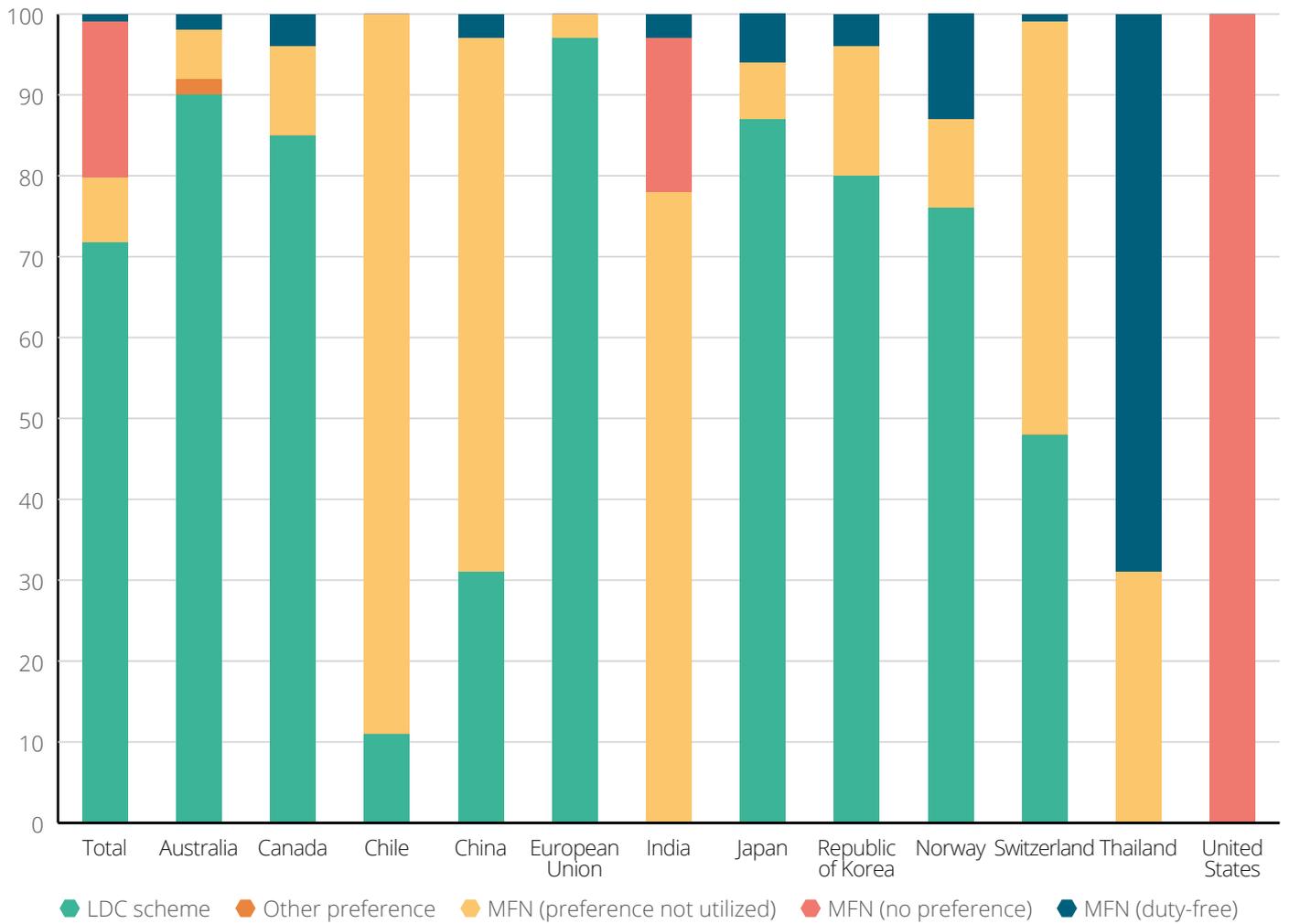
US\$ 20.10 billion out of total exports of US\$ 37.63 billion) are destined for the European Union. The second largest reduction in the value of exports is projected for exports to Canada, amounting to about US\$ 0.54 billion. The largest reduction as a percentage of initial exports is also expected for Canada, 42.05 per cent, driven by the largest projected effective increase in tariffs (by 14.47 percentage points). The simulations also indicate an expected fall in exports to China (by 8.79 per cent), the European Union (by 26.28 per cent), Japan (by 30.53 per cent), the Republic of Korea (by 27.53 per cent) and New Zealand (by 11.90 per cent) as a result of the graduation of preferences.

The reductions in exports to these regions are partially compensated for by rising exports to other destinations, although the size of this trade diversion is an order of magnitude smaller than the fall in exports to countries withdrawing preferences. The aggregate results in Table 10 indicate that the projected total reduction in exports from Bangladesh is about US\$ 5.37 billion, and the increase in exports to other regions is US\$ 0.79 billion.

Table 10 shows that most trade diversion takes place for exports towards the United States, where Bangladesh currently does not benefit from preferences and where it is estimated that exports will increase by US\$ 0.45 billion. Exports from Bangladesh are also projected to increase to some regions where it will lose preferential market access. This is the case, for example, for exports to Switzerland, Chile and the Russian Federation. This is because the trade-depressing effect of the loss of preferences to these countries is balanced by the trade-promoting effect of lower input prices resulting from the fact that it becomes more expensive to export to the European Union, the dominant market for Bangladesh.

Table 11 shows the change in exports from Bangladesh by MTN category. The table clearly shows that the largest reduction in exports occurs in the sector in which Bangladesh exports most – clothing. The reduction in exports is projected to be US\$ 4.84 billion out of a total projected reduction of exports of US\$ 5.37 billion. Other sectors with large reductions in exports as a percentage of initial exports are leather and footwear (13.96 per

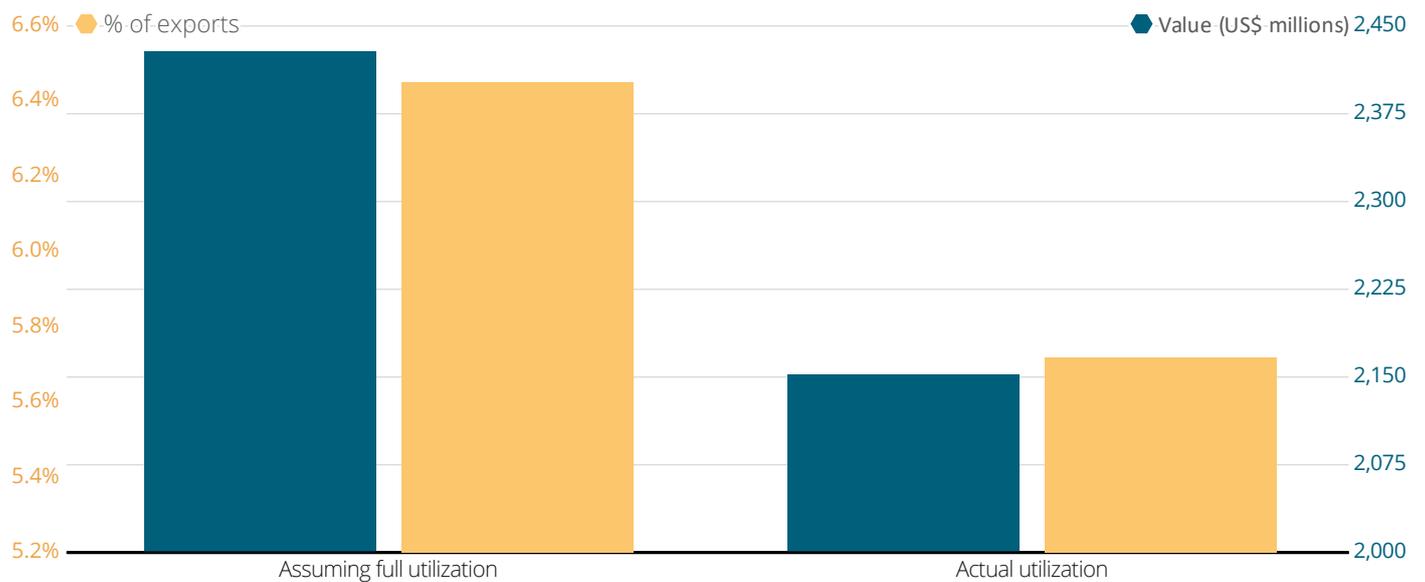
Figure 3: Preference utilization: imports from Bangladesh by duty type



Source: WTO IDB.

Note: Utilization rates are computed as the ratio between the imports entering under a specific duty scheme over the total imports towards the preference-granting member. The data are averages for 2015-16.

Figure 4: Additional tariff costs on exports due to loss of preferences



Source: WTO IDB and UN Comtrade.

Note: The tariff cost increase for a product is estimated by multiplying the expected increase in tariff rates following graduation with the product's average export value during 2016-18.

cent), transport equipment (17.20 per cent), fish and fish products (19.69 per cent), and beverages and tobacco (9.08 per cent).

Table 12 provides details on the reduction in exports of clothing by country of destination. More than half of all exports of clothing from Bangladesh goes to the European Union: US\$ 18.34 billion out of total exports of US\$ 31.75 billion. Exports of clothing to the European Union are projected to fall by about US\$ 4.85 billion, 26 per cent of the initial exports to the European Union. This reduction is almost identical to the total reduction of exports of clothing from Bangladesh, projected at US\$ 4.84 billion. Furthermore, clothing exports are also projected to fall in other markets in which Bangladesh faces substantial tariff increases (Canada, Japan, the Republic of Korea and New Zealand), whereas exports to other markets are projected to increase, in particular to the United States. Table 12 clearly shows that the largest share of the reduction in exports from the graduating LDCs of US\$ 6 billion consists of reductions in exports of clothing from Bangladesh to the European Union.

Table 13 shows the 12 products at the HS six-digit level that are estimated to experience the largest reductions in value of exports. Table 13 shows that, with the exception of shrimps and prawns, the largest changes in terms of the value of exports occur all in the detailed product lines belonging to the category clothing. US\$ 990 million of the total reduction in exports takes place in one product line, T-shirts made out of cotton.

Summarizing the results for Bangladesh, the simulations project that exports from Bangladesh are substantially impacted by the phasing-out of preferences. Total exports are projected to fall by US\$ 5.37 billion or 14.28 per cent of initial exports. Most of the reduction is expected for exports to the European Union, a fall of US\$ 5.28 billion or 26.28 per cent of initial exports. As a share of initial exports, exports to Canada (42.82 per cent), Japan (32.27 per cent) and the Republic of Korea (32.34 per cent) are also significantly affected. The bulk of the reduction in exports is projected to take place in clothing. The products most affected in terms of the value of trade are T-shirts (cotton), trousers for men (cotton) and jerseys (fibres and cotton).

Table 9: Top 12 export products – additional tariff costs due to loss of preferences

HS Code	Description	Increase in tariff costs (US\$ thousands)	
		Full utilization	Actual utilization
6203	Men's suits, ensembles, jackets, blazers (not knitted)	340,793	312,881
6109	T-shirts, singlets and other vests (knitted)	422,575	389,944
6110	Jerseys, pullovers, cardigans (knitted)	343,350	319,986
6204	Women's suits, ensembles, jackets, blazers (not knitted)	252,968	226,808
6205	Men's shirts (not knitted)	123,076	112,799
6104	Women's suits, jackets, dresses, trousers (knitted)	138,011	126,849
6105	Men's shirts (knitted)	71,258	67,882
6108	Women's slips, pyjamas, negligees, bathrobes (knitted)	53,099	50,311
6206	Women's blouses, shirts and shirt-blouses (not knitted)	51,264	46,805
6111	Babies' garments and clothing accessories (knitted)	44,936	39,927
6201	Men's coats, wind-jackets (not knitted)	45,870	37,338
6403	Footwear (with uppers of leather)	36,547	32,441

Source: WTO IDB (tariff and utilization data) and UN Comtrade (exports).

Note: The tariff cost increase is computed as the product of exports, tariff rate increases and utilization rates. Exports are 2016–18 averages obtained using mirror data from UN Comtrade; tariff increase is defined as the difference between the LDC rate and the best alternative rate in 2016; utilization rates are computed as the ratio between the exports that enter under the LDCs scheme and the total exports towards the preference-granting members (2015–16 average, where available); for column 1 the utilization rates of the LDC schemes are set to 1.

Table 10: Changes in exports and tariffs of Bangladesh by country of destination

Importer	Initial exports	Change in exports	Percentage change	Effective tariff change*
MARKETS WITH AN EFFECTIVE TARIFF CHANGE				
European Union	20,098,203	-5,281,554	-26.28%	8.91
Canada	1,274,933	-536,147	-42.05%	14.47
Japan	1,271,295	-388,128	-30.53%	8.89
Republic of Korea	318,903	-87,781	-27.53%	7.94
China	923,479	-76,559	-8.29%	2.96
New Zealand	85,208	-10,137	-11.90%	4.62
Armenia	15,271	991	6.49%	0.45
Switzerland	520,272	4,919	0.95%	2.12
Thailand	62,754	5,601	8.93%	0.03
Chile	92,339	7,029	7.61%	0.67
India	864,915	28,586	3.31%	0.00
Norway	267,501	29,019	10.85%	0.01
Russian Federation	820,051	72,100	8.79%	0.19
OTHER REGIONS				
United States	6,082,199	446,622	7.34%	0.00
Middle East	1,171,403	109,396	9.34%	0.00
Australia	689,356	75,806	11.00%	0.00
Rest of Asia	925,707	75,520	8.16%	0.00
Rest of Americas	688,906	71,322	10.35%	0.00
Africa	321,417	22,720	7.07%	0.00
Commonwealth of Independent States (CIS)	153,061	12,489	8.16%	0.00
Rest of Europe	49,761	5,632	11.32%	0.00
Kazakhstan	43,578	4,010	9.20%	0.00
South Asia	173,737	1,490	0.86%	0.00
Iceland	11,049	1,299	11.76%	0.00
Pacific	2,951	252	8.53%	0.00
Total	37,633,733	-5,372,278	-14.28%	5.73

Note: Change in exports (in thousands of dollars and as a percentage of initial exports).

* The effective tariff change is measured in percentage points. It takes into account the increase in tariff rates due to the loss of LDC-specific preferences as well as preference utilization by graduating LDCs. A lower preference utilization will result in a lower effective increase in tariffs as a smaller fraction of exports will be exposed to changes in tariff rates after graduation.

Table 11: Changes in exports and tariffs of Bangladesh by MTN category

MTN category	Initial exports	Change in exports	Percentage change	Effective tariff change*
Clothing	31,746,823	-4,844,572	-15.26%	6.25
Textiles	2,410,786	-183,999	-7.63%	2.55
Leather, footwear, etc.	1,168,239	-163,117	-13.96%	5.27
Fish and fish products	581,935	-114,599	-19.69%	4.75
Transport equipment	176,179	-30,301	-17.20%	4.28
Beverages and tobacco	147,769	-13,421	-9.08%	5.24
Chemicals	266,647	-6,624	-2.48%	0.53
Minerals and metals	245,552	-4,786	-1.95%	0.83
Cereals and preparations	68,111	-3,939	-5.78%	2.48
Fruits, vegetables, plants	114,458	-2,692	-2.35%	0.71
Manufactures n.e.s.	256,449	-1,169	-0.46%	0.14
Oilseeds, fats and oils	46,937	-1,065	-2.27%	0.58
Wood, paper, etc.	105,976	-1,054	-0.99%	0.38
Other agricultural products	32,722	-329	-1.00%	0.26
Electrical machinery	75,708	-272	-0.36%	0.10
Sugars and confectionery	16,200	-227	-1.40%	0.45
Non-electrical machinery	69,633	-80	-0.12%	0.03
Coffee, tea	6,998	-18	-0.26%	0.07
Dairy products	2,168	-12	-0.56%	0.37
Animal products	1,989	-3	-0.16%	0.09
Petroleum	80,525	0	0.00%	0.00
Cotton	11,930	0	0.00%	0.00
Total	37,633,733	-5,372,278	-14.28%	5.73

Note: Change in exports (in thousands of dollars and as a percentage of initial exports).

* The effective tariff change is measured in percentage points. It takes into account the increase in tariff rates due to the loss of LDC-specific preferences as well as preference utilization by graduating LDCs. A lower preference utilization will result in a lower effective increase in tariffs as a smaller fraction of exports will be exposed to changes in tariff rates after graduation.

Table 12: Changes in exports and tariffs of clothing from Bangladesh by country of destination

Importer	Initial exports	Change in exports	Percentage change	Effective tariff change*
European Union	18,339,879	-4,854,272	-26.47%	9.17
Canada	1,093,149	-468,106	-42.82%	15.03
Japan	961,381	-310,214	-32.27%	9.14
Republic of Korea	228,972	-74,053	-32.34%	9.36
China	502,762	-21,008	-4.18%	2.75
New Zealand	75,445	-9,982	-13.23%	5.00
Switzerland	475,743	139	0.03%	2.25
Chile	83,897	7,010	8.36%	0.65
India	237,487	15,522	6.54%	0.00
United States	5,267,928	398,590	7.57%	0.00
Middle East	894,397	100,789	11.27%	0.00
Russian Federation	727,416	70,969	9.76%	0.00
Rest of Americas	600,088	67,195	11.20%	0.00
Australia	605,499	67,038	11.07%	0.00
Rest of Asia	552,201	65,551	11.87%	0.00
Norway	232,878	24,826	10.66%	0.00
Africa	179,007	19,810	11.07%	0.00
CIS	95,155	10,848	11.40%	0.00
Rest of Europe	46,049	5,275	11.46%	0.00
Thailand	37,816	4,362	11.53%	0.00
Kazakhstan	38,863	3,817	9.82%	0.00
Iceland	9,666	1,080	11.18%	0.00
Armenia	9,804	1,022	10.43%	0.00
South Asia	5,687	613	10.79%	0.00
Pacific	1,425	224	15.72%	0.00
Total	31,746,823	-4,844,572	-15.26%	6.25

Note: Change in exports (in thousands of dollars and as a percentage of initial exports).

* The effective tariff change is measured in percentage points. It takes into account the increase in tariff rates due to the loss of LDC-specific preferences as well as preference utilization by graduating LDCs. A lower preference utilization will result in a lower effective increase in tariffs as a smaller fraction of exports will be exposed to changes in tariff rates after graduation.

Table 13: Change in exports of Bangladesh of the 12 HS lines with the largest changes

HS line	Product description	Initial exports	Change in exports	Percentage change
610910	T-shirts (cotton)	4,619,085	-989,727	-21.43%
620342	Trousers for men (cotton)	4,888,118	-535,170	-10.95%
611030	Jerseys (fibres)	2,007,350	-436,243	-21.73%
611020	Jerseys (cotton)	2,198,012	-402,027	-18.29%
620462	Trousers for women (cotton)	2,804,465	-322,917	-11.51%
620520	Shirts for men (cotton)	1,831,274	-211,484	-11.55%
610990	T-shirts (other)	692,915	-174,602	-25.20%
610462	Trousers for women (cotton)	928,258	-167,676	-18.06%
610510	T-shirts for men (cotton)	845,268	-150,200	-17.77%
030617	Shrimps and prawns	416,467	-89,580	-21.51%
620343	Trousers for men (synthetic fibres)	567,623	-78,710	-13.87%
611120	Babies' clothing (cotton)	708,300	-68,063	-9.61%

Note: Change in exports (in thousands of dollars and as a percentage of initial exports).

Bhutan

4.1 Export structure

Table 14 provides an overview of the export structure of Bhutan and the importance of preference-granting countries as destination markets, at both the aggregate and sectoral levels. Bhutan exported on average US\$ 296 million of merchandise from 2016 to 2018.

Exports from Bhutan are concentrated in minerals and metals, in particular ferro-alloys, dolomite and limestone, which account for 63 per cent of merchandise exports. The other main export products include chemicals (13 per cent), in particular carbides and hydrogen, electrical energy (11 per cent, included under “manufactures, n.e.s.” in Table 14), transport equipment (4 per cent) and beverages and tobacco (3 per cent).

The most important destination market is India, accounting for 81 per cent of Bhutan’s merchandise exports. Other markets with LDC-specific preference schemes are less relevant, i.e. the European Union (11 per cent), the United States (2 per cent), Japan (1 per cent) and Turkey (1 per cent). Around 4 per cent of Bhutan’s exports go to other markets, mainly Bangladesh, with which Bhutan has already a special bilateral trade arrangement in place and is reportedly close to finalizing a preferential trade agreement.

Bhutan’s main export products are predominantly shipped to India, i.e. 83 per cent of exports of minerals and metals, 84 per cent of chemicals and 97 per cent of electricity. The European Union is a significant destination market for minerals and metals (10 per cent), in particular ferro-alloys; and both the United States (11 per cent) and the European Union (3 per cent) are important markets for chemicals, in particular hydrogen.

4.2 Impact on preferential market access

Table 15 illustrates the loss of tariff preference for Bhutan’s main export products in preference-granting markets. For the top 12 export products at the level of HS headings, the table shows the increase in tariffs that Bhutan will face in destination markets when utilizing the best available alternative tariff compared to the LDC duty rate. The best alternative tariffs are GSP preferences for Australia, Canada, the European Union, Japan, New Zealand, Norway, the Russian Federation, Switzerland, Turkey and the United States. In the case of India, Table 15 uses MFN rates as best alternative tariffs, as the WTO IDB does not contain any data on India’s bilateral RTA with Bhutan and SAFTA. Furthermore, in the cases of Chile, China and Thailand, the best alternative tariffs are also MFN rates.

The top 12 export products represent around 88 per cent of Bhutan’s merchandise exports and are heavily concentrated towards India. Bhutan would face significant tariff increases in the Indian market if exports were subject to MFN rates, although reportedly all of Bhutan’s trade with India takes place under their bilateral RTA. For instance, average tariffs would increase by 8 percentage points for ferro-alloys and carbides (HS 7202), 15 percentage points for electricity (HS 2716) and 10 percentage points for iron and non-alloy steel (HS 7207).

Based on its current export structure, Bhutan will face limited increases in tariffs after graduation in other preference-granting markets. Exports to the European Union and other preference-granting markets are limited, often with no trade occurring. Most of its major export products, such as ferroalloys, carbides, cardamom, dolomite and limestone, will see no or small tariff increases in preference-granting markets. However, in the

Table 14: Exports of Bhutan by sector and shares of destination markets in sectoral exports (2016–18 average)

MTN code	Product	Partner: World		Share of destination markets in product exports (%)						
		% of total	US\$ million	Australia	Canada	Chile	China	European Union	India	Japan
	Total	100	296	0	0	0	0	11	81	1
12	Minerals and metals	63	188	0	0	0	0	10	83	0
14	Chemicals	13	39	0	0	0	0	3	84	0
22	Manufactures n.e.s.	11	34	0	0	0	0	0	97	1
21	Transport equipment	4	11	9	0	0	0	81	1	0
08	Beverages and tobacco	3	9	0	0	0	0	0	98	0
19	Non-electrical machinery	1	3	1	0	0	0	10	64	1
15	Wood, paper, etc.	1	3	0	0	0	0	8	87	0
06	Oilseeds, fats and oils	1	3	0	0	0	0	0	100	0
03	Fruits, vegetables, plants	1	2	0	0	0	0	6	63	11
10	Other agricultural products	1	2	0	0	0	0	1	93	1
17	Clothing	0	1	12	0	0	0	82	0	0
20	Electrical machinery	0	1	1	1	0	1	38	15	3
02	Dairy products	0	1	0	0	0	0	0	99	1
05	Cereals and preparations	0	0	0	0	0	0	0	69	1
16	Textiles	0	0	0	1	0	0	19	5	0
18	Leather, footwear, etc.	0	0	2	0	0	0	2	1	0
01	Animal products	0	0	0	0	0	0	100	0	0
11	Fish and fish products	0	0	0	0	0	0	25	0	0
04	Coffee, tea	0	0	0	33	0	30	0	0	0

Source: UN Comtrade.

Note: Export values and shares are based on mirrored import statistics and represent averages for 2016–18. Blanks indicate missing data. Zeros (0) indicate shares below 0.5 per cent. Green shading indicates share value, with highest share in dark green. Sectors are shown in terms of MTN categories. The MTN categories' coverage of HS codes is included in World Tariff Profiles 2019 (pages 40–41) (available at https://www.wto.org/english/res_e/publications_e/world_tariff_profiles19_e.htm).

United States, tariffs on ferro-alloys would increase by 1 percentage point if Bhutan were to use GSP preferences after graduation.

Figure 5 shows Bhutan's utilization of LDC-specific preferences by providing a breakdown of imports by duty type for preference-granting countries. The first bar ("Total") shows that Bhutan's dependence on LDC-specific preferences is minimal, as less than 10 per cent of exports make use of LDC-specific preferences. Bhutan benefits from

bilateral preferences in India, its main export market, whereas it relies on LDC-specific preferences when exporting to other significant markets such as the European Union, the United States and Japan. While 91 per cent of exports to the United States and 71 per cent of the exports towards the European Union make use of LDC-specific preferences, only 18 per cent of exports to Japan use LDC preferences. In a few other markets, i.e. Canada and Switzerland, the large majority of exports enter MFN duty-free.

Republic of Korea	Norway	New Zealand	Russian Federation	Switzerland	Thailand	Turkey	United States	Rest of the world
0	0	0	0	0	0	1	2	4
0	0	0	0	0	0	1	0	4
0	0	0	0	0	0	0	11	1
0	0	0	0	0	0	0	1	0
0	0	0	0	0	1	0	3	5
0	0	0	0	0	0	0	0	1
0	0	0	0	0	0	0	10	14
0	0	0	0	0	0	0	2	3
0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	1	19
0	0	0	0	0	0	0	0	4
0	0	0	0	0	0	0	1	5
1	0	0	0	0	5	0	1	35
0	0	0	0	0	0	0	0	0
0	0	0	0	0	1	0	10	18
0	0	1	0	0	0	0	0	73
1	0	0	0	0	22	0	71	1
0	0	0	0	0	0	0	0	0
74	0	0	0	0	1	0	0	0
0	0	0	0	0	21	0	0	17

Figure 6 provides estimates of the increase in tariff costs for Bhutan following graduation, obtained by multiplying exports with the percentage point increase in tariffs due to the loss of preferences. In the case of full preference utilization, tariff costs would increase by around US\$ 18 million, which corresponds to 6.3 per cent of merchandise exports to preference-granting members. However, it should be noted that these number do not take into account the fact that Bhutan will continue to

benefit from bilateral preferences when exporting to India. Taking preference utilization into account, tariff costs are estimated to increase by only US\$ 0.5 million (0.2 per cent of merchandise exports to preference-granting members).

Table 16 provides estimates of tariff cost increases for the top 12 export products. Assuming full preference utilization, tariff costs are expected to increase the most for ferro-alloys (US\$ 6.3 million), electricity (US\$ 5.06 million) and carbides (US\$ 1.6 million), mainly in India.

Table 15. Top 12 export products of Bhutan and increase in tariffs in destination markets following graduation

HS code	Product	Partner: World		Exports in US\$ million towards destination markets (Tariff increase in percentage points due to preference loss)			
		% of total	US\$ million	Australia	Canada	Chile	China
7202	Ferro-alloys	48	139		0		0
				(0)	(0)	(6)	
2716	Electrical energy	11	33			(6)	
					(0)		
2849	Carbides	8	22			(6)	
				(0)	(0)		
7207	Iron or non-alloy steel and semi-finished products thereof	5	14			(6)	
				(0)	(0)		
2518	Dolomite	5	13			(6)	
				(0)	(0)		
8802	Aeroplanes, helicopters and other powered aircrafts	3	8		0		
				(0)	(0)		
3920	Plastic plates, sheets, film, foil and strip	2	6			(6)	
				(0)	(0)		
2520	Gypsum, anhydrite and plasters	2	5			(6)	
				(0)	(0)		
2804	Hydrogen, rare gases and other non-metals	1	4		0		
				(0)	(0)		
2202	Waters and other non-alcoholic beverages	1	3			(6)	
				(0)	(6)		
2009	Fruit and vegetable juices	1	3			(6)	
				(0)	(3)		
1511	Palm oil	1	3			(6)	
				(0)	(0)		

Source: UN Comtrade (trade flows) and WTO IDB (tariffs).

Note: For every importer-product couple, the first row reports average export values, while the second row reports in parentheses the preference loss due to graduation, i.e. the difference between the best available alternative rate and the LDC duty rate. Whenever such a figure is not available, it means that either Bhutan is not eligible for the LDC duty rate or the tariffs are not ad valorem. Export values are based on mirrored import statistics and represent averages for 2016–18. Tariffs are for the year 2019, with the exception of China (2017), India (2016) and Turkey (2016).

4.3 Impact on exports: partial equilibrium estimates

The projected changes in exports from Bhutan by destination country are depicted in Table 17. The reduction in total exports is expected to be about US\$ 4.3 million, corresponding to 1.44 per cent of initial exports. The largest reduction is expected for exports to the European Union, with US\$ 8.5 million far exceeding the overall reduction in exports. The fall in exports to the European Union will be 26.73 per cent of initial exports to the

European Union. The total loss in exports will be smaller than the loss in exports to the European Union, because more than half of the lost exports to the European Union will be compensated for by increased exports to India, Bhutan's dominant trading partner. In shares, the reduction of exports to the United States is also sizeable (11.29 per cent). However, this corresponds with a value of trade of only US\$ 0.7 million. Thus, the simulations project that there will be a substantial shift in Bhutan's export destinations, from the European Union towards India. This

	European Union	India	Japan	Republic of Korea	Norway	New Zealand	Russian Federation	Switzerland	Thailand	Turkey	United States
	16	117	1	0				1	0	2	1
	(1)	(8)	(2)	(3)	(0)	(0)	(5)	(0)	(0)	(0)	(1)
		33									
	(0)	(15)		(5)	(0)		(0)	(0)	(0)	(0)	(0)
		22									
	(1)	(8)	(0)	(5)	(0)	(0)	(4)	(0)	(0)	(1)	(1)
		14									
	(0)	(10)	(0)	(0)	(0)	(0)	(5)	(0)	(0)	(0)	(0)
		13									
	(0)	(5)	(0)	(3)	(0)	(0)	(4)	(0)	(0)	(0)	(0)
		8									
	(0)	(7)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
		6							0		
	(2)	(6)	(0)	(6)	(0)	(4)	(0)	(0)	(2)	(3)	(0)
	(0)	(5)	(0)	(5)	(0)	(0)	(4)	(0)	(2)	(0)	(0)
		0									4
	(0)	(8)	(0)	(5)	(0)	(0)	(5)	(0)	(1)	(0)	(0)
		0							0		
	(6)	(30)	(12)	(8)	(0)	(5)		(0)	(8)	(6)	(12)
		3									
	(14)	(28)	(20)	(28)	(0)	(5)	(3)	(0)	(25)	(0)	(0)
		3									
	(2)	(18)	(0)	(2)	(0)	(0)	(1)	(0)	(0)	(0)	(0)

implies that Bhutan will become even more dependent on India as an export destination.

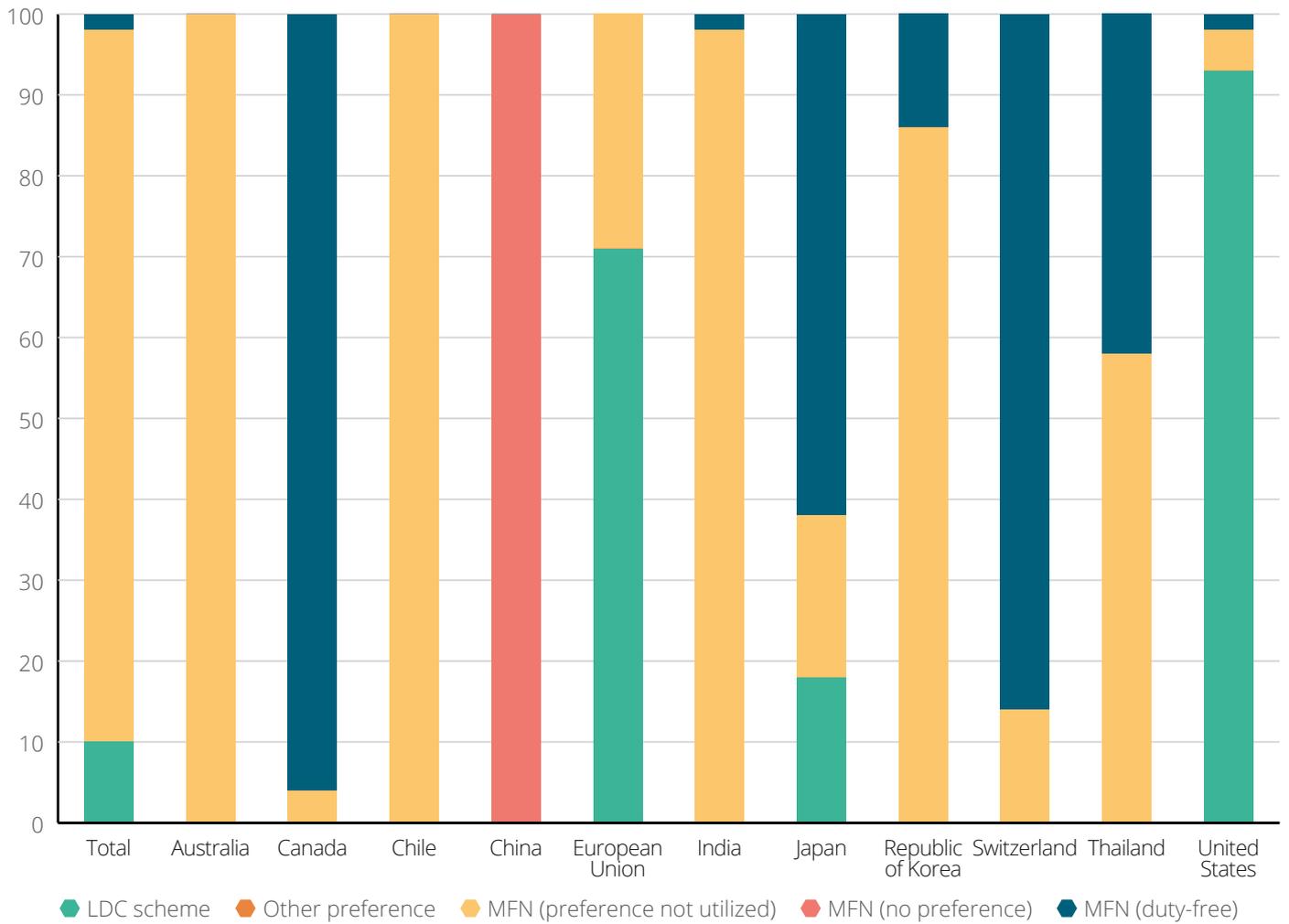
Table 18 shows that the bulk of the reduction in exports from Bhutan is projected to take place in one sector – minerals and metals – amounting to US\$ 3.0 million. The expected changes for the other MTN categories are an order of magnitude smaller.

Table 19 shows that the reduction in exports is concentrated in ferro-silicon (>55 per cent silicon), and to a lesser extent in the product lines silicon, palm oil and its

fractions, as well as milk and cream. Although the change in exports in other product categories, such as cheese and vegetables, are large in percentage terms (as a share of initial exports), the reduction in value terms is minor.

To conclude, the main projected changes in Bhutan's export patterns are a shift of exports from the European Union to India and an overall reduction in Bhutan's exports of about US\$ 3 million, concentrated in minerals and metals and in chemicals.

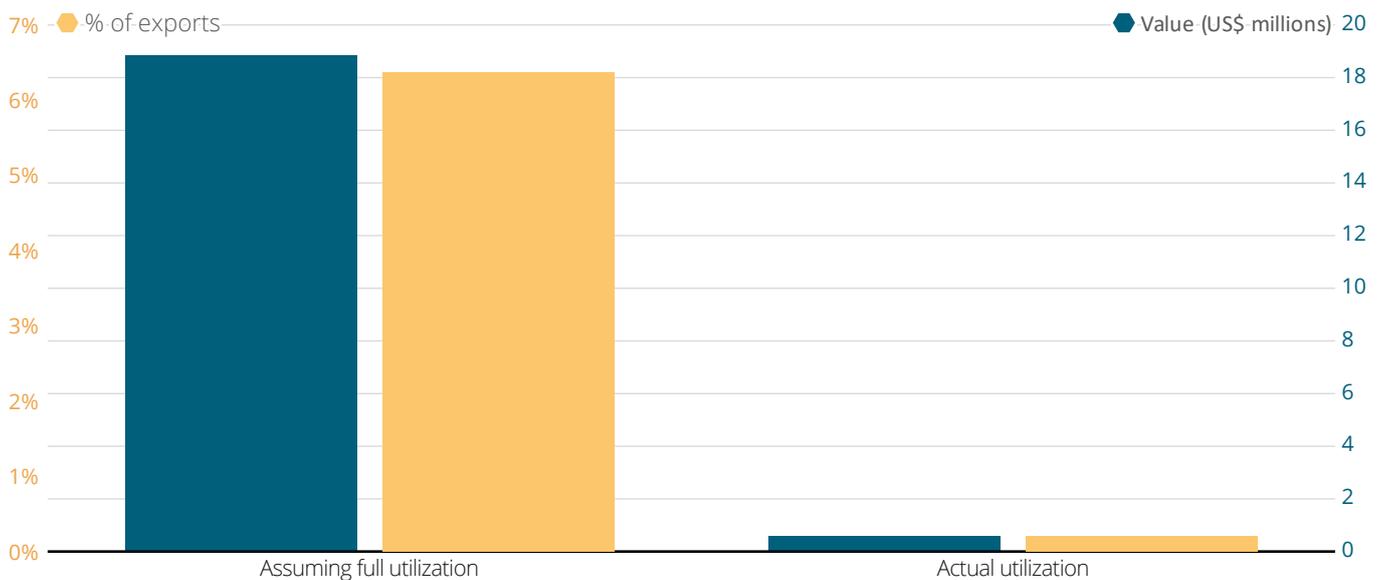
Figure 5: Preference utilization: imports from Bhutan by duty type



Source: WTO IDB.

Note: The figure is based on disaggregated import data for 2015–16 for Australia, Canada, Chile, China, the European Union, India, Japan, the Republic of Korea, Norway, Switzerland, Thailand and the United States.

Figure 6: Additional tariff costs on exports due to loss of preferences



Source: WTO IDB and UN Comtrade.

Note: The tariff cost increase for a product is estimated by multiplying the expected increase in tariff rates following graduation with the product's average export value during 2016–18.

Table 16: Top 12 export products – additional tariff costs due to loss of preferences

HS Code	Description	Increase in tariff costs (US\$ thousands)	
		Full utilization	Actual utilization
7202	Ferro-alloys	6,325	468
2716	Electrical energy	5,054	0
2849	Carbides	1,622	0
7207	Iron or non-alloy steel and semi-finished products thereof	1,434	0
2518	Dolomite	662	0
8802	Aeroplanes, helicopters and other powered aircrafts	219	0
3920	Plastic plates, sheets, film, foil and strip	276	0
2520	Gypsum, anhydrite and plasters	0	0
2804	Hydrogen, rare gases and other non-metals	152	120
2202	Waters and other non-alcoholic beverages	897	0
2009	Fruit and vegetable juices	565	0
1511	Palm oil	0	0

Source: WTO IDB (tariff and utilization data) and UN Comtrade (exports).

Note: The tariff cost increase is computed as the product of exports, tariff rate increases and utilization rates. Exports are 2016–18 averages obtained using mirror data from UN Comtrade; tariff increase is defined as the difference between the LDC rate and the best alternative rate in 2016; utilization rates are computed as the ratio between the exports that enter under the LDCs scheme and the total exports towards the preference-granting members (2015–16 average, where available); for column 1 the utilization rates of the LDC schemes are set to 1.

Table 17: Changes in exports and tariffs of Bhutan by country of destination

Importer	Initial exports	Change in exports	Percentage change	Effective tariff change*
MARKETS WITH AN EFFECTIVE TARIFF CHANGE				
European Union	31,647	-8,458	-26.28%	8.91
United States	6,050	-683	-42.05%	14.47
Republic of Korea	94	-6	-30.53%	8.89
New Zealand	4	-1	-27.53%	7.94
Chile	9	0	-8.29%	2.96
Thailand	576	16	-11.90%	4.62
Canada	503	32	6.49%	0.45
Japan	1,539	35	0.95%	2.12
India	240,321	4,630	8.93%	0.03
OTHER REGIONS				
Switzerland	620	32	7.34%	0.00
Rest of Europe	387	25	9.34%	0.00
Rest of Asia	1,668	8	11.00%	0.00
Middle East	327	6	8.16%	0.00
Rest of Americas	502	6	10.35%	0.00
China	166	5	7.07%	0.00
South Asia	7,132	3	8.16%	0.00
Africa	1,091	2	11.32%	0.00
Russian Federation	0	0	9.20%	0.00
Australia	1,165	0	0.86%	0.00
Total	295,867	-4,251	-14.28%	5.73

Note: Change in exports (in thousands of dollars and as a percentage of initial exports).

* The effective tariff change is measured in percentage points. It takes into account the increase in tariff rates due to the loss of LDC-specific preferences as well as preference utilization by graduating LDCs. A lower preference utilization will result in a lower effective increase in tariffs as a smaller fraction of exports will be exposed to changes in tariff rates after graduation.

Table 18: Changes in exports and tariffs of Bhutan by MTN category

MTN category	Initial exports	Change in exports	Percentage change	Effective tariff change*
Minerals and metals	190,795	-3,040	-1.59%	0.25
Chemicals	37,619	-577	-1.53%	0.32
Oilseeds, fats and oils	2,541	-403	-15.88%	3.75
Dairy products	538	-205	-38.20%	15.00
Fruits, vegetables, plants	2,210	-16	-0.70%	0.18
Clothing	256	-5	-1.81%	0.76
Beverages and tobacco	8,762	-3	-0.03%	0.00
Textiles	196	-1	-0.71%	0.21
Other agricultural products	2,417	0	-0.01%	0.00
Leather, footwear, etc.	162	0	-0.03%	0.03
Cereals and preparations	432	0	-0.01%	0.00
Electrical machinery	629	0	0.00%	0.00
Non-electrical machinery	2,742	0	0.00%	0.00
Manufactures n.e.s.	33,846	0	0.00%	0.00
Animal products	0	0	0.00%	0.00
Coffee, tea	2	0	0.00%	0.00
Wood, paper, etc.	2,487	0	0.00%	0.00
Transport equipment	10,201	0	0.00%	0.00
Fish and fish products	34	0	0.01%	0.00
Total	295,867	-4,251	-1.44%	0.26

Note: Change in exports (in thousands of dollars and as a percentage of initial exports).

* The effective tariff change is measured in percentage points. It takes into account the increase in tariff rates due to the loss of LDC-specific preferences as well as preference utilization by graduating LDCs. A lower preference utilization will result in a lower effective increase in tariffs as a smaller fraction of exports will be exposed to changes in tariff rates after graduation.

Table 19: Change in exports of Bhutan of the 12 HS lines with the largest change

HS line	Product description	Initial exports	Change in exports	Percentage change
720221	Ferro-silicon (>55% silicon)	141,399	-3,011	-2.13%
280469	Silicon	4,430	-577	-13.02%
151190	Palm oil and its fractions	2,541	-403	-15.88%
040120	Milk and cream (fat content >1%)	523	-199	-38.12%
720229	Ferro-silicon (<55% silicon)	2,533	-28	-1.10%
070959	Fresh mushrooms and truffles	273	-12	-4.27%
040690	Cheese	6	-3	-51.88%
040110	Milk and cream (fat content <1%)	9	-3	-33.41%
610910	T-shirts and other vests of cotton	63	-3	-4.38%
071190	Vegetables	6	-2	-40.64%
220210	Water as beverage	1,937	-2	-0.12%
071239	Dried mushrooms and truffles	7	-1	-21.13%

Note: Change in exports (in thousands of dollars and as a percentage of initial exports).

Kiribati

5.1 Export structure

Table 20 provides an overview of the export structure of Kiribati and the importance of preference-granting countries as destination markets, at both the aggregate and sectoral levels. Kiribati exported on average US\$ 154 million of merchandise from 2016 to 2018.

Exports from Kiribati are concentrated in fish and fish products, which account for 93 per cent of merchandise exports. Other main export products include oilseeds, fats and oil (4 per cent), particularly copra.

Kiribati's most important destination market is Thailand, accounting for more than one half (58 per cent) of Kiribati's merchandise exports. Other markets with LDC-specific preference schemes are less significant, i.e. Japan (6 per cent), China (3 per cent), the United States (3 per cent) and the Republic of Korea (2 per cent). Around 27 per cent of Kiribati's exports go to markets with no preferential access for LDCs ("rest of the world" in Table 20).

Kiribati's main export product, fish, is predominantly shipped to Thailand (62 per cent), followed by Japan (6 per cent) and China (3 per cent). A substantial part of Kiribati's fish exports is directed towards non preference-granting members (24 per cent). Oilseeds, fats and oils are exclusively exported to non preference-granting economies, and the same is true for less export-intensive sectors, such as coffee and tea, and fruits, vegetables and plants.

5.2 Impact on preferential market access

Table 21 illustrates the loss of tariff preferences for Kiribati's main export products in preference-granting markets. For the top 12 export products at the level of HS headings, the table shows the increase in tariffs that Kiribati will face in destination markets when using the best available alternative tariff compared to the LDC duty rate. The best alternative tariffs are GSP preferences for Canada, the European Union, Japan, Norway, the Russian Federation, Switzerland, Turkey and the United States, and South Pacific Regional Trade and Economic Cooperation Agreement (SPARTECA) preferences for Australia and New Zealand. In the case of Chile, India and Thailand, the best available alternative tariff is the MFN rate. Kiribati is currently not eligible for LDC-specific preferences in China.

The top 12 export products represent around 99 per cent of Kiribati's merchandise exports. Frozen fish (HS 0303) accounts for 88 per cent of Kiribati's exports, and is mainly exported towards Thailand, where it can enter MFN duty-free (in contrast, the Japanese and Korean markets will be characterized by a 3 per cent tariff increase) upon graduation. Fish fillets (HS 0304) will see a 3 per cent tariff increase in Japan, while copra (HS 1203), which is the third most-exported product, will not face tariff increases since it is exported exclusively towards countries which do not grant any LDC-specific duty schemes.

Table 20: Exports of Kiribati by sector and shares of destination markets in sectoral exports (2016–18 average)

MTN code	Product	Partner: World		Share of destination markets in product exports (%)						
		% of total	US\$ million	Australia	Canada	Chile	China	European Union	India	Japan
	Total	100	154	0	0	0	3	1	0	6
11	Fish and fish products	93	143	0	0	0	3	0	0	6
06	Oilseeds, fats and oils	4	6	0	0	0	0	0	0	0
19	Non-electrical machinery	1	1	18	27	0	0	15	0	0
14	Chemicals	1	1	0	0	0	14	39	29	0
22	Manufactures n.e.s.	0	1	1	12	0	0	3	0	1
21	Transport equipment	0	1	1	1	0	0	5	0	0
12	Minerals and metals	0	0	3	3	0	1	16	0	6
20	Electrical machinery	0	0	6	6	0	1	18	0	1
17	Clothing	0	0	3	0	0	0	7	0	0
08	Beverages and tobacco	0	0	0	0	0	0	100	0	0
18	Leather, footwear, etc.	0	0	5	0	0	0	2	0	0
15	Wood, paper, etc.	0	0	1	1	0	0	84	0	0
10	Other agricultural products	0	0	0	0	0	0	1	0	0
05	Cereals and preparations	0	0	0	0	0	0	1	0	0
16	Textiles	0	0	0	5	0	0	1	0	0
04	Coffee, tea	0	0	0	0	0	0	0	0	0
03	Fruits, vegetables, plants	0	0	0	0	0	0	0	0	0
13	Petroleum	0	0	0	11	0	0	0	0	0

Source: UN Comtrade.

Note: Export values and shares are based on mirrored import statistics and represent averages for 2016–2018. Blanks indicate missing data. Zeros (0) indicate shares below 0.5 per cent. Green shading indicates share value, with highest share in dark green. Sectors are shown in terms of MTN categories. The MTN categories' coverage of HS codes is included in World Tariff Profiles 2019 (pages 40–41) (available at https://www.wto.org/english/res_e/publications_e/world_tariff_profiles19_e.htm).

Figure 7 shows Kiribati's utilization of LDC-specific preferences by providing a breakdown of imports by duty type for preference-granting countries. The first bar ("Total") shows that only 2 per cent of total exports to preference-granting members make use of LDC-specific preferences, while 87 per cent enter MFN duty-free. The low degree of preference usage is partially explained by the fact that most exports towards Thailand – Kiribati's most important trading partner – enter MFN duty-free.

The same happens with Australia, Canada, the Republic of Korea and the United States, where respectively 100 per cent, 90 per cent, 95 per cent and 94 per cent of Kiribati's exports enter MFN duty-free. The only preference-granting member whose LDC scheme is significantly used is Japan, where 24 per cent of Kiribati's exports use the scheme, especially in the fish industry.

Figure 8 provides estimates of the additional tariff costs on exports for Kiribati following graduation, computed as the

Republic of Korea	Norway	New Zealand	Russian Federation	Switzerland	Thailand	Turkey	United States	Rest of the world
2	0	0	0	0	58		3	27
2	0	0	0	0	62		2	24
0	0	0	0	0	0		0	100
0	0	0	0	0	28		2	9
1	0	0	0	0	0		7	10
0	0	0	0	0	0		48	33
2	0	0	0	0	0	0	0	91
11	0	2	0	0	0		2	56
9	0	1	22	0	0	0	17	17
0	0	0	0	0	0		69	20
0	0	0	0	0	0		0	0
0	0	0	0	0	0		23	69
0	0	0	0	0	0		8	6
0	0	0	0	0	0		0	99
0	0	0	0	0	0		81	18
0	0	0	0	0	1		0	93
0	0	0	0	0	0		0	100
0	0	0	0	0	0		0	100
0	0	0	0	0	0		0	89

product of exports with the increase in tariffs due to the loss of preferences. If Kiribati fully used preferences, tariff costs would increase by more than US\$ 300,000, which corresponds to 0.2 per cent of merchandise exports to preference-granting members. Taking into account current preference utilization, the increase in tariffs would be around US\$ 70,000, i.e. less than 0.05 per cent of the total export value towards the preference-granting members for which utilization data are available.

Table 22 shows the increase in trade costs of the top 12 products ranked according to export values. Frozen fish (HS 0303) and fish fillets (HS 0304) will be most affected by the loss of preferences in terms of additional tariff costs. Other products, including copra, are not expected to incur additional tariff costs, either because they are mainly exported towards non preference-granting members or because they are already exported duty-free under the MFN regime.

Table 21: Top 12 export products of Kiribati and increase in tariffs in destination markets following graduation

HS code	Product	Partner: World		Exports in US\$ million towards destination markets (Tariff increase in percentage points due to preference loss)			
		% of total	US\$ million	Australia	Canada	Chile	China
0303	Fish (frozen) excl. fish fillets	88	139				3
				0	0	(6)	
0304	Fish fillets	4	6				0
				0	0	(6)	
1203	Copra	3	5				
				0	0	(6)	
1513	Coconut (copra), palm kernel or babassu oil	1	2				
				0	0	(6)	
0301	Fish (alive)	1	1		0		
				0	0	(6)	
0302	Fish (fresh or chilled) excl. fish fillets	1	1	0			
				0	0	(6)	
8901	Ships, boats and vessels for the transport of persons or goods	0	0				
				0	0	(3)	
8411	Turbo-jets, turbo-propellers and other gas turbines	0	0	0	0		
				0	0	(6)	
8438	Machinery for the manufacture of food or drink	0	0				
				0	0	(6)	
2903	Halogenated derivatives of hydrocarbons	0	0				
				0	0	(6)	
3904	Polymers of vinyl chloride	0	0				
				0	0	(6)	
9031	Measuring or checking instruments, appliances and machines	0	0	0			
				0	0	(6)	

Source: UN Comtrade (trade flows) and WTO IDB (tariffs).

Note: For every importer-product couple, the first row reports average export values, while the second row reports in parentheses the preference loss due to graduation, i.e. the difference between the best available alternative rate and the LDC duty rate. Whenever such a figure is not available, it means that either Kiribati is not eligible for the LDC duty rate or the tariffs are not ad valorem. Export values are based on mirrored import statistics and represent averages for 2016–18. Tariffs are for the year 2019, with the exception of China (2017), India (2016) and Turkey (2016).

5.3 Impact on exports: partial equilibrium estimates

The estimated impact of the loss of preferences from graduation on Kiribati's exports is small. The total projected reduction in exports is US\$ 0.299 million (Table 23). Changes in exports to one trading partner, Japan, are driving the results. The reduction in exports to Japan is projected to be US\$ 0.3 million, which is 3.55 per cent of

initial exports from Kiribati to Japan. The reason for the minor impact on total exports from Kiribati is that tariffs applied on its exported products will effectively only change by 0.06 per cent.

The fall in exports to Japan is larger than the total fall in exports, because some of the lost exports to Japan are diverted to other destinations, in particular China.

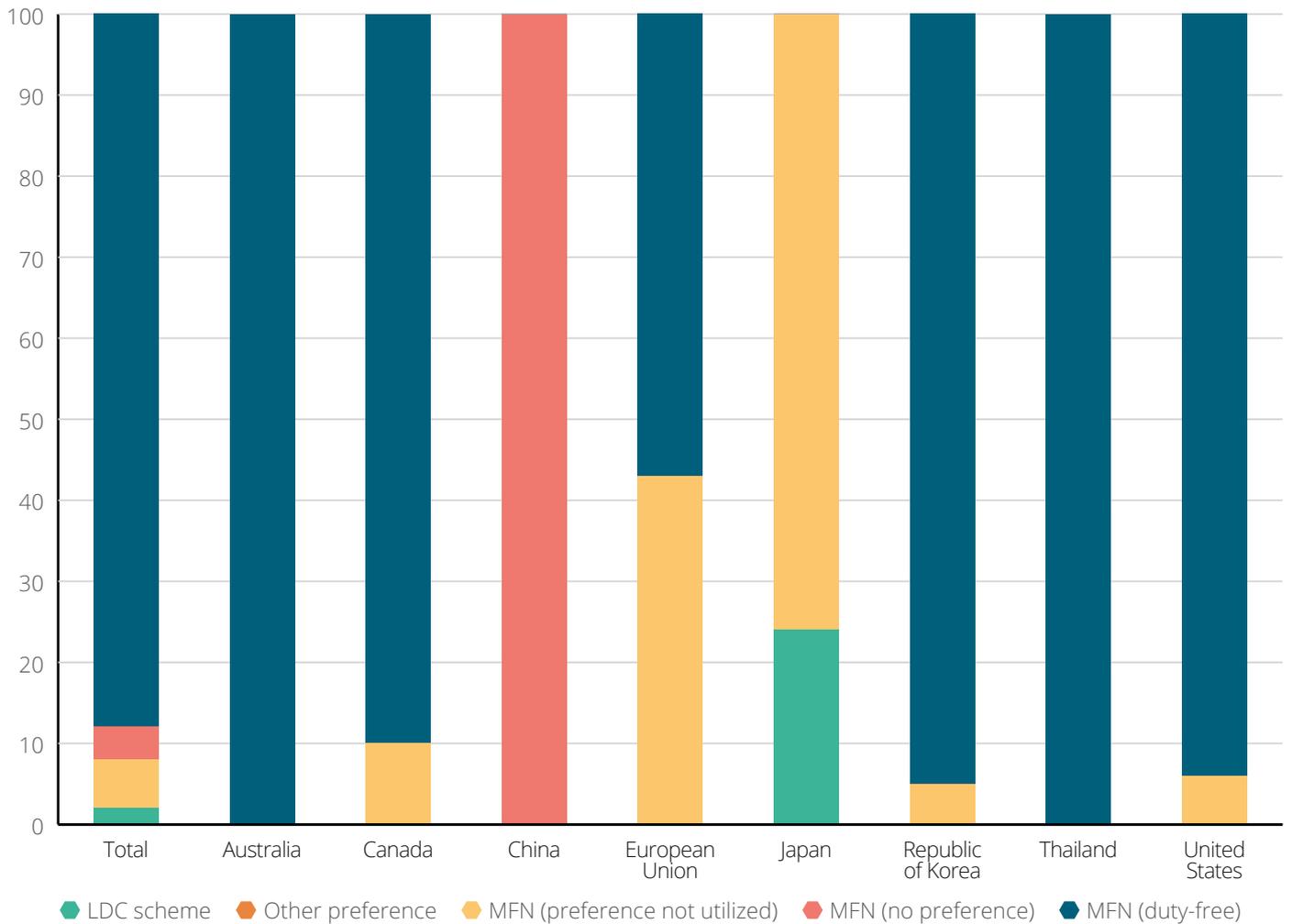
European Union	India	Japan	Republic of Korea	Norway	New Zealand	Russian Federation	Switzerland	Thailand	Turkey	United States
		4	3					95		
(7)	(30)	(3)	(3)	(0)	(0)	(5)	(0)	(0)	(0)	(0)
0		4								2
(7)	(30)	(3)	(11)	(0)	(0)	(4)	(0)	(3)	(0)	(0)
(0)	(0)	(0)	(3)	(0)	(0)	(4)	(0)	(0)	(0)	(0)
			0							
(5)	(79)	(0)	(5)	(0)	(0)	(1)	(0)	(0)	(0)	(0)
0		0	0							1
(5)	(30)	(1)	(3)	(0)	(0)	(7)	(0)	(30)	(0)	(0)
		0								1
(7)	(30)	(3)	(10)	(0)	(0)	(4)	(0)	(0)	(0)	(0)
(0)	(10)	(0)	(0)	(0)	(0)	(4)	(0)	(5)	(0)	(0)
(0)	(8)	(0)	(6)	(0)	(0)	(2)	(0)	(0)	(0)	(0)
								0		
(0)	(5)	(0)	(8)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
0										
(2)	(5)	(0)	(5)	(0)	(0)	(5)	(0)	(0)	(2)	(1)
		0								
(3)	(8)	(1)	(7)	(0)	(0)	(0)	(0)	(2)	(3)	(0)
		0								0
(0)	(6)	(0)	(1)	(0)	(0)	(0)	(0)	(0)	(0)	(0)

Table 24 shows that the total reduction in projected exports is concentrated in one sector: fish and fish products. The projected changes for all other categories are smaller than US\$ 0.001 million. This is the dominant export category for Kiribati, accounting for US\$ 143 million out of a total of US\$ 154 million. Therefore, the US\$ 0.298 million reduction in projected exports of fish and fish products is only 0.21 per cent as a share of initial exports of fish and fish products.

Table 25 shows that the reduction in exports is concentrated in three tuna products. The most important product is frozen tuna, with a projected reduction of US\$ 0.267 million.

To summarize the results for Kiribati, the total projected reduction is minimal: US\$ 0.3 million corresponding to 0.19 per cent of initial exports. The reduction is driven by exports to Japan and by exports of fish and fish products.

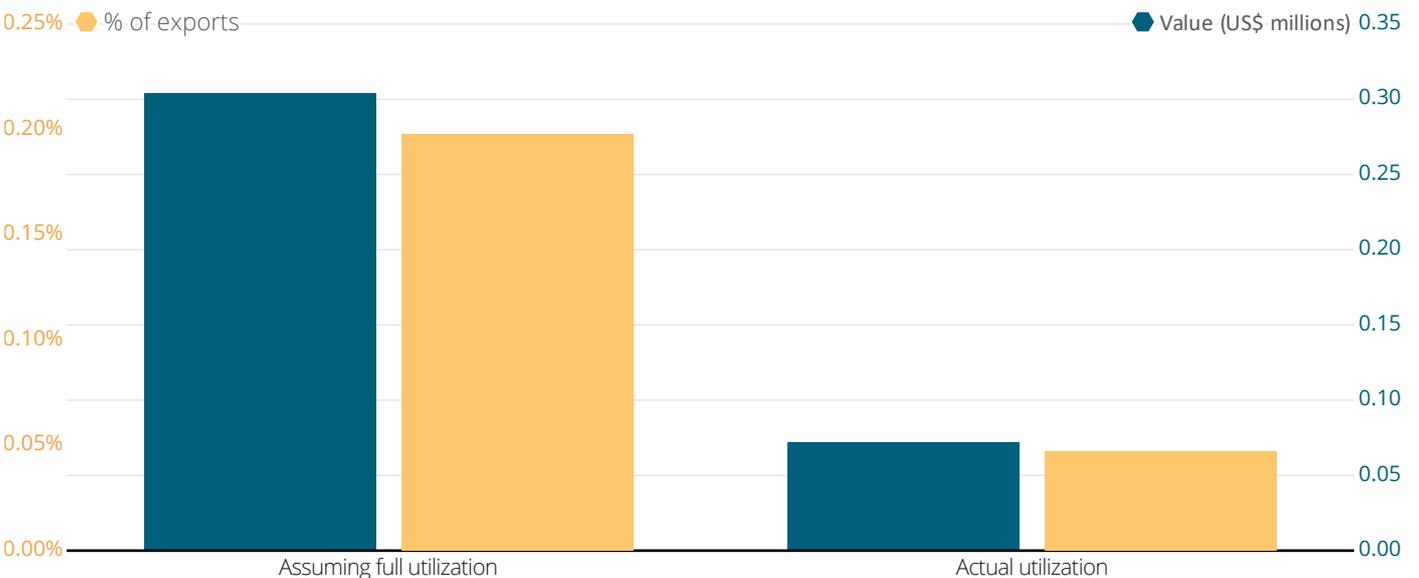
Figure 7: Preference utilization: imports from Kiribati by duty type



Source: WTO IDB.

Note: The figure is based on disaggregated import data for 2015–16 for Australia, Canada, Chile, China, the European Union, India, Japan, the Republic of Korea, Norway, Switzerland, Thailand and the United States.

Figure 8: Additional tariff costs on exports due to loss of preferences



Source: WTO IDB and UN Comtrade.

Note: The tariff cost increase for a product was estimated by multiplying the expected increase in tariff rates following graduation with the product's average export value in 2016–18.

Table 22: Top 12 export products: additional tariff costs due to loss of preferences

HS Code	Description	Increase in tariff costs (US\$ thousands)	
		Full utilization	Actual utilization
0303	Fish (frozen) excl. fish fillets	149	8
0304	Fish fillets	147	64
1203	Copra	0	0
1513	Coconut (copra), palm kernel or babassu oil	0	0
0301	Fish (alive)	4	0
0302	Fish (fresh or chilled) excl. fish fillets	0	0
8901	Ships, boats and vessels for the transport of persons or goods	0	0
8411	Turbo-jets, turbo-propellers and other gas turbines	0	0
8438	Machinery for the manufacture of food or drink	0	0
2903	Halogenated derivatives of hydrocarbons	0	0
3904	Polymers of vinyl chloride	0	0
9031	Measuring or checking instruments, appliances and machines	2	0

Source: WTO IDB (tariff and utilization data) and UN Comtrade (exports).

Note: The tariff cost increase is computed as the product of exports, tariff rate increases and utilization rates. Exports are 2016–18 averages obtained using mirror data from UN Comtrade; tariff increase is defined as the difference between the LDC rate and the best alternative rate in 2016; utilization rates are computed as the ratio between the exports that enter under the LDCs scheme and the total exports towards the preference-granting members (2015–16 average, where available); for column 1 the utilization rates of the LDC schemes are set to 1.

Table 23: Changes in exports and tariffs of Kiribati by country of destination

Importer	Initial exports	Change in exports	Percentage change	Effective tariff change*
MARKETS WITH AN EFFECTIVE TARIFF CHANGE				
Japan	8,569	-305	-26.28%	8.91
European Union	652	-54	-42.05%	14.47
Canada	414	0	-30.53%	8.89
Republic of Korea	3,541	1	-27.53%	7.94
United States	4,181	48	-8.29%	2.96
OTHER REGIONS				
China	4,873	12	0.25%	0.00
Rest of Asia	23,896	3	0.01%	0.00
Rest of Americas	15,503	1	0.01%	0.00
Africa	815	0	0.03%	0.00
Iceland	9	0	0.47%	0.00
Australia	251	0	0.00%	0.00
New Zealand	15	0	0.00%	0.00
Pacific	1,645	0	0.00%	0.00
Russian Federation	52	0	0.00%	0.00
India	226	0	0.00%	0.00
CIS	0	0	0.00%	0.00
South Asia	103	0	0.00%	0.00
Norway	0	0	-2.18%	0.00
Middle East	247	0	0.00%	0.00
Rest of Europe	98	0	-0.02%	0.00
Thailand	88,641	-6	-0.01%	0.00
Total	153,730	-299	-0.19%	0.06

Note: Change in exports (in thousands of dollars and as a percentage of initial exports).

* The effective tariff change is measured in percentage points. It takes into account the increase in tariff rates due to the loss of LDC-specific preferences as well as preference utilization by graduating LDCs. A lower preference utilization will result in a lower effective increase in tariffs as a smaller fraction of exports will be exposed to changes in tariff rates after graduation.

Table 24: Changes in exports and tariffs of Kiribati by MTN category

MTN category	Initial exports	Change in exports	Percentage change	Effective tariff change*
Fish and fish products	143,111	-298	-0.21%	0.06
Clothing	159	-1	-0.42%	0.26
Chemicals	482	0	-0.03%	0.01
Minerals and metals	568	0	-0.02%	0.01
Leather, footwear, etc.	132	0	-0.01%	0.01
Cereals and preparations	117	0	-0.01%	0.00
Wood, paper, etc.	18	0	-0.01%	0.00
Other agricultural products	58	0	0.00%	0.00
Coffee, tea	7	0	0.00%	0.00
Beverages and tobacco	158	0	0.00%	0.00
Fruits, vegetables, plants	1	0	0.00%	0.00
Petroleum	0	0	0.00%	0.00
Non-electrical machinery	1,042	0	0.00%	0.00
Electrical machinery	216	0	0.00%	0.00
Transport equipment	555	0	0.00%	0.00
Manufactures n.e.s.	583	0	0.00%	0.00
Textiles	53	0	0.00%	0.00
Oilseeds, fats and oils	6,472	0	0.00%	0.00
Total	153,730	-299	-0.19%	0.06

Note: Change in exports (in thousands of dollars and as a percentage of initial exports).

* The effective tariff change is measured in percentage points. It takes into account the increase in tariff rates due to the loss of LDC-specific preferences as well as preference utilization by graduating LDCs. A lower preference utilization will result in a lower effective increase in tariffs as a smaller fraction of exports will be exposed to changes in tariff rates after graduation.

Table 25: Change in exports of Kiribati of the 12 HS lines with the largest change

HS line	Product description	Initial exports	Change in exports	Percentage change
030487	Frozen tuna	5,715	-267	-4.67%
030342	Frozen yellowfin tuna	24,832	-25	-0.10%
030234	Fresh bigeye tuna	780	-7	-0.86%
610821	Cotton briefs and panties	8	-1	-8.29%
030499	Frozen fish meat n.e.s	6	0	-7.56%
294000	Sugars, chemically pure	2	0	-5.28%
611090	Jerseys (other)	1	0	-6.73%
392690	Plastics	5	0	-1.19%
741999	Copper	1	0	-3.18%
732393	Table, kitchen or household articles	0	0	-7.73%
831000	Sign-plates, name plates	1	0	-5.45%
620520	Shirts for men (cotton)	7	0	-0.33%

Note: Change in exports (in thousands of dollars and as a percentage of initial exports).

Lao PDR

6.1 Export profile

Table 26 provides an overview of the merchandise export structure of Lao PDR and the importance of preference-granting countries as destination markets, at both the aggregate and sectoral levels. Lao PDR exported on average US\$ 5.1 billion of merchandise from 2016 to 2018.

Lao PDR's main export products are minerals and metals, in particular copper and gold, which account for 29 per cent of merchandise exports, electrical energy (25 per cent, included under "manufactures, n.e.s." in Table 26), electrical machinery (11 per cent), wood (10 per cent), footwear (5 per cent) and clothing (5 per cent).

The most important destination markets are Thailand and China, which respectively account for 44 per cent and 28 per cent of Lao PDR's merchandise exports. Other significant markets with LDC-specific preference schemes are the European Union (6 per cent), India (4 per cent) and Japan (3 per cent). Around 11 per cent of exports go to markets with no preferential market access for LDCs ("rest of the world" in Table 26).

More than two-thirds of exports of minerals and metals go to China (47 per cent) and Thailand (26 per cent). China is the main export destination for a number of other sectors, including wood and paper (72 per cent), leather and footwear (60 per cent), and cereals and preparations (72 per cent). Thailand is the top destination for electricity (95 per cent – included under "manufactures n.e.s." in Table 26), electrical machinery (60 per cent), and fruits, vegetables and plants (61 per cent). In the case of clothing exports, the European Union is the main destination market (71 per cent), followed by Japan (15 per cent).

6.2 Impact on preferential market access

Table 27 illustrates the loss of tariff preference for Lao PDR's main export products in preference-granting markets. For the top 12 export products at the level of HS headings, the table shows the increase in tariffs that Lao PDR will face in destination markets when utilizing the best available alternative tariff compared to the LDC duty rate. The best alternative tariffs are GSP preferences for Australia, Canada, the European Union, Japan, New Zealand, Norway, the Russian Federation, Switzerland and Turkey, and preferences under APTA for the Republic of Korea. For India and Thailand, MFN rates are used as best alternative tariffs, since the WTO IDB does not contain data on preferential tariffs for Lao PDR's RTAs with these countries. Finally, in the case of Chile, the best available alternative tariff is also the MFN rate.

The top 12 export products represent around 73 per cent of Lao PDR's merchandise exports. Lao PDR is expected to face only limited tariff increases following graduation. No increase in tariffs will occur for exports to China, its main trading partner. In the case of Thailand, Lao PDR will also not face tariff increase for key products such as electricity (HS 2716), refined copper (HS 7403) or parts of transmission apparatus (HS 8529) if it were to rely on MFN tariffs after graduation. Moreover, Lao PDR will continue to benefit from preferential market access in Thailand under their bilateral RTA as well as the ASEAN Free Trade Area.

Clothing products will face tariff increases in a number of markets. For instance, tariffs on men's or boy's suits (HS 6203) are expected to increase to an average of 10 per cent in the European Union and 18 per cent in Canada. In Japan, clothing exports will continue to benefit from duty-free access under the ASEAN-Japan RTA. Coffee is another

Table 26: Exports of Lao PDR by sector and shares of destination markets in sectoral exports (2016–18 average)

MTN code	Product	Partner: World		Share of destination markets in product exports (%)						
		% of total	US\$ million	Australia	Canada	Chile	China	European Union	India	Japan
	Total	100	5,145	0	1	0	28	6	4	3
12	Minerals and metals	29	1,487	0	0		47	1	11	1
22	Manufactures n.e.s.	25	1,289	0	0	0	0	0	0	0
20	Electrical machinery	11	591	2	3	0	5	1	0	3
15	Wood, paper, etc.	10	507	0	0		72	0	3	4
18	Leather, footwear, etc.	5	266	0	0	0	60	7	0	6
17	Clothing	5	262	0	2	0	0	71	0	15
03	Fruits, vegetables, plants	3	154		0		7	7	0	2
05	Cereals and preparations	2	121	0	0		72	4	0	
04	Coffee, tea	2	115	0	0		4	21	1	16
07	Sugars and confectionery	2	91				23	60		
08	Beverages and tobacco	1	61	0	0		16	2	0	0
14	Chemicals	1	59	0	17	0	22	1	0	13
19	Non-electrical machinery	1	34	2	0		1	1		0
21	Transport equipment	1	29	0	0	0		1		
10	Other agricultural products	1	29		0		70	3	0	10
16	Textiles	0	25	0	0		1	6		31
01	Animal products	0	15		0		34	0		
06	Oilseeds, fats and oils	0	7				10	3		1
13	Petroleum	0	2					0		
11	Fish and fish products	0	0		4			2		
02	Dairy products	0	0					0		14
09	Cotton	0	0							

Source: UN Comtrade.

Note: Export values and shares are based on mirrored import statistics and represent averages for 2016–18. Blanks indicate missing data. Zeros (0) indicate shares below 0.5 per cent. Green shading indicates share value, with highest share in dark green. Sectors are shown in terms of MTN categories. The MTN categories' coverage of HS codes is included in World Tariff Profiles 2019 (pages 40–41) (available at https://www.wto.org/english/res_e/publications_e/world_tariff_profiles19_e.htm).

product for which tariffs are expected to increase in the European Union (3 per cent), India (29 per cent), Japan (3 per cent) and the Republic of Korea (3 per cent).

Figure 9 shows Lao PDR's utilization of LDC-specific preferences by providing a breakdown of imports by duty type for preference-granting countries. The first bar ("Total") shows that Lao PDR's dependence on LDC-specific preferences is

Republic of Korea	Norway	New Zealand	Russian Federation	Switzerland	Thailand	Turkey	United States	Rest of the world
1	0	0	0	1	44	0	2	11
0	0	0	0	2	26	0	1	10
0	0	0	0	0	95	0	0	4
0	0	0	1	0	70	0	9	6
2	0	0	0	0	6		0	13
0	0	0	0	0	1	0	1	23
0	0	0	1	3	1	0	3	3
2	0			0	61	0	0	21
0	0			0	13		0	10
3	0		0	0	12		3	40
					3			13
0		9		0	24		1	49
2	0		1	0	28	0	12	3
0	0	0	0	3	41	0	11	41
1				0	5	0	0	92
0	0		0	1	11	0	0	6
0		0		0	44	17	1	1
0					0			66
0				0	78			8
6					1			93
66								28
								86
					100			

limited, as only 7 per cent of exports make use of LDC-specific preferences. This can be explained by the fact that more than 80 per cent of exports from Lao PDR to Thailand, its main destination market, enter MFN duty-free. In addition, Lao PDR

benefits from a bilateral RTA with Thailand; however, this is not captured in the data on preferences utilization. Lao PDR is not covered by the LDC schemes of China and the United States. Utilization of LDC-specific preferences is highest in the

Table 27: Top 12 export products of Lao PDR and increase in tariffs in destination markets following graduation

HS code	Product	Partner: World		Exports in US\$ million towards destination markets (Tariff increase in percentage points due to preference loss)			
		% of total	US\$ million	Australia	Canada	Chile	China
2716	Electrical energy	24	1,237		(0)	(6)	
2603	Copper ores and concentrates	11	566	(0)	(0)	(6)	494
7403	Refined copper or copper alloys (unwrought)	8	424	(0)	(0)	(6)	109
8529	Parts of transmission apparatus	5	250	(0)	(0)	(6)	0
8517	Telephone sets and other transmission apparatus	5	250	10	16	0	21
4001	Natural rubber and other gums	4	215	(0)	(0)	(6)	155
4403	Wood in the rough	3	163	(0)	(0)	(6)	151
3104	Fertilizers (mineral or chemical)	3	129	(0)	(0)	(6)	41
4407	Wood sawn or chipped lengthwise	3	129	0	0	(6)	66
7108	Gold (unwrought, semi-manufactured or in powder form)	3	128	(0)	(0)	(6)	
0901	Coffee	2	109	(0)	1	(6)	4
6203	Men's suits, ensembles, jackets, blazers (not knitted)	2	99	0	0	(6)	0
				(0)	(18)	(6)	

Source: UN Comtrade (trade flows) and WTO IDB (tariffs).

Note: For every importer-product couple, the first row reports average export values, while the second row reports in parentheses the preference loss due to graduation, i.e. the difference between the best available alternative rate and the LDC duty rate. Whenever such a figure is not available, it means that either Lao PDR is not eligible for the LDC duty rate or the tariffs are not ad valorem. Export values are based on mirrored import statistics and represent averages for 2016–18. Tariffs are for the year 2019, with the exception of China (2017), India (2016) and Turkey (2016).

European Union, where more than 70 per cent of exports make use of the LDC preferences, while in Japan, the Republic of Korea and Norway, 30–40 per cent of exports enter under their respective LDC schemes.

Figure 10 provides estimates of the additional tariff costs on exports for Lao PDR following graduation, obtained by multiplying exports with the percentage point increase in tariffs due to the loss of preferences. In the case of full preference utilization, tariff costs would increase by around US\$ 97 million, which corresponds to 2.1 per cent of merchandise exports to preference-granting members. Taking preference utilization into account, tariff costs are estimated to increase by just above US\$ 29 million (0.64 per cent of merchandise exports to preference-granting members).

Table 28 provides estimates of tariff cost increases for the top 12 export products, showing that the top export products are estimated to represent less than a quarter of the increase

in tariff costs. Among the top 12 products, tariff costs will increase the most for gold and men's or boy's suits. If current preference utilization is taken into account, the increase in duty cost falls to zero for a number of products, but remains similar for men's or boy's suits, reflecting the utilization of preferences in the EU market.

6.3 Impact on exports: partial equilibrium estimates

The projected reduction in Lao PDR's exports is more than US\$ 66 million, corresponding to 1.45 per cent of initial exports (Table 29). Most of the fall is projected to be in exports to the European Union (US\$ 64.5 million) which is almost 21 per cent of initial exports. The reason for this sizeable drop is that tariffs will effectively increase by 8.4 percentage points.

Exports to other regions are also expected to fall, in particular for Japan (by US\$ 5.4 million/3.53 per cent),

European Union	India	Japan	Republic of Korea	Norway	New Zealand	Russian Federation	Switzerland	Thailand	Turkey	United States
								1189		
(0)	(15)		(0)	(0)		(0)	(0)	(0)	(0)	
	55	17	0					0		
(0)	(3)	(0)	(0)	(0)	(0)	(2)	(0)	(0)	(0)	(0)
0								315		
(0)	(3)	(0)	(3)	(0)	(0)	(3)	(0)	(0)	(0)	(0)
0			0					250		
(0)	(8)	(0)	(2)	(0)	(2)	(0)	(0)	(1)	(0)	
1	0	6	2	0	1	5	0	117	0	49
(0)	(1)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
0	0							0	0	0
(0)	(34)	(0)	(1)	(0)	(1)	(0)	(0)	(1)	(0)	
	4	0						0		
(0)	(5)	(0)	(0)	(0)	(0)	(1)	(0)	(0)	(0)	
	0	1	6		0			10		0
(0)	(8)	(0)	(3)	(0)	(0)	(0)	(0)	(2)	(0)	
0	0	0	0			0		9		0
(0)	(10)	(0)	(3)	(0)	(2)	(2)	(0)	(2)	(0)	
	90							35		0
(0)	(10)	(0)	(2)	(0)	(0)	(0)	(0)	(0)	(0)	
24	1	18	3	0		0	0	9		3
(3)	(29)	(3)	(3)	(0)	(3)	(1)	(0)	(0)	(1)	
81	0	12	0	1	0	0	1	0	0	0
(10)	(10)	(0)	(4)	(0)	(10)		(4)	(5)	(10)	

Canada (by US\$ 2.6 million/7.47 per cent) and the Republic of Korea (by US\$1.8 million/6.16 per cent). Exports to the other regions are projected to rise because of trade diversion, although the size of this rise is limited. What is remarkable is that exports to some of the regions phasing out preferences, such as Norway, the Russian Federation and Switzerland, are projected to rise. This is because the indirect trade diversion effect is larger than the direct impact of higher tariffs.

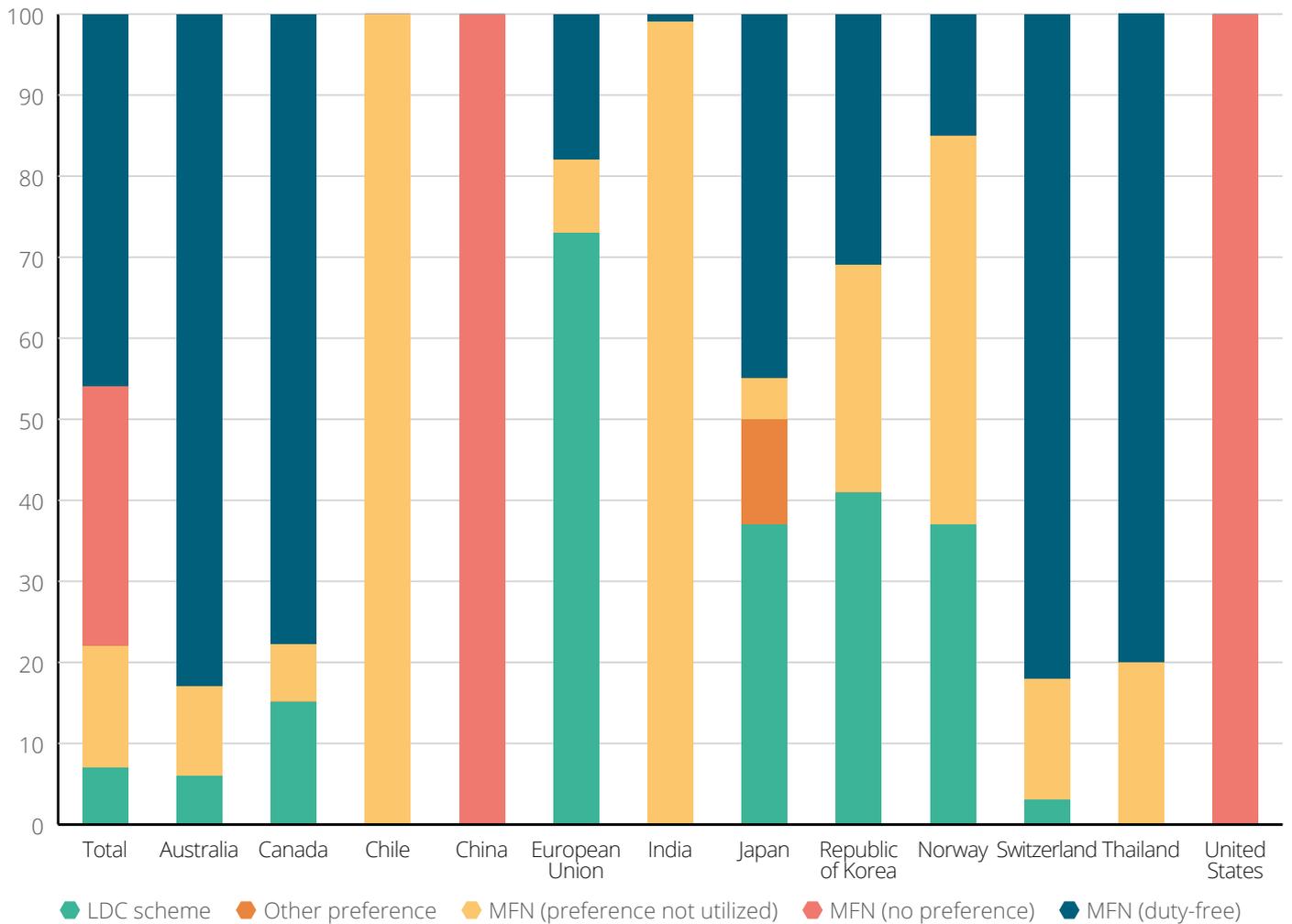
Table 30 shows that most of the projected fall in exports for Lao PDR will take place in the MTN categories of clothing, sugars and confectionary, leather and footwear, as well as cereals and preparations. Exports of clothing are expected to fall by more than US\$ 45 million, corresponding to 17 per cent of initial exports, whereas exports of sugars are projected to fall by almost US\$ 9 million, corresponding to more than 21 per cent of initial exports. Exports of leather and footwear are

projected to fall by more than US\$ 8 million, corresponding to only 4.17 per cent of initial exports. Exports of cereals and preparations are estimated to decrease by US\$ 2 million (2.05 per cent). The projected impact on other MTN categories is an order of magnitude smaller.

Table 31 shows that most of the products with the largest projected reductions in exports belong to the MTN category clothing. In addition, exports of sugars, footwear and broken rice are estimated to see large reductions.

To summarize the results for Lao PDR, the projected reduction in exports (about US\$ 66 million, corresponding to 1.45 per cent of initial exports) is concentrated in exports to the European Union (about US\$ 64.5 million or 21 per cent of initial exports). The product categories with the largest projected fall in exports are clothing, sugars, footwear and rice.

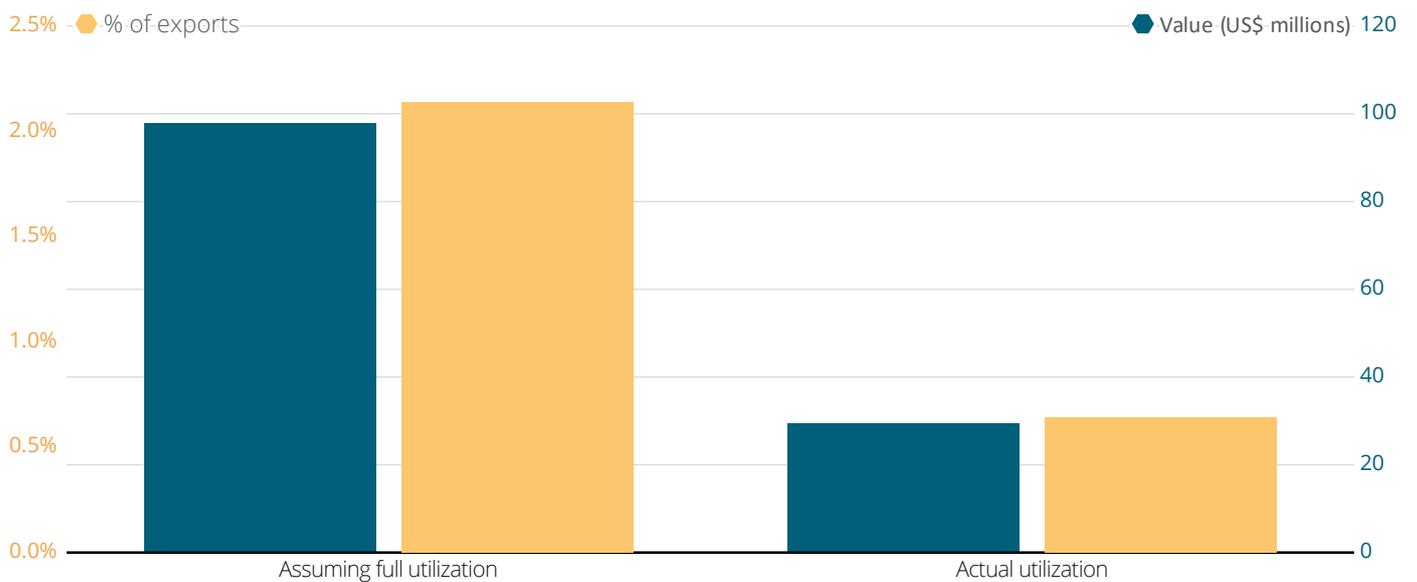
Figure 9: Preference utilization: imports from Lao PDR by duty type



Source: WTO IDB.

Note: The figure is based on disaggregated import data for 2015–16 for Australia, Canada, Chile, China, the European Union, India, Japan, the Republic of Korea, Norway, Switzerland, Thailand and the United States.

Figure 10: Additional tariff costs on exports due to loss of preferences



Source: WTO IDB and UN Comtrade.

Note: The tariff cost increase for a product is estimated by multiplying the expected increase in tariff rates following graduation with the product's average export value during 2016–18.

Table 28: Top 12 export products: additional tariff costs due to loss of preferences

HS Code	Description	Increase in tariff costs (US\$ thousands)	
		Full utilization	Actual utilization
2716	Electrical energy	0	0
2603	Copper ores and concentrates	1,365	0
7403	Refined copper or copper alloys (unwrought)	0	0
8529	Parts of transmission apparatus	2,231	0
8517	Telephone sets and other transmission apparatus	12	0
4001	Natural rubber and other gums	2	0
4403	Wood in the rough	291	0
3104	Fertilizers (mineral or chemical)	28	0
4407	Wood sawn or chipped lengthwise	273	5
7108	Gold (unwrought, semi-manufactured or in powder form)	9,698	0
0901	Coffee	51	9
6203	Men's suits, ensembles, jackets, blazers (not knitted)	9,267	8,890

Source: WTO IDB (tariff and utilization data) and UN Comtrade (exports).

Note: The tariff cost increase is computed as the product of exports, tariff rate increases and utilization rates. Exports are 2016–18 averages obtained using mirror data from UN Comtrade; tariff increase is defined as the difference between the LDC rate and the best alternative rate in 2016; utilization rates are computed as the ratio between the exports that enter under the LDCs scheme and the total exports towards the preference-granting members (2015–16 average, where available); for column 1 the utilization rates of the LDC schemes are set to 1.

Table 29: Changes in exports and tariffs of Lao PDR by country of destination

Importer	Initial exports	Change in exports	Percentage change	Effective tariff change*
MARKETS WITH AN EFFECTIVE TARIFF CHANGE				
European Union	308,540	-64,488	-20.90%	8.41
Japan	154,799	-5,463	-3.53%	1.51
Canada	34,270	-2,559	-7.47%	2.69
Republic of Korea	29,434	-1,812	-6.16%	0.84
New Zealand	7,236	-499	-6.90%	1.59
Chile	113	5	4.58%	0.12
Norway	1,835	134	7.29%	0.04
Russian Federation	10,355	247	2.39%	0.01
Switzerland	44,523	923	2.07%	0.10
OTHER REGIONS				
China	1,419,800	5,010	0.35%	0.00
United States	104,026	1,364	1.31%	0.00
Thailand	2,261,097	520	0.02%	0.00
Australia	13,833	172	1.25%	0.00
India	185,177	22	0.01%	0.00
Iceland	242	17	6.82%	0.00
Armenia	92	10	10.85%	0.00
Kazakhstan	504	6	1.23%	0.00
Total	4,581,917	-66,313	-1.45%	0.65

Note: Change in exports (in thousands of dollars and as a percentage of initial exports).

* The effective tariff change is measured in percentage points. It takes into account the increase in tariff rates due to the loss of LDC-specific preferences as well as preference utilization by graduating LDCs. A lower preference utilization will result in a lower effective increase in tariffs as a smaller fraction of exports will be exposed to changes in tariff rates after graduation.

Table 30: Changes in exports and tariffs of Lao PDR by MTN category

MTN category	Initial exports	Change in exports	Percentage change	Effective tariff change*
Clothing	259,392	-45,042	-17.36%	7.26
Sugars and confectionery	41,082	-8,596	-20.92%	14.82
Leather, footwear, etc.	204,382	-8,521	-4.17%	1.50
Cereals and preparations	109,284	-2,244	-2.05%	1.02
Wood, paper, etc.	441,248	-811	-0.18%	0.04
Fruits, vegetables, plants	120,520	-385	-0.32%	0.12
Beverages and tobacco	31,971	-382	-1.19%	0.37
Other agricultural products	26,662	-117	-0.44%	0.17
Chemicals	57,158	-89	-0.15%	0.04
Textiles	25,263	-75	-0.30%	0.10
Coffee, tea	65,010	-30	-0.05%	0.01
Oilseeds, fats and oils	6,247	-10	-0.16%	0.01
Electrical machinery	585,240	-8	0.00%	0.00
Manufactures n.e.s.	1,237,558	-3	0.00%	0.00
Dairy products	7	-1	-22.27%	5.40
Fish and fish products	69	0	-0.34%	0.08
Non-electrical machinery	20,056	0	0.00%	0.00
Transport equipment	2,118	0	0.00%	0.00
Cotton	1	0	0.00%	0.00
Petroleum	117	0	0.00%	0.00
Minerals and metals	1,343,386	0	0.00%	0.00
Animal products	5,148	2	0.03%	0.00
Total	4,581,917	-66,313	-1.45%	0.65

Note: Change in exports (in thousands of dollars and as a percentage of initial exports).

* The effective tariff change is measured in percentage points. It takes into account the increase in tariff rates due to the loss of LDC-specific preferences as well as preference utilization by graduating LDCs. A lower preference utilization will result in a lower effective increase in tariffs as a smaller fraction of exports will be exposed to changes in tariff rates after graduation.

Table 31: Change in exports of Lao PDR of the 12 HS lines with the largest change

HS line	Product description	Initial exports	Change in exports	Percentage change
620343	Trousers for men (synthetic fibres)	71,498	-14,687	-20.54%
170114	Sugars	37,896	-8,596	-22.68%
640399	Footwear (leather)	20,442	-5,923	-28.97%
610711	Underpants for men	15,470	-4,075	-26.34%
620520	Shirts for men (cotton)	20,418	-3,705	-18.14%
620342	Trousers for men (cotton)	17,575	-3,092	-17.60%
620333	Jackets for me (synthetic fibres)	9,743	-2,205	-22.63%
611030	Jerseys (fibres)	8,864	-2,003	-22.60%
610910	T-shirts (cotton)	9,454	-1,985	-21.00%
100640	Broken rice	4,110	-1,788	-43.50%
640391	Footwear (covering ankle)	12,893	-1,438	-11.15%
621133	Track-suit for men (fibres)	6,356	-1,262	-19.86%

Note: Change in exports (in thousands of dollars and as a percentage of initial exports).

Myanmar

7.1 Export structure

Table 32 provides an overview of the export structure of Myanmar and the importance of preference-granting countries as destination markets, at both the aggregate and sectoral levels. Myanmar exported on average US\$ 13.3 billion of merchandise from 2016 to 2018.

Myanmar's main export products are minerals and metals, which account for 43 per cent of merchandise exports, as well as clothing (26 per cent), fruits, vegetables and plants (8 per cent), leather and footwear (5 per cent), fish and fish products (4 per cent), wood and paper (3 per cent), and cereals and preparations (3 per cent).

The most important destination markets are China and Thailand, which respectively account for 27 per cent and 20 per cent of Myanmar's merchandise exports. Other significant markets with LDC-specific preference schemes are the European Union (18 per cent), Japan (8 per cent), India (6 per cent) and the Republic of Korea (4 per cent). Around 11 per cent of exports go to markets with no preferential market access for LDCs (rest of the world).

Exports of minerals and metals go mostly to two markets, i.e. China (51 per cent) and Thailand (40 per cent). The European Union is the main destination for clothing (52 per cent), followed by Japan (22 per cent) and the Republic of Korea (11 per cent). India, on the other hand, is the most important trading partner for the fruits and vegetables sector (57 per cent). Exports of leather and footwear go mainly to China (30 per cent), the European Union (23 per cent) and Japan (20 per cent). For fish products, Thailand (31 per cent) is the main destination market, followed by Japan (12 per cent), the European Union (8 per cent) and China (7 per cent).

7.2 Impact on preferential market access

Table 33 illustrates the loss of tariff preferences for Myanmar's main export products in preference-granting markets. For the top 12 export products at the level of HS headings, the table shows the increase in tariffs that Myanmar will face in destination markets when utilizing the best available alternative tariff compared to the LDC duty rate. The best alternative tariffs are GSP preferences for Australia, Canada, the European Union, Japan, New Zealand, Norway, the Russian Federation, Switzerland, Turkey and the United States, and preferences under ASEAN for the Republic of Korea. For Chile, China, India and Thailand, MFN rates are used as best alternative tariffs. While Myanmar benefits from preferences under the Association of Southeast Asian Nations (ASEAN) Free Trade Area in Thailand, as well as under ASEAN's RTAs with China and India, the WTO IDB does not contain data on preferential tariffs for these RTAs.

The top 12 export products represent around 65 per cent of Myanmar's merchandise exports. Myanmar is expected to face only limited tariff increases following graduation. No increase in tariffs will occur for exports to its main trading partner, China. On the other hand, the EU, Thai and Indian markets will be characterized by tariff increases, concentrated in the clothing and agricultural sectors. There will be no tariff changes in Japan.

Clothing products will face tariff increases in a number of markets. For instance, women's coats (HS 6202) and men's coats (HS 6201) will see a 10 per cent increase in tariffs in the European Union, a 12 per cent increase in the Republic of Korea and a 17 per cent increase in Canada. There will be no change in Japan, which is the third most important destination for this product after the European Union and the Republic of Korea. Similarly, tariffs for men's suits

Table 32: Exports of Myanmar by sector and shares of destination markets in sectoral exports (2016–18 average)

MTN code	Product	Partner: World		Share of destination markets in product exports (%)						
		% of total	US\$ million	Australia	Canada	Chile	China	European Union	India	Japan
	Total	100	13,287	0	1	0	27	18	6	8
12	Minerals and metals	43	5,685	0	0	0	51	2	1	0
17	Clothing	26	3,447	0	2	0	2	52	0	22
03	Fruits, vegetables, plants	8	1,010	0	1		5	2	57	3
18	Leather, footwear, etc.	5	677	0	1	0	30	23	1	20
11	Fish and fish products	4	491	2	1		7	8	1	12
15	Wood, paper, etc.	3	432	1	0	0	26	12	33	3
05	Cereals and preparations	3	406	0	0		14	32	0	1
16	Textiles	2	210	1	5	0	5	22	0	11
22	Manufactures n.e.s.	1	188	1	0	0	40	6	1	8
20	Electrical machinery	1	145	0	0	0	15	18	0	12
13	Petroleum	1	99				0	0	0	
14	Chemicals	1	98	1	5	0	39	11	1	7
06	Oilseeds, fats and oils	1	93	0	0		14	4	6	22
10	Other agricultural products	1	76	0	0		56	1	14	3
21	Transport equipment	1	69	0	0	0	0	1	74	1
01	Animal products	0	64					0		1
19	Non-electrical machinery	0	55	0	0	0	17	8	2	0
08	Beverages and tobacco	0	29	0			7	6	1	0
04	Coffee, tea	0	6	2	1		4	6	1	7
07	Sugars and confectionery	0	6	0	0		31	1	1	0
02	Dairy products	0	0				0	0		
09	Cotton	0	0						94	

Source: UN Comtrade.

Note: Export values and shares are based on mirrored import statistics and represent averages for 2016–18. Blanks indicate missing data. Zeros (0) indicate shares below 0.5 per cent. Green shading indicates share value, with highest share in dark green. Sectors are shown in terms of MTN categories. The MTN categories' coverage of HS codes is included in World Tariff Profiles 2019 (pages 40–41) (available at https://www.wto.org/english/res_e/publications_e/world_tariff_profiles19_e.htm).

(HS 6203) will increase in the European Union (10 per cent), in the Republic of Korea (13 per cent) and Canada (18 per cent).

A few agricultural products will also face tariff increases. For example, leguminous vegetables (HS 0713), which are Myanmar's second most exported product, will see a 10 per cent tariff increase in the Indian market, its first destination, and

Republic of Korea	Norway	New Zealand	Russian Federation	Switzerland	Thailand	Turkey	United States	Rest of the world
4	0	0	0	1	20	0	3	11
0	0	0	0	1	40	0	1	4
11	1	0	1	1	0	0	4	5
3	0	0	0	0	3	0	1	25
3	0	0	1	1	0	0	8	11
1	0	0	0	0	31	0	7	29
1	0	0	0	0	9	0	3	11
0	0	0	1	0	1	0	0	51
10	1	0	1	0	1	1	30	11
4	0	0	0	0	7	0	4	28
1	0	0	0	0	18	0	12	22
13	0	0	0	0	8	0	0	78
0	0	0	0	0	19	0	6	10
1	0	0	0	1	31	0	0	21
3	0	0	0	0	11	0	2	11
11	0	0	0	0	2	0	0	10
0	0	0	0	0	98	0	0	0
3	0	0	0	0	15	0	1	53
0	0	0	0	0	2	1	0	83
6	0	0	0	0	14	0	14	44
0	0	0	0	0	6	0	1	61
92	0	0	0	0	0	0	0	8
0	0	0	6	0	0	0	0	0

a 13 per cent increase in Thailand. Tariffs on petroleum gases (HS 2711) – Myanmar’s most important export, accounting for almost one-third of its total trade – will not change in its two main destination markets, China and Thailand.

Figure 11 shows Myanmar’s utilization of LDC-specific preferences by providing a breakdown of imports by duty type for preference-granting countries. The first bar (“Total”) shows a limited dependence on LDC-specific preferences,

Table 33: Top 12 export products of Myanmar and increase in tariffs in destination markets following graduation

HS code	Product	Partner: World		Exports in US\$ million towards destination markets (Tariff increase in percentage points due to preference loss)			
		% of total	US\$ million	Australia	Canada	Chile	China
2711	Petroleum gases and other gaseous hydrocarbons	25	3,229	(0)	(0)	(6)	1190 (0)
0713	Vegetables (leguminous)	7	883	2 (0)	6 (0)	(6)	15 (0)
2609	Tin ores and concentrates	6	829	(0)	(0)	(6)	811 (0)
6202	Women's coats, wind-jackets (not knitted)	5	632	1 (0)	11 (17)	0 (6)	15 (0)
7403	Refined copper or copper alloys (unwrought)	4	551	(0)	(0)	(6)	283 (0)
6201	Men's coats, wind-jackets (not knitted)	3	433	0 (0)	8 (17)	0 (6)	7 (0)
1006	Rice	3	345	0 (0)	0 (0)	(6)	32 (0)
6110	Jerseys, pullovers, cardigans (knitted)	3	330	1 (0)	2 (17)	1 (6)	5 (0)
6203	Men's suits, ensembles, jackets, blazers (not knitted)	3	327	1 (0)	1 (18)	0 (6)	4 (0)
6204	Women's suits, ensembles, jackets, blazers (not knitted)	2	320	1 (0)	2 (17)	0 (6)	6 (0)
7103	Precious and semi-precious stone (excluding diamonds)	2	272	0 (0)	0 (0)	(6)	77 (0)
7202	Ferro-alloys	2	267	(0)	(0)	(6)	247 (0)

Source: UN Comtrade (trade flows) and WTO IDB (tariffs).

Note: For every importer-product couple, the first row reports average export values, while the second row reports in parentheses the preference loss due to graduation, i.e. the difference between the best available alternative rate and the LDC duty rate. Whenever such a figure is not available, it means that either Myanmar is not eligible for the LDC duty rate or the tariffs are not ad valorem. Export values are based on mirrored import statistics and represent averages for 2016–18. Tariffs are for the year 2019, with the exception of China (2017), India (2016) and Turkey (2016).

with around 26 per cent of exports making use of them. Myanmar's utilization of LDC schemes varies substantially across preference-granting markets. Almost three-quarters (73 per cent) of exports towards China, which is the largest export market for Myanmar, enter MFN duty-free. While Myanmar appears not to make use of China's LDC scheme, the WTO IDB does not include utilization data for the ASEAN–China RTA. Use of the LDC-specific scheme is substantial in the European Union (86 per cent), Japan (81 per cent), Norway (68 per cent) and Canada (50 per cent). Most exports towards Thailand enter MFN duty-free (88 per cent), while a fraction of the exports towards Japan use preferences under the ASEAN–Japan RTA (6 per cent).

Figure 12 provides estimates of the additional tariff costs on exports for Myanmar following graduation, obtained by multiplying exports with the percentage point increase in tariffs due to the loss of preferences. In the case of full preference utilization, tariff costs would increase by close to US\$ 450 million, which corresponds to 3.4 per cent of merchandise exports to preference-granting members. Taking preference utilization into account, tariff costs are estimated to increase by around US\$ 225 million (1.7

per cent of merchandise exports to preference-granting members).

Table 34 provides estimates of cost increases for Myanmar's top 12 export products. The most important one, petroleum gases, will not see any cost increase, since tariffs will remain unchanged following graduation. Tariff costs will increase significantly for clothing products and rice, as Myanmar currently makes use of preferences for these products. Other products would see substantial cost increases if the LDC scheme were fully used. However, when current preference utilization is taken into account, the tariff cost increase falls to zero or is substantially reduced (vegetables, precious stones, refined copper and copper alloys, and ferro-alloys). For instance, the second most exported product (dried leguminous vegetables) would be characterized by an estimated cost increase of US\$ 58 million in case of full preference utilization, while the cost increase would be US\$ 0.6 million based on actual utilization rates.

European Union	India	Japan	Republic of Korea	Norway	New Zealand	Russian Federation	Switzerland	Thailand	Turkey	United States
2039										
(0)	(4)	(0)	(4)	(0)	(0)	(3)	(0)	(0)	(0)	(0)
20	561	25	8	0	1	0	0	19	0	8
(0)	(10)	(0)	(5)	(0)	(0)	(8)	(0)	(13)	(0)	(0)
						0		4		
(0)	(3)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
368	0	90	87	4	0	9	11	0	5	12
(10)	(10)	(0)	(12)	(0)	(10)		(5)	(3)	(10)	(0)
0			1					124		
(0)	(3)	(0)	(5)	(0)	(0)	(3)	(0)	(0)	(0)	(0)
183	0	96	104	2	0	4	3	0	3	10
(10)	(10)	(0)	(12)	(0)	(10)		(3)	(10)	(10)	(0)
128		0	0	0		6	0	0	1	
(8)	(46)	(0)	(0)	(0)	(0)	(8)	(0)	(0)	(0)	(0)
226	0	42	15	4	0	3	3	1	2	14
(10)	(10)	(0)	(13)	(0)	(10)		(3)	(5)	(10)	(0)
106	0	155	38	1	0	1	2	1	0	5
(10)	(10)	(0)	(13)	(0)	(10)		(4)	(5)	(10)	(0)
169	0	80	12	1	0	3	3	1	1	21
(10)	(10)	(0)	(13)	(0)	(10)		(5)	(5)	(10)	(0)
111		5	0	0	0		30	4		37
(0)	(10)	(0)	(5)	(0)	(1)	(0)	(0)	(0)	(0)	(0)
1	11							0		
(1)	(8)	(0)	(3)	(0)	(0)	(5)	(0)	(0)	(0)	(1)

7.3 Impact on exports: partial equilibrium estimates

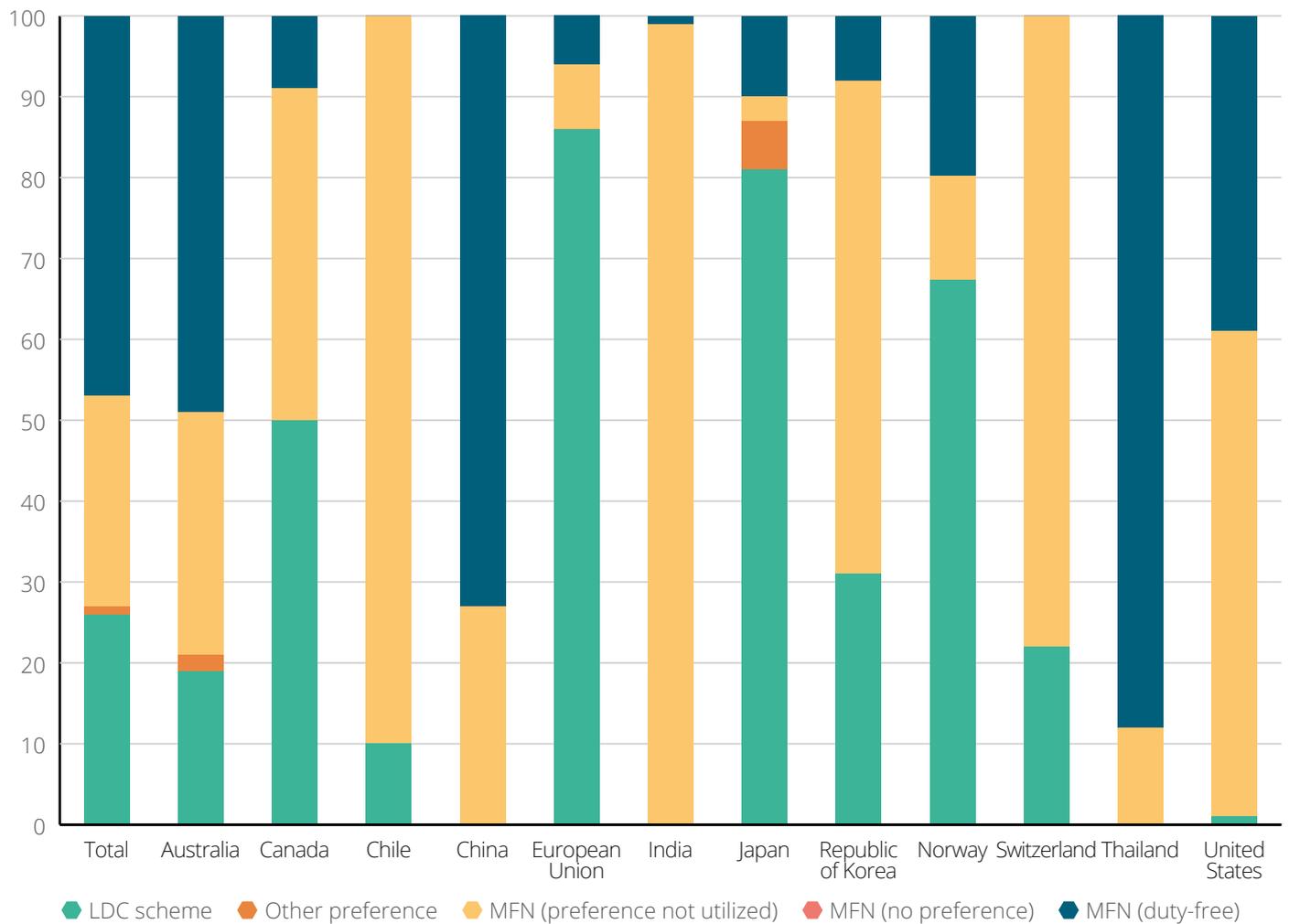
Table 35 shows how exports from Myanmar are projected to change by country of destination. The largest reduction is projected for exports to the European Union, with US\$ 499 million. Exports to other regions phasing out tariff preferences are also projected to fall, but by a much smaller amount. Exports to the Republic of Korea and Canada are projected to fall by US\$ 51 million and US\$ 16 million, respectively. In terms of the percentage of initial exports, the largest reductions are expected for the European Union, the Republic of Korea and Canada. Exports to many other regions increase slightly, as exports are redirected to regions whose applied tariffs effectively do not increase, such as Africa. However, exports to some regions that are phasing out preferences are projected to increase because of trade diversion, since tariffs effectively increase more in other destinations. This is the case, for example, for exports to the Russian Federation and the United States.

Table 36 displays the projected change in exports from Myanmar, by MTN category. The table clearly shows that the largest reductions in exports are expected for clothing (US\$ 356 million). The two other categories contributing significantly to the reduction in exports are cereals and preparations, and leather and footwear, with projected falls in exports of US\$ 66.5 million and US\$ 58.8 million, respectively.

Finally, Table 37 displays in which HS lines the largest reductions in exports are expected, in US dollars. Table 37 shows that the products with the largest expected reductions in exports consist of broken rice, different types of clothing, and footwear.

To summarize the results for Myanmar, the projected reduction in exports (US\$ 499 million or 3.83 per cent of initial exports) is concentrated in exports to the European Union (US\$ 499 million or 22.34 per cent of initial exports). Exports to the Republic of Korea and Canada are also projected to fall substantially as a share of initial exports (10.07 per cent and 18.25 per cent, respectively). The largest share of the projected fall in exports occurs in clothing, followed by cereals and preparations, and leather and footwear.

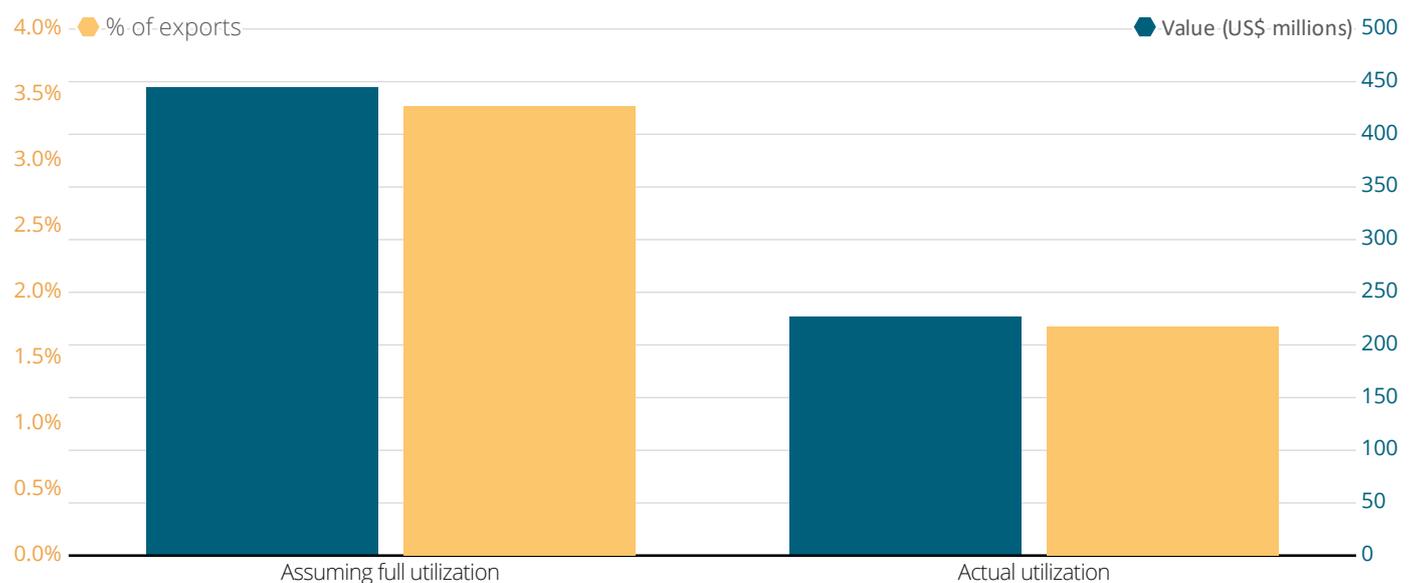
Figure 11: Preference utilization: imports from Myanmar by duty type



Source: WTO IDB.

Note: The figure is based on disaggregated import data for 2015–16 for Australia, Canada, Chile, China, the European Union, India, Japan, the Republic of Korea, Norway, Switzerland, Thailand and the United States.

Figure 12: Additional tariff costs on exports due to loss of preferences



Source: WTO IDB and UN Comtrade.

Note: The tariff cost increase for a product is estimated by multiplying the expected increase in tariff rates following graduation with the product's average export value during 2016–18.

Table 34: Top 12 export products: additional tariff costs due to loss of preferences

HS Code	Description	Increase in tariff costs (US\$ thousands)	
		Full utilization	Actual utilization
2711	Petroleum gases and other gaseous hydrocarbons	0	0
0713	Vegetables (leguminous)	57,935	619
2609	Tin ores and concentrates	0	0
6202	Women's coats, wind-jackets (not knitted)	45,657	33,555
7403	Refined copper or copper alloys (unwrought)	5,651	0
6201	Men's coats, wind-jackets (not knitted)	26,896	17,724
1006	Rice	31,588	31,527
6110	Jerseys, pullovers, cardigans (knitted)	22,566	19,049
6203	Men's suits, ensembles, jackets, blazers (not knitted)	16,164	13,183
6204	Women's suits, ensembles, jackets, blazers (not knitted)	18,662	15,608
7103	Precious and semi-precious stone (excluding diamonds)	4,953	0
7202	Ferro-alloys	4,770	0

Source: WTO IDB (tariff and utilization data) and UN Comtrade (exports). Note: The tariff cost increase is computed as the product of exports, tariff rate increases and utilization rates. Exports are 2016–18 averages obtained using mirror data from UN Comtrade; tariff increase is defined as the difference between the LDC rate and the best alternative rate in 2016; utilization rates are computed as the ratio between the exports that enter under the LDCs scheme and the total exports towards the preference-granting members (2015–16 average, where available); for column 1 the utilization rates of the LDC schemes are set to 1.

Table 35: Changes in exports and tariffs of Myanmar by country of destination

Importer	Initial exports	Change in exports	Percentage change	Effective tariff change*
MARKETS WITH AN EFFECTIVE TARIFF CHANGE				
European Union	2,233,058	-498,791	-22.34%	8.46
Republic of Korea	506,005	-50,951	-10.07%	3.46
Canada	88,874	-16,220	-18.25%	7.68
Switzerland	76,884	-783	-1.02%	1.18
New Zealand	3,926	-372	-9.47%	2.54
Armenia	667	42	6.29%	0.02
India	831,782	63	0.01%	0.03
Chile	4,698	167	3.55%	0.64
Thailand	2,706,920	1,002	0.04%	0.00
Japan	1,102,935	1,352	0.12%	1.18
Norway	25,274	1,416	5.60%	0.01
Russian Federation	48,254	3,058	6.34%	0.16
China	3,614,540	4,310	0.12%	0.01
United States	394,621	12,354	3.13%	0.04
OTHER REGIONS				
Africa	112,677	16,801	14.91%	0.00
Rest of Asia	836,993	11,530	1.38%	0.00
South Asia	126,373	6,572	5.20%	0.00
Middle East	184,787	4,274	2.31%	0.00
Rest of Americas	56,320	2,325	4.13%	0.00
Australia	32,167	1,044	3.25%	0.00
CIS	5,925	350	5.91%	0.00
Rest of Europe	3,052	200	6.56%	0.00
Kazakhstan	1,522	74	4.84%	0.00
Iceland	1,238	59	4.76%	0.00
Pacific	965	2	0.16%	0.00
Total	13,028,355	-499,133	-3.83%	1.75

Note: Change in exports (in thousands of dollars and as a percentage of initial exports). * The effective tariff change is measured in percentage points. It takes into account the increase in tariff rates due to the loss of LDC-specific preferences as well as preference utilization by graduating LDCs. A lower preference utilization will result in a lower effective increase in tariffs as a smaller fraction of exports will be exposed to changes in tariff rates after graduation.

Table 36: Changes in exports and tariffs of Myanmar by MTN category

MTN category	Initial exports	Change in exports	Percentage change	Effective tariff change*
Clothing	3,282,016	-356,003	-10.85%	5.11
Cereals and preparations	425,406	-66,532	-15.64%	7.56
Leather, footwear, etc.	649,112	-58,803	-9.06%	3.46
Fish and fish products	488,101	-6,988	-1.43%	0.53
Textiles	212,956	-5,437	-2.55%	0.89
Fruits, vegetables, plants	997,507	-2,385	-0.24%	0.09
Minerals and metals	5,653,643	-1,551	-0.03%	0.00
Other agricultural products	73,929	-579	-0.78%	0.30
Wood, paper, etc.	418,888	-312	-0.07%	0.02
Chemicals	97,136	-174	-0.18%	0.05
Oilseeds, fats and oils	81,817	-137	-0.17%	0.04
Beverages and tobacco	28,455	-77	-0.27%	0.13
Manufactures n.e.s.	182,255	-71	-0.04%	0.01
Animal products	63,752	-32	-0.05%	0.02
Coffee, tea	5,418	-21	-0.38%	0.10
Petroleum	101,421	-20	-0.02%	0.01
Transport equipment	69,677	-6	-0.01%	0.00
Sugars and confectionery	6,022	-4	-0.06%	0.00
Electrical machinery	137,470	-1	0.00%	0.00
Non-electrical machinery	53,252	0	0.00%	0.00
Dairy products	77	0	-0.03%	0.01
Cotton	43	0	0.00%	0.00
Total	13,028,355	-499,133	-3.83%	1.75

Note: Change in exports (in thousands of dollars and as a percentage of initial exports).

* The effective tariff change is measured in percentage points. It takes into account the increase in tariff rates due to the loss of LDC-specific preferences as well as preference utilization by graduating LDCs. A lower preference utilization will result in a lower effective increase in tariffs as a smaller fraction of exports will be exposed to changes in tariff rates after graduation.

Table 37: Change in exports of Myanmar of the 12 HS lines with the largest change

HS line	Product description	Initial exports	Change in exports	Percentage change
100640	Broken rice	138,100	-40,250	-29.15%
611030	Jerseys (fibres)	192,338	-33,441	-17.39%
620293	Anoraks for women (fibres)	407,863	-29,008	-7.11%
620193	Anoraks for men (fibres)	343,134	-26,387	-7.69%
640399	Footwear (leather)	109,455	-26,140	-23.88%
620520	Shirts for men (cotton)	156,506	-26,095	-16.67%
100630	Semi-milled or wholly milled rice	228,036	-24,874	-10.91%
610910	T-shirts, singlets and other vests of cotton	71,787	-16,271	-22.67%
611020	Jerseys (cotton)	88,816	-15,201	-17.12%
620343	Trousers for men (syn. fibres)	120,462	-11,847	-9.83%
640419	Footwear (other)	58,289	-11,572	-19.85%
610990	T-shirts, singlets and other vests of textile	45,584	-11,055	-24.25%

Note: Change in exports (in thousands of dollars and as a percentage of initial exports).

Nepal

8.1 Export structure

Table 38 provides an overview of the export structure of Nepal and the importance of preference-granting countries as destination markets, at both the aggregate and sectoral levels. Nepal exported on average US\$ 830 million of merchandise from 2016 to 2018.

Nepal's main export products are textiles (31 per cent), followed by chemicals (11 per cent), clothing (11 per cent), minerals and metals (10 per cent), other agricultural products (9 per cent), beverages (8 per cent), in particular water, oilseeds (4 per cent), and leather and footwear (3 per cent).

The most important destination market is India, which accounts for 56 per cent of total exports. Other significant destination markets are the European Union and the United States, which respectively absorb 15 per cent and 12 per cent of merchandise exports.

India is the main destination market for many sectors. More than one-third of the total exports in textiles are directed towards India, followed by the United States (21 per cent), Turkey (17 per cent) and the European Union (15 per cent). India is also the most important trading partner for chemicals (92 per cent), minerals and metals (73 per cent), beverages and tobacco (98 per cent), agricultural products (82 per cent), leather and footwear (71 per cent), and fruits and vegetables (60 per cent). For exports of clothing, the European Union is the largest foreign market (58 per cent), followed by the United States (15 per cent).

8.2 Impact on preferential market access

Table 39 illustrates the loss of tariff preference for Nepal's main export products in preference-granting markets. For the top 12 export products at the level of HS headings, the table shows the increase in tariffs that Nepal will face in destination markets when utilizing the best available alternative tariff compared to the LDC duty rate. The best alternative tariffs are GSP preferences for Australia, Canada, the European Union, Japan, New Zealand, Norway, the Russian Federation, Switzerland, Turkey and the United States. In addition, the United States offers duty-free treatment for certain products of export interest to Nepal through a special preferential trade arrangement currently valid until 31 December 2025. In the case of India, MFN rates are used as the best alternative tariffs, as the WTO IDB contains data neither on India's bilateral RTA with Nepal, nor on SAFTA. Furthermore, in the case of Chile, China and Thailand, the best available alternative tariff is also the MFN rate.

The top 12 export products only represent around 52 per cent of merchandise exports, reflecting Nepal's relatively diversified export structure compared to other LDCs. Table 39 indicates that for a number of Nepal's top export products MFN tariffs are rather high in India. For instance, average tariffs would increase by 30 percentage points for water, 10 percentage points for yarn, 10 percentage points for carpets, 10 percentage points for nutmeg, mace and cardamom, and 7 percentage points for articles of plastic. However, Nepal's trade relations with India are covered by a bilateral trade agreement.

Table 38: Exports of Nepal by sector and shares of destination markets in sectoral exports (2016–18 average)

MTN code	Product	Partner: World		Share of destination markets in product exports (%)						
		% of total	US\$ million	Australia	Canada	Chile	China	European Union	India	Japan
	Total	100	830	1	1	0	2	15	56	1
16	Textiles	31	256	1	2	0	2	15	36	1
14	Chemicals	11	92	0	0	0	1	2	92	0
17	Clothing	11	89	2	4	0	1	58	5	4
12	Minerals and metals	10	82	1	0	0	9	7	73	1
10	Other agricultural products	9	71	0	1	0	0	3	82	0
08	Beverages and tobacco	8	67	0	0			0	98	1
06	Oilseeds, fats and oils	4	36	0	0		0	0	99	0
18	Leather, footwear, etc.	3	28	0	1	0	5	15	71	0
22	Manufactures n.e.s.	3	26	1	2	0	12	17	6	2
03	Fruits, vegetables, plants	2	19	1	0		0	7	60	2
15	Wood, paper, etc	2	17	1	1	0	6	25	30	11
05	Cereals and preparations	2	12	3	0		0	11	76	1
19	Non-electrical machinery	1	11	2	0	0	0	26	39	
04	Coffee, tea	1	11	1	1	0	0	15	65	4
20	Electrical machinery	1	6	0	1	0	1	39	27	1
21	Transport equipment	0	2	2	1		1	31	19	0
02	Dairy products	0	2	1	0			0	68	23
13	Petroleum	0	2					0	1	
07	Sugars and confectionery	0	1	1	0			1	91	1
01	Animal products	0	1		0		80	6		
11	Fish and fish products	0	0					61	27	
09	Cotton	0	0					44		

Source: UN Comtrade.

Note: Export values and shares are based on mirrored import statistics and represent averages for 2016–18. Blanks indicate missing data. Zeros (0) indicate shares below 0.5 per cent. Green shading indicates share value, with highest share in dark green. Sectors are shown in terms of MTN categories. The MTN categories' coverage of HS codes is included in World Tariff Profiles 2019 (pages 40–41) (available at https://www.wto.org/english/res_e/publications_e/world_tariff_profiles19_e.htm).

In the European Union, Nepal is expected to face tariff increases on a number of textile and clothing products. Average tariff rates will increase from currently zero to 5 per cent for carpets (HS 5701), 6 per cent for shawls and scarves (HS 6214), and 10 per cent for jerseys, pullovers and cardigans (HS 6110). Nepal would not face any tariff increase in the European Union for textile and clothing products if it were to gain access to the EU's GSP+ initiative.¹

Figure 13 shows Nepal's utilization of LDC-specific preferences by providing a breakdown of imports by duty type for preference-granting countries. The first bar ("Total") shows that Nepal's overall dependence on LDC-specific preferences is limited, as only 16 per cent of exports make use of LDC-specific preferences. Nepal benefits from a bilateral RTA with its main export market, India; however, no data on preference utilization for India are included in the WTO IDB. Dependence on LDC-specific

Republic of Korea	Norway	New Zealand	Russian Federation	Switzerland	Thailand	Turkey	United States	Rest of the world
0	0	0	0	1	0	5	12	4
0	0	0	0	1	0	17	21	3
0	0	0	0	0	0	0	1	4
1	2	1	0	4	0	0	15	3
0	0	0	0	1	0	0	5	3
0	0	0	0	0	0	0	12	1
0		0		0	0		0	1
0		0					0	1
0	0	0	1	0	0	1	2	4
1	0	0	0	3	0	0	46	8
1		0	2	0	0	0	4	23
0	1	0	0	1	0	0	14	9
0	0	0	0	0	0		6	2
0	0	0	0	0	0	0	9	22
1	0	0	6	2	0	0	3	2
0	0	0	0	0	0	0	4	27
	0	1	0	2	0	1	1	39
2							5	1
1					0			98
0				0			6	1
	0						0	13
								12
	38			17				0

preferences is highest in the European Union, where 80 per cent of exports enter under the EU's EBA scheme, followed by Canada (59 per cent), Norway (50 per cent), Japan (46 per cent), Australia (43 per cent) and Switzerland (38 per cent).

Figure 14 provides estimates of the additional tariff costs on exports for Nepal following graduation, obtained by multiplying exports with the percentage point increase in tariffs due to the loss of preferences. In the case of full

preference utilization, tariff costs would increase by less than US\$ 60 million, which corresponds to almost 7.5 per cent of merchandise exports to preference-granting members. Taking preference utilization into account, tariff costs are estimated to increase by less than US\$ 7 million (less than 1 per cent of merchandise exports to preference-granting members). This result is mainly driven by the low utilization rate of the Indian LDC scheme.

Table 39: Top 12 export products of Nepal and increase in tariffs in destination markets following graduation

HS code	Product	Partner: World		Exports in US\$ million towards destination markets (Tariff increase in percentage points due to preference loss)			
		% of total	US\$ million	Australia	Canada	Chile	China
2202	Waters and other non-alcoholic beverages	9	77	0 (0)	(6)	(6)	(30)
5509	Yarn of synthetic staple fibres (not for retail sale)	9	77	(5)	(0)	(6)	(5)
5701	Carpets and other textile floor coverings (knotted)	9	73	2 (0)	4 (5)	0 (6)	1 (15)
0908	Nutmeg, mace and cardamoms	5	43	0 (0)	0 (0)	(6)	(6)
3926	Other plastic articles	4	34	0 (0)	0 (2)	0 (6)	0 (10)
6214	Shawls, scarves, mufflers, mantillas (not knitted)	3	22	0 (0)	0 (10)	0 (6)	1 (14)
5310	Woven fabrics of jute	3	22	(0)	0 (0)	(6)	(10)
7217	Wire of iron or non-alloy steel	2	18	(0)	0 (0)	(6)	(8)
6404	Footwear (with uppers of textile materials)	2	18	0 (0)	0 (12)	(6)	0 (5)
1511	Palm oil	2	16	(0)	(0)	(6)	(0)
6110	Jerseys, pullovers, cardigans (knitted)	2	15	0 (0)	0 (17)	0 (6)	0 (14)
6305	Sacks and bags (used for the packing of goods)	2	15	0 (0)	0 (12)	(6)	0 (15)

Source: UN Comtrade (trade flows) and WTO IDB (tariffs).

Note: For every importer-product couple, the first row reports average export values, while the second row reports in parentheses the preference loss due to graduation, i.e. the difference between the best available alternative rate and the LDC duty rate. Whenever such a figure is not available, it means that either Nepal is not eligible for the LDC duty rate or the tariffs are not ad valorem. Export values are based on mirrored import statistics and represent averages for 2016–18. Tariffs are for the year 2019, with the exception of China (2017), India (2016) and Turkey (2016).

Table 40 provides estimates of additional tariff costs for the top 12 export products. The most important export product is water (HS 2202), which would account for almost one-third of the total cost increase if LDC preferences were fully used. When the actual utilization of preferences is taken into account, the cost increase goes to zero since preference utilization is null. The same happens to many other products, like yarn (HS 5509), plastic articles (HS 3926), woven fabrics of jute (HS 5310) and wire of iron (HS 7217). Based on actual preference utilization, exports of carpets (HS 5701), shawls, scarves and mufflers (HS 6214), footwear (HS 6404), and jerseys, pullovers and cardigans (6110) will experience the highest additional tariff costs due to the loss of preferences.

8.3 Impact on exports: partial equilibrium estimates

The patterns in Nepal are similar to those in Lao PDR and Myanmar. The largest reduction in exports is expected for the European Union (Table 41). The total reduction in exports is projected to be US\$ 20.1 million, which is about 2.48 per cent of initial exports. Exports to the European Union are projected to fall by US\$ 20.6 million (or 19.13 per cent of initial exports). The projected reduction in exports to other regions are an order of magnitude smaller, although as a share of initial exports the fall is substantial (US\$ 1.5 million or 13.39 per cent for Canada; 1.4 million or 11.40 per cent for Japan and US\$ 0.37 million or 17.11 per cent for the Russian Federation).

European Union	India	Japan	Republic of Korea	Norway	New Zealand	Russian Federation	Switzerland	Thailand	Turkey	United States
0	77									0
(6)	(30)	(12)	(8)	(0)	(5)		(0)	(8)	(6)	(12)
0	35		0	0		0			42	
(3)	(10)	(5)	(8)	(0)	(5)	(5)	(5)	(5)	(3)	(0)
24	0	0	0	0	0	0	2	0	0	35
(5)	(10)	(2)	(10)	(0)	(10)	(11)	(2)	(30)	(6)	(0)
0	43	0	0	0	0		0			
(0)	(10)	(0)	(8)	(0)	(2)	(4)	(0)	(13)	(0)	(0)
0	34	0	0	0	0	0	0	0	0	0
(0)	(7)	(0)	(7)	(0)	(4)	(0)	(0)	(2)	(0)	(1)
12	1	2	0	0	0	0	3	0	0	2
(6)	(10)	(0)	(8)	(0)	(10)	(0)	(5)	(0)	(6)	(0)
	22		0							
(3)	(10)	(0)	(8)	(0)	(0)	(7)	(0)	(5)	(3)	(0)
0	18									
(0)	(10)	(0)	(0)	(0)	(5)	(5)	(0)	(0)	(0)	(0)
0	17	0	0	0	0		0	0		0
(12)	(8)	(16)	(13)	(0)	(8)		(0)	(0)	(12)	(0)
	16									
(2)	(18)	(0)	(2)	(0)	(0)	(1)	(0)	(0)	(0)	(0)
11	0	1	0	1	0	0	0	0	0	1
(10)	(10)	(11)	(13)	(0)	(10)		(3)	(5)	(10)	(0)
0	14	0	0	0	0		0	0		0
(6)	(10)	(0)	(8)	(0)	(2)	(0)	(0)	(6)	(6)	(0)

The projected fall in exports to the European Union is larger than the total projected fall in exports from Nepal. Hence, rising exports to other regions because of trade diversion partly compensate for the fall in exports to the European Union. Most of the increase in exports is expected for exports destined for the United States (increase in exports of US\$ 3.2 million, or 3.22 per cent of initial exports).

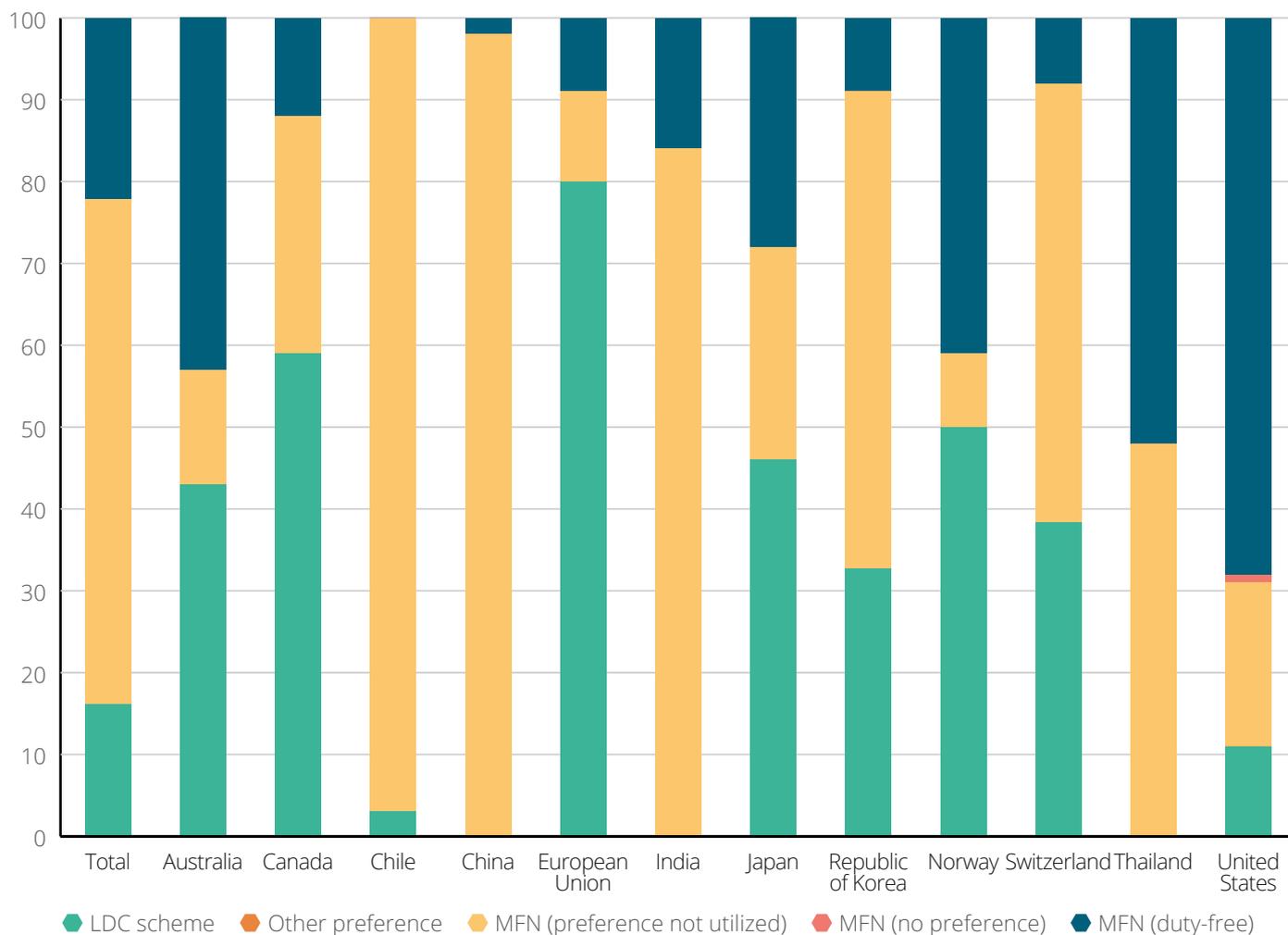
Table 42 shows that the two MTN categories, clothing and textiles, are responsible for the bulk of the projected reduction in exports. Clothing exports are projected to fall by US\$ 11.2 million (13.28 per cent of initial exports) and textiles exports by US\$ 7.4 million (2.92 per cent of initial exports). As a share of initial exports, the fall in dairy products is also sizeable (9.37 per cent of initial

exports), although the size of the projected fall is limited (US\$ 0.18 million).

The 12 products with the largest reductions in exports, in US dollars, all belong to the MTN categories clothing and textiles (Table 43). Another product in which a large reduction in exports is expected is wheat or meslin flour, which is part of cereals and preparations; these exports are projected to fall by US\$ 0.34 million, corresponding to 62.35 per cent of initial exports (results not displayed in Table 43).

Summarizing the expected impacts for Nepal, the projected reduction in exports (US\$ 20.1 million or 2.48 per cent of initial exports) is concentrated in exports to the European Union (US\$ 20.6 million or 19.13 per cent of initial exports).

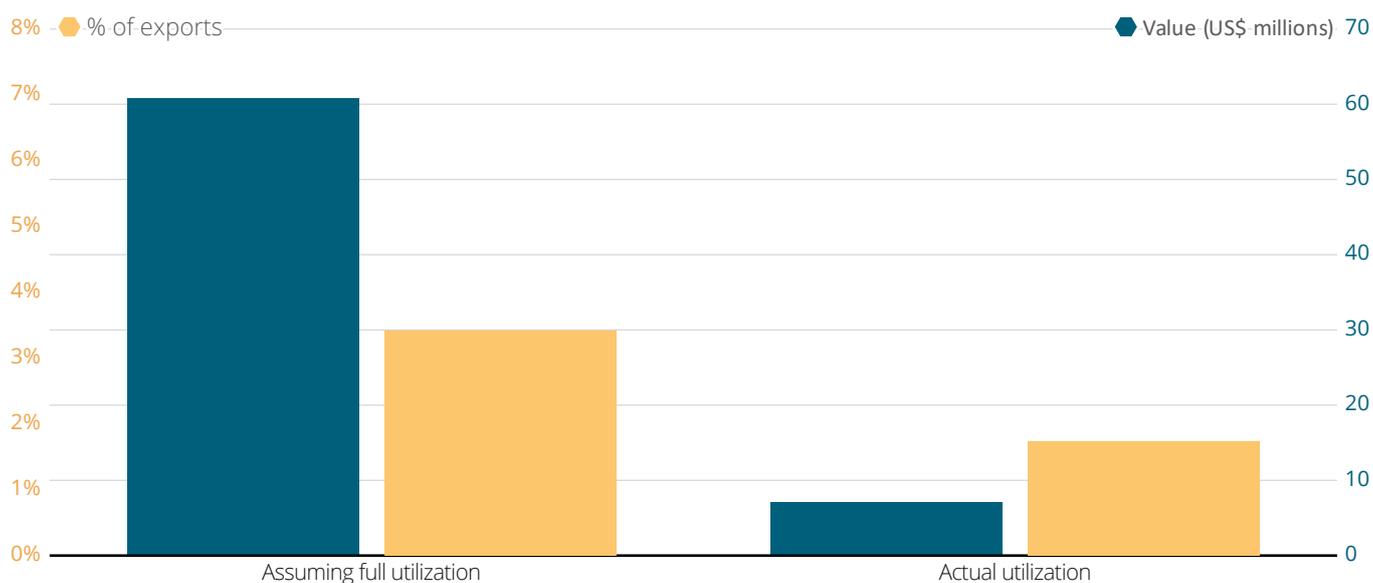
Figure 13: Preference utilization: imports from Nepal by duty type



Source: WTO IDB.

Note: The figure is based on disaggregated import data for 2015–16 for Australia, Canada, Chile, China, the European Union, India, Japan, the Republic of Korea, Norway, Switzerland, Thailand and the United States.

Figure 14: Additional tariff costs on exports due to loss of preferences



Source: WTO IDB and UN Comtrade.

Note: The tariff cost increase for a product is estimated by multiplying the expected increase in tariff rates following graduation with the product's average export value during 2016–18.

Table 40: Top 12 export products: additional tariff costs due to loss of preferences

HS Code	Description	Increase in tariff costs (US\$ thousands)	
		Full utilization	Actual utilization
2202	Waters and other non-alcoholic beverages	19,711	0
5509	Yarn of synthetic staple fibres (not for retail sale)	3,515	0
5701	Carpets and other textile floor coverings (knotted)	2,001	1,430
0908	Nutmeg, mace and cardamoms	0	0
3926	Other plastic articles	1,694	0
6214	Shawls, scarves, mufflers, mantillas (not knitted)	1,102	681
5310	Woven fabrics of jute	2,206	0
7217	Wire of iron or non-alloy steel	1,822	0
6404	Footwear (with uppers of textile materials)	1,763	53
1511	Palm oil	0	0
6110	Jerseys, pullovers, cardigans (knitted)	1,242	1,099
6305	Sacks and bags (used for the packing of goods)	2,144	15

Source: WTO IDB (tariff and utilization data) and UN Comtrade (exports). Note: The tariff cost increase is computed as the product of exports, tariff rate increases and utilization rates. Exports are 2016–18 averages obtained using mirror data from UN Comtrade; tariff increase is defined as the difference between the LDC rate and the best alternative rate in 2016; utilization rates are computed as the ratio between the exports that enter under the LDCs scheme and the total exports towards the preference-granting members (2015–16 average, where available); for column 1 the utilization rates of the LDC schemes are set to 1.

Table 41: Changes in exports and tariffs of Nepal by country of destination

Importer	Initial exports	Change in exports	Percentage change	Effective tariff change*
MARKETS WITH AN EFFECTIVE TARIFF CHANGE				
European Union	107,941	-20,649	-19.13%	5.63
Canada	10,797	-1,446	-13.39%	4.96
Japan	12,068	-1,376	-11.40%	3.38
Russian Federation	2,203	-377	-17.11%	4.63
Republic of Korea	2,310	-184	-7.98%	2.51
New Zealand	1,093	-151	-13.78%	4.00
India	462,722	-131	-0.03%	0.00
Switzerland	9,289	-62	-0.67%	0.74
Armenia	50	-4	-8.56%	2.37
Chile	292	3	0.95%	0.29
Thailand	621	13	2.11%	0.00
Norway	2,784	115	4.13%	1.00
China	19,441	138	0.71%	0.07
United States	99,022	3,188	3.22%	0.01
OTHER REGIONS				
Australia	6,834	287	4.20%	0.00
Middle East	6,454	176	2.72%	0.00
Rest of Americas	3,751	88	2.36%	0.00
CIS	2,880	85	2.95%	0.00
Rest of Asia	10,996	77	0.70%	0.00
Africa	5,444	52	0.95%	0.00
Iceland	320	10	3.25%	0.00
Kazakhstan	119	4	2.98%	0.00
South Asia	2,168	2	0.11%	0.00
Rest of Europe	32	1	4.29%	0.00
Pacific	34	0	0.01%	0.00
Total	812,796	-20,139	-2.48%	0.90

Note: Change in exports (in thousands of dollars and as a percentage of initial exports). * The effective tariff change is measured in percentage points. It takes into account the increase in tariff rates due to the loss of LDC-specific preferences as well as preference utilization by graduating LDCs. A lower preference utilization will result in a lower effective increase in tariffs as a smaller fraction of exports will be exposed to changes in tariff rates after graduation.

Table 42. Changes in exports and tariffs of Nepal by MTN category

MTN category	Initial exports	Change in exports	Percentage change	Effective tariff change*
Clothing	84,338	-11,201	-13.28%	5.44
Textiles	254,037	-7,410	-2.92%	0.87
Cereals and preparations	12,371	-537	-4.34%	1.83
Leather, footwear, etc.	27,807	-286	-1.03%	0.32
Fruits, vegetables, plants	17,770	-194	-1.09%	0.44
Dairy products	1,875	-176	-9.37%	2.56
Minerals and metals	80,104	-96	-0.12%	0.04
Coffee, tea	10,497	-85	-0.81%	0.28
Beverages and tobacco	67,128	-37	-0.05%	0.02
Manufactures n.e.s.	23,973	-31	-0.13%	0.04
Animal products	493	-22	-4.46%	2.12
Other agricultural products	70,902	-18	-0.03%	0.01
Sugars and confectionery	1,030	-18	-1.75%	0.47
Wood, paper, etc.	15,076	-9	-0.06%	0.02
Oilseeds, fats and oils	36,147	-7	-0.02%	0.00
Chemicals	90,537	-6	-0.01%	0.00
Transport equipment	1,988	-5	-0.24%	0.05
Non-electrical machinery	10,473	-1	-0.01%	0.00
Electrical machinery	4,416	-1	-0.02%	0.01
Fish and fish products	53	0	0.00%	0.00
Petroleum	1,747	0	0.00%	0.00
Cotton	33	0	0.00%	0.00
Total	812,796	-20,139	-2.48%	0.90

Note: Change in exports (in thousands of dollars and as a percentage of initial exports).

* The effective tariff change is measured in percentage points. It takes into account the increase in tariff rates due to the loss of LDC-specific preferences as well as preference utilization by graduating LDCs. A lower preference utilization will result in a lower effective increase in tariffs as a smaller fraction of exports will be exposed to changes in tariff rates after graduation.

Table 43: Change in exports of Nepal of the 12 HS lines with the largest change

HS line	Product description	Initial exports	Change in exports	Percentage change
570110	Carpets (wool)	59,037	-4,227	-7.16%
611012	Jerseys (wool)	6,318	-1,393	-22.05%
611011	Jerseys (Kashmir)	4,434	-1,040	-23.46%
621420	Scarves (wool)	17,305	-856	-4.95%
570190	Carpets (other)	13,933	-724	-5.20%
620442	Dresses for women (cotton)	3,251	-639	-19.66%
610910	T-shirts (cotton)	2,086	-507	-24.32%
611020	Jerseys (cotton)	2,023	-429	-21.22%
611710	Scarves	2,650	-413	-15.60%
620462	Trousers for women (cotton)	2,477	-401	-16.17%
630790	Made-up articles of textile materials	9,723	-387	-3.99%
560290	Felt (impregnated or coated)	2,414	-375	-15.53%

Note: Change in exports (in thousands of dollars and as a percentage of initial exports).

Endnotes

- i.e. "The special incentive arrangement for Sustainable Development and Good Governance GSP+ grants full removal of tariffs on over 66% of EU tariff lines" (see <https://trade.ec.europa.eu/tradehelp/gsp>).

Sao Tomé and Príncipe

9.1 Export structure

Table 44 provides an overview of the export structure of Sao Tomé and Príncipe and the importance of preference-granting countries as destination markets, at both the aggregate and sectoral levels. Sao Tomé and Príncipe exported on average almost US\$ 24 million of merchandise from 2016 to 2018.

Exports are concentrated in the cocoa sector (included in the MTN sector “coffee, tea” in Table 44), which accounts for 43 per cent of merchandise exports. Other major export products include non-electrical machinery (17 per cent), minerals and metals (10 per cent), chemicals (6 per cent) and transport equipment (5 per cent).

The most important destination market is the European Union, accounting for almost two-thirds (65 per cent) of Sao Tomé and Príncipe’s merchandise exports. The United States (4 per cent) is the second-largest destination market among preference-granting members. Twenty-four per cent of exports go to markets with no preferential access for LDCs (rest of the world), mostly reflecting regional trade with other economies in Africa.

Almost all cocoa-related exports go either to the European Union (96 per cent) or to Switzerland (2 per cent). The European Union is also the largest market for exports of minerals and metals (79 per cent), followed by the United States (4 per cent) and Australia (1 per cent), with 15 per cent going to the category “rest of the world” (Table 44). Non preference-granting countries are the major destination markets for a number of sectors with smaller export flows.

9.2 Impact on preferential market access

Table 45 illustrates the loss of tariff preference for Sao Tomé and Príncipe’s main export products in preference-granting markets. For the top 12 export products at the level of HS headings, the table shows the increase in tariffs that Sao Tomé and Príncipe will face in destination markets when utilizing the best available alternative tariff compared to the LDC duty rate. The best alternative tariffs are GSP preferences for Australia, Canada, the European Union, Japan, New Zealand, Norway the Russian Federation, Switzerland, and Turkey; AGOA preferences for the United States; and MFN tariffs for Chile, China, India, the Republic of Korea and Thailand.

The 12 most-traded products represent more than three-quarters of Sao Tomé and Príncipe’s merchandise exports. Exports of cocoa beans (HS 1801) to the European Union, which represent close to one-third of Sao Tomé and Príncipe’s merchandise exports, will face no tariff increase. In contrast, exports of chocolate (HS 1806) to the European Union will face a tariff increase of 3 per cent. Similar tariff escalation can be observed for other markets. For example, in Japan, Thailand and Switzerland, cocoa beans will continue to benefit from duty-free treatment following graduation, while chocolate and other food preparations containing cocoa will see increases in tariffs of 19 per cent, 10 per cent and 14 per cent, respectively. In the case of the United States, Sao Tomé and Príncipe will be able to continue exporting cocoa beans and chocolate duty-free after graduation using AGOA preferences.

Figure 15 shows Sao Tomé and Príncipe’s utilization of LDC-specific preferences by providing a breakdown of imports by duty type across preference-granting countries. The first bar (“Total”) shows that 90 per cent of exports do not make use of any preference, as they enter markets

Table 44: Exports of Sao Tomé and Príncipe by sector and shares of destination markets in sectoral exports (2016–18 average)

MTN code	Product	Partner: World		Share of destination markets in product exports (%)						
		% of total	US\$ million	Australia	Canada	Chile	China	European Union	India	Japan
	Total	100	24	1	0		0	65	0	2
04	Coffee, tea	43	10	0	0			96		0
19	Non-electrical machinery	17	4	2	0			15		9
12	Minerals and metals	10	2	1	0		0	79		0
14	Chemicals	6	1	2	0			33	0	
21	Transport equipment	5	1	2	0		0	55		8
22	Manufactures n.e.s.	4	1	1	0			46		
15	Wood, paper, etc	4	1		0		0	73		2
20	Electrical machinery	4	1	3	0		7	13		1
10	Other agricultural products	1	0		1			82	6	
09	Cotton	1	0							
16	Textiles	1	0					3		
06	Oilseeds, fats and oils	1	0					98		
03	Fruits, vegetables, plants	1	0		14			27		
17	Clothing	1	0		3			80		
18	Leather, footwear, etc.	0	0		0		1	44		
08	Beverages and tobacco	0	0					22		
05	Cereals and preparations	0	0		0			65		
01	Animal products	0	0					100		
11	Fish and fish products	0	0					1		
02	Dairy products	0	0					100		
13	Petroleum	0	0					100		
07	Sugars and confectionery	0	0					100		

Source: UN Comtrade.

Note: Export values and shares are based on mirrored import statistics and represent averages for 2016–18. Blanks indicate missing data. Zeros (0) indicate shares below 0.5 per cent. Green shading indicates share value, with highest share in dark green. Sectors are shown in terms of MTN categories. The MTN categories' coverage of HS codes is included in World Tariff Profiles 2019 (pages 40–41) (available at https://www.wto.org/english/res_e/publications_e/world_tariff_profiles19_e.htm).

MFN duty-free. In the European Union and Switzerland, almost all exports, i.e. cocoa beans, enter MFN duty-free. In the case of the United States, 11 per cent of exports enter under LDC-specific preferences, while 41 per cent of exports pay MFN tariffs despite being eligible for preferential treatment. According to data submitted by the United States, Sao Tomé and Príncipe does not make use of AGOA preferences.

Figure 16 provides estimates of the increase in tariff costs for Sao Tomé and Príncipe following graduation, obtained by multiplying exports with the percentage point increase in tariffs due to the loss of preferences. In the case of full preference utilization, tariff costs would increase by more than US\$ 13,000, which corresponds to 0.08 per cent of merchandise exports to preference-granting members. Taking preference utilization into account, tariff costs are

Republic of Korea	Norway	New Zealand	Russian Federation	Switzerland	Thailand	Turkey	United States	Rest of the world
1	0	1	0	1	0	0	4	24
0			0	2	0		1	0
0		7	0		0	1	6	60
0		0	0		0	0	4	15
	0	0	0		1	0	5	59
		0	0		0	1	2	31
0		0	0		1		28	24
0		0	0				2	23
15		0	0		0	0	25	35
								11
								100
0								97
								2
								59
1		0					14	2
0		0	0		0		14	40
								78
								35
								99

estimated to increase by only US\$ 336 (0.002 per cent of merchandise exports to preference-granting members).

Table 46 provides estimates of tariff cost increases for the top 12 export products, showing that Sao Tomé and Principe will not face any significant increase in tariff costs.

9.3 Impact on exports: partial equilibrium estimates

Table 47 shows that the impact of graduation of preferences is very small for Sao Tomé and Principe. Although the change in exports is likely to be small (because Sao Tomé and Principe is a small country, with initial exports being only US\$ 16 million), the change in

Table 45: Top 12 export products of Sao Tomé and Principe and increase in tariffs in destination markets following graduation

HS code	Product	Partner: World		Exports in US\$ million towards destination markets (Tariff increase in percentage points due to preference loss)			
		% of total	US\$ million	Australia	Canada	Chile	China
1801	Cocoa beans	32	10	0 (0)	0 (0)	(6)	
8901	Ships, boats and vessels for the transport of persons or goods	23	7	(0)	(24)	(3)	
8411	Turbo-jets, turbo-propellers and other gas turbines	9	3	(0)	(0)	(6)	
7326	Other iron or steel articles	4	1	(0)	(2)	(6)	
3901	Polymers of ethylene	2	0	(0)	(0)	(6)	
8703	Motor cars and other motor vehicles (transport of persons)	1	0	(0)	(5)	(6)	
9403	Furniture and parts thereof	1	0	(0)	0 (2)	(6)	
7204	Ferrous waste and scrap	1	0	(0)	(0)	(6)	
5201	Cotton (not carded or combed)	1	0	(0)	(0)	(6)	
8803	Parts of aircrafts	1	0	(0)	(0)	(6)	
1806	Chocolate and other food containing cocoa	1	0	(0)	(3)	(6)	
7308	Structures of iron or steel and parts thereof	1	0	(0)	0 (0)	(6)	

Source: UN Comtrade (trade flows) and WTO IDB (tariffs).

Note: For every importer-product couple, the first row reports average export values, while the second row reports in parentheses the preference loss due to graduation, i.e. the difference between the best available alternative rate and the LDC duty rate. Whenever such a figure is not available, it means that either Sao Tomé and Principe is not eligible for the LDC duty rate or the tariffs are not ad valorem. Export values are based on mirrored import statistics and represent averages for 2016–18. Tariffs are for the year 2019, with the exception of China (2017), India (2016) and Turkey (2016).

exports as a share of initial exports is also very small. Total exports are projected to fall by only 0.09 per cent or US\$ 0.014 million. The reason for the very small impact is that applied tariffs will change by only 0.03 per cent (for total exports).

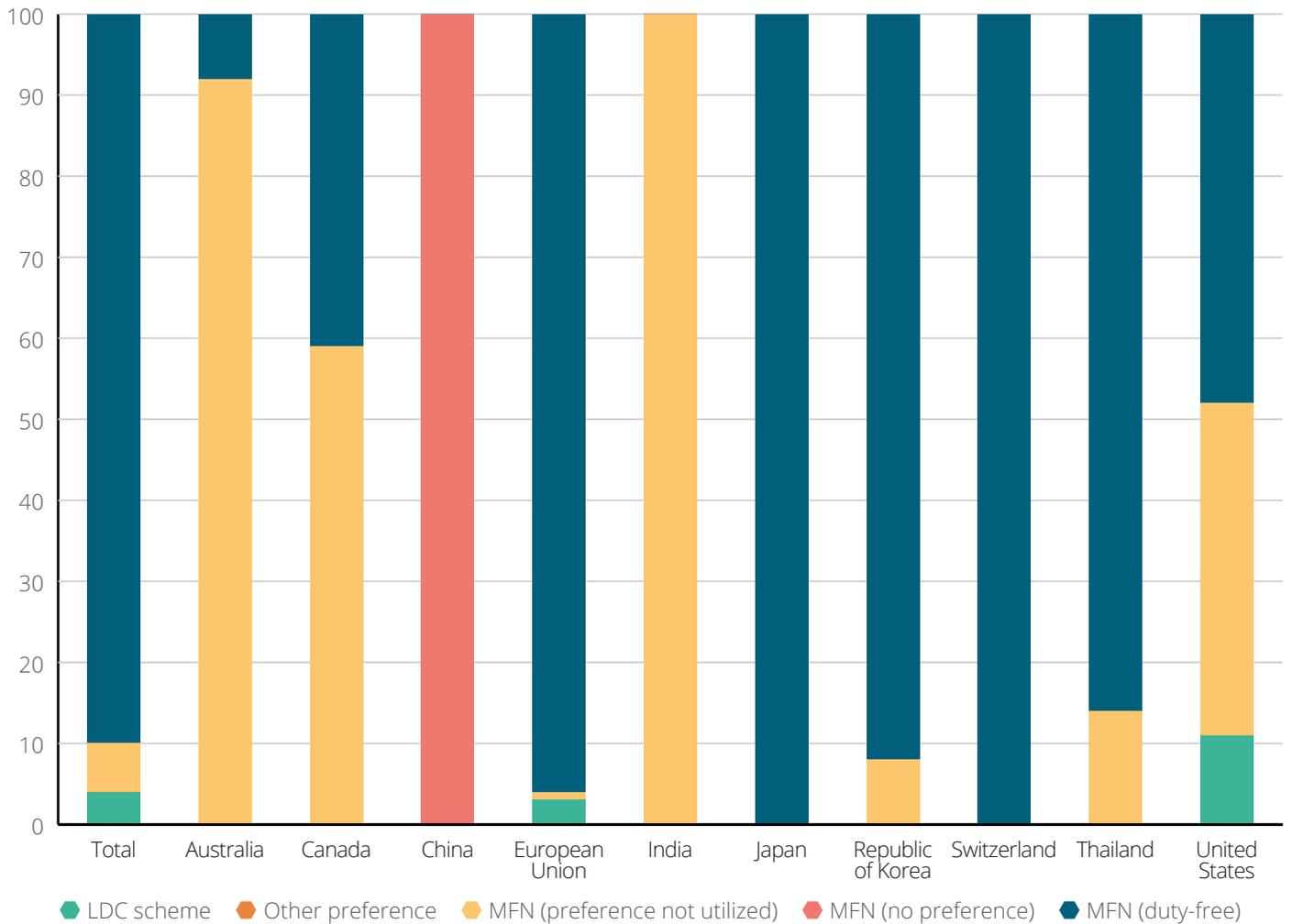
Table 48 shows that about one-third of exports from Sao Tomé and Principe consists of cocoa beans, which is part of the MTN “coffee, tea” category (US\$ 6.9 million, with total exports equal to US\$ 16 million). However, the projected reduction in exports is very small for this MTN category.

	European Union	India	Japan	Republic of Korea	Norway	New Zealand	Russian Federation	Switzerland	Thailand	Turkey	United States
	10		0	0			0	0			0
	(0)	(9)	(0)	(5)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
	(0)	(10)	(0)	(0)	(0)	(3)	(4)	(0)	(5)	(0)	(0)
	0		0			0					
	(0)	(8)	(0)	(6)	(0)	(0)	(2)	(0)	(0)	(0)	(0)
	1			0		0					0
	(0)	(10)	(0)	(8)	(0)	(3)	(1)	(0)	(0)	(0)	(0)
	0										
	(2)	(8)	(0)	(7)	(0)	(1)	(0)	(0)	(2)	(3)	(0)
	0										
	(6)	(60)	(0)	(8)	(0)	(7)	(0)	(0)	(0)	(6)	(0)
	0					0					0
	(0)	(10)	(0)	(1)	(0)	(4)	(3)	(0)	(19)	(0)	(0)
	0										
	(0)	(10)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
	0		0								
	(0)	(4)	(0)	(0)	(0)	(0)	(3)	(0)	(0)	(0)	(0)
	0								0		0
	(3)	(30)	(19)	(7)	(0)	(5)	(4)	(14)	(10)	(3)	(0)
	0										
	(0)	(10)	(0)	(4)	(0)	(5)	(0)	(0)	(0)	(0)	(0)

Table 49 shows that projected changes in exports at the product level are small in value and will not surpass US\$ 5,000. Exports of coconut oil, clothing and processed cocoa products will be most affected by an increase in tariff rates. For some of these products, the relative changes in exports can be substantial (up to 27 per cent).

Summarizing the effects for Sao Tomé and Príncipe, the simulation projects that the change in exports from Sao Tomé and Príncipe will be minimal, both in dollars and as a percentage of initial exports. A few products such as coconut oil, roasted coffee and cocoa paste will see sizeable relative declines; however, these correspond to very small changes in terms of dollar value.

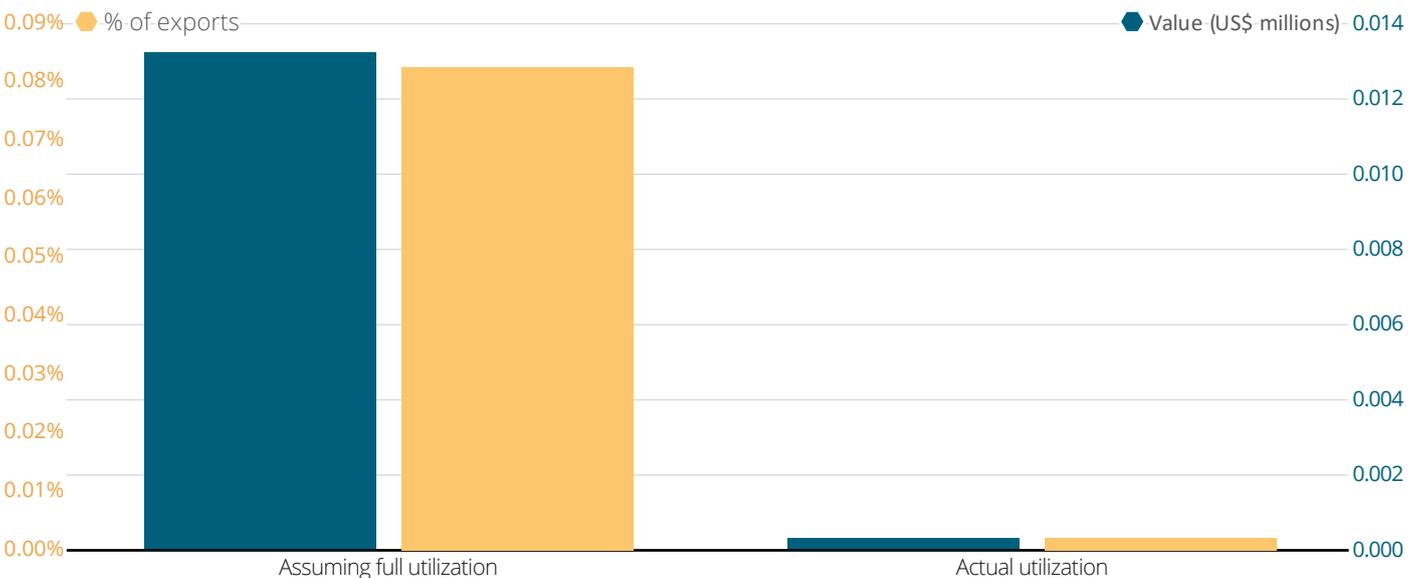
Figure 15: Preference utilization: imports from Sao Tomé and Príncipe by duty type



Source: WTO IDB.

Note: The figure is based on disaggregated import data for 2015–16 for Australia, Canada, Chile, China, the European Union, India, Japan, the Republic of Korea, Norway, Switzerland, Thailand and the United States.

Figure 16: Additional tariff costs on exports due to loss of preferences



Source: WTO IDB and UN Comtrade.

Note: The tariff cost increase for a product is estimated by multiplying the expected increase in tariff rates following graduation with the product's average export value during 2016–18.

Table 46: Top 12 export products: cost increase of due to loss of preferences

HS Code	Description	Increase in tariff costs (US\$ thousands)	
		Full utilization	Actual utilization
1801	Cocoa beans	0	0
8901	Ships, boats and vessels for the transport of persons or goods	0	0
8411	Turbo-jets, turbo-propellers and other gas turbines	0	0
7326	Other iron or steel articles	1	0
3901	Polymers of ethylene	0	0
8703	Motor cars and other motor vehicles (transport of persons)	0	0
9403	Furniture and parts thereof	0	0
7204	Ferrous waste and scrap	0	0
5201	Cotton (not carded or combed)	0	0
8803	Parts of aircrafts	0	0
1806	Chocolate and other food containing cocoa	0	0
7308	Structures of iron or steel and parts thereof	0	0

Source: WTO IDB (tariff and utilization data) and UN Comtrade (exports).

Note: The tariff cost increase is computed as the product of exports, tariff rate increases and utilization rates. Exports are 2016–18 averages obtained using mirror data from UN Comtrade; tariff increase is defined as the difference between the LDC rate and the best alternative rate in 2016; utilization rates are computed as the ratio between the exports that enter under the LDCs scheme and the total exports towards the preference-granting members (2015–16 average, where available); for column 1 the utilization rates of the LDC schemes are set to 1.

Table 47: Changes in exports and tariffs of Sao Tomé and Príncipe by country of destination

Importer	Initial exports	Change in exports	Percentage change	Effective tariff change*
MARKETS WITH AN EFFECTIVE TARIFF CHANGE				
European Union	8,124	-13	-0.16%	0.06
New Zealand	284	-1	-0.41%	0.07
Canada	68	0	-0.35%	0.18
Republic of Korea	149	0	-0.01%	0.01
OTHER REGIONS				
Thailand	20	0	-0.01%	0.00
Rest of Asia	3,739	0	0.00%	0.00
Rest of Americas	598	0	0.02%	0.00
Africa	619	0	0.01%	0.00
United States	1,084	0	0.01%	0.00
Australia	203	0	0.01%	0.00
CIS	7	0	0.21%	0.00
South Asia	99	0	0.00%	0.00
Russian Federation	43	0	0.01%	0.00
China	64	0	0.00%	0.00
Rest of Europe	29	0	0.01%	0.00
Middle East	127	0	0.00%	0.00
Norway	0	0	0.00%	0.00
Japan	511	0	0.00%	0.00
Switzerland	205	0	0.00%	0.00
Pacific	7	0	0.00%	0.00
India	27	0	0.00%	0.00
Kazakhstan	0	0	0.00%	0.00
Total	16,043	-14	-0.09%	0.03

Note: Change in exports (in thousands of dollars and as a percentage of initial exports).

* The effective tariff change is measured in percentage points. It takes into account the increase in tariff rates due to the loss of LDC-specific preferences as well as preference utilization by graduating LDCs. A lower preference utilization will result in a lower effective increase in tariffs as a smaller fraction of exports will be exposed to changes in tariff rates after graduation.

Table 48: Changes in exports and tariffs of Sao Tomé and Príncipe by MTN category

MTN category	Initial exports	Change in exports	Percentage change	Effective tariff change*
Clothing	97	-6	-6.33%	3.323
Oilseeds, fats and oils	97	-5	-5.47%	1.045
Coffee, tea	6,970	-1	-0.02%	0.005
Transport equipment	387	0	-0.07%	0.019
Chemicals	848	0	-0.02%	0.005
Fruits, vegetables, plants	134	0	-0.15%	0.054
Wood, paper, etc.	75	0	-0.22%	0.053
Non-electrical machinery	3,765	0	0.00%	0.001
Minerals and metals	1,014	0	-0.01%	0.002
Electrical machinery	835	0	-0.01%	0.003
Textiles	289	0	-0.03%	0.014
Leather, footwear, etc.	92	0	-0.04%	0.014
Beverages and tobacco	45	0	-0.05%	0.017
Animal products	0	0	-50.26%	23.360
Cereals and preparations	26	0	-0.06%	0.025
Manufactures n.e.s.	744	0	0.00%	0.000
Fish and fish products	6	0	-0.09%	0.026
Other agricultural products	302	0	0.00%	0.000
Sugars and confectionery	0	0	-18.87%	4.650
Cotton	316	0	0.00%	0.000
Petroleum	0	0	0.00%	0.000
Total	16,043	-14	-0.09%	0.031

Note: Change in exports (in thousands of dollars and as a percentage of initial exports).

* The effective tariff change is measured in percentage points. It takes into account the increase in tariff rates due to the loss of LDC-specific preferences as well as preference utilization by graduating LDCs. A lower preference utilization will result in a lower effective increase in tariffs as a smaller fraction of exports will be exposed to changes in tariff rates after graduation.

Table 49: Change in exports of Sao Tomé and Príncipe of the 12 HS lines with the largest change

HS line	Product description	Initial exports	Change in exports	Percentage change
151311	Crude coconut oil	92	-5	-5.74%
620520	Men's shirts of cotton	36	-3	-8.50%
620423	Women's ensembles of synthetic fibres	17	-2	-12.88%
610510	Men's shirts of cotton, knitted	13	-1	-7.02%
180310	Cocoa paste (excluding defatted)	3	-1	-27.19%
090121	Roasted coffee	6	-1	-8.73%
870899	Parts and accessories for tractors and motor vehicles	26	0	-0.75%
330590	Preparations for use on the hair	1	0	-23.05%
940350	Wooden furniture for bedrooms	2	0	-4.90%
841330	Fuel, lubricating or cooling medium pumps	17	0	-0.60%
180610	Cocoa powder, sweetened	1	0	-6.27%
871499	Parts and accessories for bicycles, n.e.s.	9	0	-0.82%

Note: Change in exports (in thousands of dollars and as a percentage of initial exports).

Solomon Islands

10.1 Export structure

Table 50 provides an overview of the export structure of Solomon Islands and the importance of preference-granting countries as destination markets, at both the aggregate and sectoral levels. The Solomon Islands exported on average US\$ 845 million of merchandise from 2016 to 2018.

Exports are concentrated in the wood sector, which accounts for 70 per cent of merchandise exports. In addition, the Solomon Islands also exports fish and fish products (11 per cent), oilseeds, fats and oils (8 per cent), minerals and metals, e.g. aluminium, (8 per cent), and coffee and tea (2 per cent).

China is the Solomon Islands' most important trading partner, as it is the destination of 62 per cent of merchandise exports. It is followed by the European Union (11 per cent), India (8 per cent), Switzerland (2 per cent), Thailand (2 per cent) and the Republic of Korea (2 per cent). Around 10 per cent of exports are directed towards markets that do not provide preferential market access to LDCs ("rest of the world").

More than three-quarters of wood exports (79 per cent) go to China, while 11 per cent go to India and 7 per cent to non preference-granting members. The majority of exports of fish and fish products are directed towards the European Union (52 per cent), with Thailand (22 per cent), Japan (4 per cent), China (3 per cent) and the United States (3 per cent) as other significant markets. While the European Union is the main destination market for oilseeds, fats and oils (55 per cent), China is the main market for minerals and metals (83 per cent), as is Australia for transport equipment (75 per cent).

10.2 Impact on preferential market access

Table 51 illustrates the loss of tariff preference for the Solomon Islands' main export products in preference-granting markets. For the top 12 export products at the level of HS headings, the table shows the increase in tariffs that the Solomon Islands will face in destination markets when using the best available alternative tariff compared to the LDC duty rate. The best alternative tariffs are GSP preferences for Canada, the European Union, Japan, Norway, the Russian Federation, Switzerland, Turkey and the United States, and SPARTECA for Australia and New Zealand. In the case of Chile, India and Thailand, the best available alternative tariff is the MFN rate.

The top 12 export products represent around 98 per cent of the Solomon Islands' merchandise exports. Graduation will not have any direct effect on the Chinese market. With respect to the European Union, tariff increases will range from zero to 13 per cent, while the Indian market will be characterized by a more substantial heterogeneity, with increases ranging from 3 per cent to 79 per cent (even if the largest increases will concern products that are not currently shipped to India, like copra and fish). Because of the SPARTECA agreement, there will be no preference losses within the Australian market, whereas other preference-granting members will apply increases between zero and 10 per cent.

Wood in the rough (HS 4403), which is the main export product, will see a 5 per cent tariff increase in the Indian market. Aluminium ores (HS 2606) will face a 3 per cent tariff increase in India, while prepared or preserved fish (HS 1604) will face a 13 per cent increase in the European Union and 4 per cent in the United States. Tariffs on frozen

Table 50: Exports of the Solomon Islands by sector and shares of destination markets in sectoral exports (2016-18 average)

MTN code	Product	Partner: World		Share of destination markets in product exports (%)						
		% of total	US\$ million	Australia	Canada	Chile	China	European Union	India	Japan
	Total	100	845	1	0		62	11	8	1
15	Wood, paper, etc.	70	592	1	0		79	0	11	0
11	Fish and fish products	11	92	1	0		3	52	0	4
06	Oilseeds, fats and oils	8	67	1	0		0	55		0
12	Minerals and metals	8	64	6	0		83	0	3	
04	Coffee, tea	2	15	0				2		
21	Transport equipment	0	3	64	0			14		
08	Beverages and tobacco	0	3	22				2		
22	Manufactures n.e.s.	0	2	8	5		0	52		4
19	Non-electrical machinery	0	2	23	10		0	14	4	
14	Chemicals	0	1	1	1		1	2		
18	Leather, footwear, etc.	0	1		0		0	90		0
20	Electrical machinery	0	1	35	0		1	16	0	0
10	Other agricultural products	0	1	30	0		0	45		
01	Animal products	0	1		4		14	4		3
03	Fruits, vegetables, plants	0	0	25				5		
17	Clothing	0	0					93		
16	Textiles	0	0				4	72		
02	Dairy products	0	0					0		
13	Petroleum	0	0					0		
05	Cereals and preparations	0	0					12		
07	Sugars and confectionery	0	0					100		

Source: UN Comtrade

Note: Export values and shares are based on mirrored import statistics and represent averages for 2016-18. Blanks indicate missing data. Zeros (0) indicate shares below 0.5 per cent. Green shading indicates share value, with highest share in dark green. Sectors are shown in terms of MTN categories. The MTN categories' coverage of HS codes is included in World Tariff Profiles 2019 (pages 40-41) (available at https://www.wto.org/english/res_e/publications_e/world_tariff_profiles19_e.htm).

fish (HS 0303) will increase by 3 per cent in Japan, while palm oil (HS 1511) will be characterized by a 2 per cent tariff increase in the European Union.

Figure 17 shows the Solomon Islands' utilization of LDC-specific preferences by providing a breakdown of imports by duty type for preference-granting countries. The first bar ("Total") shows that only 12 per cent of total exports towards 12 preference-granting members make use

of LDC-specific preferences, whereas more than two-thirds of exports pay MFN tariffs, as they are not eligible for preferences. The low degree of preference usage is explained by the unavailability of LDC-specific preferences in the Chinese market, which is the most important destination for exports from the Solomon Islands. On the other hand, preference utilization is high in the European Union (the second-largest export market for Solomon Islands), Switzerland and the United States. Exports to

Republic of Korea	Norway	New Zealand	Russian Federation	Switzerland	Thailand	Turkey	United States	Rest of the world
1	0	1	0	2	2	0	0	10
2		1			0		0	7
0		0	0		22		3	15
0		1		20				22
0		0	0	7	0	0		1
		0					1	97
0		1		0	0			21
					0		0	76
0		2	2	0	0	0	8	19
1	0	0	0	1	0	0	9	37
26		1	0	0	0		5	65
0			0	1	0		2	7
2		0		2	2	0	6	36
0							2	23
1			3		2	2	32	35
0		14					38	19
0		0			0		4	3
							0	24
								100
								100
1		6						82

Thailand enter MFN duty-free. In the case of Australia, the large majority of the Solomon Islands' exports enter either MFN duty-free or make use of preferences under SPARTECA.

Figure 18 provides estimates of the increase in the cost of tariffs for the Solomon Islands following graduation, obtained by multiplying exports with the percentage point increase in tariffs due to the loss of preferences. In

the case of full preference utilization, tariff costs would increase by almost US\$ 14 million, which corresponds to 1.8 per cent of merchandise exports to preference-granting members. Taking preference utilization into account, tariff costs would increase instead by around US\$ 11 million (around 1.3 per cent of merchandise exports to preference-granting members).

Table 51. Top 12 export products of the Solomon Islands and increase in tariffs in destination markets following graduation

HS code	Product	Partner: World		Exports in US\$ million towards destination markets (Tariff increase in percentage points due to preference loss)			
		% of total	US\$ million	Australia	Canada	Chile	China
4403	Wood in the rough	68	567	0 (0)	(0)	(6)	465
2606	Aluminium ores and concentrates	7	55	(0)	(0)	(6)	53
1604	Prepared or preserved fish, caviar	6	51	0 (0)	(5)	(6)	
0303	Fish (frozen) excl. fish fillets	4	37	0 (0)	(0)	(6)	2
1511	Palm oil	3	26	(0)	(0)	(6)	
1513	Coconut (copra), palm kernel or babassu oil	2	15	0 (0)	0 (2)	(6)	0
1801	Cocoa beans	2	15	0 (0)	(0)	(6)	
1203	Copra	2	14	(0)	(0)	(6)	
4407	Wood sawn or chipped lengthwise	1	10	3 (0)	(0)	(6)	1
4401	Fuel wood, wood in chip or particles	1	5	(0)	(0)	(6)	
4408	Sheets for veneering, for plywood or for similar laminated wood	1	5	(0)	(0)	(6)	0
7102	Diamonds (not mounted or set)	1	4	(0)	(0)	(6)	

Source: UN Comtrade (trade flows) and WTO IDB (tariffs).

Note: For every importer-product couple, the first row reports average export values, while the second row reports in parentheses the preference loss due to graduation, i.e. the difference between the best available alternative rate and the LDC duty rate. Whenever such a figure is not available, it means that either the Solomon Islands is not eligible for the LDC duty rate or the tariffs are not ad valorem. Export values are based on mirrored import statistics and represent averages for 2016–18. Tariffs are for the year 2019, with the exception of China (2017), India (2016) and Turkey (2016).

Table 52 shows that exports of prepared or preserved fish will face most of the increases in tariff costs. For other top export products, additional tariff costs are expected to be small, either because tariff rates will not increase or because actual preference utilization is low.

10.3 Impact on exports: partial equilibrium estimates

Substantial changes in exports from the Solomon Islands are projected as a result of graduation from LDC preferences. Total exports are expected to fall by US\$ 34.4 million, corresponding to 4.16 per cent of initial

exports (Table 53). The impact is concentrated in exports to the European Union, with the projected fall in exports to this region of US\$ 36.8 million (43.33 per cent of initial exports) exceeding the total projected reduction in exports. This implies that there is sizeable trade diversion. Exports are projected to increase substantially to countries of the Pacific, such as Fiji and Papua New Guinea (by about US\$ 2.2 million or 63.82 per cent), and also to Australia (US\$ 0.3 million or 2.72 per cent).

The fall in exports to other regions in which the Solomon Islands faces rising tariffs because of graduation are minimal (United States and Japan).

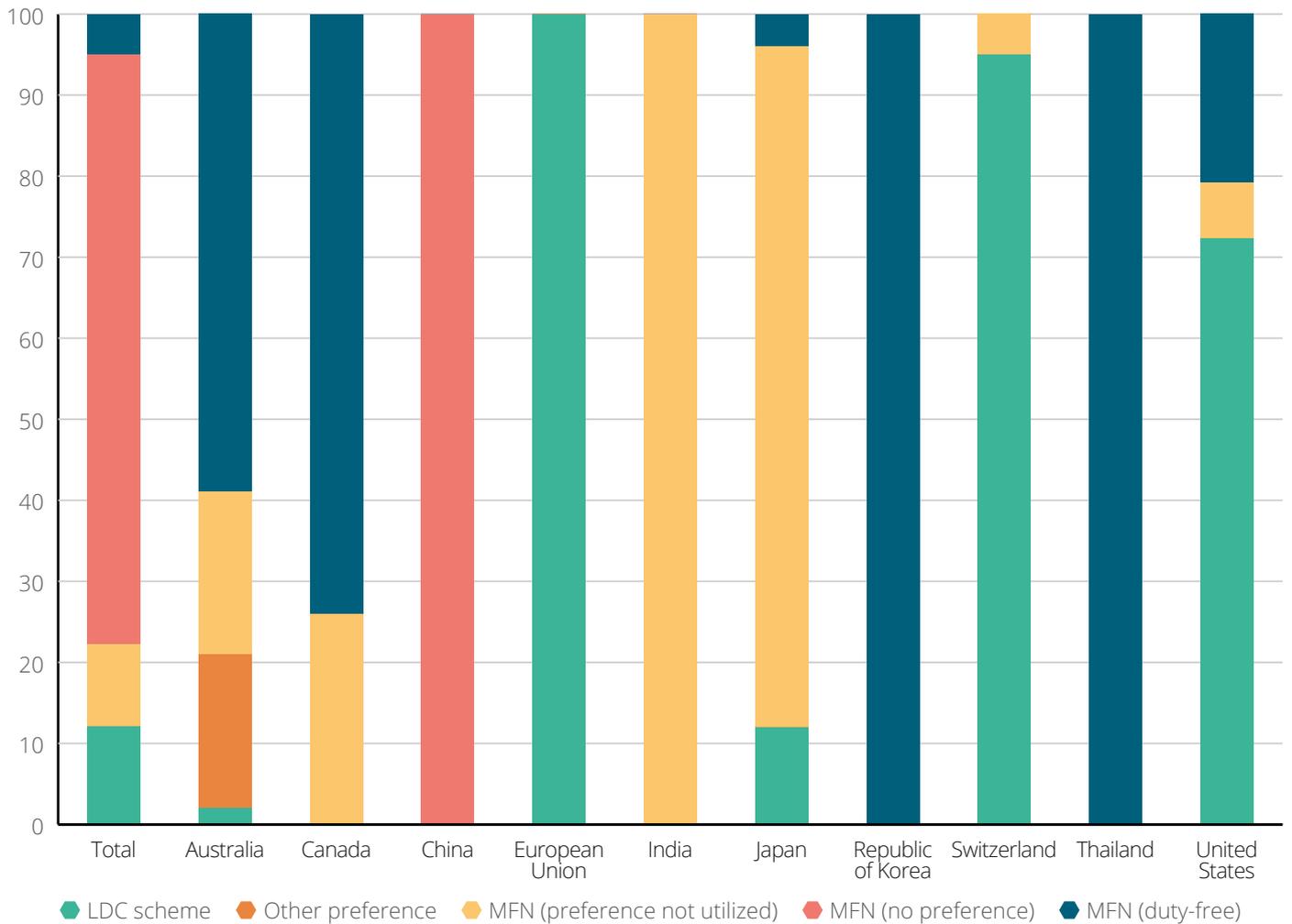
European Union	India	Japan	Republic of Korea	Norway	New Zealand	Russian Federation	Switzerland	Thailand	Turkey	United States
	65	1	11		0					
(0)	(5)	(0)	(0)	(0)	(0)	(1)	(0)	(0)	(0)	(0)
	2									
(0)	(3)	(0)	(0)	(0)	(0)	(4)	(0)	(0)	(0)	(0)
47			0					0		2
(13)	(30)	(7)	(9)	(0)	(0)	(10)	(0)	(22)	(0)	(4)
0		3	0					23		
(7)	(30)	(3)	(3)	(0)	(0)	(5)	(0)	(0)	(0)	(0)
23							4			
(2)	(18)	(0)	(2)	(0)	(0)	(1)	(0)	(0)	(0)	(0)
4		0	0		0		10			
(5)	(79)	(0)	(5)	(0)	(0)	(1)	(0)	(0)	(0)	(0)
0					0					0
(0)	(9)	(0)	(5)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
(0)	(0)	(0)	(3)	(0)	(0)	(4)	(0)	(0)	(0)	(0)
0	0				4					
(0)	(10)	(1)	(5)	(0)	(0)	(2)	(0)	(2)	(0)	(0)
0										
(0)	(5)	(0)	(2)	(0)	(0)	(1)	(0)	(1)	(0)	(0)
			1							
(0)	(10)	(4)	(4)	(0)	(0)	(1)	(0)	(5)	(0)	(0)
							4			
(0)	(10)	(0)	(3)	(0)	(0)	(0)	(0)	(0)	(0)	(0)

Table 54 shows that almost all of the projected reduction in exports will take place in fish and fish products (US\$ 33 million or 34.85 per cent of initial exports of fish and fish products). The only other sector with a sizeable reduction in exports is oilseeds, fats and oils.

Table 55 shows that more than 95 per cent of the reduction in exports is projected to occur for prepared tuna, whose exports are projected to fall by US\$ 32.4 million or 58.87 per cent of initial exports. The changes for other products, mostly part of the MTN category fish and fish products, are orders of magnitude smaller.

Summarizing the effects for the Solomon Islands, exports are projected to fall substantially, by US\$ 34.4 million or 4.16 per cent of initial exports. The projected reduction is concentrated in exports to the European Union (US\$ 36.8 million or 43.33 per cent of initial exports). The main MTN category affected is fish and fish products, driven by one product, prepared tuna. Exports of this product would fall by US\$ 32.4 million and thus make up more than 95 per cent of the projected total reduction in exports from the Solomon Islands.

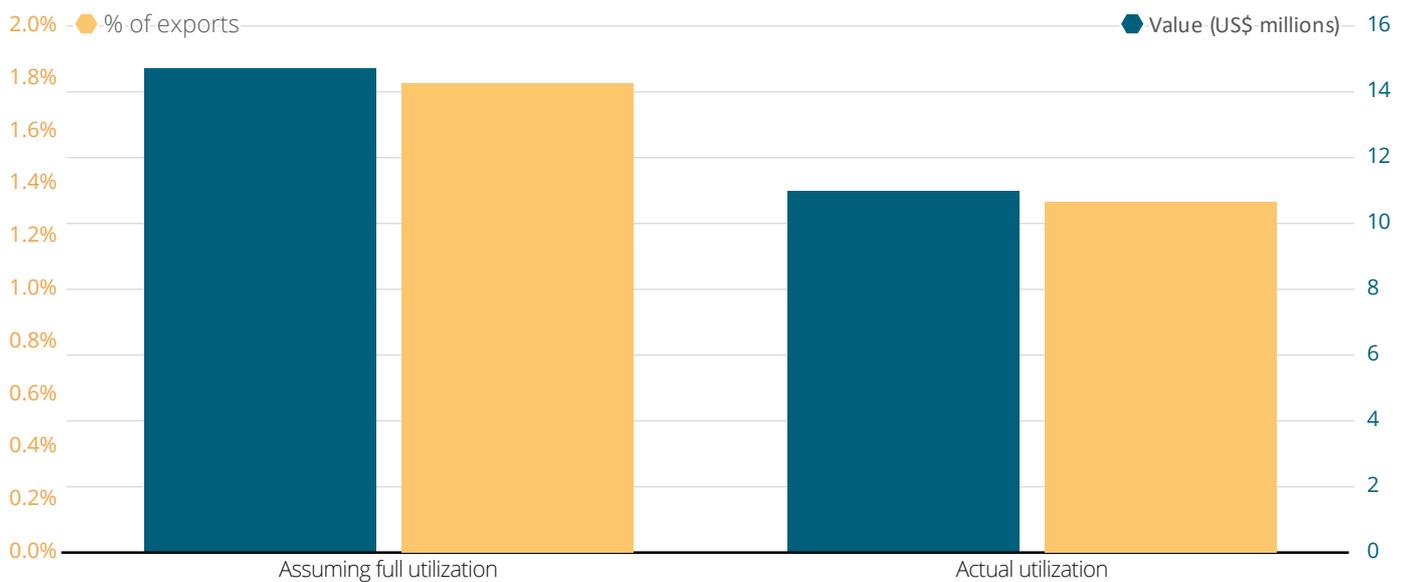
Figure 17: Preference utilization: imports from the Solomon Islands by duty type



Source: WTO IDB.

Note: The figure is based on disaggregated import data for 2015–16 for Australia, Canada, Chile, China, the European Union, India, Japan, the Republic of Korea, Norway, Switzerland, Thailand and the United States.

Figure 18: Additional tariff costs on exports due to loss of preferences



Source: WTO IDB and UN Comtrade.

Note: The tariff cost increase for a product is estimated by multiplying the expected increase in tariff rates following graduation with the product's average export value during 2016–18.

Table 52: Top 12 export products: cost increase of due to loss of preferences

HS Code	Description	Increase in tariff costs (US\$ thousands)	
		Full utilization	Actual utilization
4403	Wood in the rough	3,281	0
2606	Aluminium ores and concentrates	0	0
1604	Prepared or preserved fish, caviar	10,883	10,882
0303	Fish (frozen) excl. fish fillets	137	21
1511	Palm oil	54	0
1513	Coconut (copra), palm kernel or babassu oil	291	85
1801	Cocoa beans	0	0
1203	Copra	0	0
4407	Wood sawn or chipped lengthwise	53	0
4401	Fuel wood, wood in chip or particles	0	0
4408	Sheets for veneering, for plywood or for similar laminated wood	0	0
7102	Diamonds (not mounted or set)	0	0

Source: WTO IDB (tariff and utilization data) and UN Comtrade (exports).

Note: The tariff cost increase is computed as the product of exports, tariff rate increases and utilization rates. Exports are 2016–18 averages obtained using mirror data from UN Comtrade; tariff increase is defined as the difference between the LDC rate and the best alternative rate in 2016; utilization rates are computed as the ratio between the exports that enter under the LDCs scheme and the total exports towards the preference-granting members (2015–16 average, where available); for column 1 the utilization rates of the LDC schemes are set to 1.

Table 53: Changes in exports and tariffs of the Solomon Islands by country of destination

Importer	Initial exports	Change in exports	Percentage change	Effective tariff change*
MARKETS WITH AN EFFECTIVE TARIFF CHANGE				
European Union	84,935	-36,805	-43.33%	12.86
Japan	5,935	-97	-1.63%	0.38
United States	3,572	-61	-1.71%	6.61
India	67,895	-27	-0.04%	0.01
Republic of Korea	12,025	-9	-0.07%	0.01
Russian Federation	82	-4	-4.87%	1.38
Canada	384	0	0.07%	0.01
OTHER REGIONS				
Pacific	3,406	2,174	63.82%	0.00
Australia	12,676	344	2.72%	0.00
Switzerland	18,074	42	0.23%	0.00
Rest of Asia	64,605	19	0.03%	0.00
Thailand	20,499	13	0.06%	0.00
China	521,832	6	0.00%	0.00
New Zealand	5,704	3	0.06%	0.00
Rest of Americas	1,324	1	0.06%	0.00
South Asia	101	1	0.57%	0.00
Africa	2,622	0	0.00%	0.00
CIS	95	0	0.01%	0.00
Middle East	358	0	0.00%	0.00
Rest of Europe	3	0	0.00%	0.00
Norway	1	0	0.00%	0.00
Iceland	23	0	0.00%	0.00
Total	826,170	-34,399	-4.16%	1.35

Note: Change in exports (in thousands of dollars and as a percentage of initial exports).

* The effective tariff change is measured in percentage points. It takes into account the increase in tariff rates due to the loss of LDC-specific preferences as well as preference utilization by graduating LDCs. A lower preference utilization will result in a lower effective increase in tariffs as a smaller fraction of exports will be exposed to changes in tariff rates after graduation.

Table 54: Changes in exports and tariffs of the Solomon Islands by MTN category

MTN category	Initial exports	Change in exports	Percentage change	Effective tariff change*
Fish and fish products	94,717	-33,011	-34.85%	11.53
Oilseeds, fats and oils	61,408	-1,377	-2.24%	0.43
Chemicals	556	-8	-1.43%	0.28
Clothing	55	-2	-3.87%	1.96
Animal products	502	-1	-0.12%	0.06
Wood, paper, etc.	579,500	-1	0.00%	0.00
Minerals and metals	64,361	0	0.00%	0.00
Fruits, vegetables, plants	397	0	-0.02%	0.01
Textiles	32	0	-0.11%	0.04
Other agricultural products	630	0	0.00%	0.00
Leather, footwear, etc.	104	0	0.00%	0.00
Transport equipment	2,953	0	0.00%	0.00
Petroleum	23	0	0.00%	0.00
Coffee, tea	14,481	0	0.00%	0.00
Electrical machinery	765	0	0.00%	0.00
Dairy products	50	0	0.00%	0.00
Cereals and preparations	3	0	0.00%	0.00
Non-electrical machinery	1,362	0	0.00%	0.00
Manufactures n.e.s.	1,483	0	0.00%	0.00
Beverages and tobacco	2,789	0	0.00%	0.00
Total	826,170	-34,399	-4.16%	1.35

Note: Change in exports (in thousands of dollars and as a percentage of initial exports).

* The effective tariff change is measured in percentage points. It takes into account the increase in tariff rates due to the loss of LDC-specific preferences as well as preference utilization by graduating LDCs. A lower preference utilization will result in a lower effective increase in tariffs as a smaller fraction of exports will be exposed to changes in tariff rates after graduation.

Table 55: Change in exports of the Solomon Islands of the 12 HS lines with the largest change

HS line	Product description	Initial exports	Change in exports	Percentage change
160414	Prepared tuna	54,954	-32,352	-58.87%
151190	Palm oil and its fractions	11,102	-849	-7.65%
160420	Prepared fish	1,075	-526	-48.95%
151321	Crude oil	5,130	-496	-9.68%
030342	Frozen yellowfin tuna	15,091	-70	-0.47%
030487	Frozen tuna	223	-40	-17.85%
151311	Crude coconut oil	9,525	-31	-0.33%
230120	Flours, meals and pellets of fish	833	-16	-1.87%
390760	Polyethylene terephthalate	43	-7	-16.90%
030343	Frozen skipjack tuna	17,765	-3	-0.01%
050800	Coral	633	-2	-0.36%
440810	Sheets for veneering	14	-2	-11.84%

Note: Change in exports (in thousands of dollars and as a percentage of initial exports).

Timor-Leste

II.1 Export structure

Table 56 provides an overview of the export structure of Timor-Leste and the importance of preference-granting countries as destination markets, at both the aggregate and sectoral levels. Timor-Leste exported on average US\$ 110 million of merchandise from 2016 to 2018.

Exports are concentrated in petroleum, which accounts for 70 per cent of merchandise exports. Other main export products are coffee and tea (17 per cent), minerals and metals (2 per cent), other agricultural products (2 per cent), electrical machinery (2 per cent) and non-electrical machinery (2 per cent).

The most important destination market is Thailand, accounting for 34 per cent of Timor-Leste's merchandise exports. Other relevant markets are the European Union (6 per cent), the United States (6 per cent), Canada (3 per cent), Australia (2 per cent), China (2 per cent), Japan (1 per cent) and the Republic of Korea (1 per cent). Around 44 per cent of merchandise exports goes to markets with no preferential market access for LDCs ("rest of the world").

Petroleum exports are mainly directed towards Thailand (48 per cent) as well as to the economies indicated in Table 56 as "rest of the world" (51 per cent). The main trading partners for coffee are the United States (30 per cent), the European Union (27 per cent), Canada (17 per cent) and Australia (4 per cent). Exports of minerals and metals are mainly directed towards non preference-granting members (85 per cent), followed by Australia (10 per cent); other agricultural products are mainly exported to China (69 per cent) and the United States (8 per cent).

II.2 Impact on preferential market access

Table 57 illustrates the loss of tariff preference for Timor-Leste's main export products in preference-granting markets. For the top 12 export products at the level of HS headings, the table shows the increase in tariffs that Timor-Leste will face in destination markets when using the best available alternative tariff compared to the LDC duty rate. The best alternative tariffs are GSP preferences for Australia, Canada, the European Union, Japan, Norway, Turkey and the United States; and MFN tariffs for China, India, the Republic of Korea and Thailand.

The top 12 export products represent around 93 per cent of Timor-Leste's merchandise exports. Timor-Leste is expected to face limited tariff increases following graduation, because most of its exports are directed towards markets that do not grant LDC-specific preferences. Petroleum (HS 2709) exports towards Thailand, its main market, will not see any tariff increase. Coffee (HS 0901) will not be subject to a tariff increases in its main market, the United States. However, coffee will face tariff increases of 14 per cent in China; 4 per cent in the Republic of Korea; and 3 per cent in the European Union, Japan and Japan. Locust beans (HS 1212) will see an 18 per cent tariff increase in the Chinese market.

Figure 19 shows Timor-Leste's utilization of LDC-specific preferences by providing a breakdown of imports by duty type for preference-granting countries. The first bar ("Total") shows that Timor-Leste is currently not dependent on LDC-specific preference, as almost all exports enter preference-granting markets MFN duty-free, including in Australia, Canada, the European Union, Japan, Norway, Thailand and the United States. It is only in the Korean market that Timor-Leste is making substantive use of LDC preferences.

Table 56: Exports of Timor-Leste by sector and shares of destination markets in sectoral exports (2016-18 average)

MTN code	Product	Partner: World		Share of destination markets in product exports (%)						
		% of total	US\$ million	Australia	Canada	Chile	China	European Union	India	Japan
	Total	100	110	2	3	0	2	6	0	1
13	Petroleum	70	78	1				0		
04	Coffee, tea	17	19	4	17		1	27		6
12	Minerals and metals	2	2	10	0		1	2		
10	Other agricultural products	2	2	1			69	0	3	
20	Electrical machinery	2	2	4	0		7	48		
19	Non-electrical machinery	2	2	6	0		0	17	3	
21	Transport equipment	1	1	35	0	0		2		
22	Manufactures n.e.s.	1	1	1	1		1	41		
15	Wood, paper, etc.	1	1	0	1		24	1		
03	Fruits, vegetables, plants	1	1	1	0		3	10	23	0
06	Oilseeds, fats and oils	1	1				2	0		
16	Textiles	1	1	2			0	2		
18	Leather, footwear, etc.	0	0	77	0		0	0		
05	Cereals and preparations	0	0	2			1	59		1
14	Chemicals	0	0	10	0	0	3	21		
17	Clothing	0	0		2		1	7		
01	Animal products	0	0					3		
07	Sugars and confectionery	0	0		0			100		
08	Beverages and tobacco	0	0				18	63		
11	Fish and fish products	0	0					3		

Source: UN Comtrade.

Note: Export values and shares are based on mirrored import statistics and represent averages for 2016-18. Blanks indicate missing data. Zeros (0) indicate shares below 0.5 per cent. Green shading indicates share value, with highest share in dark green. Sectors are shown in terms of MTN categories. The MTN categories' coverage of HS codes is included in World Tariff Profiles 2019 (pages 40-41) (available at https://www.wto.org/english/res_e/publications_e/world_tariff_profiles19_e.htm).

Figure 20 provides estimates of the additional tariff costs on exports for Timor-Leste following graduation, obtained by multiplying exports with the percentage point increase in tariffs due to the loss of preferences. In the case of full preference utilization, the tariff cost increase would be US\$ 430,000, which is equivalent to 0.35 per cent of merchandise exports to preference-granting members. Taking preference utilization into account, tariff costs are estimated to increase by less than US\$ 6,000, which is

equivalent to less than 0.005 per cent of the total exports to preference-granting members.

Table 58 provides estimates of cost increases for the top 12 export products. Three products would be affected if utilization were full: coffee (HS 0901), worn clothing (HS 6309) and locust beans (HS 1212). If the actual utilization of preferences is taken into account, the only change is an increase in tariff costs for coffee.

Republic of Korea	Norway	New Zealand	Russian Federation	Switzerland	Thailand	Turkey	United States	Rest of the world
1	0	0	0		34	0	6	44
					48			51
3		2				0	30	12
0		0	0		0		1	85
0							8	18
11		1	2		0		13	13
23	0	0			0		13	38
9		0			0			53
0		0	16		0		4	36
0		1			1		12	60
0					17			45
							30	68
1		1			2		0	91
0			0		0		9	13
0					0		32	6
0		0			12		3	50
1					2			87
								97
								19
								97

11.3 Impact on exports: partial equilibrium estimates

Table 59 shows that the impact of preference graduation on exports from Timor-Leste will be minimal. Total exports are projected to fall by US\$ 0.04 million. This is due to the fact that the effective changes in applied tariffs are minimal, 0.01 per cent for total trade. Exports to the Republic of Korea are projected to fall somewhat, by US\$ 0.03 million. However, exports to the Republic of Korea are a very small

share of total exports from Timor-Leste. About one-fifth of total exports from Timor-Leste go to the European Union, but applied tariffs to this destination are not projected to increase with graduation.

Table 60 clearly shows that the only sector with a somewhat sizeable projected reduction in exports is coffee and tea, featuring a reduction in exports of US\$ 0.02 million. Since coffee and tea are important export products for Timor-Leste (about 15 per cent of total exports, US\$ 18.43 million out of US\$ 123 million in total

Table 57: Top 12 export products of Timor-Leste and increase in tariffs in destination markets following graduation

HS code	Product	Partner: World		Exports in US\$ million towards destination markets (Tariff increase in percentage points due to preference loss)			
		% of total	US\$ million	Australia	Canada	Chile	China
2709	Petroleum oils (crude)	70	77	(0)	(0)	(6)	(0)
0901	Coffee	17	19	1	3	(6)	0
1212	Locust beans, seaweeds, sugar beet/cane, fruit stones and kernels	1	1	(0)	(0)	(6)	(18)
8517	Telephone sets and other transmission apparatus	1	1	0	0	(6)	(0)
7204	Ferrous waste and scrap	1	1	(0)	(0)	(6)	(1)
2710	Petroleum oils (not crude)	1	1	1	(0)	(6)	(4)
8803	Parts of aircrafts	0	0	0	(0)	(6)	(1)
6309	Textiles (worn clothing and other worn articles)	0	0	(0)	(9)	(6)	(14)
7602	Aluminium (waste and scrap)	0	0	(0)	(0)	(6)	(2)
4202	Trunks, cases and bags	0	0	0	(5)	(6)	0
8802	Aeroplanes, helicopters and other powered aircrafts	0	0	(0)	(0)	(0)	(3)
8542	Electronic integrated circuits	0	0	(0)	0	(3)	0
				(0)	(0)	(3)	(2)

Source: UN Comtrade (trade flows) and WTO IDB (tariffs).

Note: For every importer-product couple, the first row reports average export values, while the second row reports in parentheses the preference loss due to graduation, i.e. the difference between the best available alternative rate and the LDC duty rate. Whenever such a figure is not available, it means that either Timor-Leste is not eligible for the LDC duty rate or the tariffs are not ad valorem. Export values are based on mirrored import statistics and represent averages for 2016–18. Tariffs are for the year 2019, with the exception of China (2017), India (2016) and Turkey (2016).

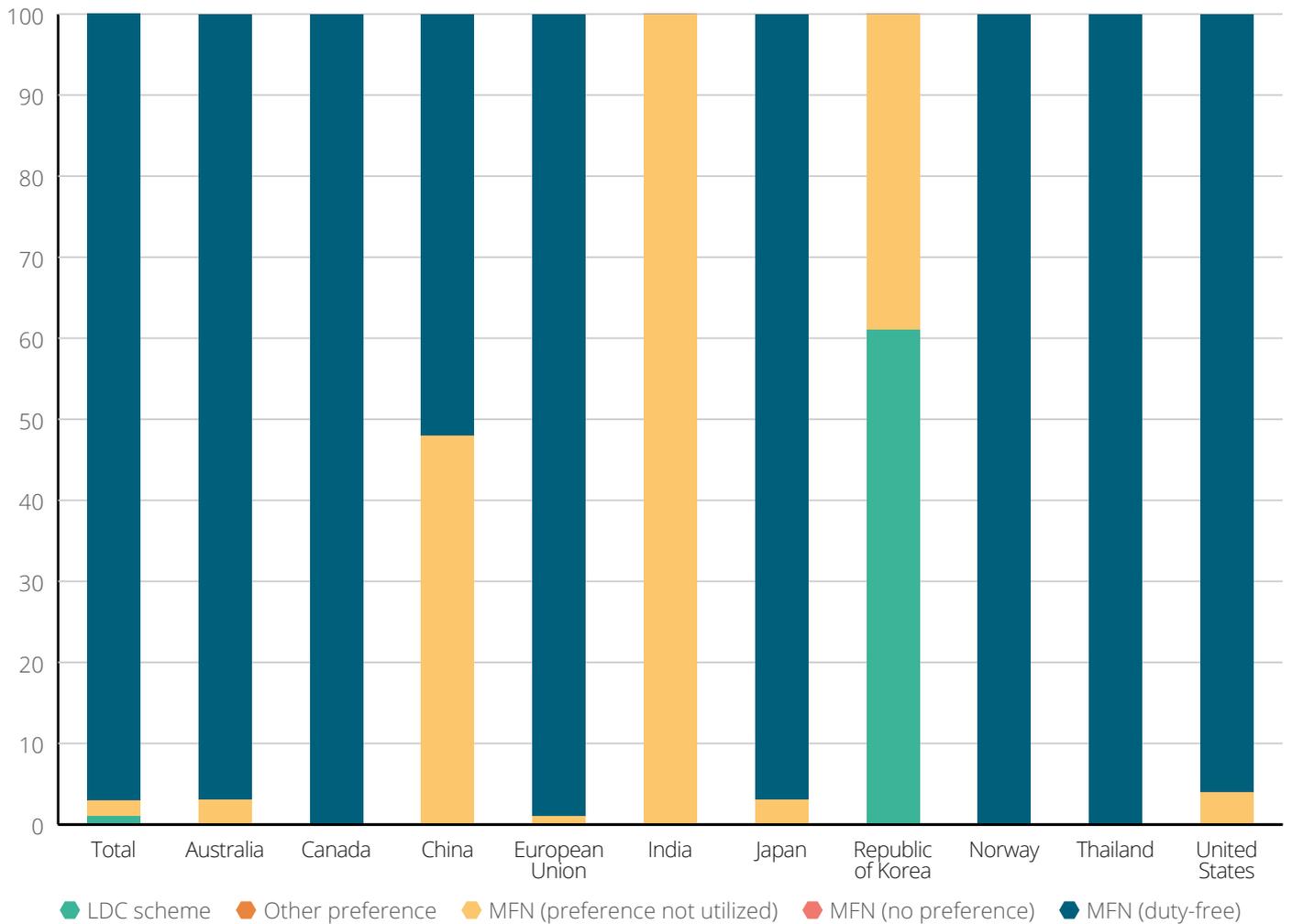
exports), this change is still very small as a percentage of initial exports (0.11 per cent).

Table 61 shows that the entire reduction in the category coffee and tea occurs in two products: coffee and seaweeds.

Summarizing the results for Timor-Leste, the impact of preference graduation will be minimal, because the change in tariffs is very small. Because utilization rates are minimal, the effective change in applied tariffs is also minor. The main products that will be slightly affected by preference graduation are coffee and seaweed.

European Union	India	Japan	Republic of Korea	Norway	New Zealand	Russian Federation	Switzerland	Thailand	Turkey	United States
								38		
(0)	(0)	(0)	(0)	(0)	(0)	(1)	(0)	(0)	(0)	(0)
5		1	0		0				0	6
(3)	(29)	(3)	(4)	(0)	(3)	(1)	(0)	(0)	(1)	(0)
(1)	(30)	(3)	(2)	(0)	(0)	(3)	(0)	(10)	(0)	(0)
1			0			0		0		0
(0)	(1)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
(0)	(10)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
0										
(0)	(3)	(1)	(0)	(0)	(1)	(4)	(0)	(5)	(0)	(3)
0								0		
(0)	(4)	(0)	(0)	(0)	(0)	(3)	(0)	(0)	(0)	(0)
0			0					0		
(4)	(10)	(0)	(8)	(0)	(0)		(24)	(30)	(4)	(0)
(0)	(3)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
0			0					0		
(1)	(10)	(10)	(8)	(0)	(4)	(0)	(0)	(0)	(0)	(0)
(0)	(7)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
0			0		0	0		0		0
(0)	(2)	(0)	(1)	(0)	(0)	(0)	(0)	(0)	(0)	(0)

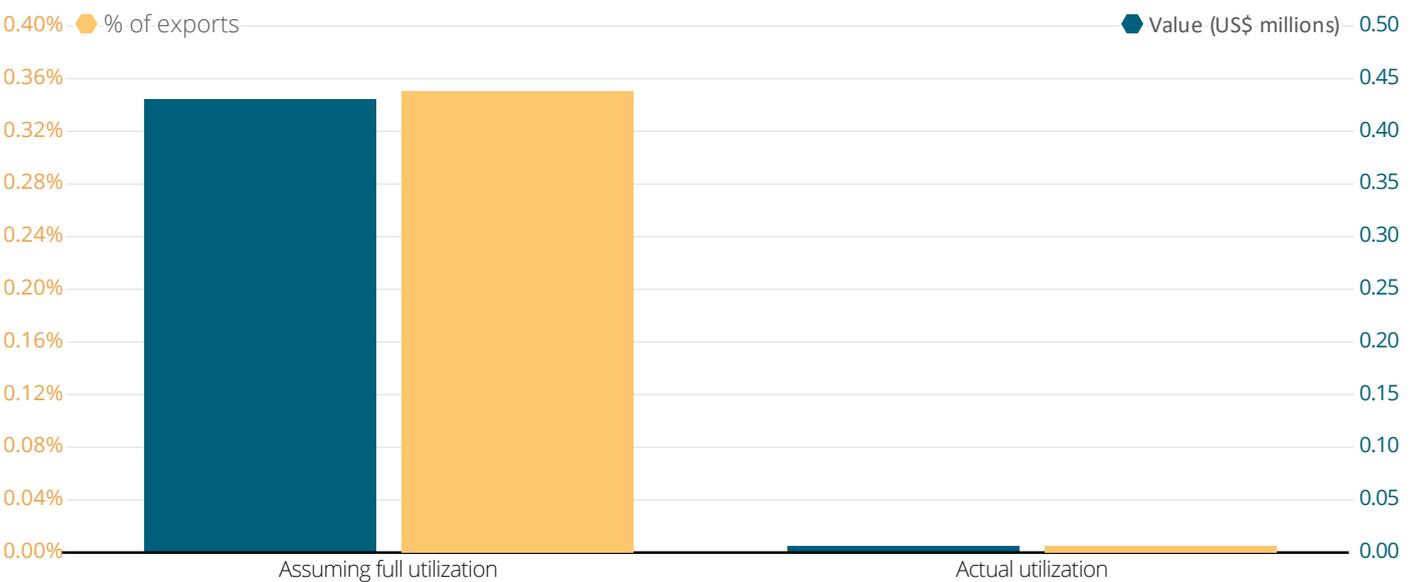
Figure 19: Preference utilization: imports from Timor-Leste by duty type



Source: WTO IDB.

Note: The figure is based on disaggregated import data for 2015–16 for Australia, Canada, Chile, China, the European Union, India, Japan, the Republic of Korea, Norway, Switzerland, Thailand and the United States.

Figure 20: Additional tariff costs on exports due to loss of preferences



Source: WTO IDB and UN Comtrade.

Note: The tariff cost increase for a product is estimated by multiplying the expected increase in tariff rates following graduation with the product's average export value during 2016–18.

Table 58: Top 12 export products: additional tariff costs due to loss of preferences

HS Code	Description	Increase in tariff costs (US\$ thousands)	
		Full utilization	Actual utilization
2709	Petroleum oils (crude)	0	0
0901	Coffee	24	6
1212	Locust beans, seaweeds, sugar beet/cane, fruit stones and kernels	292	0
8517	Telephone sets and other transmission apparatus	0	0
7204	Ferrous waste and scrap	0	0
2710	Petroleum oils (not crude)	0	0
8803	Parts of aircrafts	1	0
6309	Textiles (worn clothing and other worn articles)	5	0
7602	Aluminium (waste and scrap)	0	0
4202	Trunks, cases and bags	0	0
8802	Aeroplanes, helicopters and other powered aircrafts	0	0
8542	Electronic integrated circuits	0	0

Source: WTO IDB (tariff and utilization data) and UN Comtrade (exports).

Note: The tariff cost increase is computed as the product of exports, tariff rate increases and utilization rates. Exports are 2016–18 averages obtained using mirror data from UN Comtrade; tariff increase is defined as the difference between the LDC rate and the best alternative rate in 2016; utilization rates are computed as the ratio between the exports that enter under the LDCs scheme and the total exports towards the preference-granting members (2015–16 average, where available); for column 1 the utilization rates of the LDC schemes are set to 1.

Table 59: Changes in exports and tariffs of Timor-Leste by country of destination

Importer	Initial exports	Change in exports	Percentage change	Effective tariff change*
MARKETS WITH AN EFFECTIVE TARIFF CHANGE				
Republic of Korea	1,192	-29	-2.47%	0.49
China	1,896	-25	-1.33%	0.38
New Zealand	346	0	-0.01%	0.02
Chile	0	0	-4.67%	1.11
Canada	3,309	2	0.05%	0.00
European Union	19,761	2	0.01%	0.00
OTHER REGIONS				
United States	6,693	3	0.04%	0.00
Rest of Asia	46,038	5	0.01%	0.00
Japan	1,052	1	0.05%	0.00
Rest of Americas	326	0	0.07%	0.00
Australia	2,639	0	0.01%	0.00
Africa	985	0	0.01%	0.00
CIS	34	0	0.01%	0.00
Rest of Europe	223	0	0.00%	0.00
Thailand	37,537	0	0.00%	0.00
South Asia	14	0	0.00%	0.00
Pacific	87	0	0.00%	0.00
Russian Federation	205	0	0.00%	0.00
Norway	0	0	0.00%	0.00
India	244	0	-0.01%	0.00
Middle East	455	0	-0.02%	0.00
Total	123,038	-42	-0.03%	0.01

Note: Change in exports (in thousands of dollars and as a percentage of initial exports).

* The effective tariff change is measured in percentage points. It takes into account the increase in tariff rates due to the loss of LDC-specific preferences as well as preference utilization by graduating LDCs. A lower preference utilization will result in a lower effective increase in tariffs as a smaller fraction of exports will be exposed to changes in tariff rates after graduation.

Table 60: Changes in exports and tariffs of Timor-Leste by MTN category

MTN category	Initial exports	Change in exports	Percentage change	Effective tariff change*
Coffee, tea	18,437	-20	-0.11%	0.03
Other agricultural products	1,943	-18	-0.95%	0.34
Minerals and metals	2,147	-2	-0.09%	0.02
Chemicals	276	-1	-0.36%	0.07
Leather, footwear, etc.	494	0	-0.05%	0.00
Clothing	88	0	-0.27%	0.13
Manufactures n.e.s.	1,102	0	-0.02%	0.00
Electrical machinery	9,977	0	0.00%	0.00
Wood, paper, etc.	612	0	-0.01%	0.00
Textiles	569	0	0.00%	0.00
Fruits, vegetables, plants	558	0	0.00%	0.00
Non-electrical machinery	6,807	0	0.00%	0.00
Sugars and confectionery	0	0	-7.61%	1.67
Fish and fish products	5	0	0.00%	0.00
Beverages and tobacco	5	0	0.00%	0.00
Animal products	31	0	0.00%	0.00
Petroleum	77,823	0	0.00%	0.00
Transport equipment	1,432	0	0.00%	0.00
Oilseeds, fats and oils	588	0	0.00%	0.00
Cereals and preparations	146	0	0.01%	0.00
Total	123,038	-42	-0.03%	0.01

Note: Change in exports (in thousands of dollars and as a percentage of initial exports).

* The effective tariff change is measured in percentage points. It takes into account the increase in tariff rates due to the loss of LDC-specific preferences as well as preference utilization by graduating LDCs. A lower preference utilization will result in a lower effective increase in tariffs as a smaller fraction of exports will be exposed to changes in tariff rates after graduation.

Table 61: Change in exports of Timor-Leste of the 12 HS lines with the largest change

HS line	Product description	Initial exports	Change in exports	Percentage change
090111	Coffee (excluding roasted and decaffeinated)	18,075	-20	-0.11%
121221	Seaweeds and other algae	117	-18	-15.69%
780199	Unwrought lead	22	-2	-7.81%
391590	Waste, parings and scrap of plastics	11	-1	-8.56%
691110	Tableware and kitchenware, of porcelain or china	3	0	-9.81%
901380	Liquid crystal devices, n.e.s.	28	0	-0.71%
853610	Fuses for a voltage <= 1000 V	2	0	-7.98%
420231	Cases and containers of leather	303	0	-0.05%
610990	T-shirts of textile materials	33	0	-0.35%
121299	Fruit stones and kernels	1,276	0	-0.01%
410712	Grain splits leather	6	0	-1.72%
621050	Women's garments of textile fabrics	2	0	-4.69%

Note: Change in exports (in thousands of dollars and as a percentage of initial exports).

Tuvalu

12.1 Export structure

Table 62 provides an overview of the export structure of Tuvalu and the importance of preference-granting countries as destination markets, at both the aggregate and sectoral levels. Tuvalu exported on average US\$ 60 million of merchandise from 2016 to 2018.

Tuvalu's main export products are transport equipment (55 per cent), fish and fish products (38 per cent) and chemicals (2 per cent).

The most important destination market is Thailand, which accounts for 75 per cent of merchandise exports, followed by Japan (4 per cent), the European Union (3 per cent) and Australia. Around 17 per cent of the total exports are directed towards non preference-granting economies (rest of the world).

Thailand is the only destination market for Tuvalu's main export product, i.e. transport equipment, and it is the main importer of fish and fish products (53 per cent). The European Union is the most important destination of many other sectors, namely electrical chemicals (64 per cent), non-electrical machinery (52 per cent), minerals and metals (51 per cent), clothing (96 per cent), the category "manufactures n.e.s." (65 per cent), and wood and paper (43 per cent). Australia is the main importer of leather and footwear (78 per cent), cereals and preparations (84 per cent), and beverages and tobacco (85 per cent). A few products are mainly exported towards non preference-granting countries, for instance electrical machinery (62 per cent) and sugars and confectionery (100 per cent).

12.2 Impact on preferential market access

Table 63 illustrates the loss of tariff preference for Tuvalu's main export products in preference-granting markets. For the top 12 export products at the level of HS headings, the table shows the increase in tariffs that Tuvalu will face in destination markets when using the best available alternative tariff compared to the LDC duty rate. The best alternative tariffs are GSP preferences for Canada, the European Union, Japan, Norway, the Russian Federation, Switzerland, Turkey and the United States and SPARTECA for Australia and New Zealand. In the case of Chile, India and Thailand, the best available alternative tariff is the MFN rate. Tuvalu is currently not eligible for LDC-specific preferences in China.

The top 12 export products represent around 96 per cent of Tuvalu's merchandise exports to the world. Tariff increases will range from zero to 18 percentage points in Thailand and from zero to 10 percentage points in the European Union. Because of the SPARTECA agreement, the Australian market will not see any tariff change for the 12 most exported products. Neither will graduation have any direct impact in China, since trade currently happens at the MFN rate.

Frozen fish (HS 0303) – one of the most important export products for Tuvalu – will not see any tariff increase in Thailand, which is its most important export market; however, tariffs will increase by 3 percentage points in Japan. Tariffs on tracksuits, swimwear and other garments (HS 6211) will increase by 10 percentage points both in Thailand and the European Union.

Table 62: Exports of Tuvalu by sector and shares of destination markets in sectoral exports (2016-18 average)

MTN code	Product	Partner: World		Share of destination markets in product exports (%)						
		% of total	US\$ million	Australia	Canada	Chile	China	European Union	India	Japan
	Total	100	60	1		0	0	3	0	4
21	Transport equipment	55	33	0			0	0	0	
11	Fish and fish products	38	23							9
14	Chemicals	2	1	0		0		64	7	
20	Electrical machinery	1	1	3		0	3	14	6	1
19	Non-electrical machinery	1	1	3				52		1
07	Sugars and confectionery	1	1							
12	Minerals and metals	1	0	21			2	51		
17	Clothing	1	0	0		0		96		
22	Manufactures n.e.s.	0	0	8		1		65		
18	Leather, footwear, etc.	0	0	78		0	0	20		
15	Wood, paper, etc.	0	0	32		0		43		
16	Textiles	0	0					43		
03	Fruits, vegetables, plants	0	0					0		
05	Cereals and preparations	0	0	84						
08	Beverages and tobacco	0	0	85						
13	Petroleum	0	0	1					5	

Source: UN Comtrade.

Note: Export values and shares are based on mirrored import statistics and represent averages for 2016–2018. Blanks indicate missing data. Zeros (0) indicate shares below 0.5 per cent. Green shading indicates share value, with highest share in dark green. Sectors are shown in terms of MTN categories. The MTN categories' coverage of HS codes is included in World Tariff Profiles 2019 (pages 40–41) (available at https://www.wto.org/english/res_e/publications_e/world_tariff_profiles19_e.htm).

Figure 21 shows Tuvalu's utilization of LDC-specific preferences by providing a breakdown of imports by duty type for preference-granting countries. Tuvalu does not make use of LDC schemes in preference-granting markets. While most exports towards the European Union, Norway and the United States enter MFN duty-free, exports are subject to positive MFN rates in other markets. An LDC-specific duty scheme is not available in China.

Figure 22 provides estimates of the increase in the cost of tariffs for Tuvalu following graduation, obtained by multiplying exports with the percentage point increase in tariffs due to the loss of preferences. In the case of full preference utilization, tariff costs would increase by more than US\$ 3 million, which corresponds to 5.7 per cent of merchandise exports to preference-granting members. Since LDC-specific schemes are not used, the actual cost increase, taking into account utilization rates, is null.

Republic of Korea	Norway	New Zealand	Russian Federation	Switzerland	Thailand	Turkey	United States	Rest of the world
0	0	0	0		75		0	17
					100			0
					53			38
0					2			27
1		0	0		0		9	62
0	0	0	0		0		11	32
								100
		3	0		2		9	12
					0		1	2
0		1			2		3	20
0			0					2
0					23			2
					7		2	48
		1						99
		13						2
		14						0
								15

Table 64 provides estimates of cost increases for the top 12 export products, showing that the increase in tariff costs following graduation will be almost entirely due to the two main export products. Taking into account the actual utilization rates of the LDC schemes of the countries for which utilization data are available, the cost increase will be null for all products.

12.3 Impact on exports: partial equilibrium estimates

Table 65 implies that the projected changes in exports from Tuvalu are very small. The reduction in total exports is US\$ 0.005 million, corresponding to a fall of 0.01 per cent of initial exports. The reason for the small effect is that the average applied tariff on total exports is projected to remain almost unchanged after graduation. This pattern holds for all preference-granting destinations.

Table 63: Top 11 export products of Tuvalu and increase in tariffs in destination markets following graduation

HS code	Product	Partner: World		Exports in US\$ million towards destination markets (Tariff increase in percentage points due to preference loss)			
		% of total	US\$ million	Australia	Canada	Chile	China
8904	Tugs and pusher craft	56	33	(0)	(25)	(6)	
0303	Fish (frozen) excl. fish fillets	36	21	(0)	(0)	(6)	
1702	Sugars, artificial honey and caramel	1	1	(0)	(3)	(6)	
8473	Parts and accessories of office machines	1	0	(0)	(0)	(5)	
3209	Synthetic paints and varnishes	1	0	(0)	(3)	(6)	
6211	Track suits, swimwear and other garments (not knitted)	0	0	(0)	(14)	(6)	
8542	Electronic integrated circuits	0	0	0	(0)	0	
3822	Diagnostic or laboratory reagents	0	0	(0)	(0)	(6)	
3907	Polyethers, polycarbonates and polyesters	0	0	(0)	(0)	(6)	
7118	Coin	0	0	(0)	(2)	(6)	0
4821	Paper or paperboard labels	0	0	(0)	(0)	(6)	

Source: UN Comtrade (trade flows) and WTO IDB (tariffs).

Note: For every importer-product couple, the first row reports average export values, while the second row reports in parentheses the preference loss due to graduation, i.e. the difference between the best available alternative rate and the LDC duty rate. Whenever such a figure is not available, it means that either Tuvalu is not eligible for the LDC duty rate or the tariffs are not ad valorem. Export values are based on mirrored import statistics and represent averages for 2016–18. Tariffs are for the year 2019, with the exception of China (2017), India (2016) and Turkey (2016).

Table 65 shows that about 85 per cent of exports from Tuvalu go to Thailand and applied tariffs on exports to Thailand effectively change by less than 0.00 per cent because of graduation.

Table 66 shows that the largest reduction in exports is projected to take place in the MTN category textiles. Exports in this sector are projected to fall by US\$ 0.003 million (corresponding to 4.10 per cent of initial trade). Exports in the MTN categories chemicals and fish and fish products, are projected to fall by

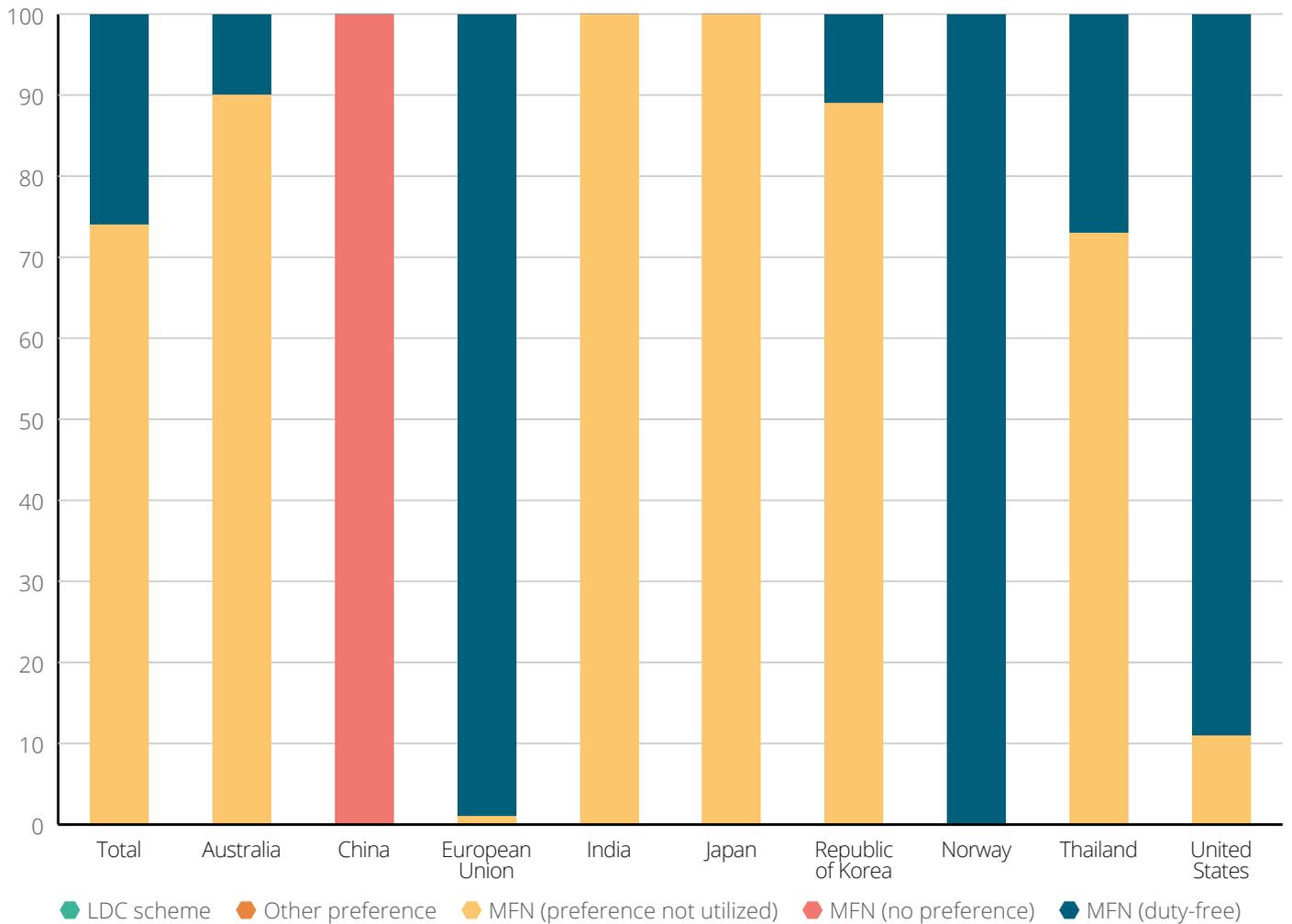
European Union	India	Japan	Republic of Korea	Norway	New Zealand	Russian Federation	Switzerland	Thailand	Turkey	United States
								33		
(0)	(10)	(0)	(5)	(0)	(0)	(0)	(0)	(10)	(0)	(0)
		2						10		
(7)	(30)	(3)	(3)	(0)	(0)	(5)	(0)	(0)	(0)	(0)
(8)	(29)	(13)	(4)	(0)	(0)	(4)	(0)	(18)	(0)	(2)
0										
(0)	(2)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
0										
(0)	(10)	(0)	(7)	(0)	(0)	(5)	(0)	(0)	(0)	(0)
0								0		0
(10)	(10)	(10)	(13)	(0)	(0)	(1)	(5)	(10)	(10)	(0)
0			0					0		
(0)	(2)	(0)	(1)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
(0)	(10)	(0)	(8)	(0)	(0)	(5)	(0)	(4)	(0)	(0)
0										
(1)	(8)	(0)	(6)	(0)	(0)	(4)	(0)	(3)	(1)	(0)
0										0
(0)	(10)	(0)	(0)	(0)	(0)	(0)	(0)	(4)	(0)	(0)
(0)	(6)	(0)	(0)	(0)	(0)	(5)	(0)	(10)	(0)	(0)

US\$ 0.001 million. The change in exports in all the other MTN categories is expected to be smaller than US\$ 0.001 million.

Table 67 shows that the reduction in projected exports is concentrated in flexible intermediate bulk containers.

Summarizing the projected effects for Tuvalu, the analysis shows that the projected reduction in exports is very small, both in values (US\$ 0.005 million) and as a share of initial exports (0.01 per cent). The reduction is concentrated in exports to the European Union and the Republic of Korea in the MTN category textiles.

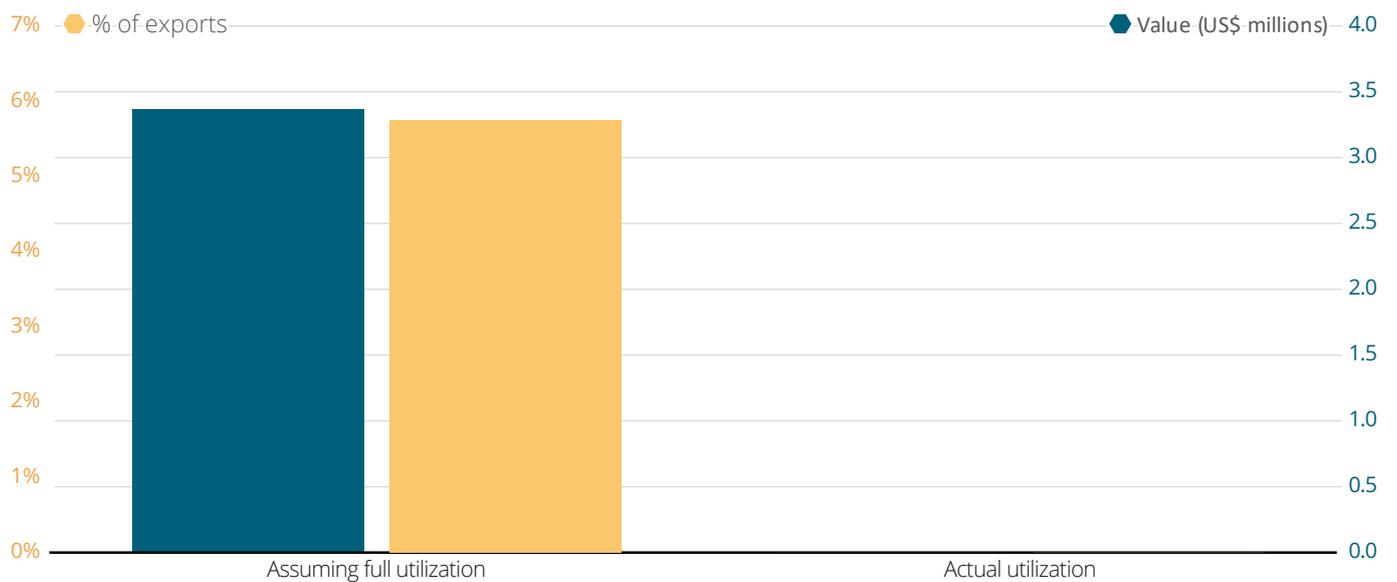
Figure 21: Preference utilization: imports from Tuvalu by duty type



Source: WTO IDB.

Note: The figure is based on disaggregated import data for 2015–16 for Australia, Canada, Chile, China, the European Union, India, Japan, the Republic of Korea, Norway, Switzerland, Thailand and the United States.

Figure 22: Additional tariff costs on exports due to loss of preferences



Source: WTO IDB and UN Comtrade.

Note: The tariff cost increase for a product is estimated by multiplying the expected increase in tariff rates following graduation with the product's average export value during 2016–18.

Table 64: Top 12 export products: additional tariff costs due to loss of preferences

HS Code	Description	Increase in tariff costs (US\$ thousands)	
		Full utilization	Actual utilization
8904	Tugs and pusher craft	3,281	0
0303	Fish (frozen) excl. fish fillets	74	0
1702	Sugars, artificial honey and caramel	0	0
8473	Parts and accessories of office machines	0	0
3209	Synthetic paints and varnishes	0	0
6211	Track suits, swimwear and other garments (not knitted)	0	0
8542	Electronic integrated circuits	0	0
3822	Diagnostic or laboratory reagents	0	0
3907	Polyethers, polycarbonates and polyesters	0	0
7118	Coin	0	0
4821	Paper or paperboard labels	0	0
8518	Microphones and their stands	0	0

Source: WTO IDB (tariff and utilization data) and UN Comtrade (exports).

Note: The tariff cost increase is computed as the product of exports, tariff rate increases and utilization rates. Exports are 2016–18 averages obtained using mirror data from UN Comtrade; tariff increase is defined as the difference between the LDC rate and the best alternative rate in 2016; utilization rates are computed as the ratio between the exports that enter under the LDCs scheme and the total exports towards the preference-granting members (2015–16 average, where available); for column 1 the utilization rates of the LDC schemes are set to 1.

Table 65: Changes in exports and tariffs of Tuvalu by country of destination

Importer	Initial exports	Change in exports	Percentage change	Effective tariff change*
MARKETS WITH AN EFFECTIVE TARIFF CHANGE				
Republic of Korea	1,192	-29	-2.47%	0.49
China	1,896	-25	-1.33%	0.38
Chile	0	0	-4.67%	1.11
Canada	3,309	2	0.05%	0.00
OTHER REGIONS				
Japan	2,127	1	0.03%	0.00
Rest of Americas	3,339	0	0.00%	0.00
Australia	308	0	0.00%	0.00
New Zealand	26	0	0.01%	0.00
United States	215	0	0.00%	0.00
Middle East	201	0	0.00%	0.00
Africa	634	0	0.00%	0.00
Rest of Europe	274	0	0.00%	0.00
South Asia	6	0	0.00%	0.00
China	35	0	0.00%	0.00
Pacific	38	0	0.00%	0.00
CIS	0	0	0.00%	0.00
Russian Federation	1	0	0.00%	0.00
Kazakhstan	1	0	0.00%	0.00
Norway	2	0	0.00%	0.00
India	129	0	0.00%	0.00
Rest of Asia	6,015	0	0.00%	0.00
Total	58,623	-5	-0.01%	0.00

Note: Change in exports (in thousands of dollars and as a percentage of initial exports).

* The effective tariff change is measured in percentage points. It takes into account the increase in tariff rates due to the loss of LDC-specific preferences as well as preference utilization by graduating LDCs. A lower preference utilization will result in a lower effective increase in tariffs as a smaller fraction of exports will be exposed to changes in tariff rates after graduation.

Table 66: Changes in exports and tariffs of Tuvalu by MTN category

MTN category	Initial exports	Change in exports	Percentage change	Effective tariff change*
Textiles	64	-3	-4.10%	1.11
Chemicals	393	-1	-0.36%	0.13
Fish and fish products	22,778	-1	0.00%	0.00
Clothing	15	0	-0.36%	0.21
Leather, footwear, etc.	87	0	-0.01%	0.00
Manufactures n.e.s.	129	0	0.00%	0.00
Dairy products	0	0	0.00%	0.00
Transport equipment	32,835	0	0.00%	0.00
Petroleum	4	0	0.00%	0.00
Non-electrical machinery	438	0	0.00%	0.00
Wood, paper, etc.	244	0	0.00%	0.00
Sugars and confectionery	558	0	0.00%	0.00
Electrical machinery	707	0	0.00%	0.00
Fruits, vegetables, plants	23	0	0.00%	0.00
Minerals and metals	320	0	0.00%	0.00
Cereals and preparations	20	0	0.00%	0.00
Beverages and tobacco	7	0	0.02%	0.00
Total	58,623	-5	-0.01%	0.00

Note: Change in exports (in thousands of dollars and as a percentage of initial exports).

* The effective tariff change is measured in percentage points. It takes into account the increase in tariff rates due to the loss of LDC-specific preferences as well as preference utilization by graduating LDCs. A lower preference utilization will result in a lower effective increase in tariffs as a smaller fraction of exports will be exposed to changes in tariff rates after graduation.

Table 67: Change in exports of Tuvalu of the 12 HS lines with the largest change

HS line	Product description	Initial exports	Change in exports	Percentage change
630532	Flexible intermediate bulk containers	20	-3	-12.97%
392490	Household and toilet articles of plastics	3	-1	-40.38%
030343	Frozen skipjack or stripe-bellied bonito	14,735	-1	-0.01%
620342	Men's trousers	2	0	-1.01%
620520	Men's shirts of cotton	0	0	-8.50%
610220	Women's overcoats and anoraks (cotton)	0	0	-9.84%
640399	Footwear (rubber soles)	0	0	-23.37%
392690	Articles of plastics and other materials	18	0	-0.06%
620439	Women's jackets and blazers of textile	0	0	-11.87%
620463	Women's trousers of synthetic fibres	0	0	-10.44%
611212	Track-suits of synthetic fibres	0	0	-11.47%
610230	Women's overcoats and anoraks	0	0	-12.24%

Note: Change in exports (in thousands of dollars and as a percentage of initial exports).

Vanuatu

13.1 Export structure

Table 68 provides an overview of the export structure of Vanuatu and the importance of preference-granting countries as destination markets, at both the aggregate and sectoral levels. Vanuatu exported on average almost US\$ 299 million of merchandise from 2016 to 2018.

Its main export sector is transport equipment (44 per cent), followed by fish and fish products (38 per cent), oilseeds, fats and oils (6 per cent), fruits and vegetables (4 per cent), coffee and tea (2 per cent), and wood and paper (1 per cent). Exports based on mirrored import statistics from UN Comtrade differ from national export statistics, particularly with respect to transport equipment due to the recording of ships that changed flags ("flags of convenience"). It should therefore be noted that, as per national statistics, Vanuatu's exports are concentrated in primary commodities such as kava, copra, coconut oil, cocoa and fish products.

Japan is the most important trading partner, as it is the destination of 24 per cent of the total exports. It is followed by the Republic of Korea (6 per cent), Thailand (5 per cent), China (4 per cent), Turkey (4 per cent), the European Union (3 per cent) and the United States (3 per cent). Around 49 per cent of Vanuatu's trade is directed towards non preference-granting countries ("rest of the world"). National statistics show that in recent years, the geography of destination markets has evolved towards regional integration with regional markets (i.e. Pacific Islands, Australia and New Zealand), accounting for around 44 per cent of Vanuatu's exports. While the United States and China have become major destination markets, exports to the European Union and Japan have declined significantly.

13.2 Impact on preferential market access

Table 69 illustrates the loss of tariff preference for Vanuatu's main export products in preference-granting markets. For the top 12 export products at the level of HS headings, the table shows the increase in tariffs that Vanuatu will face in destination markets when using the best available alternative tariff compared to the LDC duty rate. The best alternative tariffs are GSP preferences for Canada, the European Union, Japan, Norway, the Russian Federation, Switzerland, Turkey and the United States, and SPARTECA for Australia and New Zealand. In the case of Chile, China, India and Thailand, the best available alternative tariff is the MFN rate.

The top 12 export products represent around 91 per cent of Vanuatu's merchandise exports. They will not face any tariff increase in Australia, Norway, Switzerland, Turkey and the United States. The other markets will be characterized by heterogeneous changes, ranging from zero to 79 per cent overall and from zero to 11 per cent for traded products. Tariffs on molluscs (HS 0307) and on plants or part of plants (HS 1211) will respectively increase by 10 per cent and 7 per cent in China. Tariffs on wood in the rough (HS 0304) will increase by 3 per cent in Japan and by 11 per cent the Republic of Korea. Copra (HS 8901), which is one of the most exported products, will not see any tariff increase since it is mainly exported towards non preference-granting countries.

Figure 23 shows Vanuatu's utilization of LDC-specific preferences by providing a breakdown of imports by duty type across preference-granting countries. The first bar ("Total") shows that the utilization of the LDC-specific preferential scheme is low (1 per cent of the total exports towards the 12 preference-granting members). The low preference utilization is explained by the fact that most of

Table 68: Exports of Vanuatu by sector and shares of destination markets in sectoral exports (2016–18 average)

MTN code	Product	Partner: World		Share of destination markets in product exports (%)						
		% of total	US\$ million	Australia	Canada	Chile	China	European Union	India	Japan
	Total	100	299	1	0	0	4	3	0	24
21	Transport equipment	44	130	0	0	0		4		
11	Fish and fish products	38	113	0	0		8	0		62
06	Oilseeds, fats and oils	6	18	4				1		
03	Fruits, vegetables, plants	4	13	0	0		5	2		1
04	Coffee, tea	2	5	1	0			4		0
15	Wood, paper, etc.	1	4	0	0	0	70	6		2
22	Manufactures n.e.s.	1	3	5	5	1	1	8	9	0
08	Beverages and tobacco	1	2	0						
20	Electrical machinery	1	2	1	0	2	1	11	0	0
12	Minerals and metals	1	2	15	0	3	4	39		16
01	Animal products	0	1	2				0		50
19	Non-electrical machinery	0	1	5	3	23		5		0
10	Other agricultural products	0	1	14			0	3		
14	Chemicals	0	1	1	0	1	0	23		3
05	Cereals and preparations	0	0	0	0			0		
17	Clothing	0	0		2	44	0	6		
16	Textiles	0	0		0	7	0	23		
18	Leather, footwear, etc	0	0		3	11	0	11		
13	Petroleum	0	0			2		0		

Source: UN Comtrade.

Note: Export values and shares are based on mirrored import statistics and represent averages for 2016–18. Blanks indicate missing data. Zeros (0) indicate shares below 0.5 per cent. Green shading indicates share value, with highest share in dark green. Sectors are shown in terms of MTN categories. The MTN categories' coverage of HS codes is included in World Tariff Profiles 2019 (pages 40–41) (available at https://www.wto.org/english/res_e/publications_e/world_tariff_profiles19_e.htm).

Vanuatu's exports towards Australia, Canada, the Republic of Korea and Thailand enter MFN duty-free. On the other hand, under-utilization is an issue in the Chilean, Chinese, European, Indian, Japanese and US markets.

Figure 24 provides estimates of the additional tariff cost for Vanuatu following graduation, obtained by multiplying exports with the percentage point increase in tariffs due to the loss of preferences. If Vanuatu fully used preferences, tariff costs would increase by more than US\$ 3.6 million, which corresponds to 1.2 per cent of merchandise exports to preference-granting members. Taking into account real preference utilization, the increase in tariffs would be

slightly below US\$ 0.3 million, i.e. less than 0.1 per cent of the total export value towards the preference-granting members for which utilization data are available.

Table 70 shows the increase in trade costs of the top 12 products, ranked according to export values. Some of them would not experience cost increases even in a full use scenario, either because they are mainly exported towards non preference-granting members or because they are already exported duty-free under the MFN regime. When actual utilization is taken into account, the tariff increase for the 12 most exported products is null, with the exception of molluscs (HS 0307).

Republic of Korea	Norway	New Zealand	Russian Federation	Switzerland	Thailand	Turkey	United States	Rest of the world
6	0	0	0		5	4	3	49
7		0	0			9	0	79
9		0			14	0	2	4
0		1					1	93
0		1					28	62
	0	2	0				0	92
0		0	0		0		2	19
0		2					3	67
					0			100
0		0				0	62	22
		3	0		0		0	20
		0						48
1		2	0				23	37
5		0			3		18	56
		1	2		0	0	19	50
		2						97
0						1	30	17
		0						69
0			0				2	74
34					0			63

13.3 Impact on exports: partial equilibrium estimates

The projected impact on exports from Vanuatu of graduation of LDC preferences is also small: US\$ 0.86 million or 0.29 per cent of initial exports (Table 71). The projected reduction in exports is concentrated in China and Japan (respectively US\$ 0.53 million/3.95 per cent and US\$ 0.511 million/0.71 per cent). The reduction in exports to the European Union is orders of magnitude smaller and only equal to US\$ 0.01 million. Some of the reduction in exports to Japan is compensated by trade

diversion, in particular to Thailand and the Pacific (e.g. Fiji and Papua New Guinea). The projected change in exports to other regions is minimal.

Table 72 shows that the reduction in exports from Vanuatu is concentrated in the MTN categories “animal products” and “fish and fish products”. Exports in these categories are projected to fall by US\$ 0.47 million (33.60 per cent of initial exports) and US\$ 0.36 million (0.33 per cent of initial exports), respectively. The fall in all other MTN categories is minor, both in dollars and as a share of initial exports.

Table 69: Top 12 export products of Vanuatu and increase in tariffs in destination markets following graduation

HS code	Product	Partner: World		Exports in US\$ million towards destination markets (Tariff increase in percentage points due to preference loss)			
		% of total	US\$ million	Australia	Canada	Chile	China
0303	Frozen fish, excluding fillet	32	96		0		3
				(0)	(0)	(6)	(11)
8904	Tugs and pusher craft	30	89				
				(0)	(25)	(6)	(9)
8901	Cruise ships	6	17				
				(0)	(24)	(3)	(8)
1203	Copra	5	13				
				(0)	(0)	(6)	(15)
1211	Plants and parts of plants	4	13		0		1
				(0)	(0)	(6)	(7)
8908	Vessels and other floating structures	4	12				
				(0)	(5)	(6)	(3)
8902	Fishing vessels	3	10				
				(0)	(13)	(4)	(8)
0307	Molluscs	2	7				5
				(0)	(1)	(6)	(10)
1801	Cocoa beans	2	5				
				(0)	(0)	(6)	(8)
0304	Fish fillets and fish meat	1	4				
				(0)	(0)	(6)	(11)
4403	Wood in the rough	1	3				3
				(0)	(0)	(6)	(0)
1513	Oil (copra, palm kernel)	1	2				
				(0)	(2)	(6)	(9)

Source: UN Comtrade (trade flows) and WTO IDB (tariffs).

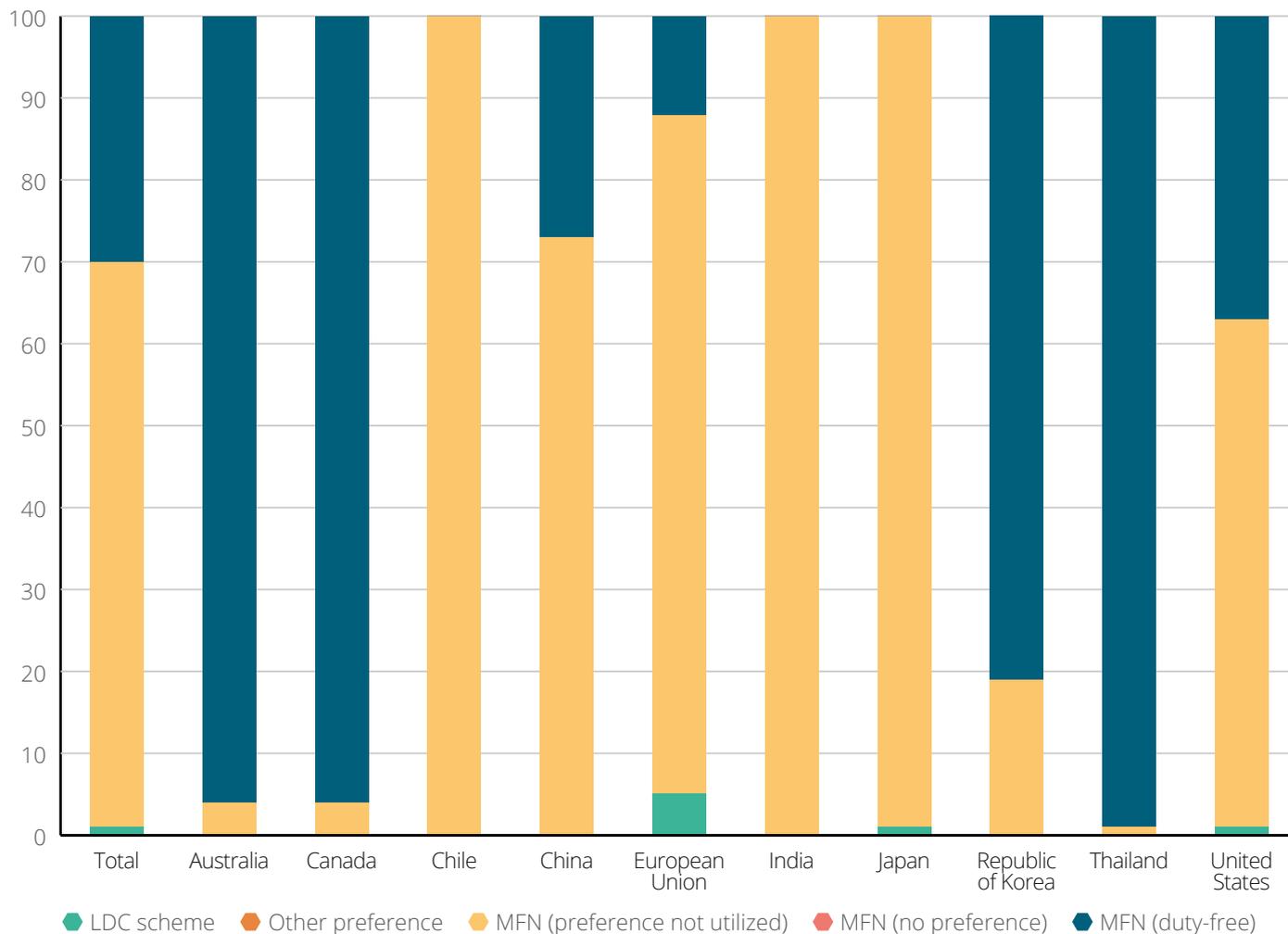
Note: For every importer-product couple, the first row reports average export values, while the second row reports in parentheses the preference loss due to graduation, i.e. the difference between the best available alternative rate and the LDC duty rate. Whenever such a figure is not available, it means that either Vanuatu is not eligible for the LDC duty rate or the tariffs are not ad valorem. Export values are based on mirrored import statistics and represent averages for 2016–18. Tariffs are for the year 2019, with the exception of China (2017), India (2016) and Turkey (2016).

Table 73 shows that the projected reduction in exports is concentrated in the two products “boneless meat” (part of the MTN category “animal products”) and “frozen skipjack or stripe-bellied bonito” (part of the MTN category “fish and fish products”). The fall in exports of bovine offal is projected to be large as a share of initial exports. However, in dollars the reduction is minor, because initial exports for these product categories are small.

Summarizing the effects for Vanuatu, the analysis indicates that the projected fall in exports from Vanuatu is minor, both in terms of value (US\$ 0.864 million) and as a share of initial exports (0.29 per cent). The reduction is concentrated in exports to Japan and in the product boneless meat, part of the MTN category animal products.

European Union	India	Japan	Republic of Korea	Norway	New Zealand	Russian Federation	Switzerland	Thailand	Turkey	United States
		64	9					15		0
(7)	(30)	(3)	(3)	(0)	(0)	(5)	(0)	(0)	(0)	(0)
(0)	(10)	(0)	(5)	(0)	(0)	(0)	(0)	(10)	(0)	(0)
4			9							
(0)	(10)	(0)	(0)	(0)	(0)	(4)	(0)	(5)	(0)	(0)
(0)	(0)	(0)	(3)	(0)	(0)	(4)	(0)	(0)	(0)	(0)
0		0			0					4
(0)	(15)	(1)	(3)	(0)	(0)	(4)	(0)	(12)	(0)	(0)
									12	
(0)	(3)	(0)	(0)	(0)	(0)	(0)	(0)	(5)	(0)	(0)
(0)	(5)	(0)	(0)	(0)	(0)	(5)	(0)	(7)	(0)	(0)
0			0					0		1
(3)	(30)	(5)	(3)	(0)	(0)	(0)	(0)	(8)	(0)	(0)
0		0			0	0				
(0)	(9)	(0)	(5)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
		4	1							0
(7)	(30)	(3)	(11)	(0)	(0)	(4)	(0)	(3)	(0)	(0)
		0	0							
(0)	(5)	(0)	(0)	(0)	(0)	(1)	(0)	(0)	(0)	(0)
0					0					
(5)	(79)	(0)	(5)	(0)	(0)	(1)	(0)	(0)	(0)	(0)

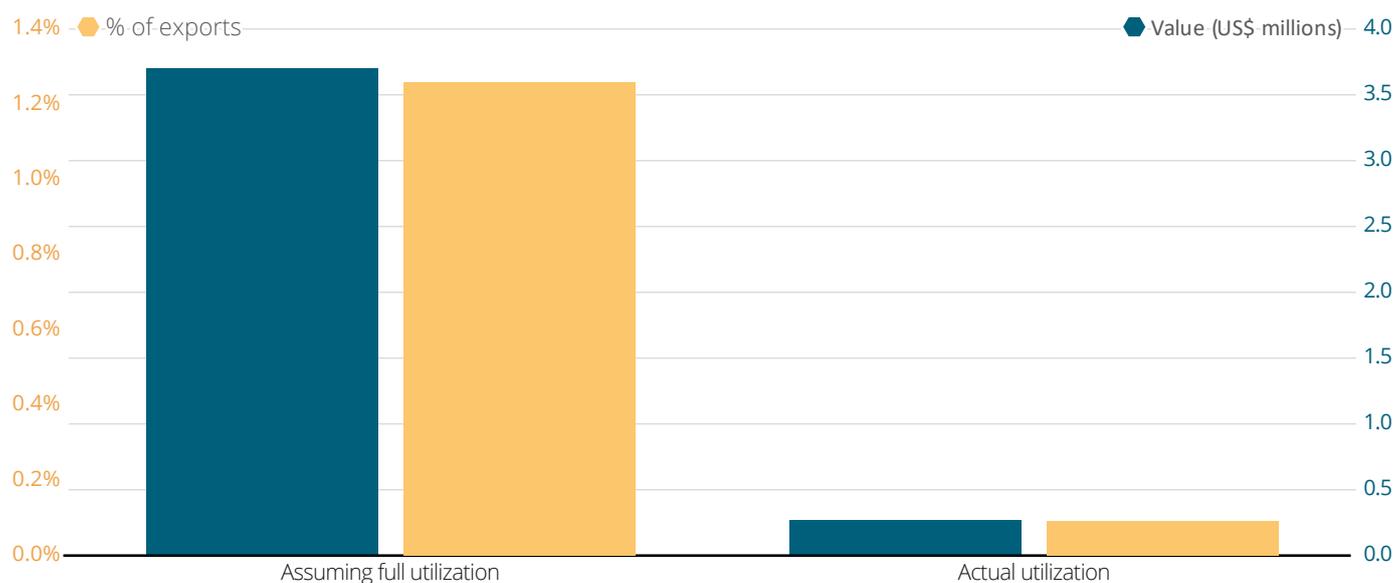
Figure 23: Preference utilization: imports from Vanuatu by duty type



Source: WTO IDB.

Note: Utilization rates are computed as the ratio between the imports entering under a specific duty scheme over the total imports towards the preference-granting member. The data are 2015–16 averages.

Figure 24: Additional tariff costs on exports due to loss of preferences



Source: WTO IDB and UN Comtrade.

Note: The tariff cost increase for a product is estimated by multiplying the expected increase in tariff rates following graduation with the product's average export value during 2016–18.

Table 70: Top 12 export products: additional tariff costs due to loss of preferences

HS Code	Description	Increase in tariff costs (US\$ thousands)	
		Full utilization	Actual utilization
0303	Fish (frozen) excl. fish fillets	2,451	0
8904	Tugs and pusher craft	0	0
8901	Ships, boats and vessels for the transport of persons or goods	25	0
1203	Copra	0	0
1211	Plants and parts of plants (used in perfumery and pharmacy)	110	0
8908	Vessels and other floating structures for breaking up	0	0
8902	Fishing vessels, factory ships	0	0
0307	Molluscs	668	1
1801	Cocoa beans	0	0
0304	Fish fillets	101	0
4403	Wood in the rough	0	0
1513	Coconut (copra), palm kernel or babassu oil	0	0

Source: WTO IDB (tariff and utilization data) and UN Comtrade (exports).

Note: The tariff cost increase is computed as the product of exports, tariff rate increases and utilization rates. Exports are 2016–18 averages obtained using mirror data from UN Comtrade; tariff increase is defined as the difference between the LDC rate and the best alternative rate in 2016; utilization rates are computed as the ratio between the exports that enter under the LDCs scheme and the total exports towards the preference-granting members (2015–16 average, where available); for column 1 the utilization rates of the LDC schemes are set to 1.

Table 71: Changes in exports and tariffs of Vanuatu by country of destination

Importer	Initial exports	Change in exports	Percentage change	Effective tariff change*
MARKETS WITH AN EFFECTIVE TARIFF CHANGE				
China	13,271	-525	-3.95%	1.04
Japan	71,562	-511	-0.71%	0.38
European Union	4,975	-10	-0.21%	0.07
Chile	669	-3	-0.42%	0.12
Canada	477	-1	-0.25%	0.09
Russian Federation	17	0	-0.41%	0.05
OTHER REGIONS				
Republic of Korea	18,562	0	0.00%	0.00
Thailand	15,661	128	0.82%	0.00
Pacific	16,237	47	0.29%	0.00
Rest of Asia	27,524	10	0.04%	0.00
Middle East	521	0	0.05%	0.00
Rest of Americas	10,451	0	0.00%	0.00
Australia	2,053	0	0.00%	0.00
Africa	90,321	0	0.00%	0.00
CIS	6	0	0.18%	0.00
South Asia	248	0	0.00%	0.00
Norway	4	0	0.11%	0.00
Rest of Europe	0	0	0.00%	0.00
Armenia	4	0	0.00%	0.00
India	249	0	0.00%	0.00
United States	8,127	0	0.00%	0.00
New Zealand	815	0	-0.03%	0.00
Total	293,961	-864	-0.29%	0.14

Note: Change in exports (in thousands of dollars and as a percentage of initial exports).

* The effective tariff change is measured in percentage points. It takes into account the increase in tariff rates due to the loss of LDC-specific preferences as well as preference utilization by graduating LDCs. A lower preference utilization will result in a lower effective increase in tariffs as a smaller fraction of exports will be exposed to changes in tariff rates after graduation.

Table 72: Changes in exports and tariffs of Vanuatu by MTN category

MTN category	Initial exports	Change in exports	Percentage change	Effective tariff change*
Animal products	1,406	-472	-33.60%	19.18
Fish and fish products	111,048	-362	-0.33%	0.12
Minerals and metals	1,596	-20	-1.24%	0.46
Textiles	294	-5	-1.79%	0.64
Clothing	355	-3	-0.85%	0.33
Other agricultural products	975	-1	-0.09%	0.04
Leather, footwear, etc.	296	-1	-0.25%	0.10
Oilseeds, fats and oils	18,047	0	0.00%	0.00
Coffee, tea	5,116	0	0.00%	0.00
Cereals and preparations	422	0	-0.02%	0.00
Chemicals	951	0	-0.01%	0.00
Wood, paper, etc.	4,019	0	0.00%	0.00
Transport equipment	127,874	0	0.00%	0.00
Beverages and tobacco	2,312	0	0.00%	0.00
Non-electrical machinery	1,103	0	0.00%	0.00
Petroleum	130	0	0.00%	0.00
Manufactures n.e.s.	2,749	0	0.00%	0.00
Electrical machinery	1,979	0	0.00%	0.00
Fruits, vegetables, plants	13,288	0	0.00%	0.00
Total	293,961	-864	-0.29%	0.14

Note: Change in exports (in thousands of dollars and as a percentage of initial exports).

* The effective tariff change is measured in percentage points. It takes into account the increase in tariff rates due to the loss of LDC-specific preferences as well as preference utilization by graduating LDCs. A lower preference utilization will result in a lower effective increase in tariffs as a smaller fraction of exports will be exposed to changes in tariff rates after graduation.

Table 73: Change in exports of Vanuatu of the 12 HS lines with the largest change

HS line	Product description	Initial exports	Change in exports	Percentage change
020230	Boneless meat	769	-471	-61.23%
030343	Frozen skipjack or stripe-bellied bonito	9,693	-359	-3.70%
711319	Jewellery of precious metals (not silver)	30	-11	-35.89%
630790	Made-up articles of textile materials	56	-5	-8.19%
710122	Cultured pearls	12	-4	-35.89%
030344	Frozen bigeye tunas	42,696	-3	-0.01%
030791	Molluscs	24	-3	-12.64%
711610	Articles of natural or cultured pearls	4	-2	-44.62%
020629	Bovine offal	2	-2	-71.08%
711719	Imitation jewellery of base metal	12	-1	-10.30%
711311	Jewellery of silver	5	-1	-27.05%
611030	Jerseys and pullovers of man-made fibres	10	-1	-10.36%

Note: Change in exports (in thousands of dollars and as a percentage of initial exports).

Summary

Most developed members, and a number of important trading partners of LDCs, have LDC schemes in place through which they grant preferential market access to LDC products. However, the actual impact of the loss of LDC-specific preferences following graduation will depend on their export structure and the degree of utilization of LDC preferences.

It has been observed that, with the exception of Bangladesh and Nepal, the dependence on preferences is limited for most other graduating LDCs. For some LDCs this reflects their export products such as primary commodities, which often can enter markets MFN duty-free. There are, furthermore, a number of reasons why firms from LDCs may not actually utilize LDC schemes, including lack of awareness of the availability of preferences, availability of alternative preference schemes, rules of origin conditions, or because the preference margin does not justify covering additional administrative costs that would occur when using the preference.

The study has used data submitted to the WTO's IDB to calculate the expected increase in tariffs rates following the loss of preferences under LDC scheme. While preferential tariff data for PTAs of developed members have mostly been available, data on RTAs involving graduating LDCs have been more limited. Hence, in a number of instances, the analysis shows an increase of tariffs in regional or neighbouring markets following graduation, while, thanks to preferences under some RTAs, the increase in tariffs and resulting impact on exports in these markets would be marginal.

A number of graduating LDCs predominantly rely on exports of oils, minerals and metals, with regional markets being the main destinations. The impact of graduation is limited, as these products are either MFN duty-free or with low MFN duty, or are being traded duty-free under RTAs – the application of which is independent of LDC status. In general, the important developing country markets for graduating LDCs include China, India and Thailand.

Generally, the projected reduction in exports is concentrated in the European Union and is mostly expected to affect clothing and, to a lesser extent, fish and fish products. In the European Union, graduating LDCs face a trade-weighted average tariff increase of around 8 per cent based on the product coverage and tariff rates under the European Union's standard GSP. It should be noted that the European Union has other arrangements, such as the GSP+ initiative, which offers better market access conditions than its standard GSP scheme, including duty-free treatment of clothing products; however, countries must meet certain conditions to be eligible as beneficiaries under GSP+. The other developed country markets where tariff increases could lead to reduction in exports are Canada and Japan. For all of these markets, continuation of LDC-type treatment would require specific negotiations, as the alternative schemes available would not offer perfect substitutes for LDC schemes.

Following is a summary of the main findings of the analysis for each graduating LDC. Note that the estimated projections of reductions in exports of the partial equilibrium model should give an indication to the graduating LDCs of the markets that require specific attention.

Angola

Exports are concentrated in petroleum, accounting for 86 per cent of merchandise exports. The most important destination market is China (53 per cent), followed by the European Union (10 per cent), India (10 per cent), and the United States (7 per cent). Angola's dependence on LDC-specific preferences is low, as both petroleum and diamonds – its second most exported product – can enter most markets MFN duty-free; however, diamonds may face a 10 per cent tariff increase in India following graduation. While overall exports are estimated to be reduced by 0.1 per cent, the largest reduction is expected for exports to the Republic of Korea (28.9 per cent), where Angola will face an increase in tariffs for petroleum gases.

Bangladesh

Exports are concentrated in clothing products, which account for 85 per cent of merchandise exports. The most important destination market is the European Union (58 per cent) followed by the United States (14 per cent). Graduation will lead to an average tariff increase of around 10 per cent for clothing products in the European Union, in the absence of any special arrangement following graduation. Increases in tariffs would also be substantial for clothing in the Canadian market (16–18 per cent), as well as for footwear items in Japan (28 per cent). While overall exports are estimated to be reduced by 14.3 per cent, the largest reduction is expected for exports to the European Union (-26 per cent).

Bhutan

Exports are concentrated in ferro-alloys (48 per cent) and electricity (11 per cent). India accounts for more than three-quarters (81 per cent) of Bhutan's merchandise exports. The tariff impact analysis indicates some increase of tariffs in the Indian market in the range of 8–15 per cent if exports were subject to MFN rates. However, since Bhutan's trade with India reportedly takes place under their bilateral free trade agreement, tariff rates and exports to India will remain unaffected by graduation. Exports to other markets, including the European Union, are small in value. Overall exports are estimated to be reduced by 1.4 per cent; the largest reduction is expected in exports to the European Union (-26.7 per cent), where Bhutan will face an increase in tariffs for ferro-silicon.

Kiribati

Exports from Kiribati are concentrated in fish and fish products, accounting for more than 90 per cent of merchandise exports. The most important destination market is Thailand (58 per cent), where exports of frozen fish enter MFN duty-free. While overall exports are estimated to be reduced by 0.2 per cent, the largest reduction is expected for exports to Japan (-3.6 per cent) where Kiribati currently uses LDC-specific preferences for tuna.

Lao PDR

Exports from Lao PDR are concentrated in minerals and metals (29 per cent of merchandise exports) and electrical energy (25 per cent). The most important destination markets are Thailand (44 per cent) and China (28 per cent). Lao PDR is not dependent on LDC schemes in these two markets, and reportedly its trade with these two markets takes place under the framework of the ASEAN Free Trade Area. The tariff analysis indicates tariff increases for clothing products in the European Union (10 per cent) and for coffee exports to the European Union, Japan and Republic of Korea (each around 3 per cent). While overall exports are estimated to be reduced by 1.45 per cent, the largest reduction is expected for exports to the European Union (-20.9 per cent) where Lao PDR currently uses LDC-specific preferences for clothing and sugars.

Myanmar

Exports from Myanmar are concentrated in minerals and metals (43 per cent of merchandise exports) and clothing (26 per cent). The most important export markets are China (27 per cent), Thailand (20 per cent) and the European Union (18 per cent) and Japan (8 per cent). Myanmar is not dependent on LDC schemes in China and Thailand since the majority of its exports, in particular petroleum gases, enter these markets MFN duty-free. Myanmar is likely to face an average tariff increase of 10 per cent for its exports of clothing to the European Union. The analysis shows increase of duties in the range of 10–13 per cent for its second most important item (vegetables) in India and Thailand, though these could very well be covered under regional arrangements. While overall exports are estimated to be reduced by 3.8 per cent, the largest reduction is expected for exports to the European Union (22 per cent), where it will face an increase in tariffs for clothing products and rice.

Nepal

Nepal has a relatively diversified export structure, with the main export products being textile items (e.g. carpets) (31 per cent). Its most important destination market is India for a wide range of products (agricultural products, chemicals, beverages, minerals, etc.). The European Union accounts for 15 per cent of overall exports and is the largest market for its clothing exports. Nepal is not dependent on the LDC scheme in India, where it benefits from a bilateral free trade agreement. Nepal is utilizing preferences in the European Union, where 80 per cent of its exports enter under the EBA scheme. While it is estimated that overall exports will be reduced by 2.48 per cent, the largest reduction is expected for exports to the European Union (-19.1 per cent), where it will face an increase in tariffs for carpets and clothing.

Sao Tomé and Príncipe

Exports from Sao Tomé and Príncipe are heavily concentrated in cocoa beans, most of which are exported to the European Union. Sao Tomé and Príncipe is currently not dependent on LDC-specific preferences as cocoa beans can be exported to most markets MFN duty-free. As a consequence, overall exports are estimated to fall by only 0.09 per cent, mostly due to increases in tariffs in the European Union for coconut oil, clothing and processed cocoa products.

Solomon Islands

Exports from the Solomon Islands are concentrated in the wood sector, which accounts for 70 per cent of merchandise exports. Its main trading partner is China (62 per cent of the total merchandise exports), followed by the European Union (11 per cent) and India (8 per cent). Its utilization of LDC-specific preferences is high in the European Union, Switzerland and the United States. The tariff impact analysis suggests an increase of duties for certain fish items in the EU market on GSP terms, although reportedly the Solomon Islands has signed an interim economic partnership agreement with the European Union to continue to benefit from duty-free treatment. While overall exports are estimated to be reduced by 4.2 per cent, the largest reduction is expected for exports to the European Union (-43.3 per cent) where it will face an increase in tariffs for prepared tuna and palm oil.

Timor-Leste

Exports from Timor-Leste are concentrated in petroleum (70 per cent) and coffee and tea (17 per cent). Thailand (34 per cent), the European Union (6 per cent) and the United States (6 per cent) are the main destination markets offering preferential market access. Timor-Leste is not

dependent on LDC-specific preference as petroleum can enter Thailand MFN duty-free, while coffee, which is not roasted, can enter both the European Union and the United States MFN duty-free. As a consequence, overall exports are estimated to be reduced by only 0.03 per cent.

Tuvalu

Exports from Tuvalu are concentrated in the transport equipment and fish sectors, respectively accounting for 55 per cent and 38 per cent of total exports. Among preference-granting members, the most important destination market is Thailand (75 per cent), Japan (4 per cent) and the European Union (3 per cent), while 17 per cent of exports are directed towards markets with no preferential access for LDCs. Since Tuvalu, according to the data available, does not currently make use of LDC schemes in preference-granting markets, the impact of graduation on exports is predicted to be negligible (-0.01 per cent).

Vanuatu

There are significant discrepancies between nationally reported data on exports and data on mirrored imports from UN Comtrade. As per national statistics, exports from Vanuatu are concentrated in primary commodities (kava, copra, coconut oil, cocoa, fish products, etc.). Around 44 per cent of Vanuatu's trade goes to the region (i.e. Pacific Islands, Australia and New Zealand). The United States and China have become major destinations in the recent past, while exports to the European Union and Japan have seen further declines. As a consequence, the estimated impact of graduation on exports is small (-0.29 per cent) and concentrated in China (-3.95 per cent) and Japan (-0.71 per cent), mainly for certain fish items.

Annex

Methodology applied for partial equilibrium model

15.1 Description of the model

To project the expected changes in trade flows because of the phasing out of preferences, we employ a partial equilibrium model, which allows for substitution between exports from different origin countries. This model is appropriate if we do not have knowledge about domestic flows, neither on the importer side, nor on the exporter side. To circumvent the lack of data on domestic flows, we employ import demand and export supply elasticities to capture the response of import demand and export supply to changes in prices.

With this set-up, an increase in tariffs imposed by an importer on goods from a specific exporter will make it more attractive for the importer to source goods from other exporters and for the exporter to export to other destinations, leading to changes in the direction of trade for the importer and exporter respectively. A generic negative import demand elasticity implies that the higher price of imports due to higher tariffs will lead to a reduction of imports. The positive export supply elasticity implies that export supply will rise if a higher price can be earned on exports. In addition, export supply will fall if higher tariffs are imposed, as they will drive down the export price and thus export supply.

Technically, we follow most quantitative models in the literature, and we abstract from imperfect transformability of exports (with a constant elasticity of transformation [CET] function) imposing that there is one price for exports to all destinations.

The following set of equilibrium equations formally defines the Armington partial equilibrium model for commodity k :

$$E_{jk}^{imp} = \kappa_{jk}^{imp} (P_{jk}^{imp})^{1-\varepsilon_{jk}} \quad (1)$$

$$P_{jk}^{imp} = \left(\sum_i \omega_{ijk}^{\sigma_k} (p_{ik}(1+t_{ijk})) \right)^{\frac{1}{1-\sigma_k}} \quad (2)$$

$$m_{ijk} = \omega_{ijk}^{\sigma_k} (p_{ik}(1+t_{ijk}))^{-\sigma_k} (P_{jk}^{imp})^{\sigma_k-1} E_{jk}^{imp} \quad (3)$$

$$x_{ik} = \lambda_{ik} p_{ik} \quad (4)$$

$$x_{ik} = \sum_j m_{ijk} \quad (5)$$

Equation (1) represents import demand in country j for commodity k with the import expenditures E_{jk}^{imp} and the importer price index P_{jk}^{imp} . P_{jk}^{imp} is defined in equation (2) as a weighted sum over the prices from the different sources. Equation (3) is the import demand equation, with m_{ijk} the quantity imported from country i , p_{ik} the export price, and the bilateral *ad valorem* tariff rate t_{ijk} . Equation (4) is the export supply equation in country i , and equation (5) is market equilibrium with export supply x_{ik} equal to import demand from different destinations. ε_{jk} is the (negative of the) demand elasticity for total import demand, η_{ik} is the export supply elasticity for total export supply, and σ_k is the substitution elasticity between goods from different sources.

15.2 Size of behavioural parameters

We obtain the values for the three behavioural parameters as follows:

The substitution elasticities between imports from different sources, σ_k , are based on the tariff estimates in Fontagné et al. (2019)¹ obtained with data at the HS6 level. Such elasticities are imputed using four-digit averages, and whenever a figure is missing or null it is replaced with the two-digit average.

Based on a model with nested Armington preferences, the price elasticity of aggregate import demand, can be written as follows:²

$$\varepsilon_{jk} = \rho_k - (\rho_k - \nu_{jk}) sh_{jk}^{imp}$$

Hence, we need three inputs to determine the import demand elasticity:

The substitution elasticity between domestic and imported goods, ρ_{ik} . We assume that ρ_{ik} is half the substitution elasticity between imports from different sources following the approach in most CGE-models.

The share of imports in total demand (import plus domestic) of a commodity, sh_{jk}^{imp} . Due to lack of domestic consumption data at the detailed product level for the countries under consideration, we employ data from the GTAP 10 database for the aggregate commodity to which the product line belongs to obtain sh_{jk}^{imp} .

The price elasticity of total demand for product k in country j is ν_{jk} . Following the new quantitative trade literature, we could set ν_{jk} at 1, corresponding with a Cobb-Douglas upper nest choice between spending in different sectors. However, the model will be more accurate by using the price elasticities from the GTAP model, which are based on the non-homothetic constant distance elasticity preferences and are generally much lower than 1.

If we were to use a demand elasticity, ε_{jk} , unrelated to the substitution elasticity, σ_k , we could run into the risk of having a higher price elasticity for total import demand than for import demand from different sourcing countries. Therefore, it seems better to infer the price elasticity of total import demand from the substitution elasticity between imports from different sources.

The price elasticity of export supply, η_{ik} , could be obtained in a similar way to the price elasticity of demand, based on a theoretical framework on the exporter side with a CET. However, given that we do not work with a CET on the export side, we decided to obtain the export supply elasticity from the literature, selecting the median value of 7.7 reported in the latest handbook chapter on trade elasticities (Hillberry and Hummels, 2014).³

15.3 Calibration of the model

To calibrate the model and calculate the counterfactual levels of trade, we need three inputs: the cost, insurance and freight (CIF) value of imports (exclusive of tariffs), the baseline tariff rates and the counterfactual tariff rates. These three inputs are obtained as follows:

Imports have been extracted from Comtrade at the Harmonized System 2012 six-digit level (HS6 level); the database contains 2016–18 averages for all the importers and exporters available in that period.

Whenever there is a transaction between a preference-granting member and a graduating LDC, the baseline tariff is the weighted average of all the tariffs (at the six-digit level), where the weights are the use rates. If graduating LDCs or preference-granting members are not involved, we use the effectively applied tariff from the UNCTAD Trade Analysis Information System (TRAINS) database.

Similarly, if the transaction involves a graduating LDC and a preference-granting member, the baseline tariff (before preferences are abolished) is obtained through a weighted average, where the LDC duty rate is substituted with the best alternative rate; if this is not the case, the counterfactual tariff is equal to the baseline.

Based on these three inputs, calibration of the baseline is straightforward and follows standard procedures. Since we solve the model in levels using General Algebraic Modeling System (GAMS), we need baseline values for the share parameters ω_{ijk} , κ_{jk} , and λ_{ik} . These are obtained using standard approaches, normalizing all prices at 1 in the baseline (details are available upon request).

15.4 Level of aggregation of the model

Regarding the effects by destination, some effects might be missed by the model because of a lack of feedback effects between sectors. So, a reduction in export opportunities to countries withdrawing LDC preferences on specific products will reduce the price of inputs in all sectors and thus lead to more exports to third countries for other products as well. In the model this effect is not present.

Endnotes

1. Fontagné L., Guimbard H. and Gianluca Orefice (2019), "Product-Level Trade Elasticities", Working Papers 2019-17, CEPII research center.
2. Nested preferences imply different substitution elasticities between imports from different exporters (lower nest) and between imports and domestic goods (upper nest).
3. Hilberry, R. and Hummels, D. (2014), "Trade Elasticity Parameters for a Computable General Equilibrium Model" in *Handbook of Computable General Equilibrium Modeling*, eds. Dixon, P.B. and Jorgenson, D. W., Volumes 1A and 1B, Oxford: Elsevier B.V.

The best way to avoid this omission is to include spillover effects between sectors. However, this would require additional data on the input–output structure of graduating LDCs, which is not available for most of these countries. An alternative is to run the partial equilibrium model at a higher level of aggregation. In this way a reduction in export opportunities to countries withdrawing preferences for LDCs would lead directly to a fall in the price of inputs of graduating LDCs, and thus make these countries more competitive in their exports to third regions in more aggregate sectors.

The disadvantage of using more aggregate sectors is that the modelling of changes in the direction of trade on the import side is less accurate. With more aggregate sectors, a reduction in imports of an aggregate product (for example oilseeds, fats and oils) from a graduating LDC facing higher tariffs will lead directly to more imports from other countries, whereas the graduating LDC and the third country might produce very different detailed products within the aggregate product and are thus not competing directly for the detailed product. For example, suppose that the LDC exports oilseeds and the third country fats. The model could predict that a third country starts exporting more oilseeds, fats and oils in response to higher tariffs only on oilseeds, whereas the third country does not export any oilseeds and only fats.

A further argument against simulating the effects at a more aggregate product level is that the empirical elasticities estimated are valid for the HS6 level, implying that the counterfactual analysis should also be conducted at the HS6 level. Therefore, we have decided to present the results of the simulations conducted with the partial equilibrium model at a detailed aggregation level.

Acronyms

AGOA	African Growth and Opportunity Act	IDB	WTO Integrated Database
APTA	Asia-Pacific Trade Agreement	LDC	least-developed country
ASEAN	Association of Southeast Asian Nations	MFN	most-favoured nation
CET	constant elasticity of transformation	n.e.s.	not elsewhere specified
CIF	cost, insurance and freight	PTA	preferential trade arrangement
CIS	Commonwealth of Independent States	RTA	regional trade agreement
EBA	Everything But Arms	SAFTA	South Asian Free Trade Agreement
GSP	Generalized System of Preferences	SPARTECA	South Pacific Regional Trade and Economic Cooperation Agreement
HS	Harmonized System		

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Graduation from the status of least-developed country (LDC) marks an important milestone in the development path of each LDC. At the same time, the phasing-out of international support measures associated with LDC status, including trade preferences and special treatment in the WTO, could present challenges for graduating LDCs in their efforts to continue integration into the global economy. A quarter of LDCs were on track to graduate from LDC status prior to the outbreak of the COVID-19 pandemic.

“Trade impacts of LDC graduation: Insights from country-specific market access analyses” complements the report “Trade impacts of LDC graduation” issued in May 2020, and examines in greater detail the impact of graduation on preferential market access for each of the 12 graduating LDCs. The report looks at the export structure of graduating LDCs, the likely increase of tariffs on their exported products and projected changes in trade flows employing a partial equilibrium model. It sheds light on products and destination markets that require specific attention from graduating LDCs as they prepare for graduation.

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