Duty-free and quota-free market access for LDCs

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Abstract

Developed countries have agreed to provide duty free and quota free access to imports from LDCs covered by 97 per cent of tariff lines. However, LDCs would like to extend the agreement to 100 per cent coverage, since 3 per cent of tariff lines can cover a substantial proportion of LDC exports. Products of major interest include textiles and clothing and agricultural goods such as rice, oilseeds, sugar and bananas. The potential trade and welfare impacts of expanding the coverage are analysed using a general equilibrium model. Estimates indicate LDCs stand to gain $7.5 billion in additional exports.

Key words: WTO negotiations, trade, agricultural tariffs

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Introduction

As part of the Doha Round of World Trade Organization negotiations, members agreed at the Hong Kong Ministerial meeting of December 2005 that developed countries would provide duty free and quota free access to 97 per cent of imports from least developed countries (LDCs) (WTO 2005). This was to start at the beginning of the Doha implementation period.

LDC would like to extend the agreement to 100 per cent coverage, since 3 per cent of tariff lines could significantly affect the proportion of LDC exports. In addition, they would like similar preferential access to be provided by the major developing countries, such as China, Brazil and India. However, moving from 97 per cent towards 100 per cent product coverage is proving to be difficult as some developed countries continue to be unwilling to liberalize fully some sensitive products.

Products of major interest include textiles and clothing and agricultural goods such as sugar, rice and bananas. A number of developed countries had already met 97 per cent tariff line coverage by 2005 (e.g., EU, Canada, Australia and New Zealand) while a few others were yet to meet the benchmark. Since 2005, major improvements have been reported in Japan and Switzerland. In 2007, Japan expanded its coverage for duty-free and quota-free treatment from 7758 to 8859 products so that it now covers 98 per cent of its total tariff lines, or over 99 per cent of imports from LDCs (UNCTAD 2007). Switzerland grants as of 2007 immediate duty-free treatment for all products from all LDCs with the exception of broken rice and sugar which are subject to a transition period until September 2009[2]. The United States is yet to meet the 97 per cent benchmark mainly owing to textiles and clothing products, including cotton by-products, excluded from its GSP and, to a lesser extent, AGOA schemes. In addition, India and China have taken major steps to grant duty-free and quota-free market access for LDCs. China has granted, autonomously and within regional frameworks, duty-free treatment for over 400 tariff lines covering some 94 per cent of LDCs exports for 39 LDCs. India has granted, from May 2008, duty free and preferential market access for all LDCs on 94 per cent of its total tariff lines covering 92.5 per cent of global exports of all LDCs. Korea and Brazil have also indicated their intention

[2] The Swiss scheme also grants the same treatment to all heavily indebted poor countries (HIPC) participating in the World Bank led debt relief programme including two non-LDCs (Rep. of Congo and Côte d'Ivoire) (Häberli, 2008).

to undertake some initiatives.

To assess the potential gains from the extension of duty-free and quota-free market access for LDCs to all developed countries, we use a general equilibrium model, GTAP. GTAP is designed for trade policy analysis of this nature. Specifically, it contains bilateral trade and tariff data that are necessary to model the impacts of preferential agreements. The GTAP database refers to the base year 2004 and it specifies many, but not all, LDCs as separate regions in the model. The database contains preferential tariffs.

In the next section we describe the current trade patterns and the existing barriers. In the following section the scenarios, model and data are described. The fourth section contains the results, and finally, limitations, implications and conclusions close the paper. The analysis covers trade in goods, not services.

Trade patterns

LDC exports have increased significantly in recent years, after a period of relative stagnation in the 1990s when the share of global trade remained static at around half of one per cent (table 1). Exports have increased three-fold since 2000, and the share of world trade has increased to 0.9 per cent.

Table 1 Growth in LDC exports, selected years

	Total exports	**Share of global trade**
	$m	%
1980	15258	0.75
1990	19615	0.56
2000	36334	0.56
2003	46275	0.61
2004	60906	0.66
2005	82836	0.79
2006	103706	0.86
2007	125644	0.91

Source: UNCTAD Handbook of Statistics 2008, table 1.1.1 and 1.1.2.

The markets for LDC exports

The European Union and the United States are the major markets for the LDCs (table 2).

Access to these markets has improved over the past ten years, with exports expanding three-fold. More notable has been the increase in exports to developing countries, particularly China. India has also become a significant market.

Table 2 Major markets for LDC exports

	1996 $m	**2006** $m
EU25	9916	23413
United States	5691	24629
Japan	1702	5365
Canada	331	1487
China	1120	20410
India	688	4842
Brazil	301	728
Korea, Rep.	654	1881

Source: Comtrade through WITS.

Export growth dominated by oil based products

Most of the growth in LDC exports has occurred in mineral fuel/lubricants, that is, oil based products (table 3). Tariffs on such products are typically very low. There has also been substantial growth in non-fuel items, including agricultural and manufactured products.

Table 3 LDCs export by product

	1996 $m	**2006** $m
Food & live animals	4729	6529
Beverages and tobacco	418	839
Crude material ex food/fuel	4072	7329
Mineral fuel/lubricants	7264	58301
Animal/veg oil/fat/wax	121	204
Chemicals/products n.e.s	261	1009
Manufactured goods	4538	8107
Machinery/transport equipment	839	2181
Miscellaneous manufactured articles	4101	16974
Commodities n.e.s.	153	646
Total trade	**26506**	**102134**

Source: Comtrade through WITS.

The major exporters

Angola and Bangladesh are the largest LDC exporters, accounting for 45 per cent of the

LDC total exports. The top ten countries account for 80 per cent of total imports. Angola's exports have increased from $5 billion in 1996 to $32 billion in 2006. The bulk of these exports are oil based products (HS Chapter 27). A listing of exports for all individual LDCs can be found in Annex table A1. There are ten countries with exports of less than $100 million.

Table 4 Major LDC exporters, 2006

	Exports $m
Angola	32042
Bangladesh	13010
Equatorial Guinea	8426
Congo, Dem. Rep.	7326
Senegal	5953
Mozambique	4648
Cambodia	4014
Togo	2508
Mauritania	2350
Malawi	1689
LDC total	**102134**

Source: Comtrade through WITS.

Preferential access

A list of the average preferential and non-preferential tariffs facing LDCs are presented in table 5. The final row shows that a third of LDC exports are sent under preferences arrangements with a very low trade weighted average tariff, practically zero. Two thirds of their exports are under non-preferential arrangements. Here the average tariff facing these exports is low, 2 per cent, but these percentages vary widely from country to country, the highest being 26 per cent for Guinea-Bissau. Nine countries face non-preferential tariffs over ten per cent. However, the key variable is the share of exports entering under preferential access, shown in the final column of table 5. The average is 36 per cent but varies from zero (Tuvalu) to 87 (Maldives) per cent. This is far below the 97 per cent of tariff lines that provide duty free access because the excluded items can cover a large amount of trade (WITS 2008).

Table 5 Exports and MFN and preferential tariffs facing LDCs

Country	Average tariff on mfn exports	Non-preferential exports	Average tariff on preferential exports	Preferential exports	Share of exports with preferential access
	%	$m	%	$m	%
Afghanistan	14.81	159	0.01	23	13
Angola	0.36	23857	0.00	12664	35
Bangladesh	4.00	4841	0.05	7943	62
Bhutan	20.49	216	0.28	2	1
Solomon Islands	0.11	178	0.00	50	22
Myanmar	9.21	2124	1.25	342	14
Burundi	1.47	66	0.01	8	11
Cambodia	7.84	2849	0.14	1324	32
Cape Verde	2.76	14	0.00	29	67
Central African Republic	1.27	90	0.17	6	6
Chad	0.50	391	0.00	2135	85
Comoros	10.62	20	0.00	13	39
Congo, Dem. Rep.	0.53	1696	0.00	166	9
Benin	15.22	277	0.09	86	24
Equatorial Guinea	0.13	7322	0.01	1918	21
Ethiopia (excl. Eritrea)	2.11	659	2.25	339	34
Eritrea	3.27	6	2.28	7	54
Djibouti	2.18	20	0.14	6	23
Gambia, The	14.50	29	0.00	10	26
Kiribati	1.11	4	0.01	3	43
Guinea	1.71	1577	0.00	51	3
Haiti	9.97	467	3.85	152	25
Lao PDR	1.20	271	0.30	271	50
Lesotho	0.37	231	0.00	399	63
Liberia	1.96	665	0.00	435	40
Madagascar	0.90	221	0.04	1009	82
Malawi	4.62	128	3.80	470	79
Maldives	2.00	16	1.56	109	87
Mali	16.40	252	0.33	23	8
Mauritania	1.73	1393	0.03	314	18
Mozambique	0.74	681	0.04	2001	75
Nepal	11.58	442	0.19	167	27
Vanuatu	0.91	33	0.07	150	82
Niger	0.84	336	0.06	14	4
Guinea-Bissau	26.03	54	0.03	4	7
Rwanda	1.66	112	0.19	9	7
Sao Tome and Principe	0.45	6	0.00	1	14
Senegal	2.99	336	0.09	609	64
Sierra Leone	0.85	256	0.00	16	6
Somalia	2.19	133	0.48	15	10
Sudan	0.59	5842	0.00	145	2
Togo	4.56	435	0.20	145	25
Tuvalu	1.39	2	0.00	0	0
Uganda	2.63	432	0.64	297	41
Tanzania	5.17	923	2.12	508	35
Burkina Faso	23.43	303	0.16	41	12

Samoa	0.51	15	0.27	88	85
Yemen	1.86	5159	0.18	542	10
Zambia	1.69	1607	0.05	1927	55
Total	**2.08**	**67148**	**0.16**	**36989**	**36**

Source: Comtrade and Trains, accessed through WITS. Note: Preferential exports are exports eligible for preferential treatment, although whether the whole amount of exports actually received preferential treatment is unknown. Non-preferential exports are the difference of total and preferential exports.

This raises the question of why the preferential shares of exports are so low in some instances. The more obvious explanations include:

- The country exports goods which tend not to have preferential access, such as rice, sugar or textiles;
- The country exports goods which tend to have low mfn rates. Such goods include oil-based products and minerals. For example, Sao Tome and Principe faces mfn rates averaging less than one per cent;
- Preferential aaccess is restricted by administrative requirements and particular rules of origin.

Next, we look at the potential gains to LDCs from the extension of duty free quota free access to all goods. The analysis assumes preferential access is taken up, ignoring the third point listed above. Where there is a large tariff differential, exporters have an incentive to meet the administrative requirements.

A quantitative assessment of duty free quota free market access

To assess the potential gains to LDCs from 100 per cent access we utilise general equilibrium model, GTAP, and its associated database. The GTAP database has 106 separate countries and regions. This includes the LDCs Cambodia, Bangladesh, Malawi, Mozambique, Senegal, Tanzania and Zambia as individual countries (table 6) and a number of regional groupings that are predominantly LDCs. This grouping is not perfect, as Developing Africa contains Lesotho, an LDC, while Rest of South East Asia contains Brunei, a small but wealthy country.

Table 6 Regional concordance

Region	Countries
European Union	Austria, Belgium, Cyprus, Czech Republic, Germany, Denmark, Spain, Estonia, Finland, France, United Kingdom, Greece, Hungary, Ireland, Italy, Lithuania, Luxembourg, Latvia, Malta, Netherlands, Poland, Portugal, Slovakia, Slovenia, Sweden
United States	
Japan	
Other developed	Australia, Canada, Switzerland, Rest of EFTA, Korea, New Zealand, Taiwan
China	
India	
Brazil	
South East Asia	Indonesia, Malaysia, Philippines, Singapore, Thailand, Viet Nam, Pakistan, Sri Lanka, P.R. Korea, Macau, Mongolia, Rest of Oceania
Latin America	Argentina, Caribbean, Rest of Central America, Rest of North America, Bolivia, Chile, Colombia, Ecuador, Rest of South America, Mexico, Nicaragua, Peru, Paraguay, Uruguay, Venezuela
Developing Africa	Botswana, Algeria, Libya, Egypt, Lesotho, Namibia, Swaziland, Madagascar, Mauritius, Nigeria, Tunisia, Uganda, South Africa, Zimbabwe
Rest of World	Albania, Rest of Europe, Armenia, Azerbaijan, Bulgaria, Rest of Western Asia, Belarus, Georgia, Croatia, Iran Islamic Republic of, Kazakhstan, Kyrgyzstan, Morocco, Rest of Eastern Europe, Romania, Russian Federation, Rest of Former Soviet Union, Turkey, Ukraine.
Least developed country groups	
Rest of South Asia	Afghanistan, Bhutan, Moldova, Nepal
Rest of South East Asia	Brunei, Myanmar, Laos, East Timor
Cambodia	
Bangladesh	
Malawi	
Mozambique	
Senegal	
Tanzania	
Zambia	
Rest of West Africa	Cape Verde, Benin, Gambia, Ghana, Guinea, Côte d'Ivoire, Liberia, Mali, Niger, Mauritania, Guinea-Bissau, Saint Helena, Sierra Leone, Togo, Burkina Faso
Central Africa	Cameroon, Central African Republic, Chad, Congo, Equatorial Guinea, Gabon, Sao Tome and Principe

South Central Africa	Angola, DR Congo
Rest of Eastern Africa	Burundi, Comoros, Mayotte, Ethiopia, Eritrea, Djibouti, Kenya, Reunión, Rwanda, Seychelles, Somalia, Sudan

Regional exports corresponding to this concordance are shown in table 7. LDCs export about 70 per cent of the goods to developed countries, although this ranges from 50 (Senegal) to 90 per cent (Cambodia) for the countries shown in the table.

Table 7 Value of exports from LDCs

	EU25	**USA**	**Japan**	**Other developed**	**China, India and Brazil**	**Total**
	\$m	\$m	\$m	\$m	\$m	\$m
Rest of South Asia	835	569	149	163	647	2807
Rest South East Asia	1095	574	1218	691	770	6283
Cambodia	1297	1975	165	257	86	4090
Bangladesh	5825	2980	211	624	237	10794
Malawi	210	91	16	25	13	573
Mozambique	1331	65	28	29	153	2030
Senegal	667	122	51	72	252	1760
Tanzania	798	220	134	150	276	2269
Zambia	228	46	102	507	211	2156
Rest of West Africa	8916	1324	383	973	1264	17848
Central Africa	4233	2459	181	1062	975	9941
South Central Africa	1046	2239	64	568	1531	5970
Rest of Eastern Africa	3571	1367	886	576	781	10213

Source: GTAP v7 database.

Tariffs on this trade (table 8) are generally very low, averaging less than 10 per cent in most instances, although exceptions are Malawi (mainly sugar) exports to the European Union and Rest of Eastern African (mainly oilseed) exports to 'Other Developed Countries (particularly Korea).

The share of LDC exports to China, India and Brazil is relatively low, ranging from 2 per cent to 26 for some groups. However, the tariffs LDCs face on these exports are much higher because of the absence of the preferential treatment provided by developed countries. The raises the question of whether LDCs should push for further concessions from developed countries or the wealthier developing countries. The implicit tariff revenue raised on exports to developed countries is estimated at $1,284 million compared with $704 million on exports to China, India and Brazil.

Table 8 Trade weighted average applied tariffs on exports from LDCs

	EU25	USA	Japan	Other developed	China, India and Brazil	Total
	%	%	%	%	%	%
Rest of South Asia	2	4	1	0	8	4
Rest South East Asia	6	6	1	4	9	4
Cambodia	0	10	0	1	3	5
Bangladesh	0	9	0	1	8	4
Malawi	14	0	0	0	29	8
Mozambique	0	6	0	0	6	2
Senegal	0	0	0	4	13	3
Tanzania	2	0	1	2	14	5
Zambia	5	0	0	0	8	4
Rest of West Africa	1	0	1	1	24	5
Central Africa	2	0	0	2	4	2
South Central Africa	1	0	0	2	1	1
Rest of Eastern Africa	1	0	1	37	6	5

Source: Derived from GTAP database.

Scenarios, model and data

To assess the impact of duty free quota free market access we postulate two scenarios:

(1) The removal of developed country tariffs on exports from LDCs; and

(2) The removal of tariffs in developed countries plus China, India and Brazil on exports from LDCs.

By examining tariff changes at an industry or tariff line level, it is possible to make a reasonable estimate as to their likely effects on the industry's prices and production, consumption, and, perhaps, imports and exports. However, looking at tariffs alone is insufficient. Because many firms sell their output to other firms as intermediate inputs, lower prices in one sector are beneficial to downstream sectors. For example, the removal of tariffs on textiles makes a country's apparel sector more competitive. Such interactions should be taken into consideration in assessing a policy change. Where a large number of variables are involved, computational models are necessary to take account of the interactions. Trade models are used to make estimates of the possible effects of changes in trade policy on a number of economic variables, such as exports, imports, tariff revenues, production and welfare. The value of the models is in providing an understanding of the interplay of different economic forces, and in enabling comparisons of the relative impact of different policies. They can often help to highlight unexpected or counter-intuitive outcomes, which can assist policy-makers in their choice of policy options and/or development of support measures.

The standard GTAP model used here is a static, multiregional, multisector, computable general equilibrium (CGE) model that assumes perfect competition and constant returns to scale. Bilateral trade is handled via the so-called Armington assumption that differentiates imports by source. Input-output tables reflect the links between sectors. GTAP is ideally suited for analysis of trade policies, such as the liberalisation of industrial tariffs, which are likely to have international and intersectoral effects. The input-output tables capture the indirect intersectoral effects, while the bilateral trade flows capture the linkages between countries. A shock or policy change in any sector has effects throughout the whole economy. Tariff support for one sector, such as textiles, tends to have negative effects on downstream sectors (apparel) by raising prices and costs. Changes in policies in sectors such as steel and petroleum tend to have relatively important economy-wide effects because many sectors use these inputs. Support in one market often has a negative effect on others because each sector competes with the others for factor inputs, capital, labour and land. CGE models attempt to capture these effects. The methodology involves specifying a data set that represents a specific year, postulating a change in tariffs or other policy variable, and comparing the simulated outcome with the base data. Impacts of the removal of trade barriers on trade flows, government revenues, welfare and resource allocation within countries can then be ascertained. It is important to note that no dynamic elements are assumed here, although in reality the policy changes are implemented over time and there are, in addition, time lags for their effects to work through. There are also adjustment costs that are ignored. However, policy changes are phased in over a number of years, and, in practice, the output changes would take place in a growing world economy. This facilitates the adjustment process.

The GTAP 7.5 database is used here. The value (of output and trade flows) data relate to 2004 and the behavioural parameters, such as elasticities, are taken from the literature rather than econometrically estimated specifically for use within the model. Input-output data are taken from national accounts and vary from year to year, depending on their availability in particular countries. Preferences are included in the tariff database, and data for the EU are aggregated to 25 members, with internal tariffs removed.

Simulation results

Trade policy changes can have significant economic effects. The focus here is national trade and welfare effects.[3] The additional exports for LDCs from developed country duty free quota free liberalisation are estimated at \$7.5 billion. Further liberalisation by China, India and Brazil increases LDC exports by a further \$70 million.

[3] Sectoral changes for the developed country DFQF scenario are given in Appendix table 1.

The changes in LDC exports are shown below in table 9 for the two scenarios. All the regions show positive gains, with no obvious trade diversion at the aggregated level. The major impact is on the exports of the Rest of Eastern Africa (comprising Burundi, Comoros, Mayotte, Ethiopia, Eritrea, Djibouti, Kenya, Reunion, Rwanda, Seychelles, Somalia and Sudan. This group includes developing countries Kenya and Seychelles). Exports increase from a base of $10.2 billion to $14.7 billion. This result is driven by the removal of import duties averaging 281 per cent on exports of 'Other crops', to 'Other Developed Countries'. Bilateral exports in this sector are worth $67 million in the base period database. This is mainly oilseeds exported to Korea, which attracts a tariff of 644 per cent.[4] The second major flow is 'Other crops' exported to Switzerland against an ad valorem tariff equivalent of 121 per cent.

The impact on LDC exports of additional liberalisation by three large developing countries appears relatively small in aggregate, $70 million. However, this is because the results for the developed country liberalisation scenario are dominated by the East African exports of $4.5 billion. Developing country liberalisation, all of it outside Africa, is quite important for Mozambique, Senegal, Tanzania, Zambia, Rest of West Africa, Central Africa, and South Central Africa.

In addition to Eastern Africa the other major beneficiaries are Rest of South East Asia and Bangladesh. The former group includes Brunei, Myanmar, Laos and East Timor. The major trade for both groups is rice exports to Japan. Current trade is minimal but Japanese tariffs are very high. Exports are estimated to increase by $730 million from south East Asia and $535 million from Bangladesh respectively.

[4] Although developing countries Kenya and Seychelles are in the Rest of Eastern Africa group, these countries do not export oilseeds to Korea.

Table 9 Change in value of exports following DFQF liberalisation

	Developed countries		Developed countries plus China, India and Brazil	
	%	$m	%	$m
Rest of South Asia	5.46	157	7.97	229
Rest of South East Asia	15.61	993	16.42	1044
Cambodia	9.12	375	9.2	378
Bangladesh	8.86	958	9.21	997
Malawi	9.65	56	10.3	60
Mozambique	1.66	34	2.22	46
Senegal	0.17	3	1.43	25
Tanzania	4.93	120	7.39	180
Zambia	1.69	38	2.91	65
Rest of West Africa	0.42	91	1.47	284
Central Africa	1.63	165	2.83	287
South Central Africa	0.6	36	0.93	56
Rest of Eastern Africa	42.07	4491	42.71	4560

Source: GTAP simulations

The changes in LDC welfare are shown in table 10. Most of the change in welfare can be attributed to improvements in the terms of trade, also shown in table 10. An increase in the price of exports dominates the terms of trade. As a result, the welfare changes tend to follow the growth in exports shown in table 9. The resource allocation effects are minimal because none the LDCs is undertaking any liberalisation. Global welfare gains are $2.6 billion and $2.9 billion under the two scenarios respectively, but the liberalising countries are in fact worse off, by around $8 billion, because of negative terms of trade effects.

Global welfare gains are spread across a number of sectors, including rice, $172 million, other crops, $775 million, sugar, $386 million, other processed agriculture, $654 million, textiles, $361 million, chemicals, rubber and plastics, $166 million, and manufacturing $220 million.

Table 10 Change in welfare following DFQF liberalisation

	Developed countries		Developed countries plus China, India and Brazil	
	Welfare	Terms of trade	Welfare	Terms of trade
	$m	$m	$m	$m
Rest of South Asia	199	94	330	150
Rest of South East Asia	694	661	745	709
Cambodia	229	247	231	250
Bangladesh	803	436	846	454
Malawi	147	86	159	94
Mozambique	26	22	37	32
Senegal	15	3	165	72
Tanzania	69	50	131	97
Zambia	31	38	57	66
Rest of West Africa	1206	756	1912	1205
Central Africa	84	92	142	146
South Central Africa	85	40	124	56
Rest of Eastern Africa	5355	3414	5423	3445

Source: GTAP simulations

Implications, limitations and conclusions

Potential export gains to LDCs from duty free quota free liberalization in developed countries are estimated at $7.5 billion. Similar liberalization by China, India and Brazil is estimated to generate a further $70 million. These estimates are based on the assumption that the tariff estimates presented here are correct, that the tariffs would be removed and that LDCs could supply these markets, notwithstanding SPS, TBTs and other non-tariffs measures. This implies that there would be no ongoing reforms under a Doha outcome, so these estimates are not in addition to any impacts from the Round.

Two important sectors for LDC markets are oilseeds in Korea and rice in Japan. Although market opening would provide opportunities to LDCs, there are some doubts about the ability of LDCs to supply these markets. Firstly, these markets have prohibitive tariffs, and imports may not increase as tariffs are reduced. In other words, there may be water in the tariff, and it is not clear what reduction would be required before Korea or Japan started importing. This implies that the estimated benefits for the exporting countries may be overestimated. A second qualification is the type of rice preferred by the Japanese. Although the GTAP database shows some trade between Bangladesh, Laos, and Cambodia and Japan, these countries typically do not grow the Japonica variety favoured in Japan.[5]

A further qualification is that Korea designates itself as a developing country in the agricultural negotiations and may not be part of any duty free quota free agreement.

A final issue concerns data. Tariffs vary significantly, and different methods of aggregating data can lead to vastly different estimates, particularly where specific tariffs are concerned. For example, there are 55 tariff lines on Korean imports of oilseeds from LDC countries, with mfn tariffs in 2006 ranging from 8 to 630 per cent. The simple average is 168 per cent yet the weighted average is 530. In 2007 these numbers were 222 and 365 per cent respectively. The change reflects movement in prices and trade weights rather than tariffs. Different tariff will generate differing estimates of benefits.

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[5] Comtrade data show $6 million tonnes of rice exports from LDCs to Japan in 2005, all of it from Bangladesh. There were no imports of rice into Japan from LDCs in 2007.

Annex

Table A1 LDC exports by country

Country	**1996** $m	**2006** $m
Afghanistan	125	225
Angola	4971	32042
Bangladesh	4187	13010
Benin	287	509
Bhutan	41	211
Burkina Faso	155	341
Burundi	101	64
Cambodia	288	4014
Cape Verde	17	49
Central African Republic	172	118
Chad	127	19
Comoros	22	49
Congo, Dem. Rep.	1619	7326
Djibouti	19	223
Equatorial Guinea	194	8426
Eritrea	28	17
Ethiopia (excludes Eritrea)	464	983
Gambia, The	174	40
Guinea	850	1542
Guinea-Bissau	72	58
Haiti	197	586
Kiribati	9	8
Lao PDR	287	1081
Liberia	1132	1638
Madagascar	695	537
Malawi	493	1689
Maldives	70	1152
Mali	318	158
Mauritania	684	2350
Mozambique	243	4648
Myanmar	1281	401
Nepal	411	374
Niger	94	559
Rwanda	68	598
Samoa	71	239
Sao Tome and Principe	9	126
Senegal	628	5953
Sierra Leone	214	241
Solomon Islands	222	874
Somalia	147	284
Sudan	477	108
Tanzania	728	4
Togo	290	2508
Tuvalu	2	495

Uganda	645	1428
Vanuatu	44	657
Yemen	2102	84
Zambia	1034	1473
Total LDCs	**26506**	**102134**

Source: Comtrade through WITS.

Table A2 Change in value of LDC exports by sector: developed country duty free quota free liberalisation

	South East Asia	Latin America	Rest of South Asia	Rest South East Asia	Cambodia	Bangladesh	Malawi	Mozambique	Senegal	Tanzania	Zambia	Rest of West Africa	Central Africa
	%	%	%	%	%	%	%	%	%	%	%	%	%
Rice	-24	11480	473	14629	2343	-3	8	10	-7	-18	-8	-11	-63
Other crops	-17	-67	-30	-19	-38	2	-2	-1	-11	-22	-10	-7	567
Vegetables, fruit, nuts	-5	-16	-21	-2	-25	4	9	-1	-7	11	114	-1	-48
Sugar	2254	13323	-47	3032	383	530	-29	860	445	4331	263	313	106
Plant based fibres	-13	-46	-15	-6	-28	-2	-2	-4	-5	-14	-4	1	-63
Livestock	-12	-59	-26	-14	-31	-7	-2	-6	-4	-3	-5	-4	-50
Fishing	0	-2	-1	-2	-35	-4	0	-4	-2	-8	1	-1	-22
Resources	-9	-6	-33	-25	-44	-6	-1	-14	8	-9	0	0	-62
Meat	-26	101	-50	-2	-69	-19	1	-20	5	7	61	-10	-87
Other processed agriculture	-10	-29	-20	-14	-35	0	4	2	-1	-10	-1	-1	-48
Textiles	-7	6	-1	-12	-59	-6	-5	-3	-9	-17	8	3	-69
Wearing apparel	43	24	27	21	-64	-4	-5	-11	-7	-15	5	19	-67
Chemicals	-10	-35	-31	-18	-54	16	0	-3	-4	-14	-4	-5	-58
Metal manufactures	-11	-24	-24	-19	-62	-6	-1	-8	-6	-14	-4	-5	-55
Wood & paper products	-9	-16	-21	-17	-51	-4	2	-6	-5	-12	-4	-5	-60
Manufactures	-13	-27	-22	-22	-58	-1	0	-6	-1	-11	-4	-5	-63
Electronics	-14	-23	-30	-29	-39	-5	-2	-9	-8	-17	-6	-2	-75
Transport & communications	-9	-13	-19	-12	-32	-2	-1	-4	-1	-8	-1	-2	-35
Business services	-10	-26	-22	-14	-45	-3	-2	-7	-4	-12	-2	-3	-48
Services and activities NES	-10	-22	-22	-14	-44	-3	-1	-8	-4	-11	-2	-3	-46

Source: GTAP simulations