Chapter 4

Terms of trade effects

The discussion so far has followed the well-worn track of trying to estimate the way in which the EU–India FTA will affect the volume of trade flows between the partners and other countries and to allocate the latter between trade diversion and trade re-orientation.[51] This last chapter turns to the less frequently studied issues discussed in Part I based on the stream of analysis stemming from Winters (1997) through to Chang and Winters (2002) and Chang and Schiff (2004). It concerns the effect of the FTA on the terms of trade of excluded countries. Recall that while the changes in the terms of trade are driven by the *changes* in trade volumes of the sort we have been analysing so far, their potential effects on the terms of trade are related to the *levels* of trade.

The essence of the analysis of this chapter is that as the FTA diverts demand from excluded to included countries, the prices commanded by the former are likely to decline. The important point for economic welfare, however, is not the volume or value of the lost exports *per se* – which may after all have cost just as much to produce as they earned in revenue – but the fact that, as demand falls, suppliers are driven back down the supply curves (or choose to cut their prices if they have any pricing discretion), so that the prices they charge ***on all their sales*** to the FTA may fall[52]. The loss entailed in this is a function of (a) the decline in price, which we can only speculate about, although the incentive to cut prices is related to the importance of the newly preferred supplier in the overall market and the extent of the preference that they receive, and (b) the level of existing trade, which we know.[53]

To capture these possibilities we present, for each partner, the proportions of 'active' trade headings (the headings in which they actually export to the EU) and of the value of total exports falling into different cells of a matrix cross-classified by the Indian share of the EU market and the size of the tariff that India previously faced. (Recall that we assume that all tariffs are removed by the EU–India agreement immediately.) The further right and lower down one goes in the sub-tables, the greater the terms of trade effect on excluded countries is likely to be: that is, where India is a market leader and where India receives a large improvement in access in the EU, the larger the likely competitive pressure on excluded suppliers. These are tendencies, of course, not precise predictions for each heading; without a great deal more information about market conditions we cannot assert, say, that any heading with a larger Indian share will have greater terms of trade changes than any heading with a smaller one, even if they have equal degrees of preference.

The cross-classification is undertaken at 6-digits and aggregated up to the identified categories. The more intense is the shading in the tables, the greater the scope for adverse effects, *ceteris paribus.* If India does not export a heading to the EU, or if the tariff she faces is zero, we assume that the terms of trade effect will be zero, so we isolate such cases in the

first row and column of each sub-table. Here we are implicitly assuming that trade structures are fixed so that the FTA does not generate imports in trade headings which India previously did not supply at all. This is clearly a major assumption – and especially so for the reverse case of EU exports to India – but is unavoidable at this level of generality. Also in mitigation, it is also likely that for headings in which the EU is entirely excluded from the Indian market, or vice versa, imports from other partners are likely to be small as well. Where FTAs are being examined *ex post*, however, 'new trade' is an important dimension – see Winters (forthcoming) on the Indian-Sri Lankan FTA.

A second assumption is that the data for 2004 give a reasonable representation of India's market share in the year in which the FTA is implemented. For textiles and clothing this may not be true, for as noted above, the MFA still applied in 2004. However, the effect of abolishing the MFA should have been to increase competition in import markets and so, even if we are under-estimating India's share (and we might by over-estimating it since other countries might have made more of the abolition than did India), we may still not be underestimating her market power and hence her ability to determine prices.

Terms of trade effects in the EU market

For India, Table II.15 counts the number of tariff lines that fall into each category identified[54]. As can be seen, the bottom-right value in the table indicates that there is only 1 tariff line in which India has a share of over 25 per cent of the EU market and in which the current tariff faced by India is above 10 per cent.

Table II.15: Indian access to the EU market by market share and tariff faced (2004)

		Tariff lines				Percentage of tariff lines			
		0%	<10%	10–25%	>25%	0%	< 10%	10–25%	> 25%
Tariff differential	0%	722	2413	51	22	13.83%	46.23%	0.98%	0.42%
	<5%	253	710	32	23	4.85%	13.60%	0.61%	0.44%
	5–10%	113	626	34	18	2.16%	11.99%	0.65%	0.34%
	>10%	105	97	0	1	2.01%	1.86%	0.00%	0.02%

Source: Own calculations using COMTRADE and TRAINS.

Note: The left panel presents the quantity of tariff lines affected and the right panel shows the share of left panel tariff lines out of total tariff lines.

Table II.16 indicates the importance of the tariff lines identified above for excluded countries' exports to the EU. This gives us an indication of the possible scope for their suffering adverse terms of trade effects. We reiterate that, in this section, we are considering not the potential for changes in the volume of trade, as we did in Part II Chapters 1–3, but that for changes in the prices at which trade occurs. The latter is likely to be related to the size of the new tariff preference received by Indian exporters – their scope to cut their prices – and the importance of Indian exporters in the EU market – which proxies the extent to which their price cuts would disturb the EU market for other suppliers. The columns on the left identify excluded countries' exports to the EU as a proportion of their total exports to the EU.

Table II.16. Third party exports to the EU cross classified (2004)[55]

	Tariff differential	Share EU India market share in EU 0%	< 10%	10–25%	> 25%	Share World India market share in EU 0%	< 10%	10–25%	> 25%
Afghanistan	0%	43.00	43.85	0.00	0.00	7.86	8.02	0.00	0.00
	< 5%	0.06	2.72	0.00	0.80	0.01	0.50	0.00	0.15
	5–10%	0.05	1.35	7.88	0.06	0.01	0.25	1.44	0.01
	> 10%	0.01	0.21	0.00	0.00	0.00	0.04	0.00	0.00
Bangladesh	0%	0.01	0.99	0.27	0.46	0.01	0.57	0.16	0.27
	< 5%	0.05	2.28	0.01	0.35	0.03	1.33	0.01	0.21
	5–10%	0.00	92.57	1.58	0.35	0.00	53.93	0.92	0.21
	> 10%	0.00	1.06	0.00	0.02	0.00	0.62	0.00	0.01
Bhutan	0%	4.29	77.31	0.05	0.00	0.06	1.16	0.00	0.00
	< 5%	0.00	11.45	0.00	0.00	0.00	0.17	0.00	0.00
	5–10%	0.00	3.45	0.21	0.00	0.00	0.05	0.00	0.00
	> 10%	0.61	2.62	0.00	0.00	0.01	0.04	0.00	0.00
Maldives	0%	0.01	5.18	0.00	0.00	0.00	0.89	0.00	0.00
	< 5%	0.00	0.32	0.00	0.00	0.00	0.05	0.00	0.00
	5–10%	0.00	4.40	0.00	0.00	0.00	0.76	0.00	0.00
	> 10%	0.04	90.04	0.00	0.00	0.01	15.45	0.00	0.00
Nepal	0%	0.04	10.65	0.77	0.15	0.01	1.99	0.14	0.03
	< 5%	0.19	7.21	0.01	0.24	0.04	1.35	0.00	0.05
	5–10%	0.00	23.72	56.14	0.74	0.00	4.43	10.49	0.14
	> 10%	0.01	0.12	0.00	0.00	0.00	0.02	0.00	0.00
Pakistan	0%	0.09	11.20	5.65	0.03	0.03	4.13	2.08	0.01
	< 5%	0.01	7.16	3.40	0.32	0.00	2.64	1.25	0.12
	5–10%	0.24	62.12	4.30	2.90	0.09	22.89	1.59	1.07
	> 10%	0.88	0.71	0.00	1.00	0.32	0.26	0.00	0.37
Sri Lanka	0%	0.09	26.83	8.95	0.40	0.03	9.62	3.21	0.14
	< 5%	0.01	4.66	0.05	0.15	0.00	1.67	0.02	0.05
	5–10%	0.01	54.33	2.20	0.24	0.00	19.48	0.79	0.09
	> 10%	0.00	2.08	0.00	0.00	0.00	0.75	0.00	0.00
Brazil	0%	6.65	64.28	0.81	0.07	1.74	16.85	0.21	0.02
	< 5%	2.19	9.39	0.05	0.04	0.57	2.46	0.01	0.01
	5–10%	1.62	6.07	0.03	0.02	0.42	1.59	0.01	0.00
	> 10%	6.40	2.49	0.00	0.00	1.68	0.65	0.00	0.00
Russia	0%	65.84	26.23	0.53	0.00	32.85	13.09	0.27	0.00
	< 5%	1.45	2.94	0.00	0.00	0.72	1.47	0.00	0.00
	5–10%	0.05	2.50	0.01	0.01	0.03	1.25	0.00	0.00
	> 10%	0.09	0.38	0.00	0.00	0.04	0.19	0.00	0.00

	Tariff differential	Share EU India market share in EU 0%	< 10%	10–25%	> 25%	Share World India market share in EU 0%	< 10%	10–25%	> 25%
China	0%	1.31	64.34	1.21	0.03	0.27	13.02	0.24	0.01
	< 5%	0.66	13.89	0.24	0.03	0.13	2.81	0.05	0.01
	5–10%	0.12	15.25	0.58	0.19	0.02	3.08	0.12	0.04
	> 10%	0.13	2.00	0.00	0.00	0.03	0.40	0.00	0.00
South Africa	0%	10.60	69.14	1.53	0.00	3.87	25.24	0.56	0.00
	< 5%	1.46	5.79	0.45	0.01	0.53	2.12	0.16	0.00
	5–10%	1.25	7.98	0.02	0.01	0.46	2.91	0.01	0.00
	> 10%	0.56	1.16	0.00	0.00	0.20	0.42	0.00	0.00
Caricom	0%	27.44	19.44	0.04	0.01	4.72	3.34	0.01	0.00
	< 5%	1.49	26.19	0.00	0.00	0.26	4.50	0.00	0.00
	5–10%	0.19	5.14	0.01	0.00	0.03	0.88	0.00	0.00
	> 10%	0.08	18.90	0.00	1.06	0.01	3.25	0.00	0.18
Central Africa	0%	47.25	42.73	0.01	0.00	13.15	11.89	0.00	0.00
	< 5%	0.01	1.59	0.02	0.00	0.00	0.44	0.01	0.00
	5–10%	0.47	3.23	0.00	0.00	0.13	0.90	0.00	0.00
	> 10%	0.01	4.67	0.00	0.00	0.00	1.30	0.00	0.00
Eastern and Southern Africa	0%	4.08	21.15	4.64	0.42	1.40	7.25	1.59	0.14
	< 5%	0.56	23.71	0.13	0.10	0.19	8.13	0.05	0.03
	5–10%	0.56	27.72	1.05	0.08	0.19	9.51	0.36	0.03
	> 10%	0.11	15.69	0.00	0.00	0.04	5.38	0.00	0.00
Pacific	0%	20.38	38.10	0.59	0.00	3.52	6.58	0.10	0.00
	< 5%	0.03	34.08	0.00	0.00	0.01	5.89	0.00	0.00
	5–10%	0.01	0.77	0.00	0.00	0.00	0.13	0.00	0.00
	> 10%	0.04	5.99	0.00	0.00	0.01	1.03	0.00	0.00
SADC	0%	19.29	49.20	0.68	0.01	5.87	14.96	0.21	0.00
	< 5%	0.42	3.14	0.09	0.00	0.13	0.95	0.03	0.00
	5–10%	0.17	24.17	0.02	0.00	0.05	7.35	0.01	0.00
	> 10%	2.34	0.47	0.00	0.00	0.71	0.14	0.00	0.00
West Africa	0%	51.33	31.06	0.47	0.04	14.08	8.52	0.13	0.01
	< 5%	0.07	6.98	0.44	0.28	0.02	1.91	0.12	0.08
	5–10%	2.42	2.53	0.02	0.01	0.66	0.69	0.01	0.00
	> 10%	0.11	4.44	0.00	0.00	0.03	1.22	0.00	0.00

SOURCE: Authors' calculations using COMTRADE and TRAINS.

In the right panel we divide exports to the EU by category by the value of their total exports to the world.

What emerges from Table II.16 is that the amount of trade likely to be affected by adverse

terms of trade effects is low. However, some countries fare worse than others, with the worst hit being Nepal, followed at some distance by Afghanistan and Pakistan. Their challenge is that they export more heavily to the EU in products in which India simultaneously has an important market share (>10 per cent) and faces a high tariff (>5 per cent). Nepal is landlocked and exports mainly through India. It already has a co-operation agreement covering its exports and imports from India and so may very well need to be treated specially in an EU–India FTA. The analysis in Table II 16 re-emphasises this need.

For the majority of excluded countries, the potential terms of trade shock looks muted. Many are heavily concentrated in commodities in which India has a positive but small market share (up to 10 per cent) and a positive but small tariff (up to 5 per cent). Within this class there may be cases in which the FTA implies an adverse terms of trade shock of a few per cent, but overall the problems do not look likely to be large.

Terms of trade effects in the Indian market

We now complete the same exercise for EU access to the Indian market. This entails cross-classifying excluded countries' exports to India according to the EU's share of Indian imports and India's tariff. Table II.17 counts EU tariff lines that enter the Indian market according to the identified criteria. As can be seen, when comparing this table to Table II.13, EU goods have a much higher market share in the Indian market than do Indian goods in the EU market. Furthermore, EU goods also face higher tariffs (over 90 per cent of EU tariff lines face tariffs that are above 10 per cent). Thus, in this dimension, the FTA looks likely to have much greater adverse terms of trade effects on excluded countries.[56]

Table II.17. EU access to the Indian market by market share and tariff faced (2004)

		Tariff lines				Percentage of tariff lines			
		0%	<10%	10–25%	>25%	0%	< 10%	10–25%	> 25%
Tariff differential	0%	17	37	30	42	0.33%	0.71%	0.57%	0.80%
	<5%	1	1	0	5	0.02%	0.02%	0.00%	0.10%
	5–10%	27	23	11	17	0.52%	0.44%	0.21%	0.33%
	>10%	873	1,076	789	2,275	16.71%	20.60%	15.10%	43.55%

Source: Own calculations using COMTRADE and TRAINS

The sub-tables in Table II.18 are analogous to those of Table II.16, but with excluded countries' exports to India cross-classified by the EU exports in India and India's tariff. From the tables on the left of the figure we see that the potential for a strong terms of trade effect is relatively high with respect to countries' exports to India: they all have a material share of their exports in the four 'vulnerable' cells in the bottom right and the bulk in the positive share/high tariff cell. However, the right-hand panel shows that, for most countries, since exports to India are a relatively small share of these countries' total exports, the overall effect is not very strong. This does not apply to other SAARC partners, however, which trade heavily in the Indian market. Nepal and Bhutan could suffer from

seriously adverse terms of trade effects, since more than 10 per cent of their total exports lie in the vulnerable categories. The goods concerned are apparel (HS 62) and carpets (HS 57), and toilet and kitchen linen of cotton (HS 63) and fresh fish (HS 3) respectively. Sri Lanka also has significant exposure, mainly via trade re-orientation, since the Sri Lanka-India FTA appears to have stimulated a fair amount of mutual trade – see Winters (forthcoming).

Table II.18. Excluded countries' exports to India cross classified by EU share and Indian tariffs (2004)

		Share EU				Share World			
	Tariff	India market share in EU				India market share in EU			
	differential	0%	< 10%	10–25%	> 25%	0%	< 10%	10–25%	> 25%
Afghanistan	0%	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	< 5%	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	5–10%	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	> 10%	37.24	58.30	4.19	0.27	8.50	13.31	0.96	0.06
Bangladesh	0%	0.00	0.01	0.00	0.06	0.00	0.00	0.00	0.00
	< 5%	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	5–10%	0.03	33.25	0.00	0.00	0.00	0.19	0.00	0.00
	> 10%	27.85	26.42	5.18	7.20	0.16	0.15	0.03	0.04
Bhutan	0%	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	< 5%	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	5–10%	0.17	0.21	0.00	0.00	0.15	0.19	0.00	0.00
	> 10%	18.96	69.62	3.02	8.01	17.11	62.81	2.73	7.23
Maldives	0%	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00
	< 5%	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	5–10%	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	> 10%	0.00	3.86	96.08	0.05	0.00	0.01	0.26	0.00
Nepal	0%	0.06	0.00	0.00	0.08	0.03	0.00	0.00	0.04
	< 5%	0.00	0.00	0.00	0.04	0.00	0.00	0.00	0.02
	5–10%	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	> 10%	12.01	52.71	18.56	16.53	6.02	26.40	9.30	8.28
Pakistan	0%	0.00	0.02	0.20	0.19	0.00	0.00	0.00	0.00
	< 5%	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	5–10%	0.00	0.06	0.00	0.00	0.00	0.00	0.00	0.00
	> 10%	34.05	54.73	6.18	4.57	0.26	0.43	0.05	0.04
Sri Lanka	0%	0.00	1.04	0.16	0.05	0.00	0.06	0.01	0.00
	< 5%	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00
	5–10%	0.04	0.08	0.15	0.00	0.00	0.01	0.01	0.00
	> 10%	9.68	54.20	23.69	10.91	0.59	3.32	1.45	0.67

Brazil	0%	0.00	0.16	0.05	0.10	0.00	0.00	0.00	0.00
	< 5%	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	5–10%	7.09	0.42	0.61	0.00	0.05	0.00	0.00	0.00
	> 10%	20.09	54.21	6.83	10.46	0.15	0.41	0.05	0.08
Russia	0%	0.00	0.01	0.09	0.12	0.00	0.00	0.00	0.00
	< 5%	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00
	5–10%	0.00	1.86	0.12	0.01	0.00	0.01	0.00	0.00
	> 10%	1.57	57.61	16.52	22.01	0.01	0.41	0.12	0.16
China	0%	0.00	8.82	13.94	1.72	0.00	0.07	0.11	0.01
	< 5%	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	5–10%	0.82	0.20	0.74	0.01	0.01	0.00	0.01	0.00
	> 10%	3.07	35.47	11.83	23.38	0.02	0.29	0.10	0.19
South Africa	0%	0.00	0.03	0.11	0.05	0.00	0.00	0.00	0.00
	< 5%	0.00	0.00	0.00	0.19	0.00	0.00	0.00	0.01
	5–10%	0.00	3.56	0.07	0.00	0.00	0.15	0.00	0.00
	> 10%	0.27	86.19	3.96	5.57	0.01	3.59	0.16	0.23
Caricom	0%	0.00	0.00	0.00	0.02	0.00	0.00	0.00	0.00
	< 5%	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	5–10%	0.13	8.55	0.00	0.00	0.00	0.03	0.00	0.00
	> 10%	0.00	79.27	9.80	2.24	0.00	0.28	0.03	0.01
Central Africa	0%	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	< 5%	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	5–10%	0.77	54.71	0.00	0.46	0.00	0.23	0.00	0.00
	> 10%	0.02	9.49	30.64	3.92	0.00	0.04	0.13	0.02
Eastern and	0%	0.00	1.78	0.72	0.61	0.00	0.03	0.01	0.01
Southern	< 5%	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Africa	5–10%	0.02	1.54	0.00	0.00	0.00	0.03	0.00	0.00
	> 10%	6.57	72.80	12.07	3.89	0.12	1.29	0.21	0.07
Pacific	0%	0.00	0.00	0.02	0.00	0.00	0.00	0.00	0.00
	< 5%	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	5–10%	38.05	59.72	0.00	0.00	0.90	1.42	0.00	0.00
	> 10%	0.21	0.83	1.03	0.14	0.00	0.02	0.02	0.00
SADC	0%	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00
	< 5%	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	5–10%	0.00	0.01	0.00	0.01	0.00	0.00	0.00	0.00
	> 10%	3.47	81.31	13.66	1.53	0.01	0.18	0.03	0.00
West Africa	0%	0.00	0.01	0.02	0.02	0.00	0.00	0.00	0.00
	< 5%	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	5–10%	7.10	13.62	0.02	0.06	0.11	0.21	0.00	0.00
	> 10%	1.55	66.54	9.76	1.31	0.02	1.02	0.15	0.02

SOURCE: Authors' calculations using COMTRADE and TRAINS

Trade competitiveness pressure index

To try to summarise the effects just discussed we now calculate a series of indices to represent the extent to which different excluded countries are vulnerable to FTA-induced terms of trade effects. These have not, to our knowledge, ever been used before, so in the absence of previous experience it is difficult to put an interpretation on their absolute value. They do, however, afford us a useful summary of relativities – i.e. which countries are relatively more vulnerable. The following three statistics have been calculated:

$$A_j = \sum_i x_{ji} * dt_{India.i} * shr^a_{India.i}$$

Where x_{ji} are the exports of country j of product i to the European Union; $dt_{India.i}$ is the change in the European Union tariff on i from India; $shr_{India.i}$ is the share of India in total European Union imports of product i, i.e. the market share of India in the European Union for product i; and a is a parameter summarising the sensitivity of competitive pressure to India's initial share.

$$B_j = \sum_i x_{ji} * dt_{India.i} \qquad C_j = \sum_i x_{ji}$$

B_j is the tariff liberalisation received by India weighted up by country j's exports to the EU, C_j the sum of j's exports to that market. The ratio B_j/C_j is a measure of the liberalisation induced by the FTA in the markets of interest to country j – i.e. tariff reductions matter more where commodity i accounts for a larger share of j's exports. It is similar in form to the analysis of trade diversion given above, and is included here only for information – to present the data on exactly the same basis as we are using for the main index. Our main interest is in the Index of Competitive Pressure, which is

$$ITCP_j = \frac{A_j}{B_j}$$

This expresses the possible terms of trade pressure for country j relative to the maximum that would occur if every advantage granted to India by the FTA was fully passed on to purchasers and fully matched by equal price declines by excluded countries. This is not realistic, for if India were an entirely unimportant supplier, we would expect Indian firms to keep the tariff concessions they receive as higher mark-ups rather than passing them on as lower prices. Thus, the likely effect depends on India's share of the EU's market and the parameter a captures the strength of this effect. One possible bench-mark comes from a model of imperfect competition with varieties differentiated by place of production – as is used in CGE models.

If the price index for a given commodity, k, were given by

$$P_k = \Sigma_j s_{kj} p_{kj}$$

Index j counts across varieties, each from a different country, and if India passed on the whole of its preference in terms of lower prices, the change in the price index for commodity k would be $(s_{k,\,india} * dt_{India})$. If excluded country suppliers felt obliged to match this, they would have to reduce prices by this amount; thus the competitive pressure index with a = 1 weights up their quantities over commodities. Clearly the degree of competitive response is unlikely to be this large – on the parts of both the Indian and other producers

– so in general we would expect the response to require a higher power of the share, i.e. for a > 1. This means that the weights of commodities with smaller Indian shares are reduced in the aggregate. We present below data for a = 1, 2, 3 and 4.

Table II.19. The Competitive Index for excluded countries supplying the EU market in 2004

	Parameter value	1	2	3	4
	B/C	A/B	A/B	A/B	A/B
Afghanistan	0.00048	0.18922	0.07315	0.03367	0.01634
Bangladesh	0.08861	0.05138	0.00562	0.00109	0.00035
Bhutan	0.00510	0.05298	0.00395	0.00030	0.00002
Maldives	0.17234	0.00761	0.00053	0.00006	0.00001
Nepal	0.05130	0.14971	0.05261	0.02305	0.01119
Pakistan	0.06296	0.07695	0.01767	0.00642	0.00283
Sri Lanka	0.05207	0.04387	0.00548	0.00150	0.00075
Brazil	0.02126	0.00723	0.00082	0.00021	0.00009
Russian Federation	0.00529	0.00519	0.00064	0.00017	0.00006
China	0.01998	0.02714	0.00425	0.00140	0.00066
South Africa	0.01087	0.00765	0.00107	0.00042	0.00024
Caribbean	0.07681	0.00949	0.00324	0.00140	0.00063
Central Africa	0.04915	0.00047	0.00007	0.00001	0.00000
Eastern and Southern Africa	0.05003	0.02289	0.00265	0.00055	0.00017
Pacific	0.01667	0.00160	0.00025	0.00013	0.00007
SADC (exc. South Africa)	0.01722	0.00494	0.00054	0.00010	0.00003
West Africa	0.02311	0.00160	0.00065	0.00016	0.00005

Source: Authors' calculations using COMTRADE and TRAINS

In general, we see very small values in Table II.19, although they may conceal a few cases of dramatic impact – as hinted at in the previous tables. It is difficult to know what constitutes a high number for this statistic, but the previous discussion suggests that in this particular case the terms of trade effects are likely to be small. Nonetheless, the ranking across countries is interesting. Exactly as before, it is the countries of the SAARC region that are most vulnerable, but in this case the worst hit would be Afghanistan, Nepal, and Pakistan. These formulae can be easily adjusted to consider European Union access gains in the Indian market. In Table II.20 we present the corresponding statistics.

Table II.20. The Competitive Pressure Index for excluded countries supplying India, 2004

	Parameter value	1	2	3	4
	B/C	A/B	A/B	A/B	A/B
Afghanistan	0.45	0.0071	0.0013	0.0007	0.0005
Bangladesh	0.16	0.0421	0.0151	0.0077	0.0049
Bhutan	0.20	0.0500	0.0094	0.0039	0.0023
Maldives	0.18	0.3109	0.1174	0.0500	0.0237
Nepal	0.24	0.0705	0.0202	0.0085	0.0043
Pakistan	0.30	0.0263	0.0050	0.0016	0.0007
Sri Lanka	0.24	0.0468	0.0136	0.0056	0.0029
Brazil	0.34	0.0416	0.0162	0.0076	0.0039
Russian Federation	0.16	0.1624	0.0482	0.0201	0.0102
China	0.12	0.168	0.0613	0.0284	0.0152
South Africa	0.16	0.0552	0.0163	0.0072	0.0037
Caribbean	0.12	0.2075	0.1077	0.0684	0.0498
Central Africa	0.10	0.2108	0.0828	0.0393	0.0220
East and Southern Africa	0.21	0.0953	0.0302	0.0117	0.0050
Pacific	0.14	0.2002	0.0448	0.0103	0.0025
SADC (exc South Africa)	0.28	0.0492	0.0226	0.0127	0.0080
West Africa	0.19	0.0565	0.0173	0.0062	0.0025

In this case, we see bigger potential effects than in Table II.19, which can be explained by two factors. First, the size of the absolute change in the tariff is bigger since the Indian MFN tariff is, on average, substantially higher than the tariff that India faces on the European Union market. Second, the market shares of the European Union in the Indian market are higher than the market shares of India in the EU market. The relative significance for excluded countries is also different, with the largest effects apparently falling on the Caribbean, Central Africa, the Maldives and China. For these countries, a significant degree of competitive pressure may be felt in the Indian market with the result that export earnings may be curtailed to a material degree. Part of the apparent effect, however, might be an artefact of the HS classification – such that the EU and Central Africa supply the same 6-digit headings to India, but essentially in non-competing forms. In this case, the index over-estimates the effects.

The importance of terms of trade effects has been argued by Winters (1997) and subsequent literature and proven in a couple of cases. We cannot from this exercise assert that they will be very large but they clearly are an area that requires some attention in future work. As we noted above, because price changes apply to all exports of a commodity, not just the margin that is diverted or re-oriented, they have much greater welfare leverage than the latter.

Notes

51 The data are measured in money terms, but since no attention is paid to changes in prices, changes in value equal changes in volume.

52 Indeed a very large FTA may affect the prices of tradable goods throughout the world, but we can ignore that possibility for EU–India.

53 Whether existing suppliers previously faced the same, higher or lower tariffs as the preferred supplier is, at most, a second-order issue.

54 This exercise is not directly comparable to that of the previous section as the aggregation methodology used is different. Given that this analysis is carried out at 6 digit and that the previous at 10 digits, the values reported within this section will bias downwards from those from the previous section.

55 Data for Pakistan refer to 2006, because Pakistan had deeper preferences in 2004 than currently.

56 It is important to note that 98 tariff lines at the HS 6 digit level show the EU holding a 100% market share in the Indian market. For these tariff lines the terms of trade effects will be null because no-one else exports them to India.

Part II References

Augier, P., Gasiorek, M. and Lai-Tong, C. (2008). 'Multilateralising Regionalism: Relaxing Rules of Origin', forthcoming in Baldwin, R. and Low, P., *Multilateralising Regionalism,* Oxford University Press.

Bernard, C. and McKechney (2007). 'Potential and prospects for regional energy trade in the South Asia region', Sustainable Development Department, South Asia Region, World Bank.

Brenton, P. and Manchin, M. (2003). 'Making EU Trade Agreements Work: The Role of Rules of Origin', *World Economy,* pp. 755–769.

Chang,W. and Schiff, M. (2003). 'Market presence, contestability, and the terms-of-trade effects of regional integration', *Journal of International Economics*, Vol. 60, Issue 1, pp. 161–175, May 2003.

Chang, W. and Winters, L.A. (2002). 'How Regional Blocs Affect Excluded Countries: The Price Effects of MERCOSUR', *American Economic Review*, 92, 4, 889–904.

Evans et al. (2006). 'Assessing Region Trade Agreement with Developing Countries: Shallow and Deep Integration, Trade, Productivity and Economic Performance' Report for DFID. http://www.sussex.ac.uk/Units/caris/CARIS/DFIF-RTA-REPORT.pdf

Mundell, Robert (1964). 'Tariff Preferences and the Terms of Trade', *Manchester School of Economic and Social Studies.* XXXII (1), January, 1–13.

Schiff, Maurice and Winters, L. Alan (2003). *Regional Integration and Development*, World Bank & Oxford University Press.

Winters, L.A. (1997). 'Regionalism and the Rest of the World: Theory and Estimates of

the Effects of European Integration', *Review of International Economics*, Supplement to Vol. 5, No. 4, pp. 134–147, 1997.

Winters, L. Alan (forthcoming) 'Regional Integration and Small Countries in South Asia', Chapter 10 in *Can South Asia achieve double digit Growth?* Report No. 43625 – SAS, World Bank.

Part III

Services

The services sector is extremely important for the EU and India. Both the EU and India are predominantly service economies with more than 70 per cent and 50 per cent of their respective GDPs emanating from services. Any FTA agreement between the two that excludes services would *ipso facto* exclude the most important sectors for both partners. Moreover, there are significant barriers to services trade between the two, so that substantial coverage of services *à la* GATS Article V could help to deliver improved access to both markets and more rapid liberalisation of India's services than can be accomplished unilaterally. Liberalising services offers direct benefits akin to those found in goods sectors, but in addition, recent research has suggested pervasive systemic benefits via the positive impact of services liberalisation on manufacturing productivity in both the Czech Republic and India (Arnold et al., 2006, 2007). Thus the benefits for both the EU and India from services liberalisation will almost certainly be larger benefits than those identified for goods trade liberalisation. And just as for 'regular' goods agreements, a services agreement between the EU and India is likely to have impacts on the excluded countries, and this is the subject of discussion in this chapter.