

## CHAPTER FOUR

### THE EXTENT OF TARIFF LIBERALISATION DURING THE 1990s<sup>1</sup>

#### 4.1 Introduction

Import liberalisation is often seen as a means of encouraging export production. This motivation is underpinned by two factors. One is based on the view that increased competition (in the form of increased imports) will spur an efficient allocation of resources which in turn will increase competitiveness and hence exports. The other relates to Lerner's (1936) symmetry argument, where the removal of import protection is seen to be symmetrical to an export subsidy – the gist of the argument being that access to imported inputs at world prices is an important determinant of export production. South Africa's trade policy during the 1990s was premised on the belief that trade liberalisation was essential for export production. This is borne out in a recent policy document where it is argued that, “...many of the manufacturing sub-sectors that experienced a rapid increase in their exports have benefited from substantial tariff reductions” (DTI, 2002: 15).

On the basis of South Africa's tariff liberalisation schedule submitted under the GATT, it is widely acknowledged that there has been extensive tariff liberalisation during the 1990s (Tsikata, 1999; Roberts, 2000; van Seventer, 2001). However, recently it has been argued that the tariff liberalisation undertaken during the 1990s may not have matched up to initial expectations (Fedderke and Vaze, 2001). Before one could consider the effect of tariff liberalisation on competitiveness, one needs to ascertain if this recent evidence is true since tariff liberalisation has been one of the central tenets of government's trade policy in the 1990s. Thus, the primary objective of this chapter is to document the extent of tariff liberalisation in South Africa during the 1990s in the light of the recent evidence presented by Fedderke and Vaze (2001).

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<sup>1</sup> I am grateful to an anonymous referee at the *South African Journal of Economics* for comments on a version of this chapter.

The next section provides a brief review of South Africa's policy of protection. In section 4.3 some theoretical issues relating to the effective rate of protection (ERP), which forms the basis of the analysis in this chapter, is highlighted. Section 4.4 uses ERP measures to analyse the extent of tariff liberalisation during the 1990s and some conclusions are drawn in the last section.

#### **4.2 South Africa's protection policy<sup>2</sup>**

There is consensus that South African industrialisation was founded on a policy of import substitution.<sup>3</sup> The path of the import substituting process in South Africa has been contested. McCarthy (1988), Fallon and de Silva (1994) and Joffe et al (1995) *inter alia*, have argued that South Africa followed the conventional industrialisation process - the industrialisation process began with the consumer goods industry and then moved on to "light" industry and finally the establishment of "heavy" industry. On the other hand, Fine and Rustomjee (1996) have contended that South Africa, engaged in the production of "heavy industry" before embarking on the production of consumer goods. There is, however, less debate on the instruments of trade policy used to support the industrialisation process in South Africa. Tariffs, quantitative restrictions and export incentives were the main trade incentives used to drive the industrialisation process. For Belli et al (1993), protection was granted selectively (during some periods to importers rather than on imports) and was premised on the infant industry argument (Fine and Rustomjee, 1996).

Export oriented industrialisation began to receive increasing attention in policy circles since the early 1970s.<sup>4</sup> The Reynders Commission recommended a diversification of the export base away from a reliance on gold exports. As Bell

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<sup>2</sup> Since the focus of the study is on tariff reform during the 1990s only a brief review of protection prior to this period is provided. For a more thorough review see Bell (1993, 1997); McCarthy (1999) and Strydom (1995a)

<sup>3</sup> see, McCarthy (1988); Holden (1992) ; Bell (1993); Strydom (1995) and Fine and Rustomjee (1996) for a review and analysis of South Africa's industrialisation path.

<sup>4</sup> see Bell (1993, 1996) and TIPS (2002) for a review of the protective measures during 1970 to 2000.

(1996: 71) notes, the commission did not view import liberalisation as a necessary condition for non-gold export production. In 1972, a tax allowance for export marketing expenses was one of the first direct export incentives introduced by the government. A new system of export incentives was introduced in September 1980. By the beginning of the 1990s, the official policy stance was one of export-oriented industrialisation. The General Export Incentive Scheme (GEIS) was introduced on 1 April 1990 with the objective of encouraging the production of value added exports. However, while export subsidies were used to reduce the anti-export bias in the economy, the view that the path to export production should entail trade (and more specifically tariff) liberalisation began to gain ground. This is evident in the recommendations made by an official investigation into South Africa's tariff protection policy.

*“Progress to greater export orientation, requires the responsible adjustment of the competitiveness of the existing industrial structure, which has been built up through import replacement, so as to enable it to deliver products at prices more in line with world prices. A generally accepted method of achieving this is to reduce tariffs and in addition, to follow a realistic exchange rate policy. The reduction of import tariffs is therefore an integral part of a process of progress towards export orientation” (IDC, 1990, i–ii).<sup>5</sup>*

It is further argued in the same report that:

*“the lowering of tariffs will, however, serve first and foremost to strengthen the export orientation of South Africa's trade policy” (IDC, 1990: v)*

There was thus a firm belief that the tariff protection policies (of the previous decades) created an anti-export bias and hence did not promote competitiveness and economic growth.

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<sup>5</sup> The minister of trade, industry and tourism commissioned the Industrial Development Corporation, in collaboration with the Board of Trade and Industry, to “...investigate the efficacy of the existing tariff protection policy” (IDC, 1990: i).

At the beginning of 1990, the protection system consisted of quantitative restrictions, customs duties and import surcharges. In addition, the protection policy was subject to frequent changes, biased against exports and fairly complex (Fallon and De Silva, 1994: 81).<sup>6</sup> Table 1 captures the tariff protection prevailing at the beginning of the 1990s.<sup>7</sup>

**Table 1: Nominal protection at the beginning of the 1990s**

	Weighted mean	Unweighted mean	Minimum rate	Maximum rate	Coefficient of variation
Whole economy	28	29	0	1389	159.8
Agriculture	23	16	0	147	144.9
Mining	3	3	0	20	186.6
Manufacturing	28	30	0	1389	158.4
Consumer goods	60	48	0	1389	125.5
Intermed goods	17	18	0	1320	198.9
Capital goods	19	17	0	135	103.5

Source: Fallon and De Silva (1994: 83)

The overall statutory tariff, while not too high (approximately 28 percent) by international standards, had a wide dispersion. Within the manufacturing sector, consumer goods enjoyed the highest protection.

With the election of a democratic government in 1994, the economic policy bias towards exports as a major stimulant of economic growth was further entrenched. This is clearly borne out in the Growth, Employment and Redistribution (GEAR) strategy, which has since become a cornerstone of government policy. According to GEAR;

*“...sustained growth on a higher plane requires a transformation towards a competitive outward-oriented economy” (RSA, 1996: 3).*

The challenge for economic policy was to create:

<sup>6</sup> The complexity was due to the variety of different tariff rates and exemptions granted on a firm-by-firm level rather than a product-by-product basis.

<sup>7</sup> The calculations were based on the 1989, 1990 and 1991 tariff schedules. In addition *advalorem* equivalent rates were calculated for formula duties and other specific duties.

*“...a competitive platform for a powerful expansion by the tradable goods sector”* which is taken to mean, *“...accelerated growth of non-gold exports”* (RSA, 1996: 3).

The growth employment and redistribution programme (GEAR) it is argued, is aimed at *“...strengthening the competitive capacity of the economy in the long term”* (RSA, 1996: 7).

Further, competitiveness in the tradable goods sector was to be achieved through, *“...a reduction in tariffs to contain input prices”* (RSA, 1996: 4).<sup>8</sup>

It is quite apparent from the above that government policy was premised on the assumption that exports are vital for economic growth. In addition, export production acts as a disciplining mechanism forcing domestic producers to be efficient in order to succeed on the international market. Tariff liberalisation facilitates reduced input costs improved cost competitiveness, which in turn promotes export production.

By the mid 1990s, it was clearly evident that the government was committed towards abolishing GEIS partly as a result of its incompatibility with GATT rules and partly because of a policy shift that entailed tariff liberalisation as a means of reducing the anti-export bias in the economy. The government's tariff liberalisation policy culminated in South Africa's offer to the GATT in 1994 and implemented in January 1995 (see table 2).

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<sup>8</sup> It is interesting to note that the objective of striving for international competitiveness is not meant to be isolated from social objectives. In fact one of the stated intentions of economic policy is *“...to support a competitive and more labour-intensive growth path”* (RSA, 1996: 7).

**Table 2: South Africa's tariff phase-down under the WTO**

ISIC		1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
3	Textiles	30.1	33.8	31.8	24.9	23.4	21.9	20.3	18.7	17.3	17.3	17.3
4	Clothing,	73.7	73.6	68.2	54.6	50.5	46.4	42.4	37.7	33.2	33.2	33.2
5	Leather And leather products	14.9	14.8	14.1	16.5	15.7	14.8	14.8	14.8	14.8	14.8	14.8
6	Footwear	37.5	41.6	39.1	36.8	34.2	29.1	29.1	29.1	29.1	29.1	29.1
7	Wood and wood products	13.9	3.6	3.4	3.5	3.3	3.1	3.1	3.1	3.1	3.1	3.1
8	Paper And paper product	9.6	9.3	9.1	8.8	8.7	8.5	7.9	7.3	6.8	6.2	5.6
9	Printing And publishing	8.1	1.3	1.2	1.1	1.0	1.0	1.0	1.0	1.0	1.0	1.0
10	Petroleum & petroleum products	1.6	-	-	-	-	-	-	-	-	-	-
11	Industrial chemicals	9.3	7.5	7.5	1.7	1.7	1.6	1.6	1.6	1.6	1.6	1.6
12	Other Chemical products	9.0	3.8	3.7	2.7	2.6	2.5	2.5	2.5	2.5	2.5	2.5
13	Rubber products	30.5	14.5	14.1	15.8	15.4	14.9	14.6	14.4	14.0	14.0	14.0
14	Plastic products	19.8	14.7	13.7	13.2	12.6	12.0	12.0	12.0	12.0	12.0	12.0
15	Glass and glass products	11.8	9.5	9.0	8.3	7.9	7.6	7.6	7.6	7.6	7.6	7.6
16	Non-metallic Mineral products	10.6	8.7	8.1	8.4	8.0	7.7	7.7	7.7	7.7	7.7	7.7
17	Basic iron and steel products	7.6	4.4	4.2	4.2	4.1	3.9	3.9	3.9	3.9	3.9	3.9
18	Non-ferrous Metal products	2.3	2.3	2.3	2.3	2.2	2.0	2.0	2.0	1.9	1.7	1.7
19	Metal products, excl mach	13.1	8.2	7.8	7.8	7.6	7.4	7.4	7.4	7.4	7.4	7.4
20	Non-electrical Machinery	6.5	1.4	1.3	1.4	1.3	1.3	1.3	1.3	1.3	1.3	1.3
21	Electrical machinery	11.0	6.1	6.0	5.8	5.8	5.7	5.7	5.7	5.7	5.7	5.7
22	Radio, Television & comm	12.1	5.1	3.7	2.4	2.3	2.3	2.3	2.3	2.3	2.3	2.3
23	Professional Equipment	7.2	0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
24	Motor vehicles, parts and accessories	55.4	33.5	31.7	29.3	27.9	26.1	24.8	23.2	22.1	22.1	22.1
25	Other Transport equipment	1.4	0.4	0.4	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2
26	Furniture	28.1	21.4	20.8	20.2	19.6	18.9	18.9	18.9	18.9	18.9	18.9
27	Other manufacturing	2.9	1.0	1.0	5.2	5.1	5.0	4.9	4.9	4.9	4.9	4.9
82	Mining	2.7	0.6	0.6	0.5	0.4	0.4	0.4	0.4	0.4	0.4	0.4
Total		11.7	7.2	6.8	6.1	5.8	5.5	5.3	5.1	4.9	4.9	4.9

Source: Trade and Industrial Policy Strategies (TIPS). 2002. *The state of trade policy in South Africa*. Johannesburg, TIPS.

In terms of the GATT offer, South Africa agreed to bind 98 percent of all tariff lines and to cut tariffs by a third (Holden, 2001b). The offer to GATT clearly displayed a commitment to opening up the economy to foreign competition (TIPS, 2002).<sup>9</sup> In terms of the offer, industrial protection was to be reduced by more than half, from an average tariff of around 12 percent in 1994, to approximately 5 percent in 2001. The average import weighted tariff rates were to be reduced to lower rates even though it was well within the WTO bound rates - from 34 percent to 17 percent for consumption goods, 8 percent to 4 percent for intermediate goods and 11 percent to 5 percent for capital goods (TIPS, 2002: 11).<sup>10</sup>

South Africa's commitment to its liberalisation offer, is borne out by an analysis of the applied rates over the latter half of the 1990s. The average import weighted tariffs have been significantly reduced since the GATT offer. For agricultural products, the rate has been reduced from 9.23 percent (1996) to 1.4 percent (2000), while for industrial products it has been reduced from 11.4 (1996) percent to 8.6 percent (2000) (TIPS, 2002: 14). The average for the economy as a whole has seen applied rates come down from 11.3 percent in 1996 to 7.3 percent in 2000.

The extent of trade liberalisation during the 1990s is further illustrated by table 3. From Table 3 it is evident that import surcharges and export subsidies were abolished by 1998. Further, quantitative restrictions on agricultural and manufacturing imports were virtually eliminated by the end of the decade. In addition, the tariff schedule was rationalised to 7814 tariff lines in 1998, as compared to over 13000 in 1990.

The logical question that arises when one considers the tariff structure of any country, is how it compares with those of other countries. In tables 4 and 5, the tariff rate and non tariff barrier (NTB) coverage ratio imposed by a country

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<sup>9</sup> This section is mainly based on information gleaned from TIPS (2002).

<sup>10</sup> The bound rates are 26 percent, 4 percent and 15 percent for consumption, intermediate and capital goods respectively.

**Table 3: South Africa: Protection 1990 and 1998 (In percent, unless otherwise indicated)**

Tariffs	1990	1998
<b>Manufacturing</b>		
Maximum tariff	1389	72
Average import-weighted tariff	28	10
Average unweighted tariff	30	14
Number of tariff bands	>200	72
Standard deviation	43	15
Number of tariff lines <sup>1</sup>	>13000	7814
Percent of tariff lines with non ad valorem duties <sup>1</sup>	28	26
Range of effective protection <sup>2</sup>	189 to –411	204 to –2
Average import-weighted surcharge <sup>3</sup>	6	0
Import surcharge bands	10, 15, and 40	eliminated
<b>Agriculture</b>		
Average tariff	25	2.2
Average import surcharge	8	0
Export subsidy <sup>4</sup>	17	eliminated
<b>Export taxes</b>		
Diamonds	15	15
<b>Quantitative restrictions on imports<sup>5</sup> of which:</b>	15	virtually eliminated
Agriculture	74	virtually eliminated
Manufacturing	14	virtually eliminated
<b>Quantitative restrictions on exports; goods<sup>3</sup></b>	diamonds	Diamonds
	21 agric comm.	
<b>Memorandum items:</b>		
Trade tax revenue as share of total revenue	7.9	4.0
Import taxes as share of imports	10.8	4.1
Export subsidies as a share of GDP	0.3	0.0

1/ The figure for 1998 refers to June 1997.

2/ At ISIC three-digit level; excludes import surcharge.

3/ The figure for 1990 refers to 1992.

4/ Actual subsidy disbursements were 2.7 percent of exports in 1990/91.

5/ The figure for 1990 refers to 1992. As percent of total tariff lines (other than those maintained for health, security, and environmental reasons).

Source: IMF. 2000. South Africa: Selected issues. *IMF staff country report no. 00/42*. Washington, DC.: IMF.

on its imports is considered, as well as, the tariff rates and NTB coverage ratio imposed on a country's exports by her trading partners. These rates prevailed in 1994 and as such reflects the scenario prevailing before South Africa embarked on it's tariff liberalisation programme under the WTO offer.<sup>11</sup>

<sup>11</sup> Given the implementation of the WTO offer since 1995, the situation for SA would have improved quite drastically compared to the statistics reflected in table 4.3.



**Table 4: Trade Protection Imposed by Each Importing Country in 1994**

Country	Tariff		NTB's	
	AVE (%)	COV	AVE (%)	COV
Bangladesh	45,10	0,09	2,87	2,86
Algeria	21,85	0,84	15,60	1,99
Tunisia	21,72	0,57	6,84	2,66
India	19,09	0,72	10,58	1,23
Philippines	18,72	0,63	0,00	0,00
Kenya	18,65	0,89	0,00	0,00
Egypt	16,59	0,86	0,00	0,00
Jamaica	14,19	1,01	28,30	1,02
Mauritius	13,25	1,01	0,00	0,00
Sri Lanka	12,63	0,87	0,02	4,66
Poland	12,61	0,53	0,00	0,00
Madagascar	12,33	0,85	0,00	0,00
Hungary	12,09	1,13	0,00	0,00
China	12,00	0,81	2,21	2,49
Cameroon	11,50	0,79	0,00	0,00
Cote d'Ivoire	11,32	0,87	0,00	0,00
Mexico	11,26	0,67	17,11	1,39
Peru	11,16	0,53	5,88	2,88
Argentina	10,51	0,57	5,49	1,89
Congo	10,48	1,12	0,00	0,00
Ecuador	10,11	0,73	0,00	0,00
Venezuela	10,09	0,61	11,79	1,87
Gabon	9,79	0,60	0,00	0,00
Malawi	9,78	1,26	0,00	0,00
Nicaragua	9,52	0,95	4,45	4,36
Bolivia	9,40	0,97	0,00	0,00
Thailand	9,14	0,64	17,22	1,70
Chile	9,01	0,43	3,47	3,96
Costa Rica	8,87	1,20	0,00	0,00
Brazil	8,72	1,08	11,73	1,63
Dominican Republic	8,42	1,12	0,00	0,00
Central African Republic	8,31	1,23	0,27	6,52
Chad	8,25	1,30	0,00	0,00
Trinidad & Tobago	8,15	0,82	0,00	0,00
Uruguay	7,90	0,78	2,01	2,53
Saudi Arabia	7,71	0,72	0,04	6,50
Korea, Republic of	7,48	0,69	0,16	4,07
Guatemala	7,21	0,79	0,00	0,00
Turkey	7,13	1,00	0,62	2,08
Honduras	6,77	0,85	0,00	0,00
Morocco	6,19	1,59	2,56	2,48
Indonesia	6,04	0,73	0,00	0,00
South Africa	5,81	0,78	0,00	0,00
Paraguay	5,74	1,00	0,00	0,00
El Salvador	5,67	1,08	13,21	1,35
Colombia	5,23	1,08	0,00	0,00
Malaysia	5,19	1,36	5,46	2,58

**Table 4: Trade Protection Imposed by Each Importing Country in 1994 (continued)**

Canada	5,16	0,93	13,16	1,56
Czechoslovakia	4,79	0,63	0,36	5,72
United States	4,67	1,36	19,76	1,01
European Union	4,45	0,60	22,16	1,07
Norway	3,87	1,19	6,55	2,04
Iceland	3,79	1,33	0,71	3,76
New Zealand	3,62	0,91	0,89	4,85
Australia	3,53	0,77	0,90	3,15
Oman	3,43	1,43	2,85	2,62
Israel	3,28	1,27	0,00	0,00
Japan	2,81	0,71	2,71	1,42
Singapore	0,00	0,00	3,16	3,83
Switzerland	0,00	0,00	0,00	0,00
Hong Kong	0,00	0,00	0,00	0,00

Source: WANG, Q. 2001. Import-reducing effect of trade barriers: A cross-country investigation. *IMF working paper no. WP/01/216*. Washington: IMF.

**Table 5: Trade Protection faced by each exporting Country in 1994**

Country	Tariff		NTB's	
	AVE (%)	COV	AVE(%)	COV
Mauritius	10,67	1,49	9,11	2,45
China	10,31	1,21	3,17	3,75
Madagascar	10,20	1,68	1,65	3,78
Bolivia	10,10	1,47	6,57	3,12
Ecuador	9,88	1,35	6,59	3,13
Hungary	9,84	1,38	6,71	2,11
Sri Lanka	9,71	1,45	5,24	2,85
Morocco	9,69	1,52	4,54	2,17
Guatemala	9,40	1,70	7,23	3,03
Iceland	9,22	1,50	1,02	3,71
Hong Kong	9,19	1,56	5,52	1,93
Cameroon	9,10	1,74	4,78	4,06
Argentina	9,03	1,45	6,53	2,45
New Zealand	8,70	1,39	5,91	2,92
Turkey	8,66	1,62	5,52	2,24
Colombia	8,56	1,29	4,96	3,75
Trinidad & Tobago	8,48	1,71	2,94	3,87
Korea RP	8,46	1,60	5,23	1,85
Singapore	8,41	1,62	3,19	2,04
Czechoslovakia	8,31	1,25	3,05	2,32
Oman	8,21	1,29	2,67	2,83
Jamaica	8,18	1,53	3,94	1,93
South Africa	8,16	1,56	2,44	2,41
Bangladesh	8,14	1,25	8,24	2,69
Chile	8,14	1,29	3,05	4,27
Egypt	8,02	1,37	5,70	2,51
Japan	7,96	1,54	4,10	2,29
Malawi	7,93	1,50	0,97	4,96
Uruguay	7,90	1,45	5,70	2,92
Tunisia	7,86	1,26	5,31	2,86
Malawi	7,60	1,59	3,81	2,49
Peru	7,57	1,40	2,69	2,69

**Table 5: Trade Protection faced by each exporting Country in 1994 (continued)**

Thailand	7,27	1,64	4,07	2,46
Gabon	7,25	1,34	5,22	2,56
El Salvador	7,13	1,36	9,59	2,58
Mexico	7,06	1,30	2,86	2,97
Australia	7,06	1,54	2,45	2,57
Cote d'Ivoire	6,94	1,47	1,35	4,80
Poland	6,93	1,52	2,93	2,68
Philippines	6,84	1,60	5,65	2,62
Canada	6,79	1,53	3,84	2,90
Brazil	6,78	1,34	2,33	2,46
Switzerland	6,71	1,69	2,08	3,18
European Union	6,69	1,60	4,15	1,91
Venezuela	6,68	1,37	3,97	4,23
Nicaragua	6,52	1,27	2,44	4,33
Honduras	6,50	1,36	3,63	4,03
Norway	6,41	1,68	2,12	2,51
Kenya	6,39	1,54	3,77	3,83
Israel	6,30	1,82	3,74	3,00
United States	6,08	1,46	2,78	2,34
India	5,79	1,22	5,20	2,30
Dominican Republic	5,69	1,35	3,13	3,38
Paraguay	5,37	1,28	4,59	3,28
Saudi Arabia	5,24	1,22	2,42	5,37
Algeria	5,04	1,84	2,21	5,93
Indonesia	5,01	1,27	3,94	3,66
Chad	3,95	1,82	1,10	7,24
Congo	3,72	1,70	0,23	7,65
Central African Republic	3,69	2,34	0,53	5,31
Costa Rica	3,38	1,42	4,11	4,43

Source: WANG, Q. 2001. Import-reducing effect of trade barriers: A cross-country investigation. *IMF working paper no. WP/01/216*. Washington: IMF.

From table 4, it is apparent that South Africa features towards the bottom of the list when it comes to the tariff rates imposed on total imports. The average rate of 5.81 percent in 1994 was just above that of more industrialised countries like the European Union (4.45 percent) and United States (4.79 percent). South Africa makes little use of NTBs – unlike the other (mainly developed) countries which make wide use of NTBs as a protective device. In fact, Wang (2001) finds that, in general countries of lower per capita income impose higher tariffs, while countries of higher per capita income tend to make greater use of NTBs as a protective device.<sup>12</sup> It is also interesting to note that

<sup>12</sup> According to Wang (2001) this could be due to NTBs being more costly to impose in terms of the institutional requirements while tariff barriers are more attractive to developing countries for revenue generating purposes.

South Africa's tariff structure, while quite discriminatory, is not out of line with those of other countries.<sup>13</sup>

As far as exports are concerned, South African exports faced an average 8.16 percent tariff. South Africa was in the top half of the list, indicating that South African products faced higher trade barriers than many of the other countries on the list. Many of the more industrialised countries on the list enjoyed more favourable market access than South Africa.<sup>14</sup>

It is evident that South Africa's overall tariff structure is not overly protective in comparison to other countries. On the other hand, South Africa's exports face higher levels of discrimination in export markets. This suggests that bilateral agreements (e.g recent free trade agreements with the EU and Southern African Development Community (SADC) and others proposed with Mercursor and the US) seeking improved market access for South African products is a step in the right direction.

In summary, the statistics confirm that at least in terms of a reduction in nominal tariff rates on output, South Africa has made significant strides down the tariff liberalisation path. However, the question is whether this is still the case, if one considers the combined effects on both inputs and outputs. The remainder of this chapter considers this issue more explicitly.

### **4.3 Analysis of effective protection**

Corden (1966, 1969, 1971a, 1971b) is credited with having formalised the theory of effective protection. However, as Greenaway and Milner (2002: 2) note, economists like Taussig, Haberler and Meade, decades earlier signalled the importance of considering tariffs on inputs when analysing protection. The appeal of the ERP measure lies in the fact that it takes into account tariffs imposed on the final product, as well as, on the intermediate inputs used in the production of that product. In other words, the ERP indicates the total

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<sup>13</sup> The country's regime is deemed more discriminatory, the larger its covariance.

<sup>14</sup> These countries include EU (6.69 percent) and United States (6.30 percent) which is largely due to the influence these countries have in WTO negotiations.

effect on domestic production (value added) of an existing tariff structure (Carbaugh, 2000: 116-117).

With perfect competition, protection (on output and inputs used in the production process) will result in domestic value added diverging from the level prevailing under free trade. The standard measure of the ERP is given by:<sup>15</sup>

$$ERP = \frac{V_t - V_{ft}}{V_{ft}} \dots\dots\dots(2)$$

Where value added under protection is given by  $V_t$  and value added under free trade by  $V_{ft}$ . Considering a linear relationship between inputs and outputs with  $a_{ij}$  the input-output coefficient for the  $i^{th}$  input used in the production of the  $j^{th}$  output. Considering the nominal tariff level on  $j$  ( $t_j$ ), nominal tariff on input  $i$  ( $t_i$ ) and the share of inputs  $i$  in the costs of  $j$  without tariffs ( $\sum_i a_{ij}$ ) the ERP measure is given by:

$$ERP = \frac{t_j - \sum_i a_{ij} t_i}{1 - \sum_i a_{ij}} \dots\dots\dots (3)$$

Equation 3 is a common measure used in ERP calculations. It highlights two important points. Firstly, the overall tariff structure has a tax and subsidy element with the tariff on the output (input) being equivalent to a subsidy (tax) (Greenaway and Milner, 2002). Secondly, effective protection can be negative, that is, an activity can be worse off due to protection on inputs exceeding that on the final product.

The theoretical shortcomings of the ERP concept have been well documented (Jones, 1971; Ethier, 1971, 1977; Bhagwati and Srinivasan, 1973).<sup>16</sup> More

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<sup>15</sup> See Greenaway (1983) for an elegant review of the concept and an exposition of how it can be measured. Holden (1999) provides a good review of the development of the theory.

<sup>16</sup> Some of these shortcomings include the imperfect substitutability between imported and local products, the treatment of non-tradable inputs in the measurement of the ERP, measurement of tariff equivalents of non tariff barriers and the allocation of intermediate inputs to multiple outputs.

recently Anderson (1998) has also challenged the usefulness of ERP calculations as a measure of protection.<sup>17</sup> In the light of these criticisms it is important to consider the relevance or validity of ERP analysis. In this regard it has been argued that "*...even though the theoretical validity of ERP as an indicator of resource pull is somewhat less than was initially asserted or hoped for, it continues to be a nice way to summarise the information on the protection structure resulting from tariffs on inputs and outputs ... if ERPs are used with some care ... even their analytical use can be somewhat suggestive*" (Bhagwati and Srinivasan, 1973: 131, quoted in Greenaway and Milner, 2002: 16).

Thus, ERP measures can help in "*identifying the probabilities or effects on average that may be expected from reforms ... with production falls likely to happen on average in the sectors experiencing declines in effective protection*" (Greenaway and Milner, 2002: 12). Given the theoretical shortcomings, the ERP calculations may not necessarily provide the best measure of the likely pull on resources, but in the light of data constraints it may still provide the best description of the overall structure of *tariff* protection.<sup>18</sup> Changes in the ERP may therefore provide a useful indicator of the extent of *tariff liberalisation*.

There are two ways of interpreting the extent of tariff liberalisation from ERP calculations. The first is to consider the difference in ERP measures between two periods; large reductions in the measures will show that the particular sector in question has been subjected to extensive tariff liberalisation.<sup>19</sup> An alternative is to consider the relative importance of the sectors being subjected to tariff liberalisation. Summing the contributions to GDP of all those sectors that have been liberalised (or subjected to increased tariff protection) between any two periods would indicate whether the major part of a country's

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<sup>17</sup> Holden (2001a) has found that for the South African economy there was not a robust relationship between trade policy changes (as depicted by ERP rates) and resource allocation during the 1990s.

<sup>18</sup> Since tariff rates are the only protection measures used in the calculations, the ERP in essence measures tariff protection. ERP measures also provide insights into the phenomenon of tariff escalation.

output has been liberalised or subject to increased protection. This is the approach undertaken in the study by Fedderke and Vaze (2001) and is also the one used in this study.

#### **4.4 Trade (tariff) liberalisation and the ERP: the case of South Africa during the 1990s**

Effective protection captures the net protection accorded to an industry by taking into account the protection imposed on both output and intermediate inputs used in the production process. Various studies have used ERP analysis to appraise South Africa's protection policy during the 1990s (IDC, 1996a, 1996b; Fedderke and Vaze, 2001; TIPS, 2002). Recently, Fedderke and Vaze (2001) - hereafter referred to as the FV study - have explicitly questioned the extent of tariff liberalisation in the 1990s.<sup>20</sup> The study claims that *"more of South Africa's output is protected by tariffs in 1998 than in 1988"* and hence concludes that: *"...the much-hyped liberalisation of the South African economy in the 1990's has not been fully realised"* (Fedderke and Vaze, 2001: 447). Using a similar methodology, this chapter will appraise this result of the FV study.

The FV study analyses the protection accorded to 38 economic sectors. Average EPRs (based on tariff duties collected) were calculated for the period 1988-93 and 1994-98. Sectors were classified as more protected (P) if the EPR increased by more than 1 percent, liberalised (L) if it decreased by more than 1 percent and moderately protected (M) otherwise. In terms of these criteria, 8 sectors were classified as more protected, 16 as moderately protected and 14 as liberalised. The FV study claims that the 8 protected sectors accounted for more than 50 percent of the GDP in 1998.

A defining characteristic of this study relates to the use of collected customs duties to estimate the tariff rates rather than the use of statutory tariff rates in

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<sup>19</sup> There is however an element of subjectivity involved in deciding the benchmarks for what could be considered large or extensive tariff liberalisation.

<sup>20</sup> The study also establishes a positive relationship between tariff liberalisation and export production. The results pertaining to this aspect are not analysed in this paper.

the calculations of ERPs. There are a couple of points that can be made in this regard. The first relates to high or prohibitive tariff rates not being reflected in the customs revenues collected. Secondly, it is important to recognise that in the case of South Africa, imports are recorded when they land in the country while import duties are only paid when goods leave the warehouses at the port. Thus, it is possible that in some cases, importers only pay the customs duties after the year in which the imports were reflected in customs records. In these cases, tariff calculations based on revenue collections will understate the "actual" tariff rates applicable to the products. It is unclear to what extent this issue has been addressed in the FV study.<sup>21</sup>

Table 6 captures the ERP calculations for the different sectors of the South African economy. The 38 sectors considered in the FV study are reflected in rows 1 to 38, while rows 39 to 46 reflect the sectors that are omitted in this study.<sup>22</sup> In addition, the contributions to value added are captured for all the sectors for the years 1988, 1998 and 2001 under columns 2 to 4. The ERP calculations (averages for period 1988-93 and 1994-98) are reflected in columns 5 and 6. Some derivations from the ERP calculations and trade policy classifications are depicted in columns 7 to 10.

Since the FV study considers only 38 sectors, it is important to ascertain the relative importance of these sectors in the economy. The 38 sectors considered in the FV study made up 72 percent (62 percent) of total GDP in

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<sup>21</sup> This is not to state that statutory rates are superior. In fact, the issue of whether statutory rates (rather than collected rates) are more appropriate is debatable. Statutory rates, for example, do not reflect rebates and does not capture the effects of smuggling.

<sup>22</sup> These are mainly non-tradable sectors.



**Table 6: Extent of Trade liberalisation in South Africa (ERP calculation based on collected tariff revenues)**

	Sector	Contribution to value added Rm			Average ERP for 1988-93	Average ERP for 1994-98	Change in EPR (FV class) <sup>1</sup>	% change in EPR <sup>2</sup>	Liberalisation stance (FV class)	Liberalisation (% change in EPR)
		1988	1998	2001						
	[1]	[2]	[3]	[4]	[5]	[6]	[7]=[6]-[5]	[8]=[7]/[5]*100	[9]	[10]
1	Paper and Paper products	1655	5571	7462	1.145	0.616	-0.529	-46	L	L
2	Glass and glass products	351	1020	1313	0.987	0.564	-0.423	-43	L	L
3	TV radio and equipment	884	2337	3050	0.115	0.046	-0.069	-60	L	L
4	Plastic products	1062	4146	6953	0.187	0.118	-0.069	-37	L	L
5	Footwear	462	719	578	0.300	0.244	-0.056	-19	L	L
6	Furniture	1105	3011	3196	0.092	0.038	-0.054	-59	L	L
7	Basic Iron and Steel	3094	9590	10612	0.210	0.164	-0.046	-22	L	L
8	Motor vehicles Parts	3074	8387	12670	0.063	0.032	-0.031	-49	L	L
9	Wearing apparel	1315	4305	4508	0.115	0.084	-0.031	-27	L	L
10	Other manufactures	1351	6267	6419	0.045	0.014	-0.031	-69	L	L
11	Basic Chemicals	1809	6384	8186	0.058	0.028	-0.030	-52	L	L
12	Basic non ferrous metals	1268	4740	6374	0.063	0.044	-0.019	-31	L	L
13	Professional and scientific prod	289	508	679	0.098	0.084	-0.014	-15	L	L
14	Electrical machinery	3210	6754	8768	0.042	0.030	-0.012	-28	L	L
15	Electrical, Gas and Steam	7081	19249	20658	0.070	0.062	-0.008	-11	L	L
16	Other transport	832	1034	1440	0.008	0.002	-0.006	-76	L	L
17	Rubber	602	1356	1930	0.170	0.164	-0.006	-4	L	M
18	Chemicals & Man made fibres	2525	10269	13975	0.040	0.034	-0.006	-15	L	L
19	Wood and wood production	765	2831	3337	0.018	0.014	-0.004	-24	L	L
20	Building Construction	4836	14126	15947	-0.007	-0.008	-0.001	20	M	P
21	Non metallic minerals	1510	3775	4660	0.008	0.008	0.000	-4	M	M
22	Med, dental, health and veterinary	1781	12027	16180	0.000	0.000	0.000	0	M	M
23	Metal prod excluding machinery	3031	8124	10028	0.010	0.010	0.000	0	M	M
24	Coal Mining	3287	9532	13797	-0.010	-0.010	0.000	0	M	M

**Table 6 (continued)**

25	Transport and Storage	14625	43850	53283	0.000	0.000	0.000	0	M	M
26	Wholesale and Retail Trade	22910	83206	108684	0.000	0.000	0.000	0	M	M
27	Coke and refinery petrol	2471	5531	6631	-0.013	-0.012	0.001	-10	M	L
28	Machinery & Equipment	2479	6311	7875	-0.002	0.000	0.002	-100	M	L
29	Beverages	1912	7611	9684	0.008	0.012	0.004	44	M	P
30	Printing, publishing and recording	1277	4372	6191	0.130	0.134	0.004	3	M	M
31	Other Mining	5229	17846	35019	-0.062	-0.054	0.008	-12	P	L
32	Finance and Insurance	12080	51943	79988	-0.195	-0.184	0.011	-6	P	M
33	Leather	167	284	605	0.207	0.218	0.011	5	P	M
34	Gold and Uranium Mining	13348	17410	19752	0.000	0.012	0.012	**	P	M
35	Agriculture, Forestry and Fishing	11197	24700	27730	0.052	0.064	0.012	24	P	P
36	Food	4642	13802	16472	0.027	0.064	0.037	140	P	P
37	Textiles	1652	3317	3555	0.093	0.136	0.043	46	P	P
38	Tobacco	292	951	1117	0.035	0.124	0.089	254	P	P
39	Water supply	1064	3628	3598						
40	Excluding medical, dental and veterinary services	1682	7929	10107						
41	Catering and accomod services	2190	7913	8407						
42	Civil engineering and other constr	2869	9660	11479						
43	Communication	3788	21488	37429						
44	Other producers	6317	20519	27200						
45	Business services	13969	74553	106254						
46	General government services	25571	120342	145270						
47	Contr to GDP of 38 sectors:	L							23;23;22	30;30;30
48	(FV study)	M							43;46;45	53;55;56
49		P							34;30;33	17;15;13
50	Contribution to total GDP:	L							16;14;13	21;18;19
51		M							30;29;28	38;34;34
52		P							25;19;20	12;9;8

Notes 1.Change in the average ERP for the period 1988-93 and 1994-98.

2.Percentage change in the average EPR between the period 1988-93 and 1994-98

Source: Own calculations with data from Fedderke and Vaze (2001); Trade and Industrial Policy Strategies Database.

1988 (1998).<sup>23</sup> The first point to bear in mind is that the relative importance of the 38 sectors has decreased over the period. Thus, the conclusions in the FV study are based on an analysis of only around two-thirds of the South African economy. The question therefore is whether the results of the FV study still hold if the analysis (calculations) is (are) done with reference to the whole economy?

As pointed out above, FV classify the sectors on the basis of the change in the average ERP between the two periods (1988-93 and 1994-98). The calculations and classifications are reflected in columns 7 and 9 respectively. As per the FV study, column 9 depicts the 14 sectors that were liberalised (L), 16 sectors that were moderately (M) protected and 8 sectors that enjoyed increased levels of protection (P) between the two periods. The relative importance of the sectors to the GDP of the 38 sectors considered in the FV study and the overall economy are reflected under column 9 (rows 47 to 52).<sup>24</sup> As an illustration consider column 9, row 47. The 14 liberalised sectors made up 23 percent (in 1988 and 1998) and 22 percent (in 2001) of the GDP of the 38 sectors considered in the FV study. This contribution is higher than that recorded in the FV study.<sup>25</sup> However, in terms of the overall significance of the tariff liberalisation, column 9 (row 50), indicates that these 14 sectors' contribution to the total GDP of South Africa decreased from 16 percent (1988) to 14 percent (13 percent) in 1998 (2001). Similarly, the 16 moderately protected sectors' contribution to the GDP of the 38 sectors increased from 43 percent (1988) to 46 (1998) to 45 percent (2001) while the contribution to the overall economy decreased from 30 percent (1988) to 29 percent (1998) to 28 percent (2001).<sup>26</sup> The sectors enjoying more protection decreased their contribution to the GDP of 38 sectors from 34 percent in 1988 to 30 percent in 1998 before increasing to 33 percent in 2001. These sectors' contribution to

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<sup>23</sup> These calculations are captured in rows 50 to 52; an explanation on how to interpret these representations is provided later on in this section. By 2001 these sectors made up 61 percent.

<sup>24</sup> The relative importance is for the years 1988, 1998 and 2001.

<sup>25</sup> The FV study records that the liberalised sectors account for just over 15 percent of the total GDP from the 38 sectors.

<sup>27</sup> Classified as M in the table.

the economy decreased from 25 percent in 1988 to 19 percent (20 percent) in 1998 (2001). These results refute the claim made in the FV study that: *"...more of South Africa's output is protected by tariffs in 1998 than in 1988"* (Fedderke and Vaze, 2001: 447). By 2001, liberalised (protected) sectors accounted for 13 percent (20 percent) of total GDP in 2001. Whereas the percentage of output enjoying tariff protection was higher than that subject to tariff liberalisation, the protected sectors did not make up the major proportion of the country's GDP.

An important factor influencing the results and conclusions reached in the FV study relate to the classification of the extent of liberalisation. The calculations as undertaken by FV for the classification of the sectors as liberalised (L), moderately protected (M) or protected (P) do not capture the relative significance of the change in the ERP. From table 4 for example, the 0.6 percent reduction in the ERP between the two periods represents a 4 percent and 76 percent decrease in the ERP for the rubber (row 17) and other transport sectors (row 16) respectively. Column 8 captures the percentage change in the ERP measures between the two periods (1988-93 and 1994-98).<sup>27</sup> All sectors that experienced a reduction (increase) of at least 10 percent in their ERP measures are classified as liberalised (protected) and moderately protected otherwise (classification reflected under column 10).<sup>28</sup> In terms of this classification, 21 sectors are classified as liberalised, 11 sectors as moderately protected and 6 sectors as protected. In terms of the contribution to total value added, the protected sectors made up 12 percent of total GDP in 1988 as compared to 9 percent (8 percent) in 1998 (2001).<sup>29</sup> Stated differently, it is apparent that *less* of South Africa's output enjoyed tariff protection in 2001 (or even in 1998) than in 1988.

In terms of both the classifications used, it is apparent that the protected (liberalised) sectors made up approximately 8-20 percent (between 13-19 percent) of total GDP in 2001 as compared to between 12-25 percent (16-21

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<sup>27</sup> This captures the relative rather than the absolute change in the ERP.

<sup>28</sup> It is acknowledged that the 10 percent dividing line is arbitrary and as such is only suggestive.

<sup>29</sup> See row 52, column 10 in table 4.

percent) in 1988.<sup>30</sup> Thus, contrary to what is claimed in the FV study, it is apparent that more of South Africa's output was *not* protected by tariffs in 1998 (or even in 2001) as compared to 1988.

However, it should be remembered that the tariff calculations used thus far were based on collected rather than on statutory rates. Thus, the question is whether the situation changes when one considers statutory rates? In order to ascertain if this is indeed the case, ERP calculations based on statutory rates as undertaken by the IDC (1996a) are considered. Table 7 reflects these ERP calculations for 1993 and 1999.

The objective is to ascertain if the analysis portrayed above is corroborated by these calculations. Due to data constraints we are not able to undertake a comparison across all the sectors included in the IDC study.<sup>31</sup> However, there are sufficient data points to provide at least an indication of the extent of trade liberalisation. Table 7 (columns 10 and 11) also reflects the same two classifications used above to capture the trade policy stance during 1993 and 1999. Considering the relative percentage change in ERP between 1993 and 1999, the liberalised (protected) sectors contribution to the sales of the 51 manufacturing industries, decreased from 67 percent (11 percent) in 1993 to

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<sup>30</sup> In 1998 protected (liberalised) sectors contributed between 9 and 19 percent (14 and 18 percent) to total GDP.

<sup>31</sup> The main constraints relate to the industry classifications used in the IDC study. The industry classification in the IDC study is at the SIC version 3 level while sectoral data is currently available only at SIC version 5 level. A link provided by the TIPS was used to link 51 SIC version 3 manufacturing sectors (of the 71 sectors considered in the IDC studies) with their corresponding sales data. Hence the point to bear in mind is that while all the sectors of the economy are not considered, the results are nevertheless indicative of the extent of liberalisation undertaken during the 1990s. Sales data was used as a proxy for contribution to GDP due to the unavailability of GDP data on an SIC (version 5) 4 digit level.

**Table 7 : Extent of trade liberalisation (ERP calculations based on statutory rates)**

			Contribution to total sales								
	sic v3		1990	1993	1999	ERP 1993	ERP 1999	Absolute ERP change in 93-99	% change in ERP 93-99	Liberalisation stance (absolute change in ERP)	Liberalisation stance (% change in ERP)
	[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]=8/6*100	[10]	[11]
1	3116	Grain mill products	5004	7198	9847	0.03	-0.11	-0.14	-467	L	L
2	3114	Canning Preserving & Processing of fish	794	1266	1533	0.12	-0.05	-0.17	-142	L	L
3	3133	Malt Liquors & Malt	4235	5261	8967	0.16	-0.04	-0.2	-125	L	L
4	3522	Medical & Pharmaceutical preparations	2796	3436	5781	0.13	-0.03	-0.16	-123	L	L
5	3420	Printing & Publishing	5107	7063	11665	0.11	-0.02	-0.13	-118	L	L
6	3901	Jewellery and related articles	1558	1602	2449	0.21	-0.03	-0.24	-114	L	L
7	3512	Fertilizers & pesticides	1790	2311	5932	0.08	-0.01	-0.09	-113	L	L
8	3529	Other chemical products	3233	3625	6882	0.17	0	-0.17	-100	L	L
9	3134	Soft Drinks & Carbonated waters inds	2266	3089	6092	0.4	0.01	-0.39	-98	L	L
10	3839	Other electrical apparatus & supplies	583	712	1004	0.3	0.02	-0.28	-93	L	L
11	3121	Other, food products	2580	3690	6419	1.42	0.1	-1.32	-93	L	L
12	3851/4	Other transport	1539	1679	2789	0.21	0.02	-0.19	-90	L	L
13	3115	Vegetable, animal oils & fats	1969	2901	5566	0.63	0.06	-0.57	-90	L	L
14	3310	Wood & Wood products excluding furniture	3508	4580	8355	0.19	0.02	-0.17	-89	L	L
15	3521	Paints vanishes & lacquers	1253	1727	3683	0.95	0.1	-0.85	-89	L	L
16	3213	Knitting mills	1195	1370	1859	2.82	0.4	-2.42	-86	L	L
17	3832	Radio, Television & comm. equip	2571	2772	4441	0.2	0.05	-0.15	-75	L	L

**Table 7 : Extent of trade liberalisation (ERP calculations based on statutory rates) (continued)**

18	3831	Electrical industrial machinery	630	808	2130	0.16	0.04	-0.12	-75	L	L
19	3710	Iron & Steel basic industries	13362	15041	26057	0.12	0.04	-0.08	-67	L	L
20	3119	Cocoa, Chocolate & Sugar confectionery	1204	1552	2911	0.34	0.13	-0.21	-62	L	L
21	3819	Other fabricated metals excluding machinery	5963	7560	11054	0.3	0.13	-0.17	-57	L	L
22	3523	Soap, cosmetics & toilet preparations	2519	3824	7606	1.26	0.57	-0.69	-55	L	L
23	3220	Wearing apparel excluding footwear	4848	5837	9136	3.54	1.62	-1.92	-54	L	L
24	3211	Spinning, Wool weaving & finishing of fabrics	3907	4586	6305	1.23	0.6	-0.63	-51	L	L
25	3412	Paper containers	2970	3720	6814	0.5	0.28	-0.22	-44	L	L
26	3620	Glass & Glass products	1612	1606	2141	0.16	0.09	-0.07	-44	L	L
27	3551	Tyres & Tubes	875	826	972	0.48	0.31	-0.17	-35	L	L
28	3559	Other rubber products	1744	2077	3195	0.2	0.13	-0.07	-35	L	L
29	3240	Footwear	1807	2131	2379	0.75	0.49	-0.26	-35	L	L
30	3560	Other plastic products	4328	5810	9723	0.48	0.34	-0.14	-29	L	L
31	3811	Cutlery, Hand tools & General hardware	975	1115	1839	0.31	0.27	-0.04	-13	L	L
32	3111	Slaughtering Preparing & Preserving Meat	2653	3349	5693	5.13	4.49	-0.64	-12	L	L
33	3419	Other Pulp, paper & paperboard	1185	1880	3567	0.27	0.25	-0.02	-7	L	M
34	3843/0	Motor vehicles	15497	20883	42720	1.21	1.13	-0.08	-7	L	M
35	3833	Electrical appliances & house wares	1205	1358	1926	0.56	0.56	0	0	M	M
36	3411	Pulp, Paper & Paperboard	4361	4999	10019	0.08	0.08	0	0	M	M
37	3691	Bricks, Tiles, re-factories, etc.	1466	1594	2431	0.17	0.17	0	0	M	M
38	3692	Cement	1224	1632	2313	-0.02	-0.02	0	0	M	M
39	3511	Industrial chemicals	712	793	1391	0	0	0	0	M	M
40	3610	Pottery, China & Earthenware	226	230	270	0.32	0.33	0.01	3	P	M



**Table 7 : Extent of trade liberalisation (ERP calculations based on statutory rates) (continued)**

41	3320	Furniture	3028	3451	6356	0.5	0.53	0.03	6	P	M
42	3212	Made-up textile goods, exc wearing apparel	992	1257	1659	0.77	0.82	0.05	6	P	M
43	3219	Textiles, not elsewhere classified	423	614	1105	0.15	0.2	0.05	33	P	P
44	3233	Leather products & leather substitutes	871	1065	2578	0.57	0.81	0.24	42	P	P
45	3214	Carpets & rugs mats & matting	459	610	701	0.6	0.86	0.26	43	P	P
46	3113	Canning & preserving of fruit & vegetables	2180	2720	4489	0.32	0.49	0.17	53	P	P
47	3117	Bakery products	2598	3577	4157	0.85	1.62	0.77	91	P	P
48	3131	Distilleries & wineries	2699	3226	5546	0.44	1.85	1.41	320	P	P
49	3122	Prepared animal feeds	2380	2987	5025	-0.2	1.19	1.39	695	P	P
50	3112	Diary Products	3227	4601	7165	0.16	1.84	1.68	1050	P	P
51	3118	Sugar factories & refineries	2124	2528	4473	0.1	4.99	4.89	4890	P	P
52		Contribution to sales of 51 sectors L								80;81	67;66
53		M								6;6	21;25
54		P								13;13	11;10
55		Contribution to manufacturing sales L								60;61	50;49
56		M								5;5	16;18
57		P								10;10	8;8

Source: IDC, 1996a; *Trade and Industrial Policy Strategies Database*, own calculations

66 percent (10 percent) in 1999.<sup>32</sup> Similarly the contribution to total sales of the manufacturing sector has decreased from 50 percent (8 percent) to 49 percent (8 percent) for the liberalised (protected) industries during 1993 and 1999. Similarly, by considering the absolute change between 1993 and 1999, it is noted that the protected sectors made up around 10 percent of total manufacturing sales, whilst liberalised sectors contributed approximately 61 percent of total sales during the period under analysis.<sup>33</sup> These results suggest that by the end of the 1990s, more of South Africa's manufacturing output was liberalised than protected.

There is an additional issue relating to the tariffication of the agricultural sector that warrants mention given the influence it could exert on the calculations undertaken in both the FV study and in this chapter. As part of the WTO commitment, quantitative restrictions were converted into *ad-valorem* rates during the 1990s (TIPS, 2002). This has a direct effect on the tariffs collected and could lead to increases in duties collected. It could be the case that the agricultural sector's protection is overstated and those of the other industries using agricultural inputs being understated. This problem exists also if statutory rates are used in the calculation of the ERP. However, in terms of the calculations in this study, the agricultural sector is classified as enjoying more protection during the 1990s and as such, biases the total output under protection upwards. If the tariffication of the agricultural sector does not represent an increase in the protection to this sector, the output of the agricultural sector would not form part of the total output under protection. This would lend further support to the argument presented in this chapter. On the other hand, if agriculture's protection is overstated, then the protection of the other industries using agricultural inputs, is understated and this could influence the strength of the argument. However, the information on the tariff revenues collected on agricultural products would seem to suggest that the tariffication measures did not lead to a significant increase in protection for the

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<sup>32</sup> The calculations and classifications are represented in columns 9 and 11 respectively.

<sup>33</sup> The classification used here is similar to the one used in the previous table. A one percent reduction classifies the sector as liberalised, a one percent increase as protected and moderately protected otherwise.

agricultural sector. The tariff rate for agriculture increased marginally from 1.4 percent in 1993 to 1.7 percent in 1994 before decreasing again to 1.4 percent in 1995.<sup>34</sup>

#### **4.5 Conclusion**

During the 1990s there was a deliberate attempt on the part of the South African authorities to increase the pace of tariff liberalisation. The WTO offer in 1994 and the subsequent liberalisation - in some cases at faster rates than the WTO commitments - has meant that the tariff protection, which sheltered domestic industry from international competition in the past, has largely diminished. This view is supported by an analysis of ERP calculations during the 1990s. Whether liberalisation should have gone further and faster during the 1990s is a legitimate question with the answer to this question depending on a critical analysis of the liberalisation programme during the 1990s. However, to argue, as was done by Fedderke and Vaze (2001), that more of South Africa's output has been subjected to increased levels of protection during the 1990s is incorrect.

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<sup>34</sup> The tariffs collected on products within the SIC 1 category was used in the calculation for the tariff rates. This information was obtained from the DTI. The results are even more pronounced if one considers statutory rates. According to IMF (2000) the statutory average rates decreased from 25 percent in 1990 to 2.2 percent in 1998 (see table 3).