2001 Annual Forum
at Misty Hills, Muldersdrift

The Level And Variation Of Tariff Rates: An Analysis Of Nominal And Effective Tariff Rates In South Africa For The Years 2000 And 2001

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TIPS

10-12 September, 2001

THE LEVEL AND VARIATION OF TARIFF RATES: AN ANALYSIS OF NOMINAL AND EFFECTIVE TARIFF RATES IN SOUTH AFRICA FOR THE YEARS 2000 AND 2001[1]

Dirk Ernst van Seventer, TIPS TIPS Forum, Sept 2001

Abstract

This note presents a first cut at analysing the tariff schedule that is applied to South African imports. The aim is to show various ways in which tariffs on South African imports can be analysed such that DTI can develop in-house capacity to undertake such analysis on an on-going basis. A cursory comparison with earlier analysis suggests that tariffs have declined over the period 1997-2001, notably for manufacturing. However, further tariff liberalisation has been slow in last couple of years. Tariff peaks still exist for a number of broad categories of commodities such as processed foods (HS 0- 2), vehicles and components thereof (HS 87), tobacco products (HS 24), rubber products (HS 40) and clothing and textiles (HS6). About 25% of the HS8 commodity lines are faced with non ad-valorem tariffs, although the value of imports involved is not more than 4% of total import in 2000. An attempt is made to convert non ad-valorem tariffs in order to check for tariff peaks. The highest ad-valorem equivalents are recorded for processed food, in various stages, and textiles. Finally, duty collection rates, which can give an indication of the efficiency of duty collection are lowest for mineral fuels, motor vehicles and components thereof. Using a couple of static methods on effective tariff rates singles out the textiles, clothing, footwear, leather, motor vehicles, and some food processing sectors as directly and indirectly highly protected. Simple correlation coefficients suggest that duty collection rates and the nominal tariff schedule are reasonable indicators of effective rates of protection at the chosen aggregation level of activities.

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[1] An earlier version of this paper was presented at a workshop for the TIPS Trade Policy Review

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1) Introduction

Trade liberalisation in South Africa has brought about a lowering of tariffs and a simplification of the tariff schedule. In this note we use recent detailed tariff schedules that are currently available at DTI and we apply these schedules to import data at the most detailed level published by Customs and Excise. In doing so, we can undertake various tariff analyses. A cursory comparison with earlier tariff analysis suggests that tariffs have declined over the period 1997-2000, notably for manufacturing. However, progress has been slow in last couple of years.

We employ the HS8 MFN tariff schedule for March 2001 and July 2000. Since one of the objectives of adhering to a rigid tariff liberalisation path, such as the one chosen by the South African government, is to provide certainty and stability to importers and investors, we assume that the July 2000 schedule is representative for the full 2000 calendar year. Obviously, this assumption is contestable, but probably a good departure point to get an initial tariff analysis off the ground. We are fortunate to employ recently released import data for the year 2000 at the same HS8 level.

We start with an analysis of the tariff schedule itself, followed in section 3 with an application of the tariff schedule to the trade data with the aim to identify tariff peaks and in section 4 with a brief look at tariff differentiation in the context of several free trade agreements recently concluded by South Africa. In section 5 we make an attempt to convert non-advalorem tariffs into ad-valorem tariffs and we reassess the tariff peaks. Section 6 presents an analysis at the sectoral level, which offers a link between trade and industrial policy, while section 7 discusses a comparison of actual and potential duty collection rates. Section 8 applies a couple of simple measures of effective rates of protection. Although the results present an interesting snapshot picture of the current tariff schedule, it offers only a limited intertemporal view and is essentially a static analysis. What is required is to undertaken this kind of analysis on a recurring basis so that such an intertemporal view can be obtained. We therefore conclude with recommendation as to how DTI should consider maintaining a data base and system to undertake tariff analysis on a regular basis.

2) The Tariff Schedule of July 2000

In this section we ignore tariffs on imports from the EU and SADC which may or may not be exempt from import duties at the time of writing and we also do not consider rebates for reasons of convenience. Information in this regard would obviously be crucial to any future application along the lines suggested in this section and we briefly turn to the EU and SADC schedules in the next section. We start with the July 2000 schedule, followed by a view on the March 2001 schedule. The former is important because there are no matching trade data available for the latter.

The HS8 MFN tariff schedule as of July 2000 identifies 7 824 commodity lines and 211 unique tariffs consisting of ad-valorem, specific, mixed, compound and other tariffs and combinations thereof. These tariffs are shown in Table 1. In row 1, it can be seen that the highest tariff of 55% only appears once, while the zero tariff occurs about 3 500 times, i.e. for about 45% of the HS8 commodity lines identified. Other frequently used ad-valorem tariffs are 5% (312 lines, see row 33), 10% (513 lines, see row 27), 15% (522 lines, see row 21), 20% (533 lines, see row 15), 25% (116 lines, see row 11) and 30% (153 lines, see row 9). The number of unique ad-valorem tariffs amount to 35. For 1999 Lewis (2001) still counted 44 tariff “bands”, as he calls it. So, some rationalisation has taken place between 1999 and 2000 although a different source was used in the form of the UNCTAD TRAINS data base.

Specific tariffs and the combination of specific and ad-valorem tariffs in total apply to almost 2000 HS8 commodity lines, which constitutes about 25% of all lines identified. The most frequently used combination of specific and ad-valorem tariff is "22% or 30% with a maximum of 1000c/kg" which occurs about 188 times (see row 175). Another combination tariff that is popular is "22% or 30% with a maximum of 2020c/kg" which occurs 95 times (see row 117). Having more than 200 different tariffs suggests that it makes sense to further simplify the tariff schedule.

Table 1: Tariffs identified by Customs & Excise, July 2000

row	Tariff	# lines	% of lines	row	Tariff	# lines	% of lines	row	Tariff	# lines	% of lines
	1	2	3		1	2	3		1	2	3
1	55.0%	1	0.0%	71	40% or 60%, max 5280c/kg	66	0.8%	141	22% or 30%, max 2240c/kg	1	0.0%
2	50.0%	1	0.0%	72	40% or 60%, max 5090c/kg	3	0.0%	142	22% or 30%, max 2160c/kg	20	0.3%
3	47.0%	15	0.2%	73	40% or 60%, max 5000c/kg	3	0.0%	143	22% or 30%, max 2080c/kg	1	0.0%
4	45.0%	5	0.1%	74	40% or 60%, max 4800c/kg	57	0.7%	144	22% or 30%, max 2020c/kg	95	1.2%
5	43.0%	2	0.0%	75	40% or 60%, max 4225c/kg	20	0.3%	145	22% or 30%, max 2000c/kg	1	0.0%
6	40.0%	39	0.5%	76	40% or 60%, max 3590c/kg	6	0.1%	146	22% or 30%, max 1980c/kg	1	0.0%
7	36.0%	1	0.0%	77	40% or 60%, max 3460c/kg	1	0.0%	147	22% or 30%, max 1920c/kg	1	0.0%
8	35.0%	14	0.2%	78	40% or 60%, max 3380c/kg	13	0.2%	148	22% or 30%, max 1830c/kg	60	0.8%
9	30.0%	153	2.0%	79	40% or 60%, max 270c/pr	4	0.1%	149	22% or 30%, max 1790c/kg	4	0.1%
10	27.0%	3	0.0%	80	40% or 60%, max 20500c/kg	1	0.0%	150	22% or 30%, max 1760c/kg	1	0.0%
11	25.0%	116	1.5%	81	40% or 60%, max 190c/kg	1	0.0%	151	22% or 30%, max 1730c/kg	3	0.0%
12	23.0%	1	0.0%	82	40% or 60%, max 190c each	2	0.0%	152	22% or 30%, max 1665c/kg	3	0.0%
13	22.0%	26	0.3%	83	40% or 60%, max 1630c/kg	1	0.0%	153	22% or 30%, max 1660c/kg	14	0.2%
14	21.0%	2	0.0%	84	40% or 60%, max 11520c/kg	2	0.0%	154	22% or 30%, max 1650c/kg	2	0.0%
15	20.0%	533	6.8%	85	40% or 60%, max 10700c/kg	2	0.0%	155	22% or 30%, max 1600c/kg	3	0.0%
16	19.0%	5	0.1%	86	40% or 120c/u	3	0.0%	156	22% or 30%, max 1555c/kg	15	0.2%
17	18.0%	2	0.0%	87	4.36c/li	1	0.0%	157	22% or 30%, max 1550c/kg	1	0.0%
18	17.5%	1	0.0%	88	4.15c/kg	7	0.1%	158	22% or 30%, max 1540c/kg	5	0.1%
19	17.0%	35	0.4%	89	3c/kg	2	0.0%	159	22% or 30%, max 1500c/kg	1	0.0%
20	16.0%	11	0.1%	90	35c/no	1	0.0%	160	22% or 30%, max 1430c/kg	2	0.0%
21	15.0%	522	6.7%	91	35% or 500c/2u	4	0.1%	161	22% or 30%, max 1410c/kg	51	0.7%
22	14.0%	4	0.1%	92	325c/kg , max 39%	1	0.0%	162	22% or 30%, max 1330c/kg	1	0.0%
23	13.0%	11	0.1%	93	317c/li of absolute alcohol	2	0.0%	163	22% or 30%, max 1320c/kg	8	0.1%
24	12.5%	9	0.1%	94	30% or 7.25c/kg	2	0.0%	164	22% or 30%, max 1300c/kg	15	0.2%
25	12.0%	1	0.0%	95	30% or 500c/2u	6	0.1%	165	22% or 30%, max 1280c/kg	70	0.9%
26	11.0%	1	0.0%	96	30% or 4.5c/kg	3	0.0%	166	22% or 30%, max 1230c/kg	4	0.1%
27	10.0%	513	6.6%	97	3.6c/kg , max 25%	1	0.0%	167	22% or 30%, max 1150c/kg	16	0.2%
28	9.0%	40	0.5%	98	3.3c/li	1	0.0%	168	22% or 30%, max 1145c/kg	4	0.1%
29	8.5%	1	0.0%	99	26.9c/kg	1	0.0%	169	22% or 30%, max 1135c/kg	43	0.5%
30	8.0%	2	0.0%	100	25.3c/kg	1	0.0%	170	22% or 30%, max 1100c/kg	15	0.2%
31	7.0%	1	0.0%	101	25% plus 1.04c/li	1	0.0%	171	22% or 30%, max 1090c/kg	1	0.0%
32	6.6%	10	0.1%	102	25% or 70c/kg	26	0.3%	172	22% or 30%, max 1060c/kg	5	0.1%
33	5.0%	312	4.0%	103	25% or 200c/kg	11	0.1%	173	22% or 30%, max 1040c/kg	62	0.8%
34	4.0%	1	0.0%	104	25% or 150c/kg	6	0.1%	174	22% or 30%, max 1030c/kg	1	0.0%
35	3.0%	4	0.1%	105	23.1c/kg	1	0.0%	175	22% or 30%, max 1000c/kg	188	2.4%
36	0.0%	3,485	44.5%	106	220c/kg	2	0.0%	176	21.2c/kg	1	0.0%
37	9.2c/kg	1	0.0%	107	22.2c/kg	1	0.0%	177	20% or 215c/kg less 80%	1	0.0%
38	8c/kg	6	0.1%	108	22%, max 910c/kg	3	0.0%	178	2.75c/kg	8	0.1%
39	78c/kg	1	0.0%	109	22%, max 700c/kg	69	0.9%	179	2.4c/kg net	3	0.0%
40	77c/kg	1	0.0%	110	22%, max 1700c/kg	1	0.0%	180	2.25c/kg	2	0.0%
41	6c/kg	58	0.7%	111	22% or 33%, max 960c/kg	1	0.0%	181	17c/kg	1	0.0%
42	60% or 2500c/kg	2	0.0%	112	22% or 33%, max 2880c/kg	2	0.0%	182	160c/kg	1	0.0%
43	6.6c/kg , max 25%	1	0.0%	113	22% or 33%, max 1830c/kg	1	0.0%	183	16.5c/kg , max 25%	1	0.0%
44	5c/li	1	0.0%	114	22% or 33%, max 1000c/kg	1	0.0%	184	154c/li	8	0.1%
45	5c/kg	7	0.1%	115	22% or 30%, max 960c/kg	50	0.6%	185	150c/u	2	0.0%
46	57.7c/kg	1	0.0%	116	22% or 30%, max 900c/kg	1	0.0%	186	15.103c/kg	2	0.0%
47	56.7c/kg	1	0.0%	117	22% or 30%, max 890c/kg	92	1.2%	187	15% plus 50c/u	2	0.0%
48	55.5c/kg	1	0.0%	118	22% or 30%, max 820c/kg	46	0.6%	188	15% plus 200c/u	3	0.0%
49	50c/no	1	0.0%	119	22% or 30%, max 800c/kg	30	0.4%	189	15% or 860c/kg less 85%	2	0.0%
50	500c/kg	8	0.1%	120	22% or 30%, max 775c/kg	47	0.6%	190	136c/li	7	0.1%
51	50.3c/kg	1	0.0%	121	22% or 30%, max 770c/kg	16	0.2%	191	12.5c/kg	1	0.0%
52	5.5c/kg	14	0.2%	122	22% or 30%, max 690c/kg	21	0.3%	192	11c/li	3	0.0%
53	4c/kg	4	0.1%	123	22% or 30%, max 3840c/kg	14	0.2%	193	118.9c/kg	4	0.1%
54	450c/kg	8	0.1%	124	22% or 30%, max 3425c/kg	4	0.1%	194	110c/kg net	1	0.0%
55	40c/kg	1	0.0%	125	22% or 30%, max 3200c/kg	1	0.0%	195	110c/kg less 80%	1	0.0%
56	400c/kg	2	0.0%	126	22% or 30%, max 3170c/kg	31	0.4%	196	10c/kg	1	0.0%
57	40%, max 3000c/kg	32	0.4%	127	22% or 30%, max 3070c/kg	5	0.1%	197	100c/u	1	0.0%
58	40% plus 40.3c/kg	1	0.0%	128	22% or 30%, max 2960c/kg	15	0.2%	198	10% or 55c/kg less 90%	1	0.0%
59	40% or 60%, max 9780c/kg	4	0.1%	129	22% or 30%, max 2880c/kg	16	0.2%	199	1.8c/kg , max 15%	1	0.0%
60	40% or 60%, max 9700c/kg	5	0.1%	130	22% or 30%, max 2690c/kg	16	0.2%	200	1.1c/kg	1	0.0%
61	40% or 60%, max 8980c/kg	21	0.3%	131	22% or 30%, max 2640c/kg	42	0.5%	201	0.99c/kg	1	0.0%
62	40% or 60%, max 8975c/kg	1	0.0%	132	22% or 30%, max 2570c/kg	55	0.7%	202	0.8c/kg	1	0.0%
63	40% or 60%, max 8160c/kg	3	0.0%	133	22% or 30%, max 2568c/kg	2	0.0%	203	0.85c/kg	2	0.0%
64	40% or 60%, max 8000c/kg	2	0.0%	134	22% or 30%, max 2440c/kg	2	0.0%	204	0.65c/kg	3	0.0%
65	40% or 60%, max 7500c/kg	3	0.0%	135	22% or 30%, max 2425c/kg	1	0.0%	205	0.55c/li , max 8%	2	0.0%
66	40% or 60%, max 7180c/kg	7	0.1%	136	22% or 30%, max 2380c/kg	48	0.6%	206	0.45c/kg	1	0.0%
67	40% or 60%, max 6865c/kg	7	0.1%	137	22% or 30%, max 2355c/kg	2	0.0%	207	0.44c/kg	2	0.0%
68	40% or 60%, max 6105c/kg	2	0.0%	138	22% or 30%, max 2350c/kg	14	0.2%	208	0.1c/li , max 8%	1	0.0%
69	40% or 60%, max 5810c/kg	8	0.1%	139	22% or 30%, max 2305c/kg	10	0.1%	209	0.183c/li	3	0.0%
70	40% or 60%, max 5740c/kg	4	0.1%	140	22% or 30%, max 2296c/kg	1	0.0%	210	0.091c/li	1	0.0%
									Total	7824	100%

Source: DTI

A more recent tariff schedule is available for the year 2001. The schedule is presented in the next table and shows that the total number of unique tariff lines has in fact increased from 210 to 226 while the number of HS8 commodity lines has also increased slightly from 7824 to 7831.

Table 2: Tariffs identified by Customs & Excise, March 2001

row	Tariff	# lines	% of lines
	1	2	3
1	55.0%	1	0.0%
2	50.0%	1	0.0%
3	45.0%	5	0.1%
4	43.0%	2	0.0%
5	42.5%	15	0.2%
6	40.0%	28	0.4%
7	37.0%	12	0.2%
8	36.0%	1	0.0%
9	35.0%	2	0.0%
10	32.5%	11	0.1%
11	30.0%	123	1.6%
12	28.0%	3	0.0%
13	27.0%	25	0.3%
14	25.0%	111	1.4%
15	22.5%	3	0.0%
16	22.0%	16	0.2%
17	21.0%	3	0.0%
18	20.0%	533	6.8%
19	19.0%	28	0.4%
20	18.0%	6	0.1%
21	17.5%	1	0.0%
22	17.0%	5	0.1%
23	16.0%	11	0.1%
24	15.0%	527	6.7%
25	14.0%	3	0.0%
26	13.0%	17	0.2%
27	12.5%	9	0.1%
28	12.0%	1	0.0%
29	11.0%	1	0.0%
30	10.0%	534	6.8%
31	9.8%	2	0.0%
32	9.4%	7	0.1%
33	8.5%	1	0.0%
34	8.0%	43	0.5%
35	7.4%	3	0.0%
36	7.0%	1	0.0%
37	6.6%	10	0.1%
38	5.0%	311	4.0%
39	3.0%	5	0.1%
40	0.0%	3484	44.5%
41	0.091c/li	2	0.0%
42	0.183c/li	4	0.1%
43	0.1c/li with a maximum of 8%	1	0.0%
44	0.44c/kg	2	0.0%
45	0.45c/kg	1	0.0%
46	0.55c/li with a maximum of 8%	2	0.0%
47	0.65c/kg	2	0.0%
48	0.85c/kg	2	0.0%
49	0.8c/kg	1	0.0%
50	0.99c/kg	1	0.0%
51	1.1c/kg	1	0.0%
52	1.8c/kg with a maximum of	1	0.0%
53	10% or 55c/kg less 90%	1	0.0%
54	10.1c/kg	1	0.0%
55	10c/kg	1	0.0%
56	110c/kg less 80%	1	0.0%
57	110c/kg net	1	0.0%
58	11c/li	4	0.1%
59	136c/li	7	0.1%
60	15% or 860c/kg less 85%	2	0.0%
61	154c/li	8	0.1%
62	16.5c/kg with a maximum of	1	0.0%
63	160c/kg	1	0.0%
64	19.6c/kg	1	0.0%
65	2.25c/kg	2	0.0%
66	2.4c/kg net	3	0.0%
67	2.75c/kg	8	0.1%
68	20% or 215c/kg less 80%	1	0.0%
69	20% or 700c/kg	1	0.0%
70	20% plus 29.4c/kg	1	0.0%
71	20% with a maximum of 1	1	0.0%
72	20% with a maximum of	68	0.9%
73	20% with a maximum of	3	0.0%
74	22% or 2% with a maximum of	1	0.0%
75	22% or 27% with a maximum	172	2.2%
76	22% or 27% with a maximum	1	0.0%

row	Tariff	# lines	% of lines
	1	2	3
77	22% or 27% with a maximum	1	0.0%
78	22% or 27% with a maximum	61	0.8%
79	22% or 27% with a maximum	5	0.1%
80	22% or 27% with a maximum	1	0.0%
81	22% or 27% with a maximum	15	0.2%
82	22% or 27% with a maximum	36	0.5%
83	22% or 27% with a maximum	4	0.1%
84	22% or 27% with a maximum	16	0.2%
85	22% or 27% with a maximum	4	0.1%
86	22% or 27% with a maximum	1	0.0%
87	22% or 27% with a maximum	59	0.8%
88	22% or 27% with a maximum	15	0.2%
89	22% or 27% with a maximum	8	0.1%
90	22% or 27% with a maximum	1	0.0%
91	22% or 27% with a maximum	1	0.0%
92	22% or 27% with a maximum	44	0.6%
93	22% or 27% with a maximum	2	0.0%
94	22% or 27% with a maximum	1	0.0%
95	22% or 27% with a maximum	5	0.1%
96	22% or 27% with a maximum	1	0.0%
97	22% or 27% with a maximum	15	0.2%
98	22% or 27% with a maximum	3	0.0%
99	22% or 27% with a maximum	2	0.0%
100	22% or 27% with a maximum	1	0.0%
101	22% or 27% with a maximum	13	0.2%
102	22% or 27% with a maximum	3	0.0%
103	22% or 27% with a maximum	3	0.0%
104	22% or 27% with a maximum	1	0.0%
105	22% or 27% with a maximum	4	0.1%
106	22% or 27% with a maximum	3	0.0%
107	22% or 27% with a maximum	46	0.6%
108	22% or 27% with a maximum	1	0.0%
109	22% or 27% with a maximum	1	0.0%
110	22% or 27% with a maximum	15	0.2%
111	22% or 27% with a maximum	1	0.0%
112	22% or 27% with a maximum	7	0.1%
113	22% or 27% with a maximum	9	0.1%
114	22% or 27% with a maximum	5	0.1%
115	22% or 27% with a maximum	12	0.2%
116	22% or 27% with a maximum	1	0.0%
117	22% or 27% with a maximum	4	0.1%
118	22% or 27% with a maximum	84	1.1%
119	22% or 27% with a maximum	1	0.0%
120	22% or 27% with a maximum	1	0.0%
121	22% or 27% with a maximum	19	0.2%
122	22% or 27% with a maximum	1	0.0%
123	22% or 27% with a maximum	1	0.0%
124	22% or 27% with a maximum	10	0.1%
125	22% or 27% with a maximum	14	0.2%
126	22% or 27% with a maximum	2	0.0%
127	22% or 27% with a maximum	39	0.5%
128	22% or 27% with a maximum	1	0.0%
129	22% or 27% with a maximum	2	0.0%
130	22% or 27% with a maximum	48	0.6%
131	22% or 27% with a maximum	37	0.5%
132	22% or 27% with a maximum	16	0.2%
133	22% or 27% with a maximum	6	0.1%
134	22% or 27% with a maximum	15	0.2%
135	22% or 27% with a maximum	7	0.1%
136	22% or 27% with a maximum	9	0.1%
137	22% or 27% with a maximum	2	0.0%
138	22% or 27% with a maximum	7	0.1%
139	22% or 27% with a maximum	5	0.1%
140	22% or 27% with a maximum	12	0.2%
141	22% or 27% with a maximum	5	0.1%
142	22% or 27% with a maximum	25	0.3%
143	22% or 27% with a maximum	1	0.0%
144	22% or 27% with a maximum	4	0.1%
145	22% or 27% with a maximum	14	0.2%
146	22% or 27% with a maximum	6	0.1%
147	22% or 27% with a maximum	21	0.3%
148	22% or 27% with a maximum	16	0.2%
149	22% or 27% with a maximum	47	0.6%
150	22% or 27% with a maximum	30	0.4%
151	22% or 27% with a maximum	46	0.6%

row	Tariff	# lines	% of lines
	1	2	3
152	22% or 27% with a maximum	1	0.0%
153	22% or 27% with a maximum	91	1.2%
154	22% or 27% with a maximum	1	0.0%
155	22% or 27% with a maximum	51	0.7%
156	22% or 30% with a maximum	1	0.0%
157	22% or 7% with a maximum of	1	0.0%
158	220c/kg	2	0.0%
159	25% or 150c/kg	6	0.1%
160	25% or 200c/kg	11	0.1%
161	25% or 70c/kg	26	0.3%
162	25% plus 1.04c/li	1	0.0%
163	3.3c/li	1	0.0%
164	3.6c/kg with a maximum of	1	0.0%
165	30% or 4.5c/kg	3	0.0%
166	30% or 500c/2u	10	0.1%
167	30% or 7.25c/kg	2	0.0%
168	317c/li of absolute alcohol	2	0.0%
169	325c/kg with a maximum of	1	0.0%
170	35c/no	1	0.0%
171	37 % with a maximum of 3	2	0.0%
172	37 % with a maximum of 3	4	0.1%
173	37% or 120c/each	5	0.1%
174	37% with a maximum of 3	2	0.0%
175	37% with a maximum of 3	24	0.3%
176	3c/kg	2	0.0%
177	4.15c/kg	7	0.1%
178	4.36c/li	1	0.0%
179	40% or 54% with a maximum	1	0.0%
180	40% or 54% with a maximum	2	0.0%
181	40% or 54% with a maximum	2	0.0%
182	40% or 54% with a maximum	3	0.0%
183	40% or 54% with a maximum	1	0.0%
184	40% or 54% with a maximum	4	0.1%
185	40% or 54% with a maximum	13	0.2%
186	40% or 54% with a maximum	1	0.0%
187	40% or 54% with a maximum	6	0.1%
188	40% or 54% with a maximum	19	0.2%
189	40% or 54% with a maximum	3	0.0%
190	40% or 54% with a maximum	53	0.7%
191	40% or 54% with a maximum	3	0.0%
192	40% or 54% with a maximum	3	0.0%
193	40% or 54% with a maximum	2	0.0%
194	40% or 54% with a maximum	65	0.8%
195	40% or 54% with a maximum	4	0.1%
196	40% or 54% with a maximum	8	0.1%
197	40% or 54% with a maximum	2	0.0%
198	40% or 54% with a maximum	7	0.1%
199	40% or 54% with a maximum	6	0.1%
200	40% or 54% with a maximum	3	0.0%
201	40% or 54% with a maximum	2	0.0%
202	40% or 54% with a maximum	3	0.0%
203	40% or 54% with a maximum	1	0.0%
204	40% or 54% with a maximum	21	0.3%
205	40% or 54% with a maximum	5	0.1%
206	40% or 54% with a maximum	1	0.0%
207	40% or 54% with a maximum	3	0.0%
208	40% or 60% with a maximum	1	0.0%
209	40% or 60% with a maximum	1	0.0%
210	40% or 60% with a maximum	1	0.0%
211	40.1c/kg	4	0.1%
212	400c/kg	2	0.0%
213	450c/kg	8	0.1%
214	4c/kg	4	0.1%
215	5.5c/kg	14	0.2%
216	500c/kg	8	0.1%
217	50c/no	1	0.0%
218	5c/kg	7	0.1%
219	5c/li	1	0.0%
220	6.6c/kg with a maximum of	1	0.0%
221	6.7c/kg	2	0.0%
222	60% or 2500c/kg	2	0.0%
223	6c/kg	58	0.7%
224	77c/kg	1	0.0%
225	8c/kg	6	0.1%
226	9.2c/kg	1	0.0%
	Total	7831	100%

Source: DTI

In order to obtain a quick comparison of the two years we present a consolidation of the 2000 and 2001 schedule using a limited number of tariff bands in the next table.

Table 3: A comparison of consolidated tariff schedules for July 2000 and March 2001

		# of HS8 lines July 2000	% of # of lines\ July 2000	# of HS8 lines March 2000	% of # of lines March 2001
		1	2	3	4
1	tariff ≥ 40%	63	0.8%	52	0.7%
2	30% ≤ tariff < 40%	168	2.1%	149	1.9%
3	20% ≤ tariff < 30%	681	8.7%	694	8.9%
4	15% ≤ tariff < 20%	576	7.4%	578	7.4%
5	10% ≤ tariff < 15%	539	6.9%	565	7.2%
6	5% ≤ tariff < 10%	366	4.7%	378	4.8%
7	0% ≤ tariff < 5%	5	0.1%	5	0.1%
8	0%	3,485	44.5%	3484	44.5%
9	Other	1,941	24.9%	1926	24.6%
10	Total lines	7824	100.0%	7831	100.0%

Source: DTI

It can be seen that very little has changed when comparing the 2000 and 2001 schedule. Nevertheless, the number of unique ad-valorem tariffs over 40% has dropped by 11 (which constitutes a 17.5% decline) and by about 20 for tariffs between 30% and 40%. The number of zero rated lines has remained more or less constant.

3) Tariffs and FTAs

Recently, South Africa has entered into free trade agreements with the EU and SADC and it would be interesting to see if the applied tariffs from these two sources are indeed lower. A consolidated view along the same lines as the previous table is offered in the next table.

Table 4: A comparison of consolidated tariff schedules for imports from the EU, SADC and RoW (March 2001)

		# of HS8 lines RoW	% of # of lines\ RoW	# of HS8 lines EU	% of # of lines\ EU	# of HS8 lines SADC	% of # of lines SADC
		1	2	3	4	5	6
1	tariff ≥ 40%	52	0.7%	296	3.8%	11	0.1%
2	30% ≤ tariff < 40%	149	1.9%	195	2.5%	310	4.0%
3	20% ≤ tariff < 30%	694	8.9%	1943	24.8%	202	2.6%
4	15% ≤ tariff < 20%	578	7.4%	664	8.5%	1546	19.7%
5	10% ≤ tariff < 15%	565	7.2%	528	6.7%	659	8.4%
6	5% ≤ tariff < 10%	378	4.8%	277	3.5%	23	0.3%
7	0% ≤ tariff < 5%	5	0.1%	53	0.7%	0	0.0%
8	0%	3484	44.5%	3631	46.4%	5027	64.2%
9	Other	1926	24.6%	244	3.1%	53	0.7%
10	Total lines	7831	100.0%	7831	100.0%	7831	100.0%

Source: DTI

It can be seen that compared to the rest of the world, the number of HS8 commodity lines with ad-valorem tariffs that are equal or higher than 40% is higher on imports that originate in the EU. Similarly, the number of HS8 lines with tariffs between 30 and 40% considerably higher in the SADC schedule compared to the rest of the world. The reason is that in the EU and SADC preferential schemes a number of other than ad-valorem tariffs, captured in row 10 of column 1 of Table 4, are converted to ad-valorem tariffs. For example the combined tariff of "40% or 54% with a maximum of 3 590c/kg" in the general schedule has been converted to a straight ad-valorem tariff of 40% in the case the imports originating in the EU and 35% when the goods are imported from SADC. This principal of ad-valorem equivalence will be further explored in section 5.

With regard to SADC the number of non ad-valorem tariffs has been greatly reduced and some simplification of the schedule has been achieved, although during 2000 SADC imports only applied about 1.3% of total imports. Less, but still significant, simplification is brought about with regard to imports from the EU, which, by the way, constitutes about 40% of South Africa's total imports. For example, the number of zero rated HS8 import commodity lines from the EU is about 4% (see row 8, columns 1 and 3: (3631/3484)-1=4%) higher than the MFN schedule while it is 44% higher for imports from SADC.

4) Imports for the Year 2000

Although the previous two sections discussed tariffs for the year 2001, this is as yet not accompanied by trade data so that we cannot present trade weighted tariffs and check whether tariff peaks apply to lines with low or high value imports. For the rest of this paper we, therefore, have to revert back to the 2000 tariff schedule as this is the last year for which import data are available. In order to assess the relative importance of the tariff lines shown in Table 1 we present data on import values in the table below.

Table 5: Tariffs identified by Customs & Excise, July 2000 combined with import values for the year 2000

row	Tariff	Imp ('000)	% of imp	row	Tariff	Imp ('000)	% of imp	row	Tariff	Imp ('000)	% of imp
	1	2	3		1	2	3		1	2	3
1	55.0%	272	0.0%	71	40% or 60%, max, 5280c/kg	431,839	0.2%	141	22% or 30%, max, 2240c/kg	906	0.0%
2	50.0%	67	0.0%	72	40% or 60%, max, 5090c/kg	1,400	0.0%	142	22% or 30%, max, 2160c/kg	18,810	0.0%
3	47.0%	5,860,042	3.2%	73	40% or 60%, max, 5000c/kg	26,978	0.0%	143	22% or 30%, max, 2080c/kg	843	0.0%
4	45.0%	19,777	0.0%	74	40% or 60%, max, 4800c/kg	387,454	0.2%	144	22% or 30%, max, 2020c/kg	157,549	0.1%
5	43.0%	179	0.0%	75	40% or 60%, max, 4225c/kg	67,089	0.0%	145	22% or 30%, max, 2000c/kg	512	0.0%
6	40.0%	253,142	0.1%	76	40% or 60%, max, 3590c/kg	88,486	0.0%	146	22% or 30%, max, 1980c/kg	1,037	0.0%
7	36.0%	0	0.0%	77	40% or 60%, max, 3460c/kg	537	0.0%	147	22% or 30%, max, 1920c/kg	387	0.0%
8	35.0%	15,258,745	8.3%	78	40% or 60%, max, 3380c/kg	48,117	0.0%	148	22% or 30%, max, 1830c/kg	138,794	0.1%
9	30.0%	1,902,700	1.0%	79	40% or 60%, max, 270c/pr	4,774	0.0%	149	22% or 30%, max, 1790c/kg	2,805	0.0%
10	27.0%	20,269	0.0%	80	40% or 60%, max, 20500c/kg	15,603	0.0%	150	22% or 30%, max, 1760c/kg	6,702	0.0%
11	25.0%	1,150,378	0.6%	81	40% or 60%, max, 190c/kg	15	0.0%	151	22% or 30%, max, 1730c/kg	7,035	0.0%
12	23.0%	11,201	0.0%	82	40% or 60%, max, 190c each	504	0.0%	152	22% or 30%, max, 1665c/kg	7,823	0.0%
13	22.0%	41,450	0.0%	83	40% or 60%, max, 1630c/kg	4,142	0.0%	153	22% or 30%, max, 1660c/kg	55,765	0.0%
14	21.0%	16,515	0.0%	84	40% or 60%, max, 11520c/kg	8,400	0.0%	154	22% or 30%, max, 1650c/kg	27,947	0.0%
15	20.0%	8,531,431	4.6%	85	40% or 60%, max, 10700c/kg	993	0.0%	155	22% or 30%, max, 1600c/kg	1,430	0.0%
16	19.0%	10,310	0.0%	86	40% or 120c/u	291	0.0%	156	22% or 30%, max, 1555c/kg	65,424	0.0%
17	18.0%	3,117	0.0%	87	4.36c/li	105,405	0.1%	157	22% or 30%, max, 1550c/kg	777	0.0%
18	17.5%	648	0.0%	88	4.15c/kg	41,794	0.0%	158	22% or 30%, max, 1540c/kg	35,541	0.0%
19	17.0%	193,039	0.1%	89	3c/kg	1,983	0.0%	159	22% or 30%, max, 1500c/kg	18,523	0.0%
20	16.0%	130,797	0.1%	90	35c/no	0	0.0%	160	22% or 30%, max, 1430c/kg	38,843	0.0%
21	15.0%	5,533,558	3.0%	91	35% or 500c/2u	516,966	0.3%	161	22% or 30%, max, 1410c/kg	63,414	0.0%
22	14.0%	22,453	0.0%	92	325c/kg, max, 39%	1,639	0.0%	162	22% or 30%, max, 1330c/kg	465	0.0%
23	13.0%	287,335	0.2%	93	317c/li of absolute alcohol	202	0.0%	163	22% or 30%, max, 1320c/kg	41,686	0.0%
24	12.5%	505,689	0.3%	94	30% or 7.25c/kg	617	0.0%	164	22% or 30%, max, 1300c/kg	15,181	0.0%
25	12.0%	9,028	0.0%	95	30% or 500c/2u	221,600	0.1%	165	22% or 30%, max, 1280c/kg	198,401	0.1%
26	11.0%	9,847	0.0%	96	30% or 4.5c/kg	3,514	0.0%	166	22% or 30%, max, 1230c/kg	620	0.0%
27	10.0%	5,768,122	3.1%	97	3.6c/kg, max, 25%	56	0.0%	167	22% or 30%, max, 1150c/kg	8,880	0.0%
28	9.0%	1,292,610	0.7%	98	3.3c/li	666	0.0%	168	22% or 30%, max, 1145c/kg	5,698	0.0%
29	8.5%	131	0.0%	99	26.9c/kg	563,124	0.3%	169	22% or 30%, max, 1135c/kg	20,223	0.0%
30	8.0%	26,688	0.0%	100	25.3c/kg	32	0.0%	170	22% or 30%, max, 1100c/kg	13,576	0.0%
31	7.0%	3,752	0.0%	101	25% plus 1.04c/li	5,206	0.0%	171	22% or 30%, max, 1090c/kg	3	0.0%
32	6.6%	540,685	0.3%	102	25% or 70c/kg	22,281	0.0%	172	22% or 30%, max, 1060c/kg	7,126	0.0%
33	5.0%	7,758,330	4.2%	103	25% or 200c/kg	6,225	0.0%	173	22% or 30%, max, 1040c/kg	91,057	0.0%
34	4.0%	34,065	0.0%	104	25% or 150c/kg	35	0.0%	174	22% or 30%, max, 1030c/kg	55	0.0%
35	3.0%	10,405	0.0%	105	23.1c/kg	2,216	0.0%	175	22% or 30%, max, 1000c/kg	384,911	0.2%
36	0.0%	121,357,37	65.9%	106	220c/kg	61,702	0.0%	176	21.2c/kg	94	0.0%
37	9.2c/kg	545	0.0%	107	22.2c/kg	0	0.0%	177	20% or 215c/kg less 80%	805	0.0%
38	8c/kg	17,659	0.0%	108	22%, max, 910c/kg	905	0.0%	178	2.75c/kg	8	0.0%
39	78c/kg	350	0.0%	109	22%, max, 700c/kg	148,740	0.1%	179	2.4c/kg net	14,263	0.0%
40	77c/kg	2,729	0.0%	110	22%, max, 1700c/kg	2,584	0.0%	180	2.25c/kg	32	0.0%
41	6c/kg	227,822	0.1%	111	22% or 33%, max, 960c/kg	1,435	0.0%	181	17c/kg	437	0.0%
42	60% or 2500c/kg	31,072	0.0%	112	22% or 33%, max, 2880c/kg	81	0.0%	182	160c/kg	215,920	0.1%
43	6.6c/kg, max, 25%	113	0.0%	113	22% or 33%, max, 1830c/kg	0	0.0%	183	16.5c/kg, max, 25%	121	0.0%
44	5c/li	4,233	0.0%	114	22% or 33%, max, 1000c/kg	104	0.0%	184	154c/li	397,394	0.2%
45	5c/kg	98,483	0.1%	115	22% or 30%, max, 960c/kg	22,495	0.0%	185	150c/u	0	0.0%
46	57.7c/kg	275	0.0%	116	22% or 30%, max, 900c/kg	112	0.0%	186	15.103c/kg	213,883	0.1%
47	56.7c/kg	4	0.0%	117	22% or 30%, max, 890c/kg	80,476	0.0%	187	15% plus 50c/u	0	0.0%
48	55.5c/kg	9,075	0.0%	118	22% or 30%, max, 820c/kg	13,867	0.0%	188	15% plus 200c/u	0	0.0%
49	50c/no	8	0.0%	119	22% or 30%, max, 800c/kg	11,478	0.0%	189	15% or 860c/kg less 85%	293,122	0.2%
50	500c/kg	119,401	0.1%	120	22% or 30%, max, 775c/kg	9,923	0.0%	190	136c/li	89,864	0.0%
51	50.3c/kg	45	0.0%	121	22% or 30%, max, 770c/kg	51,490	0.0%	191	12.5c/kg	2,239	0.0%
52	5.5c/kg	18,751	0.0%	122	22% or 30%, max, 690c/kg	9,150	0.0%	192	11c/li	42,894	0.0%
53	4c/kg	36,752	0.0%	123	22% or 30%, max, 3840c/kg	670	0.0%	193	118.9c/kg	12,383	0.0%
54	450c/kg	174,569	0.1%	124	22% or 30%, max, 3425c/kg	7,660	0.0%	194	110c/kg net	17,289	0.0%
55	40c/kg	261,278	0.1%	125	22% or 30%, max, 3200c/kg	7,607	0.0%	195	110c/kg less 80%	829	0.0%
56	400c/kg	115,814	0.1%	126	22% or 30%, max, 3170c/kg	1,698	0.0%	196	10c/kg	545	0.0%
57	40%, max, 3000c/kg	119,705	0.1%	127	22% or 30%, max, 3070c/kg	6,006	0.0%	197	100c/u	0	0.0%
58	40% plus 40.3c/kg	312	0.0%	128	22% or 30%, max, 2960c/kg	5,690	0.0%	198	10% or 55c/kg less 90%	14	0.0%
59	40% or 60%, max, 9780c/kg	2,460	0.0%	129	22% or 30%, max, 2880c/kg	18,718	0.0%	199	1.8c/kg, max, 15%	4,963	0.0%
60	40% or 60%, max, 9700c/kg	27,475	0.0%	130	22% or 30%, max, 2690c/kg	2,624	0.0%	200	1.1c/kg	1,312	0.0%
61	40% or 60%, max, 8980c/kg	14,007	0.0%	131	22% or 30%, max, 2640c/kg	11,441	0.0%	201	0.99c/kg	1,277	0.0%
62	40% or 60%, max, 8975c/kg	182	0.0%	132	22% or 30%, max, 2570c/kg	17,704	0.0%	202	0.8c/kg	92	0.0%
63	40% or 60%, max, 8160c/kg	358	0.0%	133	22% or 30%, max, 2568c/kg	11,469	0.0%	203	0.85c/kg	7	0.0%
64	40% or 60%, max, 8000c/kg	79,816	0.0%	134	22% or 30%, max, 2440c/kg	12,963	0.0%	204	0.65c/kg	130,941	0.1%
65	40% or 60%, max, 7500c/kg	3,518	0.0%	135	22% or 30%, max, 2425c/kg	160	0.0%	205	0.55c/li, max, 8%	6,250	0.0%
66	40% or 60%, max, 7180c/kg	492	0.0%	136	22% or 30%, max, 2380c/kg	22,403	0.0%	206	0.45c/kg	735	0.0%
67	40% or 60%, max, 6865c/kg	40,418	0.0%	137	22% or 30%, max, 2355c/kg	579	0.0%	207	0.44c/kg	1,694	0.0%
68	40% or 60%, max, 6105c/kg	200	0.0%	138	22% or 30%, max, 2350c/kg	12,136	0.0%	208	0.1c/li, max, 8%	72,295	0.0%
69	40% or 60%, max, 5810c/kg	1,480	0.0%	139	22% or 30%, max, 2305c/kg	9,143	0.0%	209	0.183c/li	50,573	0.0%
70	40% or 60%, max, 5740c/kg	1,762	0.0%	140	22% or 30%, max, 2296c/kg	549	0.0%	210	0.091c/li	554	0.0%

Source: DTI & Customs & Excise

In row 36 it can be seen that about 65% of the value of imports or R121 billion was imported during 2000 at zero duties, while about 3% came in at a 47% tariff (see row 3), about 8% at a 35% tariff (see row 8), 3% at a 15% tariff (see row 15) and 3% at a 10% tariff (see row 27). The specific or other tariffs on their own carry little weight in terms of value of imports. Whether this is because these specific and other tariffs are prohibitively high can only be ascertained if we attempt to convert them to ad-valorem equivalents, as will be shown in the next section.

A consolidation of the tariffs analysis and the associated imports for the year 2000 is shown in the next table. In row 1 it can be seen that relatively high ad-valorem tariffs of more than 40% apply to less than 1% of the total number of HS8 tariff lines, with a value of approximately R6 billion or 3.3% of total imports over the period of observation. A relatively large number of lines have ad-valorem tariffs between 20% and 30% (see row 3). Tariffs between 30% and 40% apply to about 170 lines (see row 2), but they constitute about 9% of the import bill. Specific and other tariffs constitute more than R7.5 billion or about 4% of the recorded import bill during 2000.

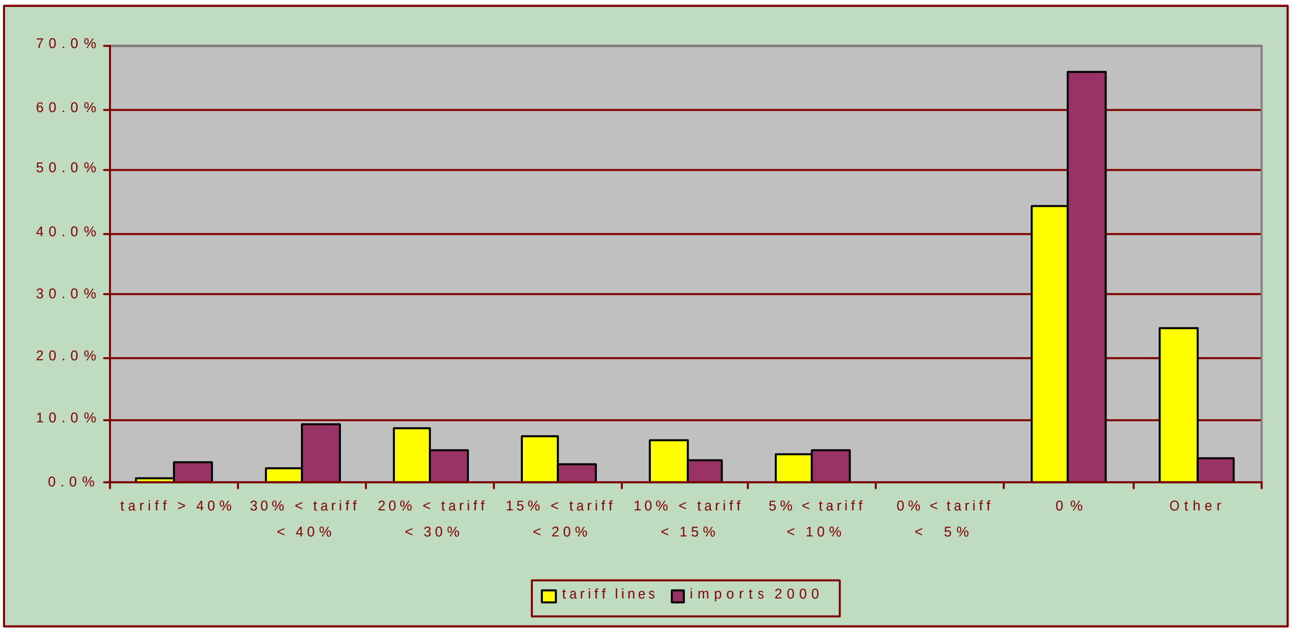
Table 6: Consolidated tariff analysis based on July 2000 tariff schedule and 2000 imports (current R'000 values)

		# of HS8 lines	% of # of lines	Imports 2000	% imports 2000
		1	2	3	4
1	tariff ≥ 40%	63	0.8%	6,133,479	3.3%
2	30% ≤ tariff < 40%	168	2.1%	17,161,445	9.3%
3	20% ≤ tariff < 30%	681	8.7%	9,771,243	5.3%
4	15% ≤ tariff < 20%	576	7.4%	5,871,468	3.2%
5	10% ≤ tariff < 15%	539	6.9%	6,602,475	3.6%
6	5% ≤ tariff < 10%	366	4.7%	9,622,196	5.2%
7	0% ≤ tariff < 5%	5	0.1%	44,470	0.0%
8	0%	3,485	44.5%	121,357,372	65.9%
9	Other	1,941	24.9%	7,566,687	4.1%
10	Total lines / imports	7824	100.0%	184,130,837	
11	Actual total imports			188,076,142	
12	% error due to missing lines			-2.1%	

Source: DTI and Customs & Excise

Note that due to the difference in recording tariffs and imports, there is an error of about 2.1% over the period of observation as can be seen in row 12. The difference suggests that there are imports in HS8 commodity lines which are not covered by the tariff schedule. The next figure shows the number of tariff lines and the corresponding import values for 2000.

Figure 1: Tariff lines (July 2000) and corresponding import values for the year 2000



Source: DTI & Customs & Excise, note that each broad tariff band includes the lower boundary, i.e., the > sign should read ≥.

In the next table we show all the HS8 commodity lines that have an ad-valorem tariff of more than 40%. It can be seen that the main groups of commodities which are faced with relatively high ad-valorem tariffs are processed foods (HS 0- 2), vehicles and components thereof (HS 87), tobacco products (HS 24), rubber products (HS 40) and clothing and textiles (HS6).

Table 7: HS8 lines with ad-valorem tariffs of more than 40% (Imports in current Rand values) based on the July 2000 schedule and 2000 imports

	HS8 code	Description (truncated at 150 characters)	Tariff	Imports (R)
1.	20082000	Preparations of vegetables, fruit, nuts or other parts of plants. Fruit, nuts and other edible parts of plants, otherwise prepared or preserved, wheth	55.0%	271,713
2.	16022090	Preparations of meat, of fish or of crustaceans, molluscs or other aquatic invertebrates Other prepared or preserved meat, offal or blood. - of liver	50.0%	67,166
3.	87012010	Vehicles (excluding railway or tramway rolling-stock) and parts and accessories thereof. Tractors (excluding tractors of heading no. 87.09). - road tr	47.0%	40,000
4.	87021080	Vehicles (excluding railway or tramway rolling-stock) and parts and accessories thereof. Motor vehicles for the transport of ten or more persons, incl	47.0%	5,253,872
5.	87029010	Vehicles (excluding railway or tramway rolling-stock) and parts and accessories thereof. Motor vehicles for the transport of ten or more persons, incl	47.0%	8,886,388
6.	87032190	Vehicles (excluding railway or tramway rolling-stock) and parts and accessories thereof. Motor cars and other motor vehicles principally designed for	47.0%	92,405,945
7.	87032290	Vehicles (excluding railway or tramway rolling-stock) and parts and accessories thereof. Motor cars and other motor vehicles principally designed for	47.0%	375,543,790
8.	87032390	Vehicles (excluding railway or tramway rolling-stock) and parts and accessories thereof. Motor cars and other motor vehicles principally designed for	47.0%	2,980,357,092
9.	87032490	Vehicles (excluding railway or tramway rolling-stock) and parts and accessories thereof. Motor cars and other motor vehicles principally designed for	47.0%	1,524,975,233
10.	87033190	Vehicles (excluding railway or tramway rolling-stock) and parts and accessories thereof. Motor cars and other motor vehicles principally designed for	47.0%	155,336
11.	87033290	Vehicles (excluding railway or tramway rolling-stock) and parts and accessories thereof. Motor cars and other motor vehicles principally designed for	47.0%	263,231,003
12.	87033390	Vehicles (excluding railway or tramway rolling-stock) and parts and accessories thereof. Motor cars and other motor vehicles principally designed for	47.0%	404,609,500
13.	87039090	Vehicles (excluding railway or tramway rolling-stock) and parts and accessories thereof. Motor cars and other motor vehicles principally designed for	47.0%	1,878,619
14.	87042180	Vehicles (excluding railway or tramway rolling-stock) and parts and accessories thereof. Motor vehicles for the transport of goods. - other, with comp	47.0%	186,399,793
15.	87043180	Vehicles (excluding railway or tramway rolling-stock) and parts and accessories thereof. Motor vehicles for the transport of goods. - other, with spar	47.0%	16,198,899
16.	87049080	Vehicles (excluding railway or tramway rolling-stock) and parts and accessories thereof. Motor vehicles for the transport of goods. - other - other, o	47.0%	0
17.	87060010	Vehicles (excluding railway or tramway rolling-stock) and parts and accessories thereof. Chassis fitted with engines, for the motor vehicles of headin	47.0%	106,715
18.	24022000	Tobacco and manf tobacco substitutes. Cigars, cheroots, cigarillos and cigarettes, of tobacco or of tobacco substitutes. - cigarettes contain	45.0%	16,093,163
19.	24029000	Tobacco and manf tobacco substitutes. Cigars, cheroots, cigarillos and cigarettes, of tobacco or of tobacco substitutes. - other	45.0%	133
20.	24031010	Tobacco and manf tobacco substitutes. Other manf tobacco and manf tobacco substitutes; "homogenised" or "reconstituted" tobacc	45.0%	1,057,433
21.	24031020	Tobacco and manf tobacco substitutes. Other manf tobacco and manf tobacco substitutes; "homogenised" or "reconstituted" tobacc	45.0%	2,401,730
22.	24039990	Tobacco and manf tobacco substitutes. Other manf tobacco and manf tobacco substitutes; "homogenised" or "reconstituted" tobacc	45.0%	224,546
23.	40121020	Rubber and articles thereof. Retreaded or used pneumatic tyres of rubber; solid or cushion tyres, interchangeable tyre treads and tyre flaps, of rubbe	43.0%	85,322
24.	40121090	Rubber and articles thereof. Retreaded or used pneumatic tyres of rubber; solid or cushion tyres, interchangeable tyre treads and tyre flaps, of rubbe	43.0%	93,677
25.	02011000	Meat and edible meat offal Meat of bovine animals, fresh or chilled. - carcasses and half-carcasses	40.0%	0
26.	02012000	Meat and edible meat offal Meat of bovine animals, fresh or chilled. - other cuts with bone in	40.0%	5,883
27.	02013000	Meat and edible meat offal Meat of bovine animals, fresh or chilled. - boneless	40.0%	467,579
28.	02021000	Meat and edible meat offal Meat of bovine animals, frozen. - carcasses and half-carcasses	40.0%	0
29.	02022000	Meat and edible meat offal Meat of bovine animals, frozen. - other cuts with bone in	40.0%	11,915,012
30.	02023000	Meat and edible meat offal Meat of bovine animals, frozen. - boneless	40.0%	65,546,144
31.	02041000	Meat and edible meat offal Meat of sheep or goats, fresh, chilled or frozen. - carcasses and half-carcasses of lamb, fresh or chilled	40.0%	10,465
32.	02042100	Meat and edible meat offal Meat of sheep or goats, fresh, chilled or frozen. - other meat of sheep, fresh or chilled: - carcasses and half-carcasses	40.0%	23,957
33.	02042200	Meat and edible meat offal Meat of sheep or goats, fresh, chilled or frozen. - other meat of sheep, fresh or chilled: - other cuts with bone in	40.0%	236,158
34.	02042300	Meat and edible meat offal Meat of sheep or goats, fresh, chilled or frozen. - other meat of sheep, fresh or chilled: - boneless	40.0%	0
35.	02043000	Meat and edible meat offal Meat of sheep or goats, fresh, chilled or frozen. - carcasses and half-carcasses of lamb, frozen	40.0%	1,786,934
36.	02044100	Meat and edible meat offal Meat of sheep or goats, fresh, chilled or frozen. - other meat of sheep, frozen : - carcasses and half-carcasses	40.0%	3,382,420
37.	02044200	Meat and edible meat offal Meat of sheep or goats, fresh, chilled or frozen. - other meat of sheep, frozen : - other cuts with bone in	40.0%	127,312,782
38.	02044300	Meat and edible meat offal Meat of sheep or goats, fresh, chilled or frozen. - other meat of sheep, frozen : - boneless	40.0%	6,891,336
39.	02045000	Meat and edible meat offal Meat of sheep or goats, fresh, chilled or frozen. - meat of goats	40.0%	16,687
40.	02101100	Meat and edible meat offal Meat and edible meat offal, salted, in brine dried or smoked; edible flours meals of meat or meat offal. - meat of swine :	40.0%	13,712
41.	02101200	Meat and edible meat offal Meat and edible meat offal, salted, in brine dried or smoked; edible flours meals of meat or meat offal. - meat of swine :	40.0%	1,259
42.	02101900	Meat and edible meat offal Meat and edible meat offal, salted, in brine dried or smoked; edible flours meals of meat or meat offal. - meat of swine :	40.0%	894,878
43.	02102000	Meat and edible meat offal Meat and edible meat offal, salted, in brine dried or smoked; edible flours meals of meat or meat offal. - meat of bovine	40.0%	2,738
44.	02109000	Meat and edible meat offal Meat and edible meat offal, salted, in brine dried or smoked; edible flours meals of meat or meat offal. - other, includin	40.0%	83,232
45.	16010090	Preparations of meat, of fish or of crustaceans, molluscs or other aquatic invertebrates Sausages and similar products, of meat, meat offal or blood;	40.0%	651,165
46.	16024100	Preparations of meat, of fish or of crustaceans, molluscs or other aquatic invertebrates Other prepared or preserved meat, offal or blood. - of swine	40.0%	898,442
47.	16024200	Preparations of meat, of fish or of crustaceans, molluscs or other aquatic invertebrates Other prepared or preserved meat, offal or blood. - of swine	40.0%	4,259,486
48.	16024990	Preparations of meat, of fish or of crustaceans, molluscs or other aquatic invertebrates Other prepared or preserved meat, offal or blood. - of swine	40.0%	2,821,577
49.	16025090	Preparations of meat, of fish or of crustaceans, molluscs or other aquatic invertebrates Other prepared or preserved meat, offal or blood. - of bovine	40.0%	503,499
50.	16029090	Preparations of meat, of fish or of crustaceans, molluscs or other aquatic invertebrates Other prepared or preserved meat, offal or blood. - other, in	40.0%	1,088
51.	24031030	Tobacco and manf tobacco substitutes. Other manf tobacco and manf tobacco substitutes; "homogenised" or "reconstituted" tobacc	40.0%	250,377
52.	24039910	Tobacco and manf tobacco substitutes. Other manf tobacco and manf tobacco substitutes; "homogenised" or "reconstituted" tobacc	40.0%	1,099,468
53.	61171000	Articles of apparel and clothing accessories, knitted or crocheted Other made up clothing accessories, knitted or crocheted; knitted or crocheted part	40.0%	943,213
54.	62141000	Articles of apparel and clothing accessories, not knitted or crocheted Shawls, scarves, mufflers, mantillas, veils and the like. - of silk or silk wa	40.0%	884,988
55.	62142000	Articles of apparel and clothing accessories, not knitted or crocheted Shawls, scarves, mufflers, mantillas, veils and the like. - of wool or fine an	40.0%	676,033
56.	62143000	Articles of apparel and clothing accessories, not knitted or crocheted Shawls, scarves, mufflers, mantillas, veils and the like. - of synthetic fibre	40.0%	7,392,552
57.	62144000	Articles of apparel and clothing accessories, not knitted or crocheted Shawls, scarves, mufflers, mantillas, veils and the like. - of artificial fibr	40.0%	1,781,224
58.	62149000	Articles of apparel and clothing accessories, not knitted or crocheted Shawls, scarves, mufflers, mantillas, veils and the like. - of other textile m	40.0%	4,289,253
59.	63011000	Other made up textile articles; sets; worn clothing and worn textile articles; rags Blankets and travelling rugs. - electric blankets	40.0%	5,339
60.	63012000	Other made up textile articles; sets; worn clothing and worn textile articles; rags Blankets and travelling rugs. - blankets (excluding electric blan	40.0%	322,751
61.	63013000	Other made up textile articles; sets; worn clothing and worn textile articles; rags Blankets and travelling rugs. - blankets (excluding electric blan	40.0%	2,494,627
62.	63014000	Other made up textile articles; sets; worn clothing and worn textile articles; rags Blankets and travelling rugs. - blankets (excluding electric blan	40.0%	4,439,106
63.	63019000	Other made up textile articles; sets; worn clothing and worn textile articles; rags Blankets and travelling rugs. - other blankets and travelling rug	40.0%	836,994

Source: tariffs: DTI, Trade: Customs & Excise

5) Conversion of Specific and Mixed Tariffs to Ad-valorem Tariffs

It was noted in the previous section that although 24% of the HS8 commodity lines in the July 2000 schedule are of a specific or other nature they only represented about 4% of the value of imports over the year 2000. Nevertheless, from a point of identifying tariff peaks it makes sense to try and convert these tariffs to ad-valorem tariffs. In this section we first discuss the methods adopted to convert other tariffs to ad-valorem tariffs, after which we show some results

Specific to ad-valorem tariff conversion, methodology

We start by calculating the unit value of the relevant HS8 commodity lines for the period of observation by dividing value of imports by volume of imports.

(1) $x_i = X_i \; / \; V_i$

in which x_i is the per unit value of HS8 commodity line i, X_i the total imports of the same commodity line and V_i the volume imported during the period of observation. By taking the ratio of the specific tariff of the relevant HS8 commodity line ($t_{i,spec}$) by its per unit value we then arrive at the ad-valorem equivalent ($t_{i,ave}$). This can be written as follows:

(2) $t_{i,ave} = t_{i,spec} \; / \; x_i = t_{i,spec} \; / \; (X_i \; / \; V_i)$

For example if the value of imports is R20 million and the volume is 5 million Kg, the unit value is R4 per Kg. If the specific tariff is 36 cents per Kg, the ad-valorem equivalent is 9% (= 36 / 400). Clearly, the ad-valorem equivalent is dependent on the unit values. If by any chance an importer got a "good deal", say for example he only paid R3 per Kg, the ad-valorem equivalent of the specific rate of 36 cents per Kg would rise to 12% (36 / 300). On the other hand, exchange rate devaluation would result in a decline in the ad-valorem equivalent. For example, if the imported commodity is purchased in US$ terms and the Rand / US$ exchange rate would devalue by 50%, the Rand unit value would become R6 per Kg and the ad-valorem equivalent would drop to 6% (= 36 / 600). An example of a variation to the specific tariff is "110c/kg less 80%", where the first part can be approached in the same way as above and the second part is a straightforward discount.

Other tariffs to ad-valorem tariff conversion

The ad-valorem equivalent of a mixed specific / ad-valorem tariff is difficult to establish as it depends on the size of the shipment. There doesn't seem to be a single set of rules that can easily be applied. What is presented here is therefore rather arbitrary and certainly open for discussion and different options. For example, the ad-valorem equivalent "22% or 30% with a maximum of 1000c/kg" could take two different tariffs that vary with the size of the shipment as is shown in the next table, i.e., 22% and 30%. In this case it is perhaps reasonable to argue that the relevant importers will try and ensure that the size of the shipment is such that the lowest rate applies. As was discussed in section 3 above, this approach also seem to be followed by the DTI negotiation team when simplifying the general applied schedule during the EU - SA FTA negotiations.

However with a mixed rate such as "35% or 500c/2u"[2], which could take one of two rates, i.e., the ad-valorem equivalent of the specific rate 500c/2u and the ad-valorem rate of 35%. If the ad-valorem equivalent of the specific component happens to yield an equivalent rate of only 23%, while the ad-valorem rate is 35%, one solution is to take the unweighted average of these two rates, which, then, results in an ad-valorem equivalent of 29%. All in all, a number of conversions rules can be identified and they are summarised in Table 8.

Table 8: Rules for the selection on the appropriate ad-valorem equivalent of specific, mixed and combine tariffs

	Condition	Rule
1	If imports are zero *and* the tariff is specific or the first component of the mixed tariff is specific	Accept “na”, i.e., not available
2	If imports are zero *and* the first component of the mixed tariff is ad-valorem	Accept the ad-valorem rate.
3	If the tariff is specific	Accept ad-valorem equivalent as calculated in equation (2)
4	If the first component of the mixed rate is ad-valorem *and* this rate is smaller than the second ad-valorem component or ad-valorem equivalent of the second component	Accept the minimum rate (as with the EU - SA FTA schedule)
5	If the first component of the mixed rate is specific *and* the this rate is smaller than the ad-valorem equivalent of the second component	Accept the minimum rate
6	Else	Accept the simple average of the ad-valorem and ad-valorem equivalent rates

The last condition also occurs if the first component of the mixed rate is specific and the second component is an ad-valorem maximum rate and the second component is lower than the ad-valorem equivalent of the first component. The results of the above conversion application are shown in Table 9. In column 1 we present the original specific or other tariff, while column 2 shows the number of HS8 commodity lines with this tariff. In the third column, the value of imports under the relevant tariff is reflected. Note that this may or may not be an aggregation of multiple HS8 commodity lines which can be verified in the second column. The duties collected for each tariff are shown in the next column followed by the collection rate in column 5. The collection rate is defined as the ratio of the actual duties collected and the value of the imports.

In column 6 we present the weighted average of the ad-valorem equivalent of the tariff shown in column 1, while the unweighted average ad-valorem equivalent can be found in the last column. It can be seen that in one case the unweighted ad-valorem equivalent of the specific rate is as high as 73% (see row 153, although the weighted average is less than 20%) while there are also equivalent rates of 60% (see row 169) and in the late 50%s (see rows 18, 105 and 157).

[2] refers to footwear, 2u stands for 2 units or a pair.

Table 9: Ad-valorem equivalents tariffs, July 2000 (imports and duties collected: year 2000, '000)

	1	2	3	4	5	6	7
	Tariff	# lines	imp	duties collect	collection rate	weigh AVE	unweigh AVE
1	0.091c/li	1	554	116	20.9%	0.0%	0.0%
2	0.183c/li	3	50,573	231	0.5%	0.1%	0.1%
3	0.1c/li , max 8%	1	72,295	42	0.1%	4.0%	4.0%
4	0.44c/kg	2	1,694	0	0.0%	0.4%	0.2%
5	0.45c/kg	1	735	0	0.0%	0.0%	0.0%
6	0.55c/li , max 8%	2	6,250	4	0.1%	4.0%	4.1%
7	0.65c/kg	3	130,941	2,321	1.8%	0.5%	0.3%
8	0.85c/kg	2	7	0	0.1%	0.1%	0.1%
9	0.8c/kg	1	92	0	0.3%	0.3%	0.3%
10	0.99c/kg	1	1,277	1	0.1%	0.1%	0.1%
11	1.1c/kg	1	1,312	4	0.3%	0.7%	0.7%
12	1.8c/kg , max 15%	1	4,963	5	0.1%	7.6%	7.6%
13	10% or 55c/kg less 90%	1	14	1	10.0%	5.8%	5.8%
14	100c/u	1	0	0	0.0%	0.0%	0.0%
15	10c/kg	1	545	1	0.1%	0.1%	0.1%
16	110c/kg less 80%	1	829	0	0.0%	6.4%	6.4%
17	110c/kg net	1	17,289	6,919	40.0%	0.2%	0.2%
18	118.9c/kg	4	12,383	6,372	51.5%	72.1%	58.9%
19	11c/li	3	42,894	974	2.3%	2.8%	2.2%
20	12.5c/kg	1	2,239	0	0.0%	5.6%	5.6%
21	136c/li	7	89,864	49	0.1%	8.4%	6.3%
22	15% or 860c/kg less 85%	2	293,122	2,142	0.7%	10.5%	10.5%
23	15% plus 200c/u	3	0	0	0.0%	0.0%	0.0%
24	15% plus 50c/u	2	0	0	0.0%	0.0%	0.0%
25	15.103c/kg	2	213,883	13,865	6.5%	17.9%	14.3%
26	150c/u	2	0	0	0.0%	0.0%	0.0%
27	154c/li	8	397,39	3,848	1.0%	5.6%	7.0%
28	16.5c/kg , max 25%	1	121	1	0.5%	12.8%	12.8%
29	160c/kg	1	215,920	50	0.0%	18.9%	18.9%
30	17c/kg	1	437	19	4.3%	4.3%	4.3%
31	2.25c/kg	2	32	0	0.1%	0.1%	0.0%
32	2.4c/kg net	3	14,263	13	0.1%	0.1%	0.1%
33	2.75c/kg	8	8	0	0.0%	0.0%	0.0%
34	20% or 215c/kg less 80%	1	805	161	20.0%	11.2%	11.2%
35	21.2c/kg	1	94	1	0.6%	2.9%	2.9%
36	22% or 30% , max 1000c/kg	188	384,911	57,899	15.0%	22.0%	22.0%
37	22% or 30% , max 1030c/kg	1	55	14	25.5%	22.0%	22.0%
38	22% or 30% , max 1040c/kg	62	91,057	15,970	17.5%	22.0%	22.0%
39	22% or 30% , max 1060c/kg	5	7,126	1,635	22.9%	22.0%	22.0%
40	22% or 30% , max 1090c/kg	1	3	1	22.0%	22.0%	22.0%
41	22% or 30% , max 1100c/kg	15	13,576	2,740	20.2%	22.0%	22.0%
42	22% or 30% , max 1135c/kg	43	20,223	3,774	18.7%	22.0%	22.0%
43	22% or 30% , max 1145c/kg	4	5,698	1,454	25.5%	22.0%	22.0%
44	22% or 30% , max 1150c/kg	16	8,880	1,713	19.3%	22.0%	22.0%
45	22% or 30% , max 1230c/kg	4	620	128	20.7%	22.0%	22.0%
46	22% or 30% , max 1280c/kg	70	198,401	32,367	16.3%	22.0%	22.0%
47	22% or 30% , max 1300c/kg	15	15,181	2,893	19.1%	22.0%	22.0%
48	22% or 30% , max 1320c/kg	8	41,686	7,539	18.1%	22.0%	22.0%
49	22% or 30% , max 1330c/kg	1	465	24	5.2%	22.0%	22.0%
50	22% or 30% , max 1410c/kg	51	63,414	11,545	18.2%	22.0%	22.0%
51	22% or 30% , max 1430c/kg	2	38,843	7,353	18.9%	22.0%	22.0%
52	22% or 30% , max 1500c/kg	1	18,523	4,887	26.4%	22.0%	22.0%
53	22% or 30% , max 1540c/kg	5	35,541	6,916	19.5%	22.0%	22.0%
54	22% or 30% , max 1550c/kg	1	777	128	16.5%	22.0%	22.0%
55	22% or 30% , max 1555c/kg	15	65,424	12,575	19.2%	22.0%	22.0%
56	22% or 30% , max 1600c/kg	3	1,430	322	22.5%	22.0%	22.0%
57	22% or 30% , max 1650c/kg	2	27,947	5,783	20.7%	22.0%	22.0%
58	22% or 30% , max 1660c/kg	14	55,765	9,463	17.0%	22.0%	22.0%
59	22% or 30% , max 1665c/kg	3	7,823	1,698	21.7%	22.0%	22.0%
60	22% or 30% , max 1730c/kg	3	7,035	1,439	20.5%	22.0%	22.0%
61	22% or 30% , max 1760c/kg	1	6,702	186	2.8%	22.0%	22.0%
62	22% or 30% , max 1790c/kg	4	2,805	534	19.0%	22.0%	22.0%
63	22% or 30% , max 1830c/kg	60	138,794	25,182	18.1%	22.0%	22.0%
64	22% or 30% , max 1920c/kg	1	387	93	24.1%	22.0%	22.0%
65	22% or 30% , max 1980c/kg	1	1,037	135	13.0%	22.0%	22.0%
66	22% or 30% , max 2000c/kg	1	512	119	23.3%	22.0%	22.0%
67	22% or 30% , max 2020c/kg	95	157,549	30,569	19.4%	22.0%	22.0%
68	22% or 30% , max 2080c/kg	1	843	84	10.0%	22.0%	22.0%
69	22% or 30% , max 2160c/kg	20	18,810	3,874	20.6%	22.0%	22.0%
70	22% or 30% , max 2240c/kg	1	906	62	6.8%	22.0%	22.0%
71	22% or 30% , max 2296c/kg	1	549	107	19.5%	22.0%	22.0%
72	22% or 30% , max 2305c/kg	10	9,143	1,588	17.4%	22.0%	22.0%
73	22% or 30% , max 2350c/kg	14	12,136	1,464	12.1%	22.0%	22.0%
74	22% or 30% , max 2355c/kg	2	579	124	21.4%	22.0%	22.0%
75	22% or 30% , max 2380c/kg	48	22,403	1,390	6.2%	22.0%	22.0%
76	22% or 30% , max 2425c/kg	1	160	19	11.8%	22.0%	22.0%
77	22% or 30% , max 2440c/kg	2	12,963	2,523	19.5%	22.0%	22.0%
78	22% or 30% , max 2568c/kg	2	11,469	56	0.5%	22.0%	22.0%
79	22% or 30% , max 2570c/kg	55	17,704	1,433	8.1%	22.0%	22.0%
80	22% or 30% , max 2640c/kg	42	11,441	2,185	19.1%	22.0%	22.0%
81	22% or 30% , max 2690c/kg	16	2,624	490	18.7%	22.0%	22.0%
82	22% or 30% , max 2880c/kg	16	18,718	2,588	13.8%	22.0%	22.0%
83	22% or 30% , max 2960c/kg	15	5,690	933	16.4%	22.0%	22.0%
84	22% or 30% , max 3070c/kg	5	6,006	1,399	23.3%	22.0%	22.0%
85	22% or 30% , max 3170c/kg	31	1,698	200	11.8%	22.0%	22.0%
86	22% or 30% , max 3200c/kg	1	7,607	298	3.9%	22.0%	22.0%
87	22% or 30% , max 3425c/kg	4	7,660	669	8.7%	22.0%	22.0%
88.	22% or 30% , max 3840c/kg	14	670	135	20.1%	22.0%	22.0%
89.	22% or 30% , max 690c/kg	21	9,150	1,430	15.6%	22.0%	22.0%
90.	22% or 30% , max 770c/kg	16	51,490	5,819	11.3%	22.0%	22.0%
91.	22% or 30% , max 775c/kg	47	9,923	1,971	19.9%	22.0%	22.0%
92.	22% or 30% , max 800c/kg	30	11,478	2,413	21.0%	22.0%	22.0%
93.	22% or 30% , max 820c/kg	46	13,867	2,244	16.2%	22.0%	22.0%
94.	22% or 30% , max 890c/kg	92	80,476	13,826	17.2%	22.0%	22.0%
95.	22% or 30% , max 900c/kg	1	112	33	29.4%	22.0%	22.0%
96.	22% or 30% , max 960c/kg	50	22,495	4,496	20.0%	22.0%	22.0%
97.	22% or 33% , max 1000c/kg	1	104	0	0.0%	22.0%	22.0%
98.	22% or 33% , max 1830c/kg	1	0	0	0.0%	0.0%	22.0%
99.	22% or 33% , max 2880c/kg	2	81	12	15.3%	22.0%	22.0%
100.	22% or 33% , max 960c/kg	1	1,435	338	23.5%	22.0%	22.0%
101.	22% , max 1700c/kg	1	2,584	388	15.0%	22.0%	22.0%
102.	22% , max 700c/kg	69	148,740	16,103	10.8%	22.0%	22.0%
103.	22% , max 910c/kg	3	905	127	14.0%	22.0%	22.0%
104.	22.2c/kg	1	0	0	0.0%	0.0%	0.0%
105.	220c/kg	2	61,702	26,181	42.4%	76.8%	57.4%
106.	23.1c/kg	1	2,216	1	0.1%	8.4%	8.4%
107.	25% or 150c/kg	6	35	0	0.0%	22.6%	3.8%
108.	25% or 200c/kg	11	6,225	79	1.3%	21.7%	14.3%
109.	25% or 70c/kg	26	22,281	158	0.7%	19.8%	9.6%
110.	25% plus 1.04c/li	1	5,206	1,284	24.7%	25.2%	25.2%
111.	25.3c/kg	1	32	2	5.5%	0.4%	0.4%
112.	26.9c/kg	1	563,124	138,701	24.6%	34.2%	34.2%
113.	3.3c/li	1	666	9	1.3%	0.5%	0.5%
114.	3.6c/kg , max 25%	1	56	0	0.6%	12.8%	12.8%
115.	30% or 4.5c/kg	3	3,514	709	20.2%	15.2%	15.2%
116.	30% or 500c/2u	6	221,600	39,767	17.9%	23.3%	25.3%
117.	30% or 7.25c/kg	2	617	185	30.0%	15.4%	7.7%
118.	317c/li of absolute alcohol	2	202	86	42.7%	43.1%	56.6%
119.	325c/kg , max 39%	1	1,639	463	28.2%	39.0%	39.0%
120.	35% or 500c/2u	4	516,966	156,653	30.3%	29.3%	27.2%
121.	35c/no	1	0	0	1.1%	0.0%	0.0%
122.	3c/kg	2	1,983	8	0.4%	0.4%	0.9%
123.	4.15c/kg	7	41,794	501	1.2%	1.2%	1.0%
124.	4.36c/li	1	105,405	1,234	1.2%	0.4%	0.4%
125.	40% or 120c/u	3	291	76	26.2%	21.0%	20.8%
126.	40% or 60% , max 10700c/kg	2	993	510	51.3%	40.0%	40.0%
127.	40% or 60% , max 11520c/kg	2	8,400	2,556	30.4%	40.0%	40.0%
128.	40% or 60% , max 1630c/kg	1	4,142	911	22.0%	40.0%	40.0%
129.	40% or 60% , max 190c each	2	504	240	47.6%	40.0%	40.0%
130.	40% or 60% , max 190c/kg	1	15	6	40.1%	40.0%	40.0%
131.	40% or 60% , max 20500c/kg	1	15,603	7,146	45.8%	40.0%	40.0%
132.	40% or 60% , max 270c/pr	4	4,774	555	11.6%	40.0%	40.0%
133.	40% or 60% , max 3380c/kg	13	48,117	18,066	37.5%	40.0%	40.0%
134.	40% or 60% , max 3460c/kg	1	537	223	41.4%	40.0%	40.0%
135.	40% or 60% , max 3590c/kg	6	88,486	37,570	42.5%	40.0%	40.0%
136.	40% or 60% , max 4225c/kg	20	67,089	19,986	29.8%	40.0%	40.0%
137.	40% or 60% , max 4800c/kg	57	387,45	125,700	32.4%	40.0%	40.0%
138.	40% or 60% , max 5000c/kg	3	26,978	13,555	50.2%	40.0%	40.0%
139.	40% or 60% , max 5090c/kg	3	1,400	564	40.3%	40.0%	40.0%
140.	40% or 60% , max 5280c/kg	67	431,839	158,337	36.7%	40.0%	40.0%
141.	40% or 60% , max 5740c/kg	4	1,762	555	31.5%	40.0%	40.0%
142.	40% or 60% , max 5810c/kg	8	1,480	381	25.8%	40.0%	40.0%
143.	40% or 60% , max 6105c/kg	2	200	103	51.6%	40.0%	40.0%
144.	40% or 60% , max 6865c/kg	7	40,418	14,475	35.8%	40.0%	40.0%
145.	40% or 60% , max 7180c/kg	7	492	222	45.1%	40.0%	40.0%
146.	40% or 60% , max 7500c/kg	3	3,518	1,006	28.6%	40.0%	40.0%
147.	40% or 60% , max 8000c/kg	2	79,816	23,779	29.8%	40.0%	40.0%
148.	40% or 60% , max 8160c/kg	3	358	157	43.9%	40.0%	40.0%
149.	40% or 60% , max 8975c/kg	1	182	79	43.3%	40.0%	40.0%
150.	40% or 60% , max 8980c/kg	21	14,007	5,119	36.6%	40.0%	40.0%
151.	40% or 60% , max 9700c/kg	5	27,475	12,734	46.4%	40.0%	40.0%
152.	40% or 60% , max 9780c/kg	4	2,460	1,141	46.4%	40.0%	40.0%
153.	40% plus 40.3c/kg	1	312	62	19.8%	73.0%	73.0%
154.	40% , max 3000c/kg	32	119,705	29,928	25.0%	40.0%	40.0%
155.	400c/kg	2	115,814	17,776	15.3%	50.4%	28.2%
156.	40c/kg	1	261,278	4,644	1.8%	20.5%	20.5%
157.	450c/kg	8	174,569	23,538	13.5%	44.4%	57.8%
158.	4c/kg	4	36,752	76	0.2%	0.2%	0.3%
159.	5.5c/kg	14	18,751	36	0.2%	0.2%	0.5%
160.	50.3c/kg	1	45	2	3.8%	3.8%	3.8%
161.	500c/kg	8	119,401	22,697	19.0%	35.7%	24.2%
162.	50c/no	1	8	0	0.0%	31.8%	31.8%
163.	55.5c/kg	1	9,075	1,218	13.4%	13.8%	13.8%
164.	56.7c/kg	1	4	0	4.4%	4.4%	4.4%
165.	57.7c/kg	1	275	18	6.7%	6.7%	6.7%
166.	5c/kg	7	98,483	125	0.1%	0.3%	0.4%
167.	5c/li	1	4,233	23	0.6%	0.6%	0.6%
168.	6.6c/kg , max 25%	1	113	1	0.5%	12.8%	12.8%
169.	60% or 2500c/kg	2	31,072	1,994	6.4%	60.0%	60.0%
170.	6c/kg	58	227,82	969	0.4%	0.5%	0.3%
171.	77c/kg	1	2,729	37	1.4%	22.1%	22.1%
172.	78c/kg	1	350	50	14.3%	25.3%	25.3%
173.	8c/kg	6	17,659	230	1.3%	1.5%	0.9%
174.	9.2c/kg	1	545	2	0.3%	0.4%	0.4%

Source: DTI

A consolidated view on the ad-valorem equivalents of other than ad-valorem tariffs is shown in the next table. Note that the number of HS8 commodity lines with specific, mixed or compound tariffs amounts to almost 2000, as can be seen in row 10. Most of the HS8 commodity lines for which ad-valorem equivalents have been calculated fall in the 20% - 30% category (see row 3), followed by the ad-valorem equivalent tariff band of 40% or more (see row 1) and the 0% - 5% band with about 6% of the HS8 commodity lines (see row 7).

Table 10: Consolidated tariff analysis of ad-valorem equivalents of other-than-ad-valorem-tariffs of the July 2000 tariff schedule and associated imports for the 2000 (current Rand values)

		# of HS8 lines	% of # of lines	Imports 2000	% imports 2000
		1	2	3	4
1	tariff ≥ 40%	295	15.2%	1,706,893,493	22.6%
2	30% ≤ tariff < 40%	10	0.5%	711,692,907	9.4%
3	20% ≤ tariff < 30%	1,104	56.9%	3,139,638,416	41.5%
4	15% ≤ tariff < 20%	16	0.8%	228,638,743	3.0%
5	10% ≤ tariff < 15%	13	0.7%	219,918,439	2.9%
6	5% ≤ tariff < 10%	15	0.8%	575,691,938	7.6%
7	0% ≤ tariff < 5%	122	6.3%	984,213,102	13.0%
8	0%	3	0.2%	326	0.0%
9	zero import lines for which no AVE is available	363	18.7%	0	0.0%
10	Total imports specific, etc	1,941	100.0%	7,566,687,364	100.0%

Source: DTI and own calculations, see Table 9

In terms of value of imports it can be seen in the second last entry of the last row that during 2000 about R7.5 billion was imported by South Africa that faces non ad-valorem duties. The distribution of the value of imports across the chosen bands of ad-valorem equivalents mirrors that of the number of HS8 commodity lines, albeit in a more compressed way. The ad-valorem equivalent tariff band with the highest value of imports remains the 20% - 30% range, which accounts for almost 40% of the value of non-ad-valorem imports during 2000, followed by the top band with about 20% and the bottom band with about 13%.

A consolidation of the ad-valorem and ad-valorem equivalent tariffs is shown in the next table. With specific, mixed and compound rates accounting for about 25% of the total number of HS8 commodity lines, the ad-valorem equivalent conversion is expected to have a significant impact on the distribution of HS8 commodity *lines* across the broad bands identified in Tables 6 and 10. The 20% - 30% band now accounts for more than 22% of the HS8 commodity lines, compared to almost 9% before the integration of the ad-valorem equivalents. Similarly, the top band now represents about 4.5% compared to 1% before and the bottom band (0% - 5%) captures 122 lines (or 1.6%) compared to only 5 HS8 lines previously.

Table 11: Consolidated tariff analysis of ad-valorem and ad-valorem equivalents tariff rates of the July 2000 tariff schedule and associated imports for 2000 (current Rand values)

		# of HS8 lines	% of # of lines	Imports 2000	% imports 2000
		1	2	3	4
1	tariff ≥ 40%	354	4.5%	7,840,372,919	4.3%
2	30% ≤ tariff < 40%	170	2.2%	17,873,137,892	9.7%
3	20% ≤ tariff < 30%	1,742	22.3%	12,910,881,748	7.0%
4	15% ≤ tariff < 20%	547	7.0%	6,100,106,953	3.3%
5	10% ≤ tariff < 15%	532	6.8%	6,822,393,474	3.7%
6	5% ≤ tariff < 10%	366	4.7%	10,197,888,207	5.5%
7	0% ≤ tariff < 5%	125	1.6%	1,028,683,515	0.6%
8	0%	3,230	41.3%	121,357,372,605	65.9%
9	zero import lines for which no AVE is available	758	9.7%	0	0.0%
10	Total imports specific, etc	7,824	100.0%	184,130,837,313	100.0%

Source: DTI and own calculations, see Table 10 and Table 6

Given that the *value* of imports for 2000 associated with specific, mixed and compound rates only amounted to about 4% of the total imports over this period, the final distribution compared to Table 6 is not much different, except for the top band, which now accounts for more than 4% compared to 3.5% before the application of the ad-valorem equivalent conversion, the 20% - 30% band with 7.0% compared 5.4% and the 0% to 5% band with 0.6% compared to 0% respectively.

We close this section with a brief look at those HS8 commodity lines that have the highest ad-valorem equivalent tariffs. It can be seen that the highest ad-valorem equivalents are recorded for processed food, in various stages, and textiles.

Table 12: HS8 lines with ad-valorem equivalent tariffs of more than 40% (Imports in current Rand values) based on the July 2000 schedule and 2000 imports

	HS8 code	HS8 description (truncated at 90 characters	original rate	AVE	Imports
1	04029100	Dairy produce; birds' eggs; natural honey; edible products of animal origin, not elsewhere	450c/kg	127.7%	1,057
2	22071000	Beverages, spirits and vinegar. Undenatured ethyl alcohol of an alcoholic strength by volume of	317c/li of absolute alcohol	102.7%	71,414
3	04029900	Dairy produce; birds' eggs; natural honey; edible products of animal origin, not elsewhere	450c/kg	97.2%	2,336,919
4	17019100	Sugars and sugar confectionery Cane or beet sugar and chemically pure sucrose, in solid form. -	118.9c/kg	86.3%	6,407,847
5	02071490	Meat and edible meat offal Meat and edible offal, of the poultry of heading no. 01.05, fresh,	220c/kg	77.6%	60,552,750
6	17011100	Sugars and sugar confectionery Cane or beet sugar and chemically pure sucrose, in solid form. -	118.9c/kg	77.4%	2,474,582
7	11010000	Products of the milling industry; malt; starches; inulin; wheat gluten Wheat or meslin flour. -	40% plus 40.3c/kg	73.0%	312,330
8	04041000	Dairy produce; birds' eggs; natural honey; edible products of animal origin, not elsewhere	450c/kg	62.7%	34,688,627
9	63090017	Other made up textile articles; sets; worn clothing and worn textile articles; rags Worn clothing	60% or 2500c/kg	60.0%	21,802,777
10	63090013	Other made up textile articles; sets; worn clothing and worn textile articles; rags Worn clothing	60% or 2500c/kg	60.0%	9,269,262
11	09024000	Coffee, tea, mate and spices Tea, whether or not flavoured - other black tea (fermented) and	400c/kg	50.8%	114,951,583
12	04051000	Dairy produce; birds' eggs; natural honey; edible products of animal origin, not elsewhere	500c/kg	48.9%	53,655,921
13	04059000	Dairy produce; birds' eggs; natural honey; edible products of animal origin, not elsewhere	500c/kg	46.7%	2,226,166
14	17019900	Sugars and sugar confectionery Cane or beet sugar and chemically pure sucrose, in solid form. -	118.9c/kg	43.9%	3,133,051
15	04039000	Dairy produce; birds' eggs; natural honey; edible products of animal origin, not elsewhere	450c/kg	42.6%	16,804,488
16	62034200	Articles of apparel and clothing accessories, not knitted or crocheted Men's or boys' suits,	40% or 60%, max,5280c/kg	40.0%	118,382,492
17	62052000	Articles of apparel and clothing accessories, not knitted or crocheted Men's or boys' shirts. -	40% or 60%, max,4800c/kg	40.0%	77,298,465
18	62034300	Articles of apparel and clothing accessories, not knitted or crocheted Men's or boys' suits,	40% or 60%, max,5280c/kg	40.0%	54,171,377
19	61091000	Articles of apparel and clothing accessories, knitted or crocheted T-shirts, singlets and other	40% or 60%, max,8000c/kg	40.0%	46,408,424
20	62053000	Articles of apparel and clothing accessories, not knitted or crocheted Men's or boys' shirts. -	40% or 60%, max,4800c/kg	40.0%	42,791,689
21	61113000	Articles of apparel and clothing accessories, knitted or crocheted Babies' garments and clothing	40% or 60%, max,3590c/kg	40.0%	36,701,236
22	61099000	Articles of apparel and clothing accessories, knitted or crocheted T-shirts, singlets and other	40% or 60%, max,8000c/kg	40.0%	33,407,384
23	62059000	Articles of apparel and clothing accessories, not knitted or crocheted Men's or boys' shirts. -	40% or 60%, max,4800c/kg	40.0%	29,808,993
24	62046200	Articles of apparel and clothing accessories, not knitted or crocheted Women's or girls' suits,	40% or 60%, max,5280c/kg	40.0%	29,418,237
25	61112000	Articles of apparel and clothing accessories, knitted or crocheted Babies' garments and clothing	40% or 60%, max,3590c/kg	40.0%	26,617,426
26	62019300	Articles of apparel and clothing accessories, not knitted or crocheted Men's or boys' overcoats,	40% or 60%, max,4225c/kg	40.0%	26,509,864
27	62069000	Articles of apparel and clothing accessories, not knitted or crocheted Women's or girls' blouses,	40% or 60%, max,4800c/kg	40.0%	25,999,340
28	62046300	Articles of apparel and clothing accessories, not knitted or crocheted Women's or girls' suits,	40% or 60%, max,5280c/kg	40.0%	23,010,361
29	61121200	Articles of apparel and clothing accessories, knitted or crocheted Track suits, ski suits and	40% or 60%, max,5000c/kg	40.0%	22,461,178
30	61051000	Articles of apparel and clothing accessories, knitted or crocheted Men's or boys' shirts, knitted	40% or 60%, max,4800c/kg	40.0%	22,312,073
31	62064000	Articles of apparel and clothing accessories, not knitted or crocheted Women's or girls' blouses,	40% or 60%, max,4800c/kg	40.0%	22,280,553
32	62063000	Articles of apparel and clothing accessories, not knitted or crocheted Women's or girls' blouses,	40% or 60%, max,4800c/kg	40.0%	22,098,754
33	61103020	Articles of apparel and clothing accessories, knitted or crocheted Jerseys, pullovers, cardigans,	40% or 60%, max,6865c/kg	40.0%	21,958,101
34	61052000	Articles of apparel and clothing accessories, knitted or crocheted Men's or boys' shirts, knitted	40% or 60%, max,4800c/kg	40.0%	20,601,373
35	62034900	Articles of apparel and clothing accessories, not knitted or crocheted Men's or boys' suits,	40% or 60%, max,5280c/kg	40.0%	19,418,436
36	61143000	Articles of apparel and clothing accessories, knitted or crocheted Other garments, knitted or	40% or 60%, max,4800c/kg	40.0%	19,364,670
37	61059000	Articles of apparel and clothing accessories, knitted or crocheted Men's or boys' shirts, knitted	40% or 60%, max,4800c/kg	40.0%	18,201,813
38	63026090	Other made up textile articles; sets; worn clothing and worn textile articles; rags Bed linen,	40%, max,3000c/kg	40.0%	16,413,532
39	61082200	Articles of apparel and clothing accessories, knitted or crocheted Women's or girls' slips,	40% or 60%, max,9700c/kg	40.0%	16,181,695
40	62121000	Articles of apparel and clothing accessories, not knitted or crocheted Brassieres, girdles,	40% or 60%, max,20500c/kg	40.0%	15,603,091
41	63022100	Other made up textile articles; sets; worn clothing and worn textile articles; rags Bed linen,	40%, max,3000c/kg	40.0%	15,253,335
42	61034300	Articles of apparel and clothing accessories, knitted or crocheted Men's or boys' suits,	40% or 60%, max,5280c/kg	40.0%	15,087,270
43	62029300	Articles of apparel and clothing accessories, not knitted or crocheted Women's or girls'	40% or 60%, max,4225c/kg	40.0%	14,273,245
44	62011990	Articles of apparel and clothing accessories, not knitted or crocheted Men's or boys' overcoats,	40% or 60%, max,3380c/kg	40.0%	13,222,881
45	61031900	Articles of apparel and clothing accessories, knitted or crocheted Men's or boys' suits,	40% or 60%, max,5280c/kg	40.0%	13,021,944
46	62093000	Articles of apparel and clothing accessories, not knitted or crocheted Babies' garments and	40% or 60%, max,3590c/kg	40.0%	12,441,745
47	63023200	Other made up textile articles; sets; worn clothing and worn textile articles; rags Bed linen,	40%, max,3000c/kg	40.0%	12,078,463
48	62113390	Articles of apparel and clothing accessories, not knitted or crocheted Track suits, ski suits and	40% or 60%, max,4800c/kg	40.0%	11,753,381
49	62044300	Articles of apparel and clothing accessories, not knitted or crocheted Women's or girls' suits,	40% or 60%, max,5280c/kg	40.0%	11,328,593
50	61142000	Articles of apparel and clothing accessories, knitted or crocheted Other garments, knitted or	40% or 60%, max,4800c/kg	40.0%	10,843,561

Source: DTI and own calculations

6) Tariffs by Sector

In order to link the trade and tariff analysis to industrial policy issues it is useful to try and express the tariffs calculated in section 3 above in terms of sectors. What is needed here is a bridge from the HS nomenclature to the South Africa Standard Industrial Classification (SIC), which is available in unpublished format from Stats SA. Below we show the tariff structure for the three main sectors of the South African economy for July 2000 and March 2001. This can be compared to the WTO Trade Policy Review (1998: 44), which offers a tariff structure in a similar format for the year 1997 (presumably for ad-valorem tariffs only).

Table 13: Tariff structure for 1997, 2000 and 2001 with imports for 2000

		1	2	3	4	5	6	7	8	9	10	11	12	13
		# of lines	imports (R million curr pr)	imports %	weighted average	unweigh-ted average	unweigh-ted average	unweigh-ted average	standard deviation	standard deviation	standard deviation	coeff of variation	coeff of variation	coeff of variation
		2000	2000	2000	2000	1997	2000	2001	1997	2000	2001	1997	2000	2001
1	agriculture	295	1,459	0.8%	1.4%	5.6%	4.2%	4.0%	8.9%	7.5%	7.2%	1.59	1.76	1.81
2	mining	107	25,559	14.5%	0.0%	1.4%	1.2%	1.4%	3.4%	3.2%	3.7%	2.47	2.78	2.63
3	manufacturing	5,479	149,539	84.7%	8.6%	15.6%	6.7%	6.7%	18.0%	9.6%	9.4%	1.15	1.42	1.40
4	gas	2	7	0.0%	0.0%		0.0%	0.0%		0.0%	0.0%		na	na
5	total	5,883	176,564	100.0%	7.3%	15,1%	6.5%	6.5%	17.8%	9.4%	9.3%	1.18	1.45	1.44

Source: DTI, Customs & Excise, WTO (1998: 44) and own calculations, note: non-ad-valorem tariffs are excluded

Our benchmark can be found in columns 5-7, where we show the unweighted average tariff of June 1997, July 2000 and March 2001. It can be seen that further reduction of tariffs has been achieved across all sectors identified but most notably in the manufacturing sector, where the unweighted average tariff has dropped from 16% to 7%. The total unweighted average tariff has over the same period declined from 15% to 6.5%. Although the standard deviations have also declined across all sectors, the coefficient of variation, which normalises the standard deviation with respect to the unweighted average has increased slightly. This is the result of the continuing decline in the unweighted average tariff, which causes the denominator of the coefficient of variation to become smaller, and this is not matched by an accompanying decline in the standard deviation. In other words, the unweighted average tariff has declined more than its standard deviation, hence the ratio of the latter over the former has increased.

A more interesting way of analysing the tariff structure is according to the degree of processing, as is presented by the WTO (1998: 44). However, the WTO does not reveal the bridge to aggregate the HS nomenclature up according to the degree of processing and merely refers to "data provided by the South African authorities". This is clearly an area that can be considered for further research.

Comparisons of 1997 and 2000 tariff structures with the WTO (1998) are possible at a more detailed SIC level, although this is not possible for all SIC codes as the WTO (1998) disaggregation is based on SIC version 3, while our analysis is based on the more current SIC version 5.

Table 14: Tariff Structure for SICv5, July 2000 and June 1997, with imports for the year 2000

	SICv5 code	SIC v 5 description	1 Jul 00 # lines	2 Jul 00 % #	3 Jun-Aug 00 Import value	4 % imp	5 Jul 00 Av	6 Jun 97 Ave	7 Jul 00 Min	8 Jul 00 Max	9 Jul 00 St dev	10 Jun 97 St dev
1	1	Agriculture, hunting, forestry and fishing	295	5.0%	1,458,983	1.0%	4.2%	5.6%	0.0%	35.0%	7.5%	1.6%
2	11	Agriculture, hunting and related activities	249	4.2%	1,312,264	1.0%	4.0%	4.5%	0.0%	35.0%	7.1%	1.7%
3	111	Growing of crops; market gardening; horticulture	240	4.1%	1,290,119	0.9%	4.2%		0.0%	35.0%	7.1%	
4	115	Hunting, trapping and game propagation including related services	9	0.2%	22,144	0.0%	0.0%		0.0%	0.0%	0.0%	
5	12	Forestry, logging and related services	29	0.5%	135,733	0.1%	4.1%	2.7%	0.0%	25.0%	7.1%	2.4%
6	121	Forestry and related services	15	0.3%	105,115	0.0%	8.0%	3.7%	0.0%	25.0%	8.1%	2.0%
7	122	Logging and related services	14	0.2%	30,618	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	
8	13	Fishing, operation of fish hatcheries and fish farms	17	0.3%	10,987	0.0%	7.6%	14.9%	0.0%	30.0%	11.9%	0.8%
9	131	Ocean and coastal fishing	15	0.3%	10,398	0.0%	8.7%	15.4%	0.0%	30.0%	12.3%	0.8%
10	132	Fish hatcheries and fish farms	2	0.0%	588	0.0%	0.0%	12.9%	0.0%	0.0%	0.0%	1.0%
11	2	Mining and quarrying	107	1.8%	25,559,270	13.2%	1.2%	1.4%	0.0%	15.0%	3.2%	2.5%
12	21	Mining of coal and lignite	5	0.1%	373,671	0.4%	0.0%	0.0%	0.0%	0.0%	0.0%	
13	22	Extraction of crude petroleum and natural gas; service activities incidenta...	10	0.2%	24,454,918	12.4%	3.0%	0.0%	0.0%	15.0%	6.0%	
14	24	Mining of metal ores, except gold and uranium	23	0.4%	180,972	0.1%	0.0%	1.7%	0.0%	0.0%	0.0%	1.2%
15	242	Mining of non-ferrous metal ores, except gold and uranium	20	0.3%	180,962	0.1%	0.0%	1.5%	0.0%	0.0%	0.0%	1.3%
16	25	Other mining and quarring	68	1.2%	549,708	0.3%	1.4%	1.4%	0.0%	10.0%	3.2%	2.8%
17	253	Other quarrying	37	0.6%	466,082	0.3%	2.6%	0.3%	0.0%	10.0%	4.0%	4.2%
18	2531	Mining of chemical and fertilizer minerals	5	0.1%	298,772	0.2%	0.0%	0.6%	0.0%	0.0%	0.0%	2.4%
19	2532	Extraction and evaporation of salt	1	0.0%	7,073	0.0%	10.0%	18.0%	10.0%	10.0%	0.0%	
20	2539	Other mining and quarrying nec	31	0.5%	160,237	0.1%	2.7%	2.4%	0.0%	10.0%	4.0%	2.0%
21	3	Manufacture	5,479	93.1%	149,538,922	85.8%	6.7%	15.6%	0.0%	55.0%	9.6%	1.2%
22	30	Manufacture of food products, beverages and tobacco products	451	7.7%	5,211,325	2.8%	12.6%	13.8%	0.0%	55.0%	13.1%	1.0%
23	301	Production, processing and preserving of meat, fish, fruit vegetables, oils...	260	4.4%	2,677,778	1.4%	13.1%		0.0%	55.0%	13.7%	
24	3011	Production, processing and preserving of meat and meat products	108	1.8%	1,011,618	0.5%	13.8%	16.8%	0.0%	50.0%	17.3%	1.1%
25	3012	Processing and preserving of fish and fish products	25	0.4%	47,018	0.0%	12.5%	19.2%	0.0%	30.0%	13.1%	0.6%
26	3013	Processing and preserving of fruit and vegetables	85	1.4%	331,925	0.2%	15.9%	15.6%	0.0%	55.0%	9.9%	0.7%
27	3014	Manufacture of vegetable and animal oils and fats	42	0.7%	1,287,216	0.7%	6.2%	4.9%	0.0%	20.0%	5.3%	1.1%
28	302	Manufacture of dairy products	13	0.2%	90,380	0.0%	4.2%	16.8%	0.0%	25.0%	8.3%	0.6%
29	303	Manufacture of grain mill products, starches, starch roducts and prepared a...	65	1.1%	1,237,975	0.7%	7.2%		0.0%	25.0%	9.0%	
30	3031	Manufacture of grain mill products	34	0.6%	991,802	0.5%	9.8%	8.2%	0.0%	25.0%	9.8%	1.5%
31	3032	Manufacture of starches and starch products	19	0.3%	47,035	0.0%	5.1%		0.0%	20.0%	6.7%	
32	3033	Manufacture of prepared animal feeds	12	0.2%	199,137	0.1%	3.3%		0.0%	20.0%	7.5%	
33	304	Manufacture of other food products	77	1.3%	944,145	0.5%	13.4%		0.0%	30.0%	10.5%	
34	3041	Manufacture of bakery products, fresh, frozen or dry	7	0.1%	66,593	0.0%	23.6%	22.4%	20.0%	25.0%	2.3%	0.3%
35	3042	Manufacture of sugar, including golden syrup and castor sugar	5	0.1%	9,227	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	
36	3043	Manufacture of cocoa, chocolate and sugar confectionery	14	0.2%	256,512	0.1%	11.7%	16.3%	0.0%	25.0%	10.4%	0.8%
37	3044	Manufacture of macaroni, noodles, couscous and similar farinaceous products...	6	0.1%	40,160	0.0%	25.0%		20.0%	30.0%	5.0%	
38	3049	Manufacture of other food products nec	45	0.8%	571,653	0.3%	12.2%		0.0%	30.0%	9.8%	
39	305	Manufacture of beverages	27	0.5%	238,539	0.1%	14.9%	10.3%	0.0%	25.0%	11.9%	1.2%
40	3051	Distilling, rectifying and blending of spirits; ethyl alcohol production fr...	18	0.3%	61,095	0.0%	20.6%	25.0%	0.0%	25.0%	9.3%	0.0%
41	3052	Manufacture of beer and other malt liquors and malt	6	0.1%	170,466	0.1%	1.3%	0.6%	0.0%	5.0%	2.0%	2.2%
42	3053	Manufacture of soft drinks; production of mineral waters	3	0.1%	6,978	0.0%	8.3%	8.3%	0.0%	25.0%	11.8%	1.7%
43	306	Manufacture of tobacco products	9	0.2%	22,509	0.0%	35.6%	35.6%	0.0%	45.0%	15.5%	0.5%
44	31	Manufacture of textiles, clothing and leather goods	507	8.6%	3,463,942	2.0%	16.2%	34.9%	0.0%	40.0%	11.6%	0.5%
45	311	Spinning, waving and finishing of textiles	162	2.8%	759,876	0.4%	10.4%	32.2%	0.0%	30.0%	9.8%	0.3%
46	3111	Preparation and spinning of textile fibres; weaving of textiles	129	2.2%	705,142	0.4%	9.4%		0.0%	30.0%	10.2%	
47	3112	Finishing of textiles	33	0.6%	54,734	0.0%	14.1%		0.0%	25.0%	6.8%	
48	312	Manufacture of other textiles	183	3.1%	904,855	0.5%	18.2%	29.7%	0.0%	40.0%	10.1%	0.5%
49	3121	Manufacture of made-up textile articles, except apparel	44	0.7%	151,685	0.1%	21.4%		0.0%	40.0%	9.6%	
50	3122	Manufacture of carpets, rugs and mats	28	0.5%	153,406	0.1%	27.5%	30.0%	0.0%	30.0%	6.3%	0.0%
51	3123	Manufacture of cordage, rope, twine and netting	15	0.3%	38,681	0.0%	19.0%	20.1%	5.0%	20.0%	3.7%	0.2%
52	3129	Manufacture of other textiles nec	96	1.6%	561,083	0.3%	13.8%	13.4%	0.0%	30.0%	9.5%	0.7%
53	314	Manufacture of wearing apparel, except fur apparel	37	0.6%	133,299	0.1%	22.8%	59.0%	0.0%	40.0%	13.3%	0.4%
54	315	Dressing and dyeing of fur; manufacture of articles of fur	9	0.2%	1,461	0.0%	18.3%	14.9%	0.0%	30.0%	9.4%	0.8%
55	316	Tanning and dressing of leather; manufacture of luggage, handbags and the l...	38	0.6%	828,360	0.5%	13.3%	5.7%	0.0%	30.0%	12.8%	1.1%
56	3161	Tanning and dressing of leather	25	0.4%	546,690	0.3%	4.6%	25.6%	0.0%	15.0%	5.3%	0.4%
57	3162	Manufacture of luggage, handbags and the like, saddlery and harness	13	0.2%	281,670	0.1%	30.0%		30.0%	30.0%	0.0%	
58	317	Manufacture of footwear	46	0.8%	666,490	0.4%	21.0%	24.9%	0.0%	30.0%	11.9%	0.6%
59	32	Manufacture of wood, products of wood, cork, except furniture; manufacture ...	247	4.2%	5,999,619	3.3%	6.9%	10.0%	0.0%	30.0%	7.3%	1.0%
60	321	Sawmilling and planting of wood	12	0.2%	520,999	0.3%	0.0%	7.5%	0.0%	0.0%	0.0%	1.1%
61	322	Manufacture of products of wood, cork, straw and plaiting materials	56	1.0%	649,655	0.4%	10.4%	11.7%	0.0%	30.0%	8.7%	1.1%
62	3221	Manufacture of veneer sheets; manufacture of plywood, laminboard, particle ...	28	0.5%	263,158	0.2%	9.1%		0.0%	15.0%	4.0%	
63	3222	Manufacture of builders' carpentry and joinery	6	0.1%	38,013	0.0%	12.5%		0.0%	15.0%	5.6%	
64	3223	Manufacture of wooden containers	6	0.1%	126,172	0.0%	16.7%	16.9%	0.0%	30.0%	11.1%	0.4%
65	3229	Manufacture of other products of wood; manufacture of articles of cork, str...	16	0.3%	222,312	0.2%	9.4%		0.0%	30.0%	12.5%	
66	323	Manufacture of paper and paper products	141	2.4%	2,744,865	1.6%	7.1%	7.5%	0.0%	20.0%	6.5%	0.9%
67	3231	Manufacture of pulp, paper and paperboard	103	1.8%	2,335,536	1.3%	5.5%	6.5%	0.0%	20.0%	5.4%	0.9%
68	3232	Manufacture of corrugated paper and paperboard	7	0.1%	42,595	0.0%	10.6%	10.2%	9.0%	15.0%	1.8%	0.6%
69	3239	Manufacture of other articles of paper and paperboard	31	0.5%	366,734	0.2%	11.6%	9.3%	0.0%	20.0%	8.0%	0.9%
70	325	Printing	27	0.5%	997,627	0.5%	4.3%	7.9%	0.0%	15.0%	6.5%	1.0%
71	326	Reproduction of recorded media	11	0.2%	1,086,474	0.6%	0.9%		0.0%	10.0%	2.9%	
72	33	Manufacture of coke, refined petroleum products and nuclear fuel; manufactr...	1,562	26.6%	28,967,725	16.7%	4.2%	6.2%	0.0%	43.0%	6.9%	1.5%
73	331	Manufacture of coke oven products	5	0.1%	326,560	0.1%	4.0%		0.0%	20.0%	8.0%	
74	332	Petroleum refineries/synthesisers	36	0.6%	624,306	0.3%	5.6%	5.4%	0.0%	20.0%	7.4%	1.3%
75	333	Processing of nuclear fuel	5	0.1%	21,369	0.0%	0.0%		0.0%	0.0%	0.0%	
76	334	Manufacture of basic chemicals	921	15.7%	14,058,040	8.1%	2.3%	4.8%	0.0%	22.0%	5.0%	1.7%
77	3341	Manufacture of basic chemicals, except fertilizers and nitrogen compounds	710	12.1%	9,036,867	5.3%	1.3%	2.0%	0.0%	22.0%	3.9%	2.5%
78	3342	Manufacture of fertilisers and nitrogen compounds	28	0.5%	869,768	0.6%	0.0%	2.9%	0.0%	0.0%	0.0%	1.8%
79	3343	Manufacture of plastics in primary form and of synthetic rubber	183	3.1%	4,151,405	2.2%	6.5%	9.8%	0.0%	18.0%	6.7%	1.0%
80	335	Manufacture of other chemical products	335	5.7%	10,199,106	5.9%	4.4%	6.3%	0.0%	20.0%	6.9%	1.4%
81	3351	Manufacture of pesticides and other agro-chemical products	16	0.3%	763,397	0.5%	5.6%		0.0%	10.0%	5.0%	
82	3352	Manufacture of paints, varnishes and similar coatings, printing ink and mas...	19	0.3%	573,372	0.3%	4.2%	7.3%	0.0%	10.0%	4.9%	1.1%
83	3353	Manufacture of pharmaceuticals, medicinal chemicals and botanical products ...	105	1.8%	4,714,087	2.8%	0.4%	1.9%	0.0%	20.0%	2.3%	2.5%
84	3354	Manufacture of soap and detergents, cleaning and polishing preparations, pe...	41	0.7%	878,371	0.5%	16.5%	18.2%	0.0%	20.0%	5.5%	0.4%
85	3359	Manufacture of other chemical products nec	154	2.6%	3,269,879	1.8%	3.8%	6.2%	0.0%	20.0%	5.9%	1.4%
86	336	Manufacture of man-made fibres	16	0.3%	368,938	0.2%	3.8%		0.0%	15.0%	6.5%	
87	337	Manufacture of rubber products	94	1.6%	2,011,498	1.2%	12.0%	15.7%	0.0%	43.0%	10.7%	0.8%
88	3371	Manufacture of rubber tyres and tubes retreading and rebuilding of rubber t...	32	0.5%	1,182,916	0.7%	16.5%	19.2%	0.0%	43.0%	14.2%	0.8%
89	3379	Manufacture of other rubber products	62	1.1%	828,582	0.5%	9.8%	14.5%	0.0%	20.0%	7.4%	0.8%
90	338	Manufacture of plastic products	150	2.5%	1,357,909	0.7%	9.8%	12.3%	0.0%	25.0%	7.7%	0.8%
91	34	Manufacture of other non-metallic mineral products	221	3.8%	2,906,979	1.7%	6.5%	6.8%	0.0%	30.0%	7.3%	1.2%
92	341	Manufacture of glass and glass products	114	1.9%	719,643	0.4%	7.6%	8.1%	0.0%	20.0%	5.8%	0.8%
93	342	Manufacture of other non-metallic mineral products nec	107	1.8%	2,187,336	1.2%	5.3%	4.5%	0.0%	30.0%	8.5%	1.7%
94	3421	Manufacture of non-structural non-refractory ceramicware	17	0.3%	841,291	0.5%	10.0%		0.0%	30.0%	12.4%	
95	3422	Manufacture of refractory ceramic products	8	0.1%	570,239	0.3%	0.0%		0.0%	0.0%	0.0%	
96	3423	Manufacture of structural non-refractory clay and ceramic products	26	0.4%	277,698	0.2%	6.5%	5.4%	0.0%	20.0%	8.4%	1.9%
97	3424	Manufacture of cement, lime and plaster	9	0.2%	58,560	0.0%	0.0%	0.5%	0.0%	0.0%	0.0%	2.8%
98	3425	Manufacture of articles of concrete, cement and plaster	17	0.3%	95,455	0.1%	5.3%		0.0%	15.0%	7.2%	
99	3426	Cutting, shaping and finishing of stone	11	0.2%	81,714	0.1%	0.0%		0.0%	0.0%	0.0%	

Table 14 (cont): Tariff Structure for SICv5, July 2000 and Jun 1997, with imports for the year 2000

			1	2	3	4	5	6	7	8	9	10
			Jul 00	Jul 00	Jun-Aug 00		Jul 00	Jun 97	Jul 00	Jul 00	Jul 00	Jun 97
	SICv5 code	SIC v 5 description	# lines	% #	Import value	% imp	Av	Ave	Min	Max	St dev	St dev
100	3429	Manufacture of other non-metallic mineral products nec	19	0.3%	262,379	0.1%	7.1%		0.0%	15.0%	7.5%	
101	35	Manufacture of basic metals, fabricated metal products, machinery and equip...	1,437	24.4%	37,726,444	20.4%	4.7%	3.7%	0.0%	40.0%	7.2%	1.3%
102	351	Manufacture of basic iron and steel	246	4.2%	2,299,362	1.3%	4.3%	4.3%	0.0%	15.0%	3.8%	0.9%
103	352	Manufacture of basic precious and non-ferrous metals	181	3.1%	1,984,924	1.1%	2.7%	3.0%	0.0%	13.0%	4.4%	1.7%
104	353	Casting of iron and steel	3	0.1%	25,240	0.0%	0.0%		0.0%	0.0%	0.0%	
105	354	Manufacture of structural metal products, tanks, reservoirs and steam gener...	25	0.4%	129,737	0.1%	3.8%	6.1%	0.0%	15.0%	6.2%	1.7%
106	3541	Manufacture of structural metal products	14	0.2%	66,519	0.0%	6.8%	9.0%	0.0%	15.0%	7.0%	1.0%
107	3542	Manufacture of tanks, reservoirs and similar containers of metal	6	0.1%	56,739	0.0%	0.0%		0.0%	0.0%	0.0%	
108	3543	Manufacture of steam generators, except central heating hot water boilers	5	0.1%	6,479	0.0%	0.0%		0.0%	0.0%	0.0%	
109	355	Manufacture of other fabricated metal products; metalwork service activitie...	327	5.6%	4,132,760	2.2%	8.0%	4.0%	0.0%	30.0%	9.0%	1.7%
110	3551	Forging, pressing, stamping and roll-forming of metal powder metallurgy	12	0.2%	105,759	0.0%	0.0%		0.0%	0.0%	0.0%	
111	3553	Manufacture of cutlery, hand tools and general hardware	132	2.2%	1,454,735	0.8%	10.4%	11.6%	0.0%	30.0%	10.0%	0.9%
112	3559	Manufacture of other fabricated metal products nec	183	3.1%	2,572,266	1.4%	6.8%	7.3%	0.0%	30.0%	7.9%	1.1%
113	356	Manufacture of general purpose machinery	165	2.8%	6,801,747	3.7%	4.7%	3.7%	0.0%	20.0%	7.0%	2.0%
114	3561	Manufacture of engines and turbines, except aircraft, vehicle and motorcycl...	30	0.5%	1,932,588	1.0%	2.7%	3.1%	0.0%	20.0%	6.0%	2.3%
115	3562	Manufacture of pumps, compressors, taps and valves	49	0.8%	2,500,912	1.4%	5.9%		0.0%	15.0%	7.1%	
116	3563	Manufacture of bearings, gears, gearing and driving elements	16	0.3%	794,146	0.5%	8.8%		0.0%	20.0%	9.9%	
117	3564	Manufacture of ovens, furnaces and furnace burners	4	0.1%	178,695	0.1%	0.0%		0.0%	0.0%	0.0%	
118	3565	Manufacture of lifting and handling equipment	48	0.8%	936,568	0.5%	3.8%		0.0%	15.0%	5.4%	
119	3569	Manufacture of other general purpose machinery	18	0.3%	458,839	0.2%	5.1%		0.0%	17.0%	7.2%	
120	357	Manufacture of special purpose machinery	359	6.1%	11,604,590	6.2%	2.1%	6.4%	0.0%	35.0%	5.7%	1.4%
121	3571	Manufacture of agricultural and forestry machinery	31	0.5%	444,004	0.2%	1.6%	1.5%	0.0%	20.0%	4.5%	3.1%
122	3572	Manufacture of machine tools	96	1.6%	2,375,265	1.1%	1.6%	6.6%	0.0%	20.0%	4.8%	1.4%
123	3573	Manufacture of machinery for metallurgy	9	0.2%	240,181	0.1%	0.0%		0.0%	0.0%	0.0%	
124	3574	Manufacture of machinery for mining, quarrying and construction	38	0.6%	2,311,054	1.4%	1.7%		0.0%	10.0%	3.7%	
125	3575	Manufacture of machinery for food, beverage and tobacco processing	13	0.2%	400,631	0.2%	0.0%		0.0%	0.0%	0.0%	
126	3576	Manufacture of machinery for textile, apparel and leather production	45	0.8%	924,961	0.5%	0.0%		0.0%	0.0%	0.0%	
127	3577	Manufacture of weapons and ammunition	24	0.4%	36	0.0%	15.6%		0.0%	35.0%	9.7%	
128	3579	Manufacture of other special purpose machinery	103	1.8%	4,908,458	2.6%	0.9%		0.0%	19.0%	3.7%	
129	358	Manufacture of household appliances nec	88	1.5%	2,189,446	1.2%	10.4%	15.1%	0.0%	40.0%	10.5%	0.8%
130	359	Manufacture of office, accounting and computing machinery	43	0.7%	8,558,638	4.6%	0.0%	0.0%	0.0%	0.0%	0.0%	
131	36	Manufacture of electrical machinery and apparatus nec	250	4.2%	6,107,366	3.3%	7.3%		0.0%	21.0%	7.5%	
132	361	Manufacture of electric motors, generators and transformers	42	0.7%	1,184,804	0.7%	7.7%	6.0%	0.0%	20.0%	7.7%	1.2%
133	362	Manufacture of electricity distribution and control apparatus	84	1.4%	2,217,506	1.2%	6.5%		0.0%	15.0%	5.7%	
134	363	Manufacture of insulated wire and cable	11	0.2%	495,608	0.3%	12.7%		0.0%	15.0%	4.9%	
135	364	Manufacture of accumulators, primary cells and primary batteries	33	0.6%	407,534	0.2%	7.4%		0.0%	20.0%	7.4%	
136	365	Manufacture of electric lamps and lighting equipment	43	0.7%	548,271	0.3%	11.1%		0.0%	21.0%	9.5%	
137	366	Manufacture of other electrical equipment nec	37	0.6%	1,253,642	0.7%	2.4%	9.6%	0.0%	15.0%	5.1%	1.0%
138	37	Manufacture of radio, television and communication equipment and apparatus...	319	5.4%	21,162,307	12.3%	1.2%	2.8%	0.0%	25.0%	4.4%	2.7%
139	371	Manufacture of electronic valves and tubes and other electronic components	29	0.5%	2,089,304	1.3%	2.4%		0.0%	25.0%	6.5%	
140	372	Manufacture of television and radio transmitters and apparatus for line tel...	37	0.6%	6,625,351	4.0%	6.2%		0.0%	25.0%	8.2%	
141	373	Manufacture of television and radio receivers, sound or video recording or ...	38	0.6%	6,415,494	3.5%	0.7%		0.0%	15.0%	2.8%	
142	374	Manufacture of medical appliances and instruments and appliances for measu...	98	1.7%	4,715,329	2.7%	0.5%		0.0%	20.0%	2.7%	
143	3741	Manufacture of medical and surgical equipment and orthopaedic appliances	60	1.0%	2,507,717	1.4%	0.6%		0.0%	20.0%	3.2%	
144	3742	Manufacture of instruments and appliances for measuring, checking, testing,...	34	0.6%	2,164,204	1.2%	0.3%		0.0%	10.0%	1.7%	
145	3743	Manufacture of industrial process control equipment	4	0.1%	43,408	0.0%	0.0%		0.0%	0.0%	0.0%	
146	375	Manufacture of optical instruments and photographic equipment	62	1.1%	981,609	0.6%	0.4%		0.0%	15.0%	2.3%	
147	376	Manufacture of watches and clocks	55	0.9%	335,220	0.2%	0.0%		0.0%	0.0%	0.0%	
148	38	Manufacture of transport equipment	239	4.1%	31,445,659	19.2%	10.6%	12.3%	0.0%	47.0%	13.8%	1.3%
149	381	Manufacture of motor vehicles	71	1.2%	8,062,338	4.9%	17.7%	18.8%	0.0%	47.0%	17.2%	1.0%
150	382	Manufacture of bodies (coachwork) for motor vehicles; manufacture of traile...	9	0.2%	124,799	0.0%	17.8%		15.0%	35.0%	6.3%	
151	383	Manufacture of parts and accessories for motor vehicles and their engines	70	1.2%	17,245,615	10.8%	14.6%		0.0%	35.0%	11.8%	
152	384	Building and repairing of ships	21	0.4%	207,889	0.1%	3.3%	5.2%	0.0%	15.0%	5.4%	1.5%
153	385	Manufacture of railway and tramway locomotives and rolling stock	25	0.4%	103,919	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	
154	386	Manufacture of aircraft and spacecraft	19	0.3%	5,164,315	3.1%	0.0%	0.0%	0.0%	0.0%	0.0%	
155	387	Manufacture of transport equipment nec	24	0.4%	536,784	0.3%	0.6%	10.6%	0.0%	15.0%	3.0%	1.0%
156	3871	Manufacture of motor cycles	12	0.2%	339,436	0.2%	0.0%		0.0%	0.0%	0.0%	
157	3872	Manufacture of bicycles and invalid carriages	12	0.2%	197,348	0.1%	1.3%		0.0%	15.0%	4.1%	
158	39	Manufacture of furniture; manufacturing nec; recycling	246	4.2%	6,547,556	4.2%	7.9%		0.0%	30.0%	9.8%	
159	391	Manufacture of furniture	28	0.5%	781,778	0.5%	17.9%		0.0%	20.0%	6.2%	
160	392	Manufacturing nec	218	3.7%	5,765,778	3.7%	6.7%		0.0%	30.0%	9.4%	
161	3921	Manufacture of jewellery and related articles	62	1.1%	3,551,474	2.5%	5.1%	10.5%	0.0%	20.0%	8.6%	1.0%
162	3922	Manufacture of musical instruments	23	0.4%	57,205	0.0%	0.0%		0.0%	0.0%	0.0%	
163	3923	Manufacture of sports goods	27	0.5%	469,960	0.3%	3.3%	9.6%	0.0%	20.0%	6.5%	1.7%
164	3924	Manufacture of games and toys	21	0.4%	859,309	0.5%	3.8%		0.0%	30.0%	9.5%	
165	3929	Other manufacturing nec	85	1.4%	827,830	0.4%	11.4%	8.0%	0.0%	30.0%	9.7%	1.3%
166	4	Electricity, gas, steam and water supply	2	0.0%	6,974	0.0%	0.0%		0.0%	0.0%	0.0%	
167	41	Electricity, gas, steam and hot water supply	2	0.0%	6,974	0.0%	0.0%		0.0%	0.0%	0.0%	
168	411	Production, collection and distribution of electricity	1	0.0%	6,244	0.0%	0.0%		0.0%	0.0%	0.0%	
169	412	Manufacture of gas; distribution of gaseous fuels through mains	1	0.0%	730	0.0%	0.0%		0.0%	0.0%	0.0%	
170		Total	5,883	100.0%	176,564,150	100.0%	6.5%		0.0%	55.0%	9.4%	

Source: DTI, Customs & Excise, WTO (1998) and own calculations, note: excluding non ad-valorem tariffs

If we rank the sectors according to the average ad-valorem tariff, as is presented in the next table for the highest 50 average tariffs calculated, it can be seen that the most protected sectors are found in the tobacco, textiles, clothing and footwear, food and beverage clusters, followed in 15^{th} position by the motor vehicle industry.

Table 15: Ranked tariff Structure for SICv5, July 2000 and Jun 1997, with imports for the year 2000

	SICv5 code	SIC v 5 description	1 Jul 00 # lines	2 Jul 00 % #	3 2000 Import value	4 % imp	5 Jul 00 Av	6 Jun 97 Ave	7 Jul 00 Min	8 Jul 00 Max	9 Jul 00 St dev	10 Jun 97 St dev
1	306	Manufacture of tobacco products	9	0.2%	22,509	0.0%	35.6%	35.6%	0.0%	45.0%	15.5%	0.5%
2	3162	Manufacture of luggage, handbags and the like, saddlery and harness	13	0.2%	281,670	0.2%	30.0%		30.0%	30.0%	0.0%	
3	3122	Manufacture of carpets, rugs and mats	28	0.5%	153,406	0.1%	27.5%	30.0%	0.0%	30.0%	6.3%	0.0%
4	3044	Manufacture of macaroni, noodles, couscous and similar farinaceous products...	6	0.1%	40,160	0.0%	25.0%		20.0%	30.0%	5.0%	
5	3041	Manufacture of bakery products, fresh, frozen or dry	7	0.1%	66,593	0.0%	23.6%	22.4%	20.0%	25.0%	2.3%	0.3%
6	314	Manufacture of wearing apparel, except fur apparel	37	0.6%	133,299	0.1%	22.8%	59.0%	0.0%	40.0%	13.3%	0.4%
7	3121	Manufacture of made-up textile articles, except apparel	44	0.7%	151,685	0.1%	21.4%		0.0%	40.0%	9.6%	
8	317	Manufacture of footwear	46	0.8%	666,490	0.4%	21.0%	24.9%	0.0%	30.0%	11.9%	0.6%
9	3051	Distilling, rectifying and blending of spirits; ethyl alcohol production fr...	18	0.3%	61,095	0.0%	20.6%	25.0%	0.0%	25.0%	9.3%	0.0%
10	3123	Manufacture of cordage, rope, twine and netting	15	0.3%	38,681	0.0%	19.0%	20.1%	5.0%	20.0%	3.7%	0.2%
11	315	Dressing and dyeing of fur; manufacture of articles of fur	9	0.2%	1,461	0.0%	18.3%	14.9%	0.0%	30.0%	9.4%	0.8%
12	312	Manufacture of other textiles	183	3.1%	904,855	0.5%	18.2%	29.7%	0.0%	40.0%	10.1%	0.5%
13	391	Manufacture of furniture	28	0.5%	781,778	0.4%	17.9%		0.0%	20.0%	6.2%	
14	382	Manufacture of bodies (coachwork) for motor vehicles; manufacture of traile...	9	0.2%	124,799	0.1%	17.8%		15.0%	35.0%	6.3%	
15	381	Manufacture of motor vehicles	71	1.2%	8,062,338	4.6%	17.7%	18.8%	0.0%	47.0%	17.2%	1.0%
16	3223	Manufacture of wooden containers	6	0.1%	126,172	0.1%	16.7%	16.9%	0.0%	30.0%	11.1%	0.4%
17	3354	Manufacture of soap and detergents, cleaning and polishing preparations, pe...	41	0.7%	878,371	0.5%	16.5%	18.2%	0.0%	20.0%	5.5%	0.4%
18	3371	Manufacture of rubber tyres and tubes retreading and rebuildingof rubber t...	32	0.5%	1,182,916	0.7%	16.5%	19.2%	0.0%	43.0%	14.2%	0.8%
19	31	Manufacture of textiles, clothing and leather goods	507	8.6%	3,463,942	2.0%	16.2%	34.9%	0.0%	40.0%	11.6%	0.5%
20	3013	Processing and preserving of fruit and vegetables	85	1.4%	331,925	0.2%	15.9%	15.6%	0.0%	55.0%	9.9%	0.7%
21	3577	Manufacture of weapons and ammunition	24	0.4%	36	0.0%	15.6%		0.0%	35.0%	9.7%	
22	305	Manufacture of beverages	27	0.5%	238,539	0.1%	14.9%	10.3%	0.0%	25.0%	11.9%	1.2%
23	383	Manufacture of parts and accessories for motor vehicles and their engines	70	1.2%	17,245,615	9.8%	14.6%		0.0%	35.0%	11.8%	
24	3112	Finishing of textiles	33	0.6%	54,734	0.0%	14.1%		0.0%	25.0%	6.8%	
25	3011	Production, processing and preserving of meat and meat products	108	1.8%	1,011,618	0.6%	13.8%	16.8%	0.0%	50.0%	17.3%	1.1%
26	3129	Manufacture of other textiles nec	96	1.6%	561,083	0.3%	13.8%	13.4%	0.0%	30.0%	9.5%	0.7%
27	304	Manufacture of other food products	77	1.3%	944,145	0.5%	13.4%		0.0%	30.0%	10.5%	
28	316	Tanning and dressing of leather; manufacture of luggage, handbags and the l...	38	0.6%	828,360	0.5%	13.3%	5.7%	0.0%	30.0%	12.8%	1.1%
29	301	Production, processing and preserving of meat, fish, fruit vegetables, oils...	260	4.4%	2,677,778	1.5%	13.1%		0.0%	55.0%	13.7%	
30	363	Manufacture of insulated wire and cable	11	0.2%	495,608	0.3%	12.7%		0.0%	15.0%	4.9%	
31	30	Manufacture of food products, beverages and tobacco products	451	7.7%	5,211,325	3.0%	12.6%	13.8%	0.0%	55.0%	13.1%	1.0%
32	3012	Processing and preserving of fish and fish products	25	0.4%	47,018	0.0%	12.5%	19.2%	0.0%	30.0%	13.1%	0.6%
33	3222	Manufacture of builders' carpentry and joinery	6	0.1%	38,013	0.0%	12.5%		0.0%	15.0%	5.6%	
34	3049	Manufacture of other food products nec	45	0.8%	571,653	0.3%	12.2%		0.0%	30.0%	9.8%	
35	337	Manufacture of rubber products	94	1.6%	2,011,498	1.1%	12.0%	15.7%	0.0%	43.0%	10.7%	0.8%
36	3043	Manufacture of cocoa, chocolate and sugar confectionery	14	0.2%	256,512	0.1%	11.7%	16.3%	0.0%	25.0%	10.4%	0.8%
37	3239	Manufacture of other articles of paper and paperboard	31	0.5%	366,734	0.2%	11.6%	9.3%	0.0%	20.0%	8.0%	0.9%
38	3929	Other manufacturing nec	85	1.4%	827,830	0.5%	11.4%	8.0%	0.0%	30.0%	9.7%	1.3%
39	365	Manufacture of electric lamps and lighting equipment	43	0.7%	548,271	0.3%	11.1%		0.0%	21.0%	9.5%	
40	3232	Manufacture of corrugated paper and paperboard	7	0.1%	42,595	0.0%	10.6%	10.2%	9.0%	15.0%	1.8%	0.6%
41	38	Manufacture of transport equipment	239	4.1%	31,445,659	17.8%	10.6%	12.3%	0.0%	47.0%	13.8%	1.3%
42	311	Spinning, waving and finishing of textiles	162	2.8%	759,876	0.4%	10.4%	32.2%	0.0%	30.0%	9.8%	0.3%
43	322	Manufacture of products of wood, cork, straw and plaiting materials	56	1.0%	649,655	0.4%	10.4%	11.7%	0.0%	30.0%	8.7%	1.1%
44	3553	Manufacture of cutlery, hand tools and general hardware	132	2.2%	1,454,735	0.8%	10.4%	11.6%	0.0%	30.0%	10.0%	0.9%
45	358	Manufacture of household appliances nec	88	1.5%	2,189,446	1.2%	10.4%	15.1%	0.0%	40.0%	10.5%	0.8%
46	2532	Extraction and evaporation of salt	1	0.0%	7,073	0.0%	10.0%	18.0%	10.0%	10.0%	0.0%	
47	3421	Manufacture of non-structural non-refractory ceramicware	17	0.3%	841,291	0.5%	10.0%		0.0%	30.0%	12.4%	
48	3031	Manufacture of grain mill products	34	0.6%	991,802	0.6%	9.8%	8.2%	0.0%	25.0%	9.8%	1.5%
49	3379	Manufacture of other rubber products	62	1.1%	828,582	0.5%	9.8%	14.5%	0.0%	20.0%	7.4%	0.8%
50	338	Manufacture of plastic products	150	2.5%	1,357,909	0.8%	9.8%	12.3%	0.0%	25.0%	7.7%	0.8%

Source: DTI, Customs & Excise, WTO (1998) and own calculations, note: excluding non ad-valorem tariffs

7) Collection Rates

There are a number of reasons why the actual duties collected as a proportion of imports may be less than the scheduled tariffs. Firstly, there may be rebates that apply to certain shipments and not to others. Secondly, goods may be imported from a Free Trade Area such as the EU or SADC. There may also be other bilateral agreements that apply to certain countries and certain goods. These arrangements will put significant burden on the Customs & Excise administration. Some monitoring of the applied rates that are governed by the EU and SADC FTAs is currently undertaken at DTI but this needs to be expanded and matched with the relevant trade data. The third reason for a deviation between actual and potential duties collected is the intentional and unintentional administrative error. We first present the duty collection efficiency analysis by broad tariff band followed by broad commodity classification of 22 chapters. Note that there is no information available to discriminate amongst these three elements and in what follows in this section the analysis is limited to ad-valorem tariffs.

Table 16: Consolidated tariff analysis based on July 2000 tariff schedule and 2000 imports, actual duties collected and potential duties (current R million)

		# of HS8 lines	% of # of lines	Imports	% imports	Actual duties collected	Actual duties collection rate	Potential duties to be collected	Potential duty collection rate	Collection efficiency rate
		1	2	3	4	5	6	7	8	9
1	tariff ≥ 40%	63	0.8%	6,133	3.5%	316	5.2%	2,865	46.7%	11.0%
2	30% ≤ tariff < 40%	168	2.1%	17,161	9.7%	514	3.0%	5,911	34.4%	8.7%
3	20% ≤ tariff < 30%	681	8.7%	9,771	5.5%	1,374	14.1%	2,015	20.6%	68.2%
4	15% ≤ tariff < 20%	576	7.4%	5,871	3.3%	641	10.9%	886	15.1%	72.3%
5	10% ≤ tariff < 15%	539	6.9%	6,602	3.7%	477	7.2%	683	10.3%	69.9%
6	5% ≤ tariff < 10%	366	4.7%	9,622	5.4%	458	4.8%	542	5.6%	84.5%
7	0% ≤ tariff < 5%	5	0.1%	44	0.0%	2	3.7%	2	3.8%	99.4%
8	0%	3,485	44.5%	121,357	68.7%	8	0.0%	0	0.0%	na
9	Total	5,883		176,564	100.0%	3,791	2.1%	12,904	7.3%	29.4%

Source: DTI and Customs & Excise, note: analysis only applies to ad-valorem tariff

While the first four columns are repeated from Table 6 above, column 5 shows the actual duties collected as published by Customs & Excise followed by the collection rate, i.e., the actual duties collected divided by the total imports for 2000 shown in column 3, in the next column. Using the tariff schedule of July 2000, the potential duties collected over the same period are shown in column 7 with the potential duty collection rate in column 8. Comparing columns 6 and 8 offers a view on the collection efficiency rate, keeping in mind the various reasons for deviations from unity as discussed above. It can be seen that the collection efficiency increases when moving down the tariff schedule, i.e., below 10% import duty rates, the actual duties collected are about 85% of what should have been collected. On the other side of the schedule, the collection rate is evidently much lower, with less than 10% being collected of the potential duties for tariffs over 30%. The overall collection efficiency rate (as defined in our limited way) is about 29%.

To get a broad indication of where in the commodity range the collection efficiency is relatively low, we present the same information for 22 broadly defined commodity groups. What is clear from the Table 17 below is that the overall average is pulled down by the "unclassified" category in shown in row 22. This includes the imports of original equipment components for the motor vehicle industry which faces 35% in the tariff schedule. Moreover, in row 17 it can be seen that the collection efficiency in the broad category of motor vehicles is the second lowest. Both should be seen in the light of the Motor Industry Development Plan. Duties collected on mineral products are also significantly less than what should be collected although the value of the potential duties involved is very low.

Table 17: Consolidated tariff analysis based on July 2000 tariff schedule and 2000 imports, actual duties collected and potential duties (current R million) for 22 broad categories of commodities

	Ch22	Ch22 code	# of HS8 lines	% of # of lines	Imports	% imports	Actual duties collected	Actual duties collection rate	Simple average tariff	Potential duties to be collected	Potential duty collection rate	Collection efficiency rate
			1	2	3	4	5	6	7	8	9	10
1.	01	Live animals animal products	128	2%	824	0.5%	58	7.0%	11.1%	103	12.5%	56.3%
2.	02	Vegetable products	295	5%	2,389	1.4%	33	1.4%	7.2%	52	2.2%	62.8%
3.	03	Animal or vegetable fats & oils	43	1%	773	0.4%	13	1.7%	4.2%	23	2.9%	59.2%
4.	04	Prepared foodstuffs, beverages, tobacco	210	4%	2,030	1.1%	203	10.0%	15.0%	238	11.7%	85.4%
5.	05	Mineral products	166	3%	26,521	15.0%	2	0.0%	2.0%	13	0.0%	13.0%
6.	06	Products of chemical or allied industries	1,094	19%	20,373	11.5%	238	1.2%	2.3%	335	1.6%	71.0%
7.	07	Plastics and rubber	424	7%	7,414	4.2%	468	6.3%	8.8%	693	9.3%	67.5%
8.	08	Raw hides and skins, leather	75	1%	1,091	0.6%	109	10.0%	10.9%	137	12.5%	79.9%
9.	09	Wood, cork, straw	86	1%	1,208	0.7%	31	2.6%	7.7%	37	3.1%	82.9%
10.	10	Pulp, paper & paperboard, books	166	3%	3,710	2.1%	199	5.4%	6.5%	245	6.6%	81.2%
11.	11	Textiles, fabrics, clothing	443	8%	2,428	1.4%	209	8.6%	14.6%	302	12.4%	69.2%
12.	12	Footwear, headgear, umbrellas	74	1%	829	0.5%	150	18.0%	20.8%	226	27.3%	66.2%
13.	13	Articles of stone asbestos ceramics glass	203	3%	2,673	1.5%	156	5.9%	7.0%	176	6.6%	88.7%
14.	14	Precious metals	60	1%	3,551	2.0%	25	0.7%	5.3%	33	0.9%	77.4%
15.	15	Base metals	742	13%	7,555	4.3%	258	3.4%	5.7%	353	4.7%	72.9%
16.	16	Machinery, mechanical & electrical	1,035	18%	52,723	29.9%	785	1.5%	4.0%	1,060	2.0%	74.1%
17.	17	Vehicles, aircraft, ships	211	4%	15,524	8.8%	617	4.0%	10.0%	3,337	21.5%	18.5%
18.	18	Optical photograph measuring musical inst	242	4%	6,909	3.9%	15	0.2%	0.3%	34	0.5%	45.4%
19.	20	Miscellaneous manufactured articles	170	3%	2,812	1.6%	171	6.1%	9.7%	255	9.1%	67.1%
20.	21	Works of art collectors pieces & antiques	7	0%	220	0.1%	0	0.0%	0.0%	0	0.0%	na
21.	22	Other unclassified goods	9	0%	15,008	8.5%	51	0.3%	35.0%	5,253	35.0%	1.0%
22.		Total	5,883	100%	176,564	100.0%	3,791	2.1%	6.5%	12,904	7.3%	29.4%

Source: DTI and Customs & Excise, note: analysis only applies to ad-valorem tariff

8) Effective Rates of Protection

It is well known that the degree of protection derived by an activity from a tariff on its output needs to be qualified by the degree of taxation due to tariffs on its inputs in order to get a sense of the *net* protection as opposed to the *gross* protection. *Net*, or rather, *effective* protection has been the subject of several studies in South Africa (see Holden and Holden, 1975; Kuhn & Jansen, 1997 and Fedderke & Vaze, 2000). While the traditional ingredient to the calculation of effective rates of protection is the nominal tariff as scheduled by the authorities, Fedderke & Vaze (2000) use collection rates as a proxy in the face of data constraints. The other ingredient that is necessary for the successful examination of effective protection is information on the inputs of each of the activities identified. Input structures for a large number of activities in the South African economy have recently been updated by Stats SA (2000) benchmarked on the year 1998 as part of the Supply – Use Tables for that year[3].

Although this is not a perfect set of ingredients, the nominal tariffs for 2000 and the 1998 SUT are currently the most recent available and will be used in this section to examine various (but not all) angles on effective rates of protection.

The simplest way to think about effective rates of protection is continue with the *net* protection concept mentioned above, which suggests that we should be concerned with the impact of nominal tariffs on *net* production, or *value added*. In particular, we like to know the difference between a sector's value added in world prices and in domestic (i.e. distorted or observed) prices expressed in terms of the latter. This can be written as:

[3] It should be noted, however, that the structural information on an activities input structure, available from the Use component of the Supply – Use Tables, is still based on the 1993 manufacturing census, although a partial updating has been achieved for lower level control totals using the 1996 manufacturing census.

(1) $$ERP_j = \frac{VA_j^* - VA_j}{VA_j}$$

in which ERP_j is the effective rate of protection in activity j, the "*" subscript indicates world price so that VA_j^* value added of activity j at world prices and VA_j value added of sector j at domestic prices as observed in the input-output data base. Since value added is the difference between output (Xj) in activity j and intermediate inputs ($Intm_{ij}$) that activity j purchases from activity i, equation (1) can be rewritten as

(2) $$ERP_j = \frac{\left(X_j^* - \sum_1^i Intm_{ij}^*\right) - \left(X_j - \sum_1^i Intm_{ij}\right)}{\left(X_j - \sum_1^j Intm_{ij}\right)} = \frac{\left(X_t(1+t_j) - \sum_1^i Intm_{ij}(1+t_i)\right) - \left(X_j - \sum_1^i Intm_{ij}\right)}{\left(X_j - \sum_1^j Intm_{ij}\right)}$$

in which t_j and t_i are the tariffs on activity j and i respectively. Some properties worth mentioning here are that effective protection will be higher if the nominal protection on output (t_j) is raised, but lower if the nominal protection on inputs (t_i) is raised. With higher intermediate demand ($Intm_{ij}$), value added will be lower and with a given tariff on output the proportional effect on value added is greater as there is less to protect.

In what follows we simplify a number of issues that have been dealt with extensively in the literature but they are worth mentioning briefly at this stage. Firstly, there is the issue of non-traded inputs such as construction, electricity, trade, transport, financial and community services. Two crude options are available, either non-traded inputs are considered traded inputs with a zero tariff, which has been labelled the Balassa method, or non-traded inputs are considered to be part of value added. The latter option, in which the index i of equation (2) above only applies to traded activities, was proposed by Corden. Consequently, with an expanded view on value added, there is more to protect, so to speak, and as a result the leverage of the output tariff is smaller and the effective rates of protection of the Corden method are most likely to be lower than those calculated by the Balassa method.

The so-called crude Corden measure can be refined by factoring the direct and indirect traded intermediate inputs out of the value added by taking the appropriate components of the Leontief inverse. Moreover, it could be argued that prices of non-traded inputs rise with protection due to higher competition for resources and aggregate expenditure effects (Greenaway & Milner, 1993: 83) which would give rise to higher effective protection given the same output tariff. The degree to which prices will in fact increase depends on the substitution between non-traded and traded goods. Staying with the possibility of substitution, Holden and Holden (1978) have investigated the degree to which intermediate inputs and value added can be exchanged. If there is indeed scope for substitution away from taxed inputs towards primary inputs, $Intm_{ij}$, in equation (2) above can be expected to decline and given the same tariff schedule, the effective rate of protection will be lower compared to a situation without substitution. Although a number of other substitutions are possible according to Holden & Holden (1978, 226), we ignore them for reasons of convenience. In sum, our application below takes a rather static view on protection afforded by the tariff schedule

Finally, we do not investigate the actually observed resource shifts that may or may not be associated with nominal or effective rates of protection. The degree to which nominal and effective rates of protection induce resources to shift into the higher protected activities have been tested by Holden (1999) and Fedderke & Vaze (2000) for South Africa. We limit ourselves to the reporting of effective rates of protection according to the Balassa and *crude* Corden methods based on the tariff schedule and the observed collection rates. In terms of the distinction between traded and non-traded goods the former is assumed to include Agriculture, Mining and Manufacturing, i.e., SIC 1-3. Non-traded goods therefore include utilities, construction and all services. Comparisons between nominal and effective, Balassa and Corden and tariff schedule and collection rates respectively are achieved by means of correlation coefficients.

Table 18: Nominal and effective rates of protection for 2000 based on the tariff structure

SU-tables description	Balassa's ERP	Corden's ERP	rank	NRP	rank	SU-tables description	Balassa's ERP	Corden's ERP	rank	NRP	rank
1 Carpets	364.3%	78.6%	1	28.9%	5	49 Petroleum	1.4%	0.9%	46	0.5%	66
2 Handbags	321.2%	70.2%	3	30.0%	3	50 Basic chemicals	1.2%	0.6%	50	1.0%	58
3 Motor vehicles	252.4%	81.0%	2	36.2%	1	51 Pesticides	0.5%	0.3%	51	1.2%	55
4 Motor vehicle parts	145.0%	64.8%	4	32.7%	2	52 Pumps	0.5%	0.3%	52	1.6%	51
5 Bakeries	116.2%	54.1%	5	24.8%	7	53 General machinery	0.3%	0.2%	53	1.4%	52
6 Footwear	99.8%	55.8%	6	28.1%	6	54 Lifting equipment	0.1%	0.1%	54	1.1%	56
7 Wearing apparel	98.8%	50.7%	12	29.2%	4	55 FSIM	0.0%	na	55	0.0%	74
8 Furniture	92.2%	38.7%	11	19.3%	10	56 Electrical equipment	-0.3%	-0.2%	57	2.1%	48
9 Soap	82.2%	35.3%	7	18.9%	12	57 Agriculture	-0.3%	-0.2%	58	1.4%	53
10 Tyres	80.0%	35.1%	8	19.0%	11	58 Real estate	-0.3%	na	84	0.0%	84
11 Knitting mills	79.9%	35.0%	14	21.3%	9	59 Machine-tools	-0.3%	-0.2%	56	0.9%	61
12 Textile articles	76.8%	36.5%	15	21.8%	8	60 Electricity	-0.4%	na	60	0.0%	87
13 Animal feeds	71.4%	34.0%	9	9.0%	26	61 Insurance	-0.5%	na	59	0.0%	80
14 Other paper	62.6%	31.0%	13	15.7%	13	62 Cement	-0.6%	-0.4%	74	0.0%	87
15 Wire and cable	50.0%	33.3%	10	14.2%	14	63 Water	-0.6%	na	76	0.0%	82
16 Other food	40.6%	20.8%	16	13.6%	16	64 Fish	-0.8%	-0.6%	65	0.5%	67
17 Lighting equipment	39.1%	23.3%	17	12.4%	18	65 Publishing	-0.9%	-0.6%	62	1.9%	49
18 Confectionery	37.5%	21.1%	22	13.7%	15	66 Business activities	-0.9%	na	61	0.0%	73
19 Fruit	35.4%	17.8%	21	11.4%	21	67 Other mining	-1.1%	-0.7%	72	0.0%	71
20 Other rubber	35.0%	20.4%	18	11.8%	20	68 Communications	-1.1%	na	71	0.0%	79
21 Textiles	32.9%	17.7%	23	10.9%	22	69 Trade	-1.2%	na	69	0.0%	85
22 Plastic	31.1%	19.3%	25	13.0%	17	70 Health and social work	-1.3%	na	73	0.0%	76
23 Other textiles	28.0%	17.9%	27	11.9%	19	71 General government	-1.3%	na	63	0.0%	78
24 Containers of paper	26.3%	15.7%	24	10.2%	24	72 Fertilizers	-1.3%	-0.8%	81	0.0%	87
25 Paper	22.7%	11.0%	20	7.2%	28	73 Gold	-1.4%	-1.1%	68	0.0%	87
26 Glass	20.1%	11.1%	31	8.9%	27	74 Other transport	-1.5%	-1.1%	66	0.2%	69
27 Beverages & tobacco	19.3%	12.8%	19	9.7%	25	75 Grain mills	-1.6%	-1.0%	78	0.7%	63
28 Other non-metallic	19.3%	10.3%	28	6.0%	33	76 Treated metals	-1.7%	-1.0%	70	0.0%	87
29 Household appliances	14.9%	8.7%	36	6.7%	30	77 Activities/services	-1.7%	na	67	0.0%	75
30 Primary plastics	14.9%	8.3%	26	4.8%	38	78 Agricultural machinery	-1.7%	-1.3%	75	0.8%	62
31 Oils	14.5%	6.9%	29	4.9%	36	79 Engines	-1.7%	-1.1%	64	0.5%	65
32 Structural ceramics	14.1%	9.2%	32	6.2%	32	80 Coal	-1.9%	-1.2%	82	0.0%	87
33 Fabricated metal	12.4%	7.6%	33	5.4%	34	81 Dairy	-2.0%	-1.2%	77	1.0%	57
34 Non-structural ceramics	12.3%	6.3%	35	5.0%	35	82 Sugar	-2.1%	-1.3%	83	0.0%	87
35 General hardware	12.1%	7.8%	34	6.3%	31	83 Transport services	-2.1%	na	80	0.0%	83
36 Structural metal	10.0%	5.9%	40	4.9%	37	84 Hotels	-2.4%	na	92	0.0%	86
37 Iron and steel	10.0%	5.0%	37	3.4%	44	85 Special machinery	-2.9%	-2.0%	79	0.3%	68
38 Paints	7.3%	3.6%	41	4.1%	43	86 Pharmaceuticals	-3.1%	-1.7%	88	0.1%	70
39 Electricity apparatus	6.8%	5.1%	39	4.6%	40	87 Other chemicals	-3.3%	-2.0%	85	1.2%	54
40 Wood	5.7%	3.6%	43	3.1%	45	88 Mining machinery	-3.8%	-2.6%	86	0.9%	59
41 Other manufacturing	5.1%	4.4%	30	4.8%	39	89 Office machinery	-4.3%	-2.1%	91	0.0%	87
42 Electric motors	4.7%	3.4%	44	4.5%	41	90 Other construction.	-4.3%	na	90	0.0%	77
43 Non-ferrous metals	4.5%	3.1%	38	2.5%	47	91 Optical instruments	-4.4%	-2.9%	87	0.6%	64
44 Accumulators	3.9%	2.5%	42	4.1%	42	92 Recorded media	-6.6%	-4.5%	94	0.0%	72
45 Radio and television	3.5%	2.2%	48	2.7%	46	93 Food machinery	-7.4%	-5.0%	89	0.0%	87
46 Leather	3.3%	1.5%	45	6.9%	29	94 Buildings	-7.5%	na	93	0.0%	81
47 Jewellery	3.1%	1.9%	47	0.9%	60	95 Meat	-378.3%	221.8%	95	10.5%	23
48 Gears	2.1%	1.2%	49	1.8%	50	Average on traded goods	12.0%	7.6%		7.3%	

Source: DTI and Customs & Excise and own calculations, note: analysis only applies to ad-valorem tariff, for SIC codes see Stats SA (2000)

Several observations can be made. In the first place, row 95 shows that the meat sector's effective rate of protection is the lowest when calculated with the Balassa method, while it is the highest in case the Corden method is applied. The reason is that according to Stats SA's Supply-Use Table, value added as a proportion of total output in this activity is about 5%, while the economy-wide average is about 50%, which causes any change in intermediate inputs due to tariffs abolition to produce exaggerated change in value added, which may swing from positive to negative territories.

In the second place it can be seen that the effective rate according to the Balassa method is indeed considerably higher than the effective rate according to the Corden method. If we ignore the wild swing in the effective rate of protection of the meat sector (see row 95) the correlation coefficient is 91% on the traded goods, while the rank correlation between the two measures is 99%. The correlation between the Balassa measure and the nominal rates of protection is 68% and the rank correlation is 88%, while the correlation between the Corden measure and the nominal rates of protection is 67% and the rank correlation 95% respectively. This suggests that the nominal rate of protection is a reasonable indicator of the effective rate of protection.

At the top of the table it can be seen that relatively high effective rates of protection are found in the textiles, leather, footwear, clothing, motor vehicles and parts, food processing and to some degree the chemicals and rubber production activities. Towards the middle of the table, we arrive in negative effective rate territories. Activities that currently receive no protection on their output, such as the non-traded goods producers and traded activities, such as cement (row 62) and fertiliser (row 72), sugar (row 82) and office equipment (row 89) are subject to negative real protection. However, also activities with a low level of output protection such as electrical equipment (row 56), agriculture (row 57) and grain milling (row 75), other chemicals (row 87) and optical equipment (row 91) have a negative effective rate of protection, because the weighted input tariffs on their inputs amount to more than their output tariff.

In the next table we show results of the same methodologies but now applied to the collection rates. In the last row it can be seen that the nominal collection rate is only just over 2% compared to an average schedules ad-valorem equivalent of more than 7%. The effective rates of protection on traded goods are therefore also much lower at 7% and 4.5% for the Balassa and Corden method respectively. By comparing the ratio effective and nominal rates of protection of the tariff schedule with that of the collection rates it can be noted that they are higher than for the latter, which suggests that there is relatively more effective protection when considering the collection rates. The correlations between the effective rates and the nominal collection rates are again, relatively high at 64% and 89% for the respectively Balassa and Corden method respectively, while the rank correlations are 92% and 95% respectively. This suggests again that the nominal rate of protection based on collection rates is a reasonable indicator for the effective rate of protection based on collection rates.

Table 19: Nominal and effective rates of protection for 2000 based on the collection rates

	SU-tables description	Balassa's ERP	Corden's ERP	rank	NRP	rank		SU-tables description	Balassa's ERP	Corden's ERP	rank	NRP	rank
1	Meat	386.8%	67.5%	1	5.9%	25	49	Pumps	1.1%	0.8%	49	1.5%	49
2	Handbags	259.3%	64.0%	2	26.3%	1	50	Motor vehicle parts	0.8%	0.5%	52	1.6%	48
3	Carpets	224.7%	63.5%	3	23.6%	3	51	Lifting equipment	0.8%	0.5%	51	1.0%	54
4	Bakeries	105.7%	50.5%	4	23.3%	4	52	Electrical equipment	0.7%	0.5%	50	1.8%	45
5	Wearing apparel	85.2%	45.2%	8	24.6%	2	53	Pesticides	0.4%	0.2%	54	1.0%	56
6	Animal feeds	76.1%	35.7%	5	8.7%	19	54	Basic chemicals	0.3%	0.1%	55	0.5%	62
7	Textile articles	68.7%	33.4%	12	18.6%	5	55	General machinery	0.2%	0.2%	56	1.1%	51
8	Other paper	59.1%	29.6%	6	14.3%	7	56	Petroleum	0.2%	0.1%	53	0.1%	70
9	Soap	53.9%	25.4%	7	14.2%	8	57	FSIM	0.0%	0.0%	57	0.0%	74
10	Footwear	52.3%	32.7%	10	17.7%	6	58	Publishing	-0.2%	-0.2%	58	1.7%	47
11	Knitting mills	43.4%	21.5%	16	13.5%	9	59	Real estate	-0.3%	0.0%	86	0.0%	84
12	Lighting equipment	40.2%	23.8%	11	11.9%	10	60	Electricity	-0.3%	0.0%	62	0.0%	87
13	Tyres	40.1%	20.1%	13	11.4%	12	61	Insurance	-0.4%	0.0%	60	0.0%	80
14	Wire and cable	35.5%	24.5%	9	10.4%	15	62	Fish	-0.4%	-0.3%	61	0.5%	63
15	Other food	33.3%	17.5%	14	11.4%	13	63	General government	-0.5%	0.0%	59	0.0%	78
16	Confectionery	31.3%	18.0%	18	11.8%	11	64	Water	-0.5%	0.0%	80	0.0%	82
17	Furniture	30.0%	15.5%	22	9.2%	17	65	Cement	-0.5%	-0.3%	79	0.0%	87
18	Containers of paper	28.1%	16.7%	19	9.5%	16	66	Grain mills	-0.7%	-0.4%	71	0.6%	61
19	Other rubber	26.3%	15.8%	15	9.0%	18	67	Other mining	-0.7%	-0.4%	68	0.0%	72
20	Plastic	26.2%	16.5%	23	10.7%	14	68	Agriculture	-0.7%	-0.6%	78	0.8%	57
21	Fruit	24.8%	12.9%	20	8.5%	20	69	Business activities	-0.7%	0.0%	63	0.0%	73
22	Textiles	19.4%	11.0%	27	6.9%	23	70	Dairy	-0.7%	-0.5%	66	1.0%	53
23	Other non-metallic	18.2%	9.8%	24	5.6%	27	71	Communications	-0.7%	0.0%	69	0.0%	79
24	Motor vehicles	18.1%	10.6%	26	4.9%	30	72	Machine-tools	-0.7%	-0.5%	64	0.4%	64
25	Other textiles	17.8%	11.7%	30	7.8%	21	73	Transport services	-0.8%	0.0%	74	0.0%	83
26	Paper	16.7%	8.4%	17	5.5%	28	74	Activities/services	-0.9%	0.0%	65	0.0%	75
27	Glass	16.7%	9.3%	28	7.5%	22	75	Health and social work	-0.9%	0.0%	76	0.0%	76
28	Structural ceramics	13.1%	8.5%	32	5.7%	26	76	Trade	-0.9%	0.0%	75	0.0%	85
29	Beverages & tobacco	11.4%	7.8%	21	6.4%	24	77	Agricultural machinery	-1.0%	-0.7%	70	0.7%	58
30	Oils	11.2%	5.4%	29	3.8%	37	78	Fertilizers	-1.0%	-0.6%	84	0.0%	87
31	Non-structural ceramics	11.0%	5.7%	35	4.4%	32	79	Gold	-1.1%	-0.8%	72	0.0%	87
32	Fabricated metal	10.6%	6.5%	33	4.4%	33	80	Coal	-1.1%	-0.7%	81	0.0%	87
33	General hardware	10.1%	6.5%	34	5.2%	29	81	Other transport	-1.2%	-0.9%	67	0.2%	68
34	Household appliances	9.9%	5.9%	37	4.8%	31	82	Treated metals	-1.2%	-0.7%	73	0.0%	87
35	Primary plastics	8.3%	4.7%	31	2.8%	42	83	Sugar	-1.4%	-0.9%	85	0.0%	87
36	Iron and steel	7.1%	3.6%	38	2.5%	44	84	Hotels	-1.6%	0.0%	93	0.0%	86
37	Electricity apparatus	6.7%	5.0%	36	4.0%	35	85	Engines	-1.9%	-1.2%	77	0.3%	65
38	Paints	6.3%	3.1%	39	3.3%	39	86	Other chemicals	-2.0%	-1.2%	83	1.1%	52
39	Structural metal	5.3%	3.2%	40	2.9%	41	87	Special machinery	-2.2%	-1.5%	82	0.2%	67
40	Other manufacturing	5.0%	4.3%	25	4.4%	34	88	Pharmaceuticals	-2.4%	-1.4%	87	0.2%	69
41	Wood	4.9%	3.1%	42	2.6%	43	89	Mining machinery	-3.0%	-2.1%	88	0.7%	60
42	Electric motors	4.2%	3.1%	43	3.5%	38	90	Other construction.	-3.4%	0.0%	91	0.0%	77
43	Jewellery	3.4%	2.1%	45	0.7%	59	91	Office machinery	-3.4%	-1.7%	92	0.0%	87
44	Accumulators	3.3%	2.1%	41	3.2%	40	92	Optical instruments	-3.9%	-2.6%	89	0.3%	66
45	Gears	2.1%	1.2%	46	1.5%	50	93	Recorded media	-5.5%	-3.7%	95	0.0%	71
46	Leather	1.8%	0.8%	47	4.0%	36	94	Food machinery	-5.7%	-3.8%	90	0.0%	87
47	Radio and television	1.7%	1.1%	48	1.8%	46	95	Buildings	-6.1%	0.0%	94	0.0%	81
48	Non-ferrous metals	1.6%	1.1%	44	1.0%	55		Average	7.0%	4.5%		2.1%	

Source: DTI and Customs & Excise and own calculations, note: analysis only applies to ad-valorem tariff, for SIC codes see Stats SA (2000)

While the ranking of activities is more or less the same as in the case of the effective rates based on the tariff schedule, the notable absentee from the top is motor vehicles, basically, because the nominal tariff based on collection rates is, with 10% (see row 24) much lower than the scheduled weighted average tariff of 36%. The correlation coefficients between the effective rates of protection based on the collection rates and the tariff schedule is 87% and 84% for the Balassa and Corden method, while the rank correlation is 97% and 96% respectively, which suggests that the effective rates of protection based on the collection rates are a good indicator of the effective rates of protection based on the tariff schedule. The ultimate question, however, is whether the actual collection rates are correlated in any way with the effective rates of protection based on the tariff schedule. The correlation coefficients are however, much lower at about 54% and 60% for the Balassa and Corden method respectively, although they reach 74% and 82% respectively if we ignore the meat processing activity as an outlier. This means that if one is aware of outliers, such as the meat processing activity, the actual import duty collection rates, at least at this level of activity aggregation, gives a reasonably accurate picture of effective rates of protection based on the tariff schedule.

9) Conclusions and Recommendations

It is clear from our analysis that a rather arbitrary framework for tariff analysis has been chosen, many other permutations of the data could offer other angles on the tariff structure in South Africa, such as tariff escalation. Moreover, the analysis has not dealt with rebates, bindings, free trade agreements and other bilateral trade arrangements between South Africa and its trading partners.

A cursory comparison with earlier analysis suggests that tariffs have declined over the period 1997-2001, notably for manufacturing. However, further tariff liberalisation has been slow in last couple of years. Tariff peaks still exist for a number of broad categories of commodities such as processed foods (HS 0- 2), vehicles and components thereof (HS 87), tobacco products (HS 24), rubber products (HS 40) and clothing and textiles (HS6). About 25% of the HS8 commodity lines are faced with non ad-valorem tariffs, although the value of imports involved is not more than 4% of total import in 2000. An attempt is made to convert non ad-valorem tariffs in order to check for tariff peaks. The highest ad-valorem equivalents are recorded for processed food, in various stages, and textiles. Finally, duty collection rates, which can give an indication of the efficiency of duty collection are lowest for mineral fuels, motor vehicles and components thereof. Relatively high effective rates of protection are found in the textiles, leather, footwear, clothing, motor vehicles and parts, food processing and to some degree the chemicals and rubber production activities.

The tariff schedule changes on a biweekly basis. Combined with the monthly releases of trade date it makes sense to consider creating a system that takes both data sources and combines them into a single analytical platform from which various analytical reports can be drawn on a regular basis. Such a system should be able to generate at least some if not all of the tables presented above and many more, after all they are generated in a rather mechanical way. Finally, having more than 200 different tariffs may still pose an administrative burden and it makes sense to further simplify the tariff schedule from that point of view.

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