

Manufacturing: production and sales

Statistical release

P3041.2

May 2000
Embargo: 13:00
Date: 11 July 2000

Key figures as at the end of May 2000

Actual estimates	May 2000	% change between May 1999 and May 2000	% change between March 1999 to May 1999 and March 2000 to May 2000	% change between January 1999 to May 1999 and January 2000 to May 2000
Physical volume of manufacturing production index (1995=100)	106,1	+4,9	+4,0	+3,5
Total value of sales of manufactured products (R million)	36 888,9	+12,8	+12,1	+11,8

Seasonally adjusted estimates	May 2000	% change between April 2000 and May 2000	% change between December 1999 to February 2000 and March 2000 to May 2000
Physical volume of manufacturing production index (1995=100)	105,3	+6,5	-1,1
Total value of sales of manufactured products (R million)	36 918,1	+6,7	+1,3

Key findings as at the end of May 2000

MANUFACTURING PRODUCTION DECREASES

Manufacturing production for the three months up to May 2000 reflected a decrease of 1,1% after seasonal adjustment compared with the previous three months. Lower manufacturing production was reported in 20 of the 27 major manufacturing divisions.

The major contributors to the decrease of 1,1% after seasonal adjustment in the total manufacturing production were the fabricated metal products (-0,5 of a percentage point), followed by the machinery (-0,4 of a percentage point), motor vehicle (-0,2 of a percentage point), the plastic products (-0,2 of a percentage point), other manufacturing industries (-0,2 of a percentage point), and furniture (-0,2 of a percentage point) divisions. However, these decreases were partially counteracted by inter alia increases in the basic iron and steel products (+0,6 of a percentage point) and the basic chemicals (+0,5 of percentage point) divisions (cf. Table A).

The total value of sales of manufactured products reflected an increase of 1,3% (R1 358 million) after seasonal adjustment for the three months up to May 2000 compared with the previous three months. The largest increases were reported by the coke and refined petroleum products (+14,0% or R886 million), basic iron and steel (+8,7% or R672 million), basic chemicals (+5,4% or R286 million), basic precious and non-ferrous metal products (+5,0% or R177 million) and food and food products (+2,1% or R302 million) divisions during this period.

Notes

Forthcoming issues Issue Expected release date

June 2000 8 August 2000

Purpose of the survey The monthly Manufacturing Production and Sales Survey is a country-wide sample survey covering a sample of private establishments, public corporations and government establishments operating in the manufacturing industry in the South African economy. The results of this survey are used to calculate physical volume of manufacturing production indices in order to estimate the gross domestic product (GDP) to monitor and develop Government policy.

Table A - Contribution of the production by the different manufacturing divisions to the total manufacturing production (Base 1995=100)

Manufacturing Divisions	Percentage contribution to the total manufacturing production in the base year 1995 (Weights)	Average seasonally adjusted production index for the three months Mar.2000 - May 2000	Quarterly percentage change (Mar. 2000 - May 2000 compared with the preceding three months)	Contribution (percentage points) to the seasonally adjusted quarterly percentage change in total manufacturing production 1/
Food and food products	10,7	95,8	-0,6	-0,06
Beverages	4,6	94,9	+2,2	+0,10
Total textiles	2,9	95,7	-0,6	-0,02
Total Wearing apparel	3,6	84,8	-1,7	-0,06
Tanning and dressing of leather	0,4	121,9	-6,6	-0,03
Footwear	0,9	68,0	-4,0	-0,04
Wood and products of wood	1,9	117,6	-0,7	-0,01
Paper and paper products	5,3	103,5	-0,4	-0,02
Total publishing and printing	4,1	91,9	-2,6	-0,11
Coke and refined petroleum products	4,2	103,6	-2,0	-0,08
Basic chemicals	4,5	139,5	+10,5	+0,47
Other chemical products	6,2	102,0	-2,5	-0,15
Rubber products	1,4	97,1	+0,6	+0,01
Plastic products	3,1	87,4	-6,5	-0,20
Glass and glass products	1,0	85,6	+6,3	+0,06
Other non-metallic mineral products	3,5	88,2	-2,3	-0,08
Basic iron and steel products	7,6	119,8	+7,3	+0,55
Basic precious and non-ferrous metal products	3,2	160,4	+0,3	+0,01
Fabricated metal products	7,0	96,8	-7,6	-0,54
Total machinery and equipment	5,8	91,0	-6,1	-0,35
Electrical machinery, apparatus	3,4	98,6	-2,6	-0,09
Radio, television and communication apparatus	1,0	132,9	+0,5	+0,01
Professional equipment	0,5	71,4	-12,1	-0,06
Motor vehicles; trailers; parts and accessories	8,0	116,9	-2,6	-0,21
Other transport equipment	1,0	107,6	-4,7	-0,05
Furniture	1,6	91,7	-11,1	-0,17
Other manufacturing industries	2,6	105,2	-7,5	-0,19
TOTAL	100,0	104,0	-1,1	-1,10

1/ The contribution is calculated by multiplying the quarterly percentage change of each manufacturing division with its corresponding weight in the base year.

P3041.2

Table 1 - Indices of the physical volume of manufacturing production: Total

Base 1995 = 100

Month	1994	1995	1996	1997	1998	1999	2000
Actual indices							
J	72,7	80,6	83,6	89,8	89,6	86,7	88,9
F	87,0	97,6	96,7	103,1	101,1	98,0	103,2
M	95,6	104,2	102,6	102,5	102,8	101,5	109,3*
A	82,8	91,0	96,4	105,5	96,3	94,8	94,0
M	84,8	101,8	104,1	106,2	101,1	101,1	106,1 1/
J	92,4	102,4	102,9	104,9	104,5	100,5	
J	92,9	101,7	104,7	108,2	104,4	104,3	
A	94,0	106,0	107,8	105,8	100,0	103,5	
S	100,9	106,7	105,2	108,3	106,8	107,0	
O	104,2	112,5	115,8	119,1	111,8	112,9	
N	108,2	110,7	114,4	111,7	109,8	115,5	
D	85,3	84,8	83,7	86,9	85,3	90,6	
Year	91,7	100,0	101,5	104,3	101,1	101,4	
Seasonally adjusted indices							
J	87,4	96,5	99,1	105,6	104,8	100,7	102,7
F	88,3	99,3	98,7	105,2	102,8	99,7	104,8
M	91,1	100,0	99,5	100,3	101,0	99,8	107,8
A	88,7	97,3	102,1	111,1	101,2	99,4	98,9
M	85,4	101,8	104,0	105,5	100,1	100,2	105,3
J	91,4	101,3	101,6	103,3	103,1	99,4	
J	91,6	99,9	102,4	105,5	101,6	101,4	
A	90,9	102,6	104,5	102,9	97,6	101,2	
S	95,8	101,5	100,2	103,2	102,1	102,6	
O	94,0	101,1	103,1	105,9	99,7	100,7	
N	97,2	99,8	103,2	101,2	99,7	105,3	
D	98,1	98,2	98,9	102,5	101,1	108,1	

* Revised

1/ Preliminary

P3041.2

Table 2 - Indices of the physical volume of manufacturing production according to manufacturing divisions and major groups

Base 1995 = 100

Manufacturing divisions and major groups	Weights	Year	Actual indices			Seasonally adjusted indices					
			1999	May	April	May 1/	May	April	May		
				1999		2000		1999		2000	
Food and food products	10,7	99,2	101,8	89,4	99,3	97,6	94,4	95,2			
Meat, fish, fruit etc.	2,8	112,4	109,5	109,6	113,4	108,7	110,1	112,5			
Dairy products	1,4	92,8	87,8	76,9	75,8	93,4	85,2	80,5			
Grain mill products	2,1	93,9	94,6	88,8	98,4	92,5	92,6	96,3			
Other food products	4,4	95,3	104,6	80,5	97,9	94,1	88,0	88,0			
Beverages	4,6	100,8	94,0	83,1	83,5	101,2	98,6	89,9			
Total textiles	2,9	91,3	92,8	84,8	98,2	88,5	90,3	94,1			
Textiles	1,7	83,8	81,9	77,8	88,4	79,4	80,8	86,2			
Other textile products	1,2	101,9	108,2	94,8	112,0	101,4	103,7	105,4			
Total wearing apparel	3,6	88,3	86,5	77,3	80,1	91,8	80,7	84,8			
Knitted, crocheted articles	0,6	82,5	85,8	65,2	89,3	78,1	65,4	81,5			
Wearing apparel	3,0	89,5	86,7	79,7	78,2	94,6	83,8	85,5			
Tanning and dressing of leather	0,4	122,9	134,1	107,5	151,2	124,9	105,5	140,9			
Footwear	0,9	69,2	66,8	63,9	62,2	71,2	69,1	66,3			
Wood and products of wood	1,9	114,1	117,1	108,9	122,0	118,5	110,6	123,6			
Sawmilling and planing of wood	0,8	104,2	113,4	101,2	105,5	117,5	105,0	109,3			
Products of wood	1,2	120,6	119,6	113,9	132,8	119,2	114,3	133,0			
Paper and paper products	5,3	98,2	100,2	88,6	112,4	101,4	96,8	113,0			
Total publishing and printing	4,1	93,1	94,1	86,5	92,8	93,6	91,6	92,3			
Publishing	1,5	99,6	94,0	98,2	93,2	97,5	102,0	96,9			
Printing, recorded media	2,6	89,5	94,2	80,0	92,6	91,5	85,7	89,8			
Coke and refined petroleum products	4,2	106,4	105,6	105,8	107,9	103,5	101,6	105,8			
Basic chemicals	4,5	126,9	109,6	120,3	145,6	117,1	127,0	156,4			
Other chemical products	6,2	103,3	100,2	100,3	95,4	103,7	104,0	98,8			
Rubber products	1,4	92,8	93,9	77,1	114,0	93,2	77,0	112,8			
Plastic products	3,1	86,5	81,2	78,1	85,2	83,5	82,7	87,8			
Glass and glass products	1,0	85,2	91,6	86,6	73,2	100,0	90,0	80,6			
Other non-metallic mineral products	3,5	85,0	84,6	82,9	88,6	83,2	87,3	87,5			
Basic iron and steel products	7,6	96,9	96,5	113,5	122,1	90,3	113,9	114,5			
Basic precious and non-ferrous metal products	3,2	153,3	150,3	147,6	168,3	146,2	159,1	164,9			
Fabricated metal products	7,0	99,1	103,9	82,7	103,0	103,2	85,2	102,3			
Structural metal products	2,4	95,9	105,7	73,8	96,1	104,1	78,7	94,5			
Other fabricated metal product	4,6	100,8	103,0	87,3	106,5	102,7	88,5	106,3			
Total machinery and equipment	5,8	97,5	106,6	74,2	93,9	104,3	82,3	92,2			
General purpose machinery	2,5	111,5	129,5	88,3	99,1	120,8	89,5	92,0			
Special purpose machinery	2,9	84,4	86,8	60,6	87,2	90,4	74,6	90,4			
Household appliances	0,4	105,3	106,3	85,2	110,6	102,0	92,7	106,0			
Electrical machinery, apparatus	3,4	96,5	92,6	88,5	97,3	92,1	93,9	97,0			
Radio, television and communication apparatus	1,0	126,9	136,0	131,2	126,9	126,2	158,6	117,2			
Professional equipment	0,5	77,9	75,8	70,7	70,8	74,9	71,0	70,3			
Motor vehicles; trailers; parts and accessories	8,0	102,5	101,6	101,2	125,2	95,9	101,8	119,2			
Motor vehicles	4,5	97,0	96,6	91,8	118,1	88,4	93,2	108,8			
Bodies for motor vehicles; trailers and semi-trailers	0,5	64,3	54,4	59,3	71,5	56,6	57,0	75,1			
Parts and accessories	3,0	117,7	117,7	123,1	145,6	114,3	122,9	143,0			
Other transport equipment	1,0	113,1	121,6	110,2	114,7	113,5	106,3	106,9			
Furniture	1,6	102,6	102,9	78,8	93,6	105,0	81,5	95,4			
Other manufacturing industries	2,6	107,7	106,2	81,1	103,0	104,9	97,3	101,8			
TOTAL	100,0	101,4	101,1	94,0	106,1	100,2	98,9	105,3			

* Revised
1/ Preliminary

P3041.2

Table 3 - Value of sales of the manufacturing industry: Total (R'000)

Month	1994	1995	1996	1997	1998	1999*	2000
Actual values							
J	16 267 098	19 206 220	21 803 249	25 254 480	25 913 926	26 410 458	28 455 805*
F	19 815 926	24 414 317	26 328 500	29 866 793	29 901 544	30 607 558	35 051 932*
M	22 056 191	26 712 878	28 188 286	29 866 272	32 190 538	32 788 344	37 989 608*
A	19 132 660	22 897 368	26 231 967	30 438 604	29 758 879	30 508 382	32 769 966
M	19 723 817	25 806 431	28 293 052	30 626 091	30 352 835	32 711 351	36 888 890 1/
J	22 055 323	26 204 689	28 261 416	30 575 542	31 723 893	33 095 019	
J	22 251 097	25 613 126	28 378 392	31 169 707	31 732 667	33 398 049	
A	21 957 670	27 064 919	29 568 761	31 400 042	30 810 619	33 726 526	
S	23 954 300	27 737 968	29 549 724	31 344 644	32 896 327	35 913 871	
O	25 209 944	29 294 559	33 070 022	35 902 602	34 970 472	37 401 299	
N	26 275 416	29 960 074	33 084 713	33 709 581	34 300 610	38 832 411	
D	20 667 319	23 877 458	26 338 721	28 128 922	29 016 347	33 012 832	
Year	259 366 761	308 790 007	339 096 803	368 283 280	373 568 657	398 406 100	
Seasonally adjusted values							
J	19 825 442	23 572 147	26 520 152	30 692 292	31 306 330	31 845 250	34 222 080
F	20 118 939	24 784 593	26 818 873	30 528 827	30 624 167	31 430 206	35 938 817
M	20 745 668	25 288 547	26 868 244	28 696 756	30 951 749	31 567 082	36 535 926
A	20 326 307	24 281 013	27 717 893	32 082 447	31 356 527	32 150 408	34 603 539
M	20 162 726	26 153 769	28 452 091	30 724 936	30 357 175	32 727 805	36 918 133
J	21 898 721	25 977 734	28 061 305	30 308 125	31 478 493	32 989 966	
J	22 150 461	25 485 451	28 272 554	30 948 923	31 491 480	33 082 612	
A	21 211 774	26 200 018	28 786 696	30 696 785	30 303 757	33 271 119	
S	22 749 031	26 482 002	28 266 657	30 029 613	31 559 986	34 580 886	
O	22 680 906	26 209 709	29 553 143	32 081 535	31 186 794	33 411 233	
N	23 541 062	26 875 338	29 767 020	30 371 258	30 911 114	35 099 061	
D	23 388 014	26 825 859	29 381 412	31 066 158	31 799 298	36 538 645	

* Revised
1/ Preliminary

Table 4 - Value of sales of manufactured products according to manufacturing divisions and major groups (R'000)

Manufacturing divisions and major groups	Year	Actual values			Seasonally adjusted values		
		May	April	May 1/	May	April	May
		1999	2000		1999	2000	
		1999	2000	2000	1999	2000	2000
Food and food products	57 143 807	4 767 377	4 805 676	5 019 758	4 766 537	4 927 533	5 007 892
Meat, fish, fruit etc.	17 159 161	1 450 943	1 460 041	1 526 195	1 413 722	1 487 708	1 486 199
Dairy products	7 152 593	576 994	529 143	542 061	599 487	581 354	562 336
Grain mill products	14 871 882	1 232 937	1 221 076	1 386 226	1 209 657	1 258 996	1 359 646
Other food products	17 960 171	1 506 503	1 595 416	1 565 276	1 543 671	1 599 475	1 599 711
Beverages	20 605 141	1 545 569	1 513 467	1 436 714	1 668 531	1 765 260	1 577 272
Total textiles	9 770 275	847 970	785 765	895 900	795 268	803 173	842 086
Textiles	6 304 565	556 513	511 281	568 234	521 348	515 465	532 526
Other textile products	3 465 710	291 457	274 484	327 666	273 920	287 708	309 560
Total wearing apparel	10 994 539	850 088	887 213	844 270	907 327	876 302	905 553
Knitted, crocheted articles	1 858 591	169 387	134 282	161 575	149 569	126 201	143 195
Wearing apparel	9 135 948	680 701	752 931	682 695	757 758	750 101	762 358
Tanning and dressing of leather	2 577 530	244 835	205 380	247 792	219 093	202 189	222 023
Footwear	2 379 127	194 136	187 638	193 790	207 304	209 106	206 332
Wood and products of wood	8 386 436	683 765	683 937	809 258	677 036	716 414	802 870
Sawmilling and planing of wood	2 380 674	197 763	192 323	217 994	199 568	215 850	219 998
Products of wood	6 005 762	486 002	491 614	591 264	477 468	500 564	582 872
Paper and paper products	20 400 594	1 793 508	1 625 466	1 990 161	1 793 242	1 802 450	1 973 405
Total publishing and printing	11 664 938	974 797	968 461	993 126	983 426	1 007 967	1 004 301
Publishing	4 471 082	349 345	377 416	373 726	361 351	391 662	387 154
Printing, recorded media	7 193 856	625 452	591 045	619 400	622 075	616 305	617 147
Coke and refined petroleum products	20 999 687	1 713 429	2 393 369	2 385 670	1 749 164	2 459 830	2 421 502
Basic chemicals	19 872 911	1 462 747	1 703 103	1 868 698	1 534 453	1 786 545	1 970 083
Other chemical products	25 490 045	1 981 861	2 030 892	2 127 348	2 041 850	2 127 492	2 197 787
Rubber products	4 167 229	335 348	339 374	415 613	330 522	327 311	409 675
Plastic products	9 723 276	769 838	722 306	871 769	785 100	762 004	891 882
Glass and glass products	2 140 820	163 545	159 628	164 647	177 941	174 990	178 663
Other non-metallic mineral products	9 255 562	762 209	754 619	866 228	750 587	786 962	856 236
Basic iron and steel products	26 143 459	2 131 292	2 567 221	3 023 031	2 045 339	2 671 098	2 918 823
Basic precious and non-ferrous metal products	13 107 160	1 077 598	1 082 927	1 320 142	1 030 850	1 200 881	1 273 966
Fabricated metal products	23 450 896	1 963 398	1 693 173	1 946 388	1 988 407	1 773 797	1 979 942
Structural metal products	8 375 921	687 090	545 583	633 076	700 432	548 878	651 720
Other fabricated metal product	15 074 975	1 276 308	1 147 590	1 313 312	1 287 975	1 224 919	1 328 222
Total machinery and equipment	18 482 182	1 739 457	1 286 976	1 561 014	1 777 894	1 435 150	1 612 727
General purpose machinery	8 715 989	973 463	623 972	708 294	955 824	695 760	689 342
Special purpose machinery	7 839 996	605 275	527 219	689 601	669 622	592 877	768 370
Household appliances	1 926 197	160 719	135 785	163 119	152 448	146 513	155 015
Electrical machinery, apparatus	11 835 715	946 581	961 211	1 047 878	911 414	1 002 222	1 016 479
Radio, television and communication apparatus	4 441 396	369 387	365 168	429 828	380 309	437 901	436 505
Professional equipment	1 299 945	106 718	96 057	96 259	106 279	97 171	96 486
Motor vehicles; trailers; parts and accessories	42 719 836	3 586 738	3 443 393	4 493 373	3 363 545	3 522 332	4 220 990
Motor vehicles	30 465 944	2 542 342	2 389 768	3 275 706	2 371 496	2 489 393	3 060 089
Bodies for motor vehicles; trailers and semi-trailers	1 529 083	126 738	112 460	139 622	122 657	108 572	136 362
Parts and accessories	10 724 809	917 658	941 165	1 078 045	869 392	924 367	1 024 539
Other transport equipment	2 789 057	179 266	170 309	217 256	221 850	242 048	270 118
Furniture	6 356 278	537 581	408 890	510 837	542 494	438 307	516 909
Other manufacturing industries	12 208 259	982 313	928 347	1 112 142	972 043	1 047 104	1 107 626
TOTAL	398 406 100	32 711 351	32 769 966	36 888 890	32 727 805	34 603 539	36 918 133

* Revised
1/ Preliminary
P3041.2

Table 5 - Value of unfilled orders according to selected manufacturing subgroups (R'000)

Selected manufacturing subgroups	Actual values			Seasonally adjusted values		
	May	April	May 1/	May	April	May
	1999	2000		1999	2000	
Spinning, weaving and finishing of textiles	208 074	223 091	215 420	210 361	223 250	217 912
Tents, tarpaulins, sails and other canvas goods and automotive textile goods	21 874	24 539	27 026	21 778	24 647	26 899
Other textile articles	66 695	63 667	61 240	67 597	61 543	62 036
Knitted and crocheted fabrics and articles	148 718	149 340	142 308	151 344	151 586	144 368
Wearing apparel	691 811	756 962	729 860	691 882	770 145	731 766
Sawmilling and preserving of timber	19 625	24 451	23 866	19 477	23 823	23 713
Veneer sheets, plywood, laminboard, etc.	26 300	23 679	23 285	25 391	21 751	22 607
Builders' carpentry and joinery	43 744	41 160	40 210	45 277	44 635	41 986
Pulp, paper and paperboard	283 366	334 095	416 407	262 720	341 288	381 863
Corrugated paper and paperboard and containers	335 310	337 525	344 823	339 075	343 663	349 516
Paints, varnishes and coatings	14 212	12 012	8 498	21 143	18 293	13 131
Basic iron and steel products	2 728 839	3 399 990	3 174 410	2 780 078	3 393 124	3 247 759
Steel pipe and tube mills	143 380	217 078	228 883	149 634	228 562	239 607
Basic precious and non-ferrous metal products	989 043	1 140 269	1 208 764	970 097	1 159 178	1 183 687
Metal structures, parts	1 518 007	1 021 268	1 288 927	1 434 107	970 324	1 213 887
Cutlery, hand tools and general hardware	28 249	35 432	31 187	30 688	35 314	34 236
Metal containers, e.g. cans and tins	50 589	74 873	77 977	55 069	77 809	84 801
Cables, wire products, springs	67 267	58 232	56 009	63 357	58 235	53 180
Metal fasteners	34 552	55 688	53 935	32 030	53 517	50 017
All other metal products	786 739	526 297	511 496	895 717	573 351	584 268
Domestic appliances	46 756	23 166	21 475	45 285	23 618	20 788
Electric motors, generators and transformers	446 209	456 691	483 997	434 195	453 703	472 012
Insulated wire and cables	182 658	224 219	187 791	182 784	205 769	189 335
Accumulators, primary cells and primary batteries	13 544	13 628	13 616	12 827	13 073	12 808
Television, radio and communication apparatus	764 683	1 072 360	1 386 714	740 697	1 089 950	1 344 425
Motor vehicles	1 928 080	2 168 213	2 249 649	1 727 416	1 940 629	2 020 205

Parts and accessories for								
motor vehicles		284 772	303 645	305 137		270 410	303 031	289 107
Furniture		188 461	202 168	216 326		226 972	214 914	259 643

--

* Revised

Additional information

Explanatory notes

Introduction 1 Statistics South Africa (Stats SA) conducts a monthly sample survey of the manufacturing industry covering private manufacturing establishments (branches), public corporations and government establishments. This statistical release contains detailed information regarding indices of the physical volume of manufacturing production, the total value of sales of manufactured products and unfilled orders, according to manufacturing divisions and major groups on a monthly basis.

2 In accordance to international practice, the indices have to be rebased every five years to a new base year. The indices in this statistical release have been calculated on the basis of 1995=100 since November 1997. Both actual and seasonally adjusted figures are presented.

3 In order to improve timeliness, some information for the current month may have been estimated due to late response. These estimates will be revised in the future statistical release(s) as soon as more up-to-date information is available.

Scope of the survey 4 This survey covers manufacturing establishments conducting activities regarding -

- the manufacturing, processing, making or packing of products;
- the slaughtering of animals, including poultry; and
- installation, assembly, completion, repair and related work.

Classification 5 The 1993 edition of the Standard Industrial Classification of all Economic Activities (SIC), Fifth Edition, Report No. 09-90-02, was used to classify the statistical units in the survey. The SIC is based on the 1990 International Standard Industrial Classification of all Economic Activities (ISIC) with suitable adaptations for local conditions. Statistics in this publication are presented at SIC division, major group and subgroup level. Each statistical unit is classified to an industry which reflects the predominant activity of the establishment (branch).

Statistical unit 6 The basic statistical unit for the collection of information is the manufacturing establishment. An establishment is the smallest economic unit that functions as a separate entity. Each statistical unit is classified to an industry (cf. paragraph 6).

Survey methodology and 7 The calculation of the monthly production indices is based on the value of products and

design articles manufactured, after the effect of price changes has been eliminated through deflation by using appropriate sub-indices of the Production Price Index (PPI). The value of the manufactured products is obtained from a monthly sample survey of manufacturing establishments in the private and public sectors.

8 The survey is collected by mail each month from a sample of approximately 2 700 manufacturing establishments.

9 The above-mentioned measurement method in paragraph 7 was followed in 40 of the various major groups. On account of certain considerations more appropriate indicators were used for the four remaining major groups namely "other transport equipment"; tobacco products and coke and refined petroleum products and bodies for motor vehicles. The volume indices for the major groups tobacco products and coke and refined petroleum products are calculated on the basis of physical quantities. The major group tobacco products is included under 'Other' manufacturing industries. This method is also applied by other international statistical agencies for petroleum products due to the results being more satisfactory (mainly due to these commodities being relatively homogeneous and the nature of the industry). In the case of "other transport equipment" units such as ships and aircraft are completed over a relatively long period and establishments can often not report charges for work done continuously. The sales and charges for work done are only

shown after completion of the product, which is not a true reflection of the real production for the month under consideration. Therefore the index for "other transport equipment" is calculated monthly according to man-hours worked.

Sample design 10 The 1988 Census of Manufacturing provided the sampling frame for the selection of the monthly sample regarding manufacturing production and sales which was implemented as from January 1995. A stratified systematic sample design based on gross output was used. All statistical units were stratified by type of economic activity according to the Standard Industrial Classification of all Economic Activities (SIC) and measure of size, where measure of size was the total manufacturing gross output of the establishment. All large establishments (size category one cases) are completely enumerated. A sample was drawn from medium and small size establishments by systematically selecting establishments with equal probability.

Benchmarking 11 The index of physical volume of manufacturing production as well as the total value of sales of manufactured products should provide an accurate reflection of the trend of activities of the relevant industry. The level of activities as measured by the monthly Manufacturing Production and Sales sample survey is based on information received from a sample of manufacturing establishments which is weighted according to the original sample design in order to represent the population of manufacturing establishments. It is necessary to adjust the level of activities as measured by the monthly sample survey to the level of activities as measured periodically by the Census of Manufacturing. This procedure, whereby the latest results of an economic census are used to compile more accurate level estimates for a certain year, is known as benchmarking. The results, due to benchmarking, were published in statistical releases P3041.3 (entitled Manufacturing statistics: Indices of the physical volume of manufacturing production, Base: 1995=100, January 1990 to September 1999) on 21 December 1999 and P3041.4 (entitled Manufacturing statistics: Value of sales, January 1990 to September 1999) on 8 December 1999.

12 The results of the 1991, 1993 and 1996 Censuses of Manufacturing and information obtained from the former TBVC states were used to adjust the level of the manufacturing production indices and the value of sales of manufactured products. The total value of output of the manufacturing major groups (which represents the total value of work done by the establishments in these major groups) as obtained from the manufacturing censuses, was deflated with appropriate sub-indices of the Production Price Index in order to calculate the real output. The latter served as benchmarks to verify or adjust the level of the monthly physical volume of manufacturing production indices. The level adjustments were done on the volume indices for January of the relevant census year (e.g. the 1996 census year covers the period 1 July 1995 to 30 June 1996 and therefore the benchmarking was done using the index of January 1996 as reference point). The motor vehicle major group is the only exception where the financial year for most of the establishments covered the period 1 January 1995 to 31 December 1995. The benchmarking was done using the physical volume of manufacturing production index for July 1995 as reference point.

Production index for the 13 In order to calculate a production index for the total manufacturing industry, the production

total manufacturing industry indices for the major groups are combined as follows:

A weight is calculated for every major group according to the value added of the relevant major group compared with the value added to the total manufacturing industry based on the 1991, 1993 and 1996 Censuses of Manufacturing. Weights between census years are fixed and are based on the results of the most recent Census of Manufacturing. The production indices of all the major groups are multiplied by the applicable weights and aggregated to reflect the total physical volume of manufacturing production index.

Seasonal adjustment 14 Seasonally adjusted estimates of all items are generated each month, using the X-11 Seasonal Adjustment Program developed by US Bureau of the Census Economic Research and Analyses Division, 1968. Seasonal adjustment is a means of removing the estimated effects of normal seasonal variation from the series so that the effects of other influences on the

series can be more clearly recognised. Seasonal adjustment does not aim to remove irregular or non-seasonal influences which may be present in any particular month. Influences that are volatile or unsystematic can still make it difficult to interpret the movement of the series even after adjustment for seasonal variations. This means the month-to-month movements of seasonally adjusted estimates may not be reliable indicators of trend behaviour.

Trend cycle 15 The trend is the long-term pattern or movement of a time series. The X-11 Seasonal Adjustment Program is used for smoothing seasonally adjusted estimates.

Reliability of estimates 16 Estimates are subject to sampling and non-sampling errors. Figures for the latest month are preliminary.

Historical data 17 More comprehensive detail on the method of calculation and historical data in respect of the production indices according to manufacturing major groups and the value of sales for the period January 1990 to September 1999 were published in statistical releases P3041.3 (entitled **Manufacturing statistics: Indices of the physical volume of manufacturing production, Base: 1995=100, January 1990 to September 1999**) on 21 December 1999 and P3041.4 (entitled **Manufacturing statistics: Value of sales, January 1990 to September 1999**) on 8 December 1999.

Related publications 18 Users may also wish to refer to the following publications which are available from Stats SA -

- P3041.3 - Manufacturing statistics: Indices of the physical volume of manufacturing production, Base: 1995=100, January 1990 to September 1999.
- P3041.4 - Manufacturing statistics: Value of sales (divisions, major groups and subgroups), January 1990 to September 1999.
- Bulletin of Statistics.
- SA Statistics.

Unpublished statistics 19 In some cases Stats SA can also make available statistics which are not published. The statistics can be made available as: computer printouts, diskette and CD. Generally a charge is made for providing unpublished statistics.

Rounding-off of figures 20 The figures in the tables have, where necessary, been rounded off to the nearest final digit shown. There may, therefore, be slight discrepancies between the sums of the constituent items and the totals shown.

Pre-release policy 21 Stats SA has adopted the confidential pre-release policy in respect of selected economic indicators and specific government departments. The policy accords with practice among leading statistical agencies. The statistical integrity of the indices and strict observance of the release time has been assured by the following procedure:

In respect of this statistical release, an official representative from the Office of the President, the Office of the Deputy President, the Department of Trade and Industry, the Department of Finance and the South African Reserve Bank receive a copy of the release on a strictly confidential basis two hours in advance of the public issue.

Stats SA's pre-release policy may be inspected at its Website, www.statssa.gov.za.

Symbols and abbreviations 22 Stats SA Statistics South Africa

TBVC states Relates to the former Transkei, Bophuthatswana, Venda and Ciskei states

SIC Standard Industrial Classification of all Economic Activities

ISIC International Standard Classification of all Economic Activities

SNA System of National Accounts

PPI Production Price Index

GDP Gross Domestic Product

1/ Preliminary figures

* Revised figures

Technical notes

Response rates See the response rates for May 2000, by manufacturing major divisions, in table B.

Table B - Response rates for April 2000

Manufacturing major divisions	% response
Food and food products	77,7
Beverages	94,1
Textile	92,2
Total wearing apparel	91,2
Tanning and dressing of leather	67,6
Footwear	63,6
Wood and products of wood	83,3
Paper and paper products	79,3
Total publishing and printing	67,8
Coke and refined petroleum products	67,6
Basic chemicals	92,5
Other chemical products	84,9
Rubber products	87,5
Plastic products	73,5
Glass and glass products	100,0
Other non-metallic mineral products	69,6
Basic iron and steel products	61,9
Basic precious and non-ferrous metal products	58,3
Fabricated metal products	81,0
Total machinery and equipment	76,1
Electrical machinery, apparatus	65,5
Radio, television and communication apparatus	64,0
Professional equipment	58,6
Motor vehicles; trailers; parts and accessories	81,8
Other transport equipment	80,0
Furniture	82,2
Other manufacturing industries	70,7
Total	78,5

Glossary

Enterprise An enterprise (firm) is a legal entity consisting of one or more establishments. The establishments need not necessarily all be manufacturing establishments, but some may be classifiable as other industries of the economy, such as wholesale trade, retail trade, motor trade and construction.

Establishment An establishment is defined as an enterprise (firm), or part of an enterprise, that is situated at a single location and in which only a single (non-ancillary) productive activity is carried out or in which the principal productive activity accounts for most of the value added.

Index of physical volume The index of physical volume of manufacturing production or a production index is a

of manufacturing production statistical measure of the change in the volume of production. The production index of a major group is the ratio between the volume of production of a major group in a given period and the volume of production of the same major group in the base period. The base period is 1995. The production in the base period is set at 100.

Industry An industry consists of a group of establishments engaged in the same or similar kinds of economic activity. Industries are defined in the System of National Accounts (SNA) in the same way as in the Standard Industrial Classification of all Economic Activities, Fifth Edition, Report No. 09-90-02 of January 1993 (SIC).

Intercensal period Intercensal period is the period between January of the one census year and January of the next census year.

Intermediate consumption Intermediate consumption includes -

- purchases and transfers-in of materials;
- payments to other establishments for work done;
- other direct factory costs;
- rent and leasing paid;
- head office charges;
- royalties, copyright, trade names and patent rights paid;
- advertising;
- insurance premiums;
- services; and
- secretarial and administrative fees.

Output Output is the aggregate value of goods manufactured and work done.

Output includes -

- sales and transfers-out of own manufactures, factory waste and stocks of factored goods;
- repairs;
- installation, erection and assembly;
- sundry trading revenue;
- sales of factored goods minus purchases of factored goods;
- rent and leasing received;
- royalties received;
- closing value of work in progress, stocks of own manufactures and stocks of factored goods;
- head office charges; and
- other revenue.

Output excludes -

- excise and customs duty paid; and
- opening values of work in progress, finished goods and factored goods.

Value added Value added is the value of output less intermediate consumption. It represents the value added to the cost of the materials used in the process of production.

Sales Sales are the total value of sales and transfers-out of all own manufactured products/articles and the amounts received for installation, erection or assembly or other services rendered.

Weight The weight of a major group is the ratio of the value added of a major group (i.e. output of a major group minus intermediate consumption) to the total value added of the manufacturing industry. The weight of a major group reflects the importance of the major group in the total manufacturing industry. The weights change over time due to quality changes, changes in relative prices, and changes in preference, etc. New weights need to be calculated from time to time.

FOR MORE INFORMATION

Stats SA publishes approximately 300 different statistical releases each year. It is not economically viable to produce them in more than one of South Africa's eleven official languages. Since the releases are used extensively, not only locally but also by international economic and social-scientific communities, Stats SA releases are published in English only.

Stats SA has copyright on this publication. Users may apply the information as they wish, provided that they acknowledge Stats SA as the source of the basic data wherever they process, apply, utilise, publish or distribute the data; and also that they specify that the relevant application and analysis (where applicable) result from their own processing of the data.

Stats SA products

A complete set of Stats SA publications is available at the Stats SA Library and the following libraries:

National Library of South Africa, Pretoria Division

Library of Parliament, Cape Town

National Library of South Africa, Cape Town Division

Bloemfontein Public Library

Natal Society Library, Pietermaritzburg

Johannesburg Public Library

Stats SA also provides a subscription service.

Electronic services

A large range of data are available via on-line services, diskette and computer printouts. For more details about our electronic data services, contact (012) 310 8095.

You can visit us on the Internet at: <http://www.statssa.gov.za>

Enquiries

Telephone number: (012) 310 8336/337/977

(012) 310 8233/310 8669 (technical enquiries)

(012) 310 8161 (publications)

(012) 310 8490 (library)

Fax number: (012) 310 8332

e-mail: Dawnvd@statssa.pwv.gov.za

Teresam@statssa.pwv.gov.za

Postal address: Private Bag X44, Pretoria, 0001