

Manufacturing: production and sales P3041.2

June 2000
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Key figures as at the end of June 2000

Actual estimates	June 2000	% change between June 1999 and June 2000	% change between April 1999 to June 1999 and April 2000 to June 2000	% change between January 1999 to June 1999 and January 2000 to June 2000
Physical volume of manufacturing production index (1995=100)	110,8	+10,2	+5,0	+5,1
Total value of sales of manufactured products (R million)	38 495,1	16,3	+12,6	+12,8

Seasonally adjusted estimates	June 2000	% change between May 2000 and June 2000	% change between January 2000 to March 2000 and April 2000 to June 2000
Physical volume of manufacturing production index (1995=100)	108,6	+2,5	-0,8
Total value of sales of manufactured products (R million)	38 041,9	+1,9	+3,2

Key findings as at the end of June 2000

MANUFACTURING PRODUCTION DECREASES

Manufacturing production for the second quarter of 2000 reflected a decrease of 0,8% after seasonal adjustment compared with the first quarter of 2000. Lower manufacturing production was reported in 18 of the 27 manufacturing major divisions.

The major contributors to the decrease of 0,8% after seasonal adjustment in the total manufacturing production were the fabricated metal products (-0,6 of a percentage point), followed by the basic iron and steel (-0,4 of a percentage point), the motor vehicle (-0,4 of a percentage point), the machinery and equipment (-0,2 of a percentage point) and the furniture (-0,2 of a percentage point) divisions. However, these decreases were partially counteracted by increases in the basic chemicals (+0,6 of a percentage point), the beverages (+0,3 of a percentage point) and the basic precious and non-ferrous metal products (+0,3 of a percentage point) divisions (cf. Table A).

The total value of sales of manufactured products reflected an increase of 3,2% (R3 390 million) after seasonal adjustment for the second quarter of 2000 compared with the first quarter of 2000. The largest increases were reported by the coke and refined petroleum products (+18,0% or R1 164 million), the basic precious and non-ferrous metal products (+9,8% or R344 million) and the food and food products (+4,6% or R657 million) divisions during this period.

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 Apr. 2000 - Jun. 2000	Quarterly percentage change (Apr. 2000 - Jun. 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	97,3	+0,5	+0,1
Beverages	4,6	98,9	+6,1	+0,3
Total textiles	2,9	94,8	-1,6	-0,1
Total Wearing apparel	3,6	86,0	-0,1	-0,0
Tanning and dressing of leather	0,4	127,7	+3,0	+0,0
Footwear	0,9	68,2	-3,7	-0,0
Wood and products of wood	1,9	120,0	+0,7	+0,0
Paper and paper products	5,3	104,0	+1,3	+0,1
Total publishing and printing	4,1	92,4	-1,9	-0,1
Coke and refined petroleum products	4,2	106,0	+0,5	+0,0
Basic chemicals	4,5	144,9	+14,1	+0,6
Other chemical products	6,2	102,8	+0,5	+0,0
Rubber products	1,4	97,7	-0,8	-0,0
Plastic products	3,1	85,2	-3,6	-0,1
Glass and glass products	1,0	82,4	+0,1	-0,0
Other non-metallic mineral products	3,5	87,5	-3,0	-0,1
Basic iron and steel products	7,6	114,2	-5,1	-0,4
Basic precious and non-ferrous metal products	3,2	168,1	+8,5	+0,3
Fabricated metal products	7,0	98,5	-7,8	-0,6
Total machinery and equipment	5,8	92,6	-3,5	-0,2
Electrical machinery, apparatus	3,4	101,6	-0,0	-0,0
Radio, television and communication apparatus	1,0	121,0	-5,1	-0,1
Professional equipment	0,5	73,6	-6,2	-0,0
Motor vehicles; trailers; parts and accessories	8,0	112,9	-4,5	-0,4
Other transport equipment	1,0	108,3	-3,1	-0,0
Furniture	1,6	93,9	-11,8	-0,2
Other manufacturing industries	2,6	103,7	-4,8	-0,1
TOTAL	100,0	104,4	-0,8	-0,8

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

Notes

Forthcoming issues	Issue	Expected release date
	July 2000	12 September 2000
	August 2000	10 October 2000
	September 2000	7 November 2000
	October 2000	12 December 2000
	November 2000	9 January 2001
	December 2000	06 February 2001

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 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	88,8
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	93,7*
M	84,8	101,8	104,1	106,2	101,1	101,1	106,7
J	92,4	102,4	102,9	104,9	104,5	100,5	110,8 1/
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	87,5	96,5	99,1	105,6	105,0	100,9	102,9
F	88,3	99,4	98,7	105,2	102,9	99,7	104,8
M	91,2	100,0	99,5	100,4	101,1	100,0	108,0
A	88,6	97,2	102,1	111,2	101,4	99,6	98,7
M	85,4	101,8	104,1	105,6	100,2	100,4	106,0
J	91,4	101,2	101,4	103,1	102,5	98,6	108,6
J	91,6	99,9	102,4	105,5	101,6	101,5	
A	90,9	102,7	104,5	102,9	97,6	101,3	
S	95,8	101,5	100,2	103,1	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	99,8	105,3	
D	98,1	98,2	98,8	102,4	101,0	108,0	

* Revised
1/ Preliminary

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	June	May	June 1/	June	May	June
				1999	2000		1999	2000	
Food and food products	10,7	99,2	102,8	99,5	104,9	99,6	95,9	101,3	
Meat, fish, fruit etc.	2,8	112,4	104,2	116,7	106,1	112,8	115,5	115,1	
Dairy products	1,4	92,8	83,7	75,8	80,2	92,0	81,3	87,8	
Grain mill products	2,1	93,9	92,3	98,4	96,6	93,3	96,7	97,5	
Other food products	4,4	95,3	112,8	96,3	115,7	96,4	87,5	98,5	
Beverages	4,6	100,8	86,8	82,9	94,6	101,0	87,4	110,1	
Total textiles	2,9	91,3	90,7	98,2	102,3	88,4	94,7	99,2	
Textiles	1,7	83,8	84,0	88,4	96,5	81,1	86,7	92,9	
Other textile products	1,2	101,9	100,3	112,0	110,6	98,8	106,1	108,1	
Total wearing apparel	3,6	88,3	77,9	83,5	79,8	87,9	88,7	90,0	
Knitted, crocheted articles	0,6	82,5	79,1	88,1	85,1	76,0	80,2	82,1	
Wearing apparel	3,0	89,5	77,6	82,6	78,7	90,2	90,4	91,6	
Tanning and dressing of leather	0,4	122,9	123,2	153,7	122,7	123,3	145,6	122,7	
Footwear	0,9	69,2	68,1	64,1	66,1	70,3	67,8	67,8	
Wood and products of wood	1,9	114,1	115,1	123,4	124,7	115,0	125,1	124,4	
Sawmilling and planing of wood	0,8	104,2	103,0	105,5	107,7	102,9	109,5	107,5	
Products of wood	1,2	120,6	123,0	135,2	135,8	123,0	135,3	135,5	
Paper and paper products	5,3	98,2	98,9	113,3	106,2	93,6	114,8	100,5	
Total publishing and printing	4,1	93,1	89,5	91,9	92,2	90,9	91,8	93,8	
Publishing	1,5	99,6	96,8	94,5	96,3	95,5	97,4	95,1	
Printing, recorded media	2,6	89,5	85,4	90,5	89,9	88,3	88,6	93,1	
Coke and refined petroleum products	4,2	106,4	105,7	107,5	112,1	103,7	106,1	110,1	
Basic chemicals	4,5	126,9	114,4	146,5	151,7	111,6	159,0	147,9	
Other chemical products	6,2	103,3	97,9	96,1	104,1	98,1	99,5	104,8	
Rubber products	1,4	92,8	90,7	114,0	119,1	78,6	112,7	103,4	
Plastic products	3,1	86,5	86,1	84,2	87,1	85,9	86,9	86,9	
Glass and glass products	1,0	85,2	84,9	74,7	87,4	77,4	80,2	80,1	
Other non-metallic mineral products	3,5	85,0	90,1	89,2	95,8	83,2	88,0	88,4	
Basic iron and steel products	7,6	96,9	98,3	125,6	119,9	91,8	116,5	112,4	
Basic precious and non-ferrous metal products	3,2	153,3	153,8	164,9	180,2	154,1	164,7	179,1	
Fabricated metal products	7,0	99,1	92,9	104,4	105,9	93,5	103,2	107,2	
Structural metal products	2,4	95,9	84,0	95,7	79,9	79,3	91,9	76,0	
Other fabricated metal product	4,6	100,8	97,4	108,9	119,2	100,8	109,0	123,2	
Total machinery and equipment	5,8	97,5	104,9	97,8	104,5	99,7	96,1	100,5	
General purpose machinery	2,5	111,5	133,6	101,4	121,3	115,6	94,8	104,2	
Special purpose machinery	2,9	84,4	78,7	92,9	85,9	84,2	95,9	93,0	
Household appliances	0,4	105,3	114,4	110,6	135,2	112,6	106,2	132,2	
Electrical machinery, apparatus	3,4	96,5	93,3	100,2	113,7	89,5	101,4	109,4	
Radio, television and communication apparatus	1,0	126,9	140,7	110,8	123,1	130,9	101,1	114,7	
Professional equipment	0,5	77,9	80,5	81,5	74,0	76,4	78,8	70,4	
Motor vehicles; trailers; parts and accessories	8,0	102,5	108,3	122,7	129,4	100,9	117,1	120,5	
Motor vehicles	4,5	97,0	109,8	116,0	123,5	97,9	107,3	109,6	
Bodies for motor vehicles; trailers and semi-trailers	0,5	64,3	55,8	71,3	72,0	54,8	74,0	70,8	
Parts and accessories	3,0	117,7	115,7	142,1	148,7	113,8	139,7	146,0	
Other transport equipment	1,0	113,1	108,8	114,7	109,1	110,6	107,4	110,8	
Furniture	1,6	102,6	110,9	94,3	106,6	107,4	96,9	102,6	
Other manufacturing industries	2,6	107,7	107,0	102,8	112,9	105,5	102,6	110,4	
TOTAL	100,0	101,4	100,5	106,7	110,8	98,6	106,0	108,6	

* Revised

1/ Preliminary

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	28 426 939*
F	19 815 926	24 414 317	26 328 500	29 866 793	29 901 544	30 607 558	35 030 754*
M	22 056 191	26 712 878	28 188 286	29 866 272	32 190 538	32 788 344	37 936 272*
A	19 132 660	22 897 368	26 231 967	30 438 604	29 758 879	30 508 382	32 803 412*
M	19 723 817	25 806 431	28 293 052	30 626 091	30 352 835	32 711 351	37 187 406
J	22 055 323	26 204 689	28 261 416	30 575 542	31 723 893	33 095 019	38 495 142 1/
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	33 707 678	
S	23 954 300	27 737 968	29 549 724	31 344 644	32 896 327	35 898 489	
O	25 209 944	29 294 559	33 070 022	35 902 602	34 970 472	37 387 455	
N	26 275 416	29 960 074	33 084 713	33 709 581	34 300 610	38 805 040	
D	20 667 319	23 877 458	26 338 721	28 128 922	29 016 347	33 001 663	
Year	259 366 761	308 790 007	339 096 803	368 283 280	373 568 657	398 319 486	
Seasonally adjusted values							
J	19 822 945	23 563 328	26 504 927	30 671 683	31 298 961	31 844 236	34 183 362
F	20 118 754	24 784 063	26 815 720	30 523 802	30 626 986	31 440 112	35 922 688
M	20 746 106	25 290 552	26 875 830	28 720 370	31 008 385	31 646 910	36 578 889
A	20 330 032	24 288 834	27 735 126	32 111 542	31 401 947	32 210 385	34 710 594
M	20 159 829	26 152 290	28 462 031	30 755 957	30 418 085	32 830 141	37 322 406
J	21 901 069	25 980 567	28 057 138	30 294 752	31 364 378	32 780 266	38 041 893
J	22 154 742	25 488 995	28 271 531	30 943 415	31 487 011	33 080 640	
A	21 214 961	26 205 652	28 794 895	30 704 526	30 313 713	33 265 835	
S	22 751 500	26 485 336	28 265 536	30 022 490	31 550 908	34 556 842	
O	22 677 057	26 203 864	29 541 787	32 058 045	31 160 821	33 372 406	
N	23 540 310	26 874 995	29 756 822	30 352 312	30 889 701	35 047 279	
D	23 383 534	26 817 843	29 373 475	31 056 159	31 799 218	36 506 323	

* 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		
		June	May	June 1/	June	May	June
		1999	2000		1999	2000	
Food and food products	57 143 807	4 718 553	4 999 969	5 051 309	4 820 076	5 003 900	5 171 485
Meat, fish, fruit etc.	17 159 161	1 358 238	1 525 143	1 447 497	1 434 552	1 489 192	1 534 378
Dairy products	7 152 593	550 855	542 255	557 156	596 976	567 125	603 135
Grain mill products	14 871 882	1 226 555	1 385 270	1 365 834	1 225 891	1 359 209	1 363 514
Other food products	17 960 171	1 582 905	1 547 301	1 680 822	1 562 657	1 588 374	1 670 458
Beverages	20 605 141	1 438 001	1 428 057	1 562 634	1 701 384	1 574 976	1 840 935
Total textiles	9 770 275	835 715	901 933	948 183	794 020	852 947	901 616
Textiles	6 304 565	541 317	570 866	605 843	511 013	540 282	571 214
Other textile products	3 465 710	294 398	331 067	342 340	283 007	312 665	330 402
Total wearing apparel	10 994 539	794 826	846 641	860 309	914 331	913 034	992 277
Knitted, crocheted articles	1 858 591	169 210	159 397	173 395	156 405	142 420	159 927
Wearing apparel	9 135 948	625 616	687 244	686 914	757 926	770 614	832 350
Tanning and dressing of leather	2 577 530	212 526	261 761	246 678	214 847	236 267	249 530
Footwear	2 379 127	191 481	197 307	184 044	208 928	209 121	199 592
Wood and products of wood	8 386 436	715 691	814 600	741 812	705 491	809 017	732 203
Sawmilling and planing of wood	2 380 674	204 020	217 994	223 617	198 767	219 683	217 419
Products of wood	6 005 762	511 671	596 606	518 195	506 724	589 334	514 784
Paper and paper products	20 400 594	1 736 791	1 995 551	1 970 953	1 665 093	1 982 814	1 879 062
Total publishing and printing	11 664 938	905 573	995 240	975 084	936 105	1 006 588	1 010 899
Publishing	4 471 082	361 167	377 267	370 048	359 256	387 282	368 748
Printing, recorded media	7 193 856	544 406	617 973	605 036	576 849	619 306	642 151
Coke and refined petroleum products	20 999 687	1 806 952	2 394 185	2 815 023	1 734 831	2 481 833	2 688 847
Basic chemicals	19 872 911	1 576 030	1 875 869	2 096 340	1 530 278	1 961 783	2 050 831
Other chemical products	25 490 045	1 995 748	2 134 951	2 154 008	2 047 823	2 207 704	2 232 906
Rubber products	4 167 229	355 430	416 300	473 817	326 183	411 008	436 010
Plastic products	9 723 276	789 106	866 866	882 368	802 746	885 911	897 176
Glass and glass products	2 140 820	160 065	165 856	181 918	161 526	180 806	183 845
Other non-metallic mineral products	9 255 562	803 494	866 338	900 869	760 002	854 225	851 494
Basic iron and steel products	26 056 845*	2 298 014	3 095 543	3 035 253	2 083 253	2 947 569	2 758 004
Basic precious and non-ferrous metal products	13 107 160	1 111 045	1 297 933	1 406 827	1 077 404	1 283 078	1 359 790
Fabricated metal products	23 450 896	1 912 147	2 210 633	2 032 618	1 856 185	2 214 910	1 988 148
Structural metal products	8 375 921	687 760	865 930	603 397	616 130	837 276	537 892
Other fabricated metal product	15 074 975	1 224 387	1 344 703	1 429 221	1 240 055	1 377 634	1 450 256
Total machinery and equipment	18 482 182	1 775 826	1 579 117	1 634 604	1 715 662	1 628 783	1 571 137
General purpose machinery	8 715 989	891 963	724 938	786 055	802 755	703 350	698 643
Special purpose machinery	7 839 996	718 488	684 472	644 309	749 983	762 805	673 079
Household appliances	1 926 197	165 375	169 707	204 240	162 924	162 628	199 415
Electrical machinery, apparatus	11 835 715	949 263	1 074 624	1 181 271	914 907	1 046 721	1 145 418
Radio, television and communication apparatus	4 441 396	430 320	382 716	393 419	397 799	400 282	360 373
Professional equipment	1 299 945	119 314	111 475	120 235	109 182	109 892	109 957
Motor vehicles; trailers; parts and accessories	42 719 836	3 656 522	4 427 632	4 704 490	3 483 548	4 206 338	4 487 710
Motor vehicles	30 465 944	2 674 776	3 166 813	3 383 933	2 503 940	2 997 369	3 171 254
Bodies for motor vehicles; trailers and semi-trailers	1 529 083	118 046	161 401	162 815	115 052	155 001	157 688
Parts and accessories	10 724 809	863 700	1 099 418	1 157 742	864 556	1 053 968	1 158 768
Other transport equipment	2 789 057	303 906	222 594	258 498	281 597	270 727	237 293
Furniture	6 356 278	533 605	513 848	558 439	553 476	519 861	577 311
Other manufacturing industries	12 208 259	969 075	1 109 867	1 124 139	983 589	1 122 311	1 128 044
TOTAL	398 319 486*	33 095 019	37 187 406	38 495 142	32 780 266	37 322 406	38 041 893

* Revised

1/ Preliminary

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

Selected manufacturing subgroups	Actual values			Seasonally adjusted values		
	June	May	June 1/	June	May	June
	1999	2000		1999	2000	
Spinning, weaving and finishing of textiles	217 876	215 447	184 261	215 010	217 250	181 526
Tents, tarpaulins, sails and other canvas goods and automotive textile goods	24 995	27 697	28 985	26 163	28 199	30 016
Other textile articles	77 604	61 045	80 438	67 306	62 621	69 480
Knitted and crotcheted fabrics and articles	143 364	156 456	144 334	151 060	157 433	152 396
Wearing apparel	643 383	715 314	663 534	681 396	714 699	707 880
Sawmilling and preserving of timber	18 682	23 866	24 677	19 110	23 901	25 216
Veneer sheets, plywood, laminboard, etc.	22 823	20 570	20 948	23 623	20 328	21 567
Builders' carpentry and joinery	60 460	41 132	41 423	57 890	42 413	39 613
Pulp, paper and paperboard	293 993	416 407	495 470	296 420	421 048	495 224
Corrugated paper and paperboard and containers	328 344	338 071	342 317	335 586	346 979	349 803
Paints, varnishes and coatings	8 209	6 929	13 959	11 775	9 662	20 623
Basic iron and steel products	2 776 703	3 174 410	2 903 703	2 839 740	3 252 835	2 980 931
Steel pipe and tube mills	126 087	175 397	173 325	137 373	180 632	190 076
Basic precious and non-ferrous metal products	1 108 836	1 178 871	1 253 165	1 018 450	1 153 874	1 146 683
Metal structures, parts	1 352 849	1 257 052	1 279 822	1 330 667	1 186 564	1 255 828
Cutlery, hand tools and general hardware	34 054	30 311	45 561	32 784	33 586	43 868
Metal containers, e.g. cans and tins	58 324	77 977	84 831	58 593	84 685	85 180
Cables, wire products, springs	64 852	56 171	64 732	62 694	52 919	62 630
Metal fasteners	32 725	53 559	54 165	33 484	50 972	55 208
All other metal products	727 001	514 724	532 534	719 341	570 420	529 563
Domestic appliances	45 300	21 475	22 073	43 583	20 747	21 225
Electric motors, generators and transformers	459 854	483 997	562 333	432 827	475 963	528 160
Insulated wire and cables	195 091	187 791	213 506	187 512	190 078	205 524
Accumulators, primary cells and primary batteries	14 297	13 616	13 851	13 378	12 865	12 843
Television, radio and						

communication apparatus	696 848	1 103 022	1 174 863	675 953	1 078 662	1 141 155
Motor vehicles	1 838 899	2 249 649	2 128 968	1 842 822	2 028 661	2 125 195
Parts and accessories for						
motor vehicles	298 907	309 388	274 277	279 616	289 022	256 307
Furniture	221 781	210 764	243 876	227 630	252 038	248 940

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* 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 June 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 design**
- 7 The calculation of the monthly production indices is based on the value of products and 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

13

In order to calculate a production index for the total manufacturing industry, the production indices for the major

**the total
manufacturing
industry**

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 June 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 June 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 June also wish to refer to the following publications which are available from Stats SA - <ul style="list-style-type: none">• 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 June 2000, by manufacturing major divisions, in table B.

Table B - Response rates for June 2000

Manufacturing major divisions	% response
Food and food products	74,7
Beverages	91,2
Textile	95,7
Total wearing apparel	87,8
Tanning and dressing of leather	58,8
Footwear	77,3
Wood and products of wood	74,6
Paper and paper products	91,5
Total publishing and printing	69,0
Coke and refined petroleum products	70,6
Basic chemicals	92,5
Other chemical products	84,9
Rubber products	91,7
Plastic products	67,4
Glass and glass products	100,0
Other non-metallic mineral products	77,7
Basic iron and steel products	79,4
Basic precious and non-ferrous metal products	75,0
Fabricated metal products	81,5
Total machinery and equipment	73,9

Electrical machinery, apparatus	72,0
Radio, television and communication apparatus	68,0
Professional equipment	68,0
Motor vehicles; trailers; parts and accessories	78,0
Other transport equipment	80,0
Furniture	72,9
Other manufacturing industries	68,4
Total	78,8

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

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