

Key figures as at the end of August 2000

Actual estimates		August 2000	% change between August 1999 and August 2000	% change between June 1999 to August 1999 and June 2000 to August 2000	% change between January 1999 to August 1999 and January 2000 to August 2000
of	Physical volume				
	manufacturing production index (1995=100)	107,7	+4,1	+5,7	+4,6
sales	Total value of				
	of manufactured products (R million)	38 424,7	+14,0	+13,1	+12,3

Seasonally adjusted estimates		August 2000	% change between July 2000 and August 2000	% change between March 2000 to May 2000 and June 2000 to August 2000
	Physical volume of manufacturing production index (1995=100)	105,8	+1,1	+2,6
sales	Total value of			
	of manufactured products (R million)	37 928,1	+4,8	+3,8

Key findings as at the end of August 2000

MANUFACTURING PRODUCTION INCREASES

Manufacturing production for the last three months up to August 2000 reflected an increase of 2,6% after seasonal adjustment compared with the previous three months. Higher manufacturing production was reported by 16 of the 27 manufacturing major divisions.

The major contributors to the increase of 2,6% after seasonal adjustment in the total manufacturing production were the basic chemicals (+0,5 of a percentage point), fabricated metal products (+0,5 of a percentage point), motor vehicle (+0,5 of a percentage point), food and food products (+0,4 of a percentage point) and the machinery and equipment (+0,4 of a percentage point) divisions (cf. Table A).

The total value of sales of manufactured products reflected an increase of 3,8% (R4 118 million) after seasonal adjustment for the three months up to August 2000 compared with the previous three months. The largest increases were reported by the coke and refined petroleum products (+14,3% or R1 045 million), motor vehicle (+12,1% or R1 443 million), basic chemicals (+8,8% or R454 million), 'other' manufacturing industries (+8,7% or R272 million) and fabricated metal products (+4,2% or R256 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 Jun.2000 - Aug. 2000	Quarterly percentage change (Jun. 2000 - Aug. 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	100,3	+3,4	+0,4
Beverages	4,6	97,4	+2,9	+0,1
Total textiles	2,9	94,6	-1,4	-0,0
Total Wearing apparel	3,6	81,6	-4,4	-0,2
Tanning and dressing of leather	0,4	124,8	-2,3	-0,0
Footwear	0,9	66,6	-2,8	-0,0
Wood and products of wood	1,9	119,9	+1,6	+0,0
Paper and paper products	5,3	104,1	+0,1	+0,0
Total publishing and printing	4,1	90,3	-1,3	-0,1
Coke and refined petroleum products	4,2	109,2	+5,3	+0,2
Basic chemicals	4,5	144,8	+11,6	+0,5
Other chemical products	6,2	100,8	-1,4	-0,1
Rubber products	1,4	95,1	-1,6	-0,0
Plastic products	3,1	89,5	+2,9	+0,1
Glass and glass products	1,0	93,7	+9,2	+0,1
Other non-metallic mineral products	3,5	88,1	-0,0	-0,0
Basic iron and steel products	7,6	115,3	-4,2	-0,3
Basic precious and non-ferrous metal products	3,2	156,3	-2,1	-0,1
Fabricated metal products	7,0	103,9	+6,6	+0,5
Total machinery and equipment	5,8	98,7	+7,5	+0,4
Electrical machinery, apparatus	3,4	100,2	+0,2	+0,0
Radio, television and communication apparatus	1,0	122,2	-1,3	-0,0
Professional equipment	0,5	83,4	+11,3	+0,1
Motor vehicles; trailers; parts and accessories	8,0	123,5	+6,6	+0,5
Other transport equipment	1,0	111,4	+3,3	+0,0
Furniture	1,6	103,5	+11,9	+0,2
Other manufacturing industries	2,6	113,8	+8,0	+0,2
TOTAL	100,0	106,4	+2,6	+2,6

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

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Forthcoming issues

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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	109,0
A	82,8	91,0	96,4	105,5	96,3	94,8	93,3
M	84,8	101,8	104,1	106,2	101,1	101,1	106,5
J	92,4	102,4	102,9	104,9	104,5	100,5	110,5
J	92,9	101,7	104,7	108,2	104,4	104,3	107,7
A	94,0	106,0	107,8	105,8	100,0	103,5	107,7 1/
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	99,2	105,7	105,0	100,8	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	101,1	99,9	107,6
A	88,7	97,3	102,2	111,1	101,3	99,5	98,1
M	85,4	101,8	103,9	105,4	100,0	100,2	105,5
J	91,3	101,1	101,5	103,3	102,8	98,9	108,7
J	91,6	99,9	102,4	105,6	101,6	101,5	104,7
A	90,9	102,6	104,5	103,1	97,7	101,5	105,8
S	95,8	101,5	100,2	103,1	102,1	102,6	
O	93,9	101,1	103,1	105,8	99,7	100,7	
N	97,2	99,8	103,1	101,1	99,7	105,2	
D	98,1	98,3	98,9	102,5	101,2	108,2	

* 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 1999	Actual indices			Seasonally adjusted indices				
			August	July	August 1/	August	July	August		
			1999		2000		1999		2000	
Food and food products	10,7	99,2	106,0	101,1	108,1	99,8	97,1	100,9		
Meat, fish, fruit etc.	2,8	112,4	119,0	100,2	104,8	117,3	109,5	102,8		
Dairy products	1,4	92,8	96,5	84,8	94,2	95,1	89,5	92,8		
Grain mill products	2,1	93,9	94,8	90,0	94,2	95,3	84,9	94,7		
Other food products	4,4	95,3	105,9	112,0	121,1	92,1	97,2	105,2		
Beverages	4,6	100,8	90,0	84,0	79,4	96,3	97,5	85,5		
Total textiles	2,9	91,3	96,9	101,1	96,3	91,7	92,7	91,5		
Textiles	1,7	83,8	88,5	90,8	88,4	83,8	83,6	84,0		
Other textile products	1,2	101,9	108,8	115,6	107,5	102,9	105,6	102,2		
Total wearing apparel	3,6	88,3	92,7	77,3	84,7	89,1	75,1	81,9		
Knitted, crocheted articles	0,6	82,5	90,5	73,0	72,3	87,8	70,1	69,9		
Wearing apparel	3,0	89,5	93,2	78,2	87,2	89,3	76,0	84,3		
Tanning and dressing of leather	0,4	122,9	134,4	125,3	124,6	129,5	130,4	120,1		
Footwear	0,9	69,2	86,1	65,5	71,4	80,1	65,3	66,6		
Wood and products of wood	1,9	114,1	117,0	121,5	125,8	112,8	113,8	121,2		
Sawmilling and planing of wood	0,8	104,2	111,9	112,3	114,3	104,5	104,7	106,3		
Products of wood	1,2	120,6	120,3	127,5	133,3	118,2	119,8	131,0		
Paper and paper products	5,3	98,2	97,1	108,4	106,1	94,3	107,6	103,6		
Total publishing and printing	4,1	93,1	96,4	87,8	93,4	93,6	86,8	90,7		
Publishing	1,5	99,6	101,1	85,0	91,7	100,0	87,1	90,8		
Printing, recorded media	2,6	89,5	93,7	89,4	94,4	90,0	86,6	90,7		
Coke and refined petroleum products	4,2	106,4	109,7	105,7	107,8	111,5	107,7	109,7		
Basic chemicals	4,5	126,9	121,6	140,5	143,2	124,5	144,7	147,2		
Other chemical products	6,2	103,3	100,2	103,1	97,7	101,7	99,6	99,3		
Rubber products	1,4	92,8	108,3	90,2	95,5	105,5	90,9	93,2		
Plastic products	3,1	86,5	85,2	92,7	92,0	83,8	89,5	90,6		
Glass and glass products	1,0	85,2	91,3	96,4	106,5	84,8	100,5	98,7		
Other non-metallic mineral products	3,5	85,0	88,7	89,7	93,4	84,4	85,4	89,1		
Basic iron and steel products	7,6	96,9	99,2	129,9	108,5	100,3	122,0	110,0		
Basic precious and non-ferrous metal products	3,2	153,3	157,7	140,7	156,7	155,5	130,5	154,6		
Fabricated metal products	7,0	99,1	98,9	103,9	109,3	98,1	101,2	108,1		
Structural metal products	2,4	95,9	92,3	85,7	87,5	94,5	85,3	89,0		
Other fabricated metal product	4,6	100,8	102,3	113,2	120,5	99,9	109,5	117,8		
Total machinery and equipment	5,8	97,5	99,8	107,9	96,1	95,9	103,2	93,2		
General purpose machinery	2,5	111,5	119,4	126,4	103,0	112,5	124,4	97,8		
Special purpose machinery	2,9	84,4	81,9	88,9	86,4	80,6	83,0	85,7		
Household appliances	0,4	105,3	107,4	130,1	123,5	103,2	115,6	119,1		
Electrical machinery, apparatus	3,4	96,5	95,8	99,2	98,6	93,5	94,3	96,9		
Radio, television and communication apparatus	1,0	126,9	124,4	126,8	134,2	119,5	120,9	129,1		
Professional equipment	0,5	77,9	79,5	89,7	92,0	75,7	84,9	87,5		
Motor vehicles; trailers; parts and accessories	8,0	102,5	108,6	129,3	128,3	105,8	123,1	125,4		
Motor vehicles	4,5	97,0	103,8	120,6	120,7	102,1	116,8	119,1		
Bodies for motor vehicles; trailers and semi-trailers	0,5	64,3	70,0	59,6	66,9	65,7	61,9	62,8		
Parts and accessories	3,0	117,7	123,0	155,0	151,0	118,5	143,9	146,3		
Other transport equipment	1,0	113,1	114,6	123,8	113,1	112,3	112,0	111,0		
Furniture	1,6	102,6	105,1	97,8	112,5	101,0	100,0	108,0		
Other manufacturing industries	2,6	107,7	117,1	115,3	126,9	108,5	106,1	117,8		
TOTAL	100,0	101,4	103,5	107,7	107,7	101,5	104,7	105,8		

* 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	28 442 536
F	19 815 926	24 414 317	26 328 500	29 866 793	29 901 544	30 607 558	35 051 600
M	22 056 191	26 712 878	28 188 286	29 866 272	32 190 538	32 788 344	37 852 848
A	19 132 660	22 897 368	26 231 967	30 438 604	29 758 879	30 508 382	32 660 715
M	19 723 817	25 806 431	28 293 052	30 626 091	30 352 835	32 711 351	37 035 847
J	22 055 323	26 204 689	28 261 416	30 575 542	31 723 893	33 095 019	38 633 102*
J	22 251 097	25 613 126	28 378 392	31 169 707	31 732 667	33 398 049	36 289 744
A	21 957 670	27 064 919	29 568 761	31 400 042	30 810 619	33 707 678	38 424 703 1/
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	33 013 723	
Year	259 366 761	308 790 007	339 096 803	368 283 280	373 568 657	398 331 546	
Seasonally adjusted values							
J	19 821 238	23 558 992	26 497 435	30 658 361	31 284 845	31 829 796	34 182 898
F	20 116 145	24 779 108	26 809 107	30 509 656	30 617 022	31 422 612	35 925 980
M	20 747 448	25 291 270	26 876 378	28 711 699	31 002 091	31 632 535	36 435 267
A	20 324 885	24 280 337	27 721 565	32 077 095	31 365 214	32 149 961	34 481 490
M	20 158 170	26 147 624	28 456 603	30 745 542	30 426 410	32 839 779	37 167 565
J	21 898 766	25 973 609	28 048 154	30 272 402	31 350 840	32 735 419	38 074 501
J	22 185 804	25 544 250	28 343 815	31 095 573	31 629 599	33 272 262	36 200 141
A	21 213 930	26 207 454	28 794 298	30 723 350	30 282 860	33 217 221	37 928 088
S	22 750 848	26 482 666	28 263 436	30 014 469	31 550 063	34 550 046	
O	22 673 513	26 198 722	29 540 078	32 054 061	31 174 265	33 384 997	
N	23 532 629	26 859 283	29 736 594	30 315 708	30 862 757	35 014 509	
D	23 375 996	26 807 626	29 358 543	31 029 826	31 771 346	36 490 128	

* 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		
		August	July	August 1/	August	July	August
		1999	2000		1999	2000	
		1999	1999	2000	1999	2000	2000
Food and food products	57 155 867	4 712 904	4 722 513	5 114 349	4 639 489	4 729 748	5 057 934
Meat, fish, fruit etc.	17 159 161	1 404 365	1 404 807	1 419 039	1 404 743	1 462 109	1 423 041
Dairy products	7 164 653	633 917	557 614	620 751	615 890	600 377	603 555
Grain mill products	14 871 882	1 285 881	1 270 426	1 293 192	1 275 998	1 227 378	1 282 241
Other food products	17 960 171	1 388 741	1 489 666	1 781 367	1 342 858	1 439 884	1 749 097
Beverages	20 605 141	1 567 325	1 537 950	1 550 664	1 689 755	1 721 590	1 688 957
Total textiles	9 770 275	846 930	855 341	868 896	815 695	797 112	841 719
Textiles	6 304 565	551 886	547 166	561 536	524 672	509 610	537 073
Other textile products	3 465 710	295 044	308 175	307 360	291 023	287 502	304 646
Total wearing apparel	10 994 539	940 315	847 473	881 291	904 252	858 908	851 225
Knitted, crocheted articles	1 858 591	164 340	140 583	145 314	161 157	136 820	142 399
Wearing apparel	9 135 948	775 975	706 890	735 977	743 095	722 088	708 826
Tanning and dressing of leather	2 577 530	225 241	233 530	222 987	224 480	238 460	223 207
Footwear	2 379 127	219 502	187 373	204 682	203 144	189 617	190 366
Wood and products of wood	8 386 436	713 899	792 481	773 269	691 873	751 828	749 372
Sawmilling and planing of wood	2 380 674	213 492	227 312	224 790	203 518	214 525	214 127
Products of wood	6 005 762	500 407	565 169	548 479	488 355	537 303	535 245
Paper and paper products	20 400 594	1 647 641	1 923 767	1 897 452	1 674 040	1 930 750	1 933 281
Total publishing and printing	11 664 938	982 954	971 632	1 060 404	963 129	968 856	1 040 259
Publishing	4 471 082	382 631	348 720	379 218	375 487	354 783	371 758
Printing, recorded media	7 193 856	600 323	622 912	681 186	587 642	614 073	668 501
Coke and refined petroleum products	20 999 687	1 934 976	2 620 119	3 143 682	1 806 526	2 726 078	2 919 003
Basic chemicals	19 872 911	1 632 634	1 813 681	1 913 851	1 670 555	1 847 800	1 946 349
Other chemical products	25 490 045	2 094 522	2 098 466	2 244 059	2 092 169	2 102 042	2 246 473
Rubber products	4 167 229	381 723	358 043	401 423	355 391	369 693	372 776
Plastic products	9 723 276	794 785	911 419	945 597	781 505	884 353	933 397
Glass and glass products	2 140 820	182 509	197 701	211 223	176 175	199 046	204 656
Other non-metallic mineral products	9 255 562	813 059	837 100	943 744	766 888	794 154	891 864
Basic iron and steel products	26 056 845	2 152 215	2 575 867	2 664 449	2 127 926	2 689 048	2 636 692
Basic precious and non-ferrous metal products	13 107 160	1 171 178	1 155 504	1 239 680	1 126 454	1 135 222	1 190 846
Fabricated metal products	23 450 896	1 933 197	2 111 147	2 173 586	1 938 150	2 087 539	2 171 745
Structural metal products	8 375 921	667 530	630 612	629 910	706 667	651 832	666 946
Other fabricated metal product	15 074 975	1 265 667	1 480 535	1 543 676	1 231 483	1 435 707	1 504 799
Total machinery and equipment	18 482 182	1 557 255	1 692 056	1 732 784	1 483 733	1 657 846	1 668 161
General purpose machinery	8 715 989	806 113	787 126	832 175	731 847	780 966	757 038
Special purpose machinery	7 839 996	593 200	708 578	709 489	599 564	700 810	725 157
Household appliances	1 926 197	157 942	196 352	191 120	152 322	176 070	185 966
Electrical machinery, apparatus	11 835 715	980 975	1 062 074	1 123 797	943 448	1 004 034	1 084 168
Radio, television and communication apparatus	4 441 396	412 730	374 237	486 682	387 178	359 990	459 256
Professional equipment	1 299 945	111 083	118 546	119 854	110 371	117 372	119 591
Motor vehicles; trailers; parts and accessories	42 719 836	3 747 764	4 311 263	4 729 910	3 764 365	4 095 114	4 769 501
Motor vehicles	30 465 944	2 699 332	3 059 252	3 285 499	2 729 253	2 900 245	3 333 799
Bodies for motor vehicles; trailers and semi-trailers	1 529 083	135 728	130 676	160 743	131 570	137 098	155 215
Parts and accessories	10 724 809	912 704	1 121 335	1 283 668	903 542	1 057 771	1 280 487
Other transport equipment	2 789 057	378 307	328 450	194 682	290 601	366 727	151 667
Furniture	6 356 278	551 127	519 149	559 516	528 546	496 913	537 936
Other manufacturing industries	12 208 259	1 020 928	1 132 862	1 022 190	1 061 883	1 080 301	1 047 687
TOTAL	398 331 546	33 707 678	36 289 744	38 424 703	33 217 221	36 200 141	37 928 088

* Revised
1/ Preliminary

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

Selected manufacturing subgroups	Actual values			Seasonally adjusted values		
	August	July	August 1/	August	July	August
	1999	2000		1999	2000	
Spinning, weaving and finishing of textiles	210 688	189 179	176 611	213 193	191 538	180 470
Tents, tarpaulins, sails and other canvas goods and automotive textile goods	26 700	28 068	25 107	26 284	30 824	24 949
Other textile articles	60 856	70 575	59 575	63 802	69 734	63 092
Knitted and crotcheted fabrics and articles	147 888	141 093	129 042	151 236	148 391	132 809
Wearing apparel	868 984	675 160	677 304	857 329	698 589	668 316
Sawmilling and preserving of timber	19 515	25 657	27 643	19 346	25 522	27 467
Veneer sheets, plywood, laminboard, etc.	21 522	25 410	24 506	21 765	24 898	24 821
Builders' carpentry and joinery	59 636	39 416	42 653	56 886	36 843	40 493
Pulp, paper and paperboard	261 976	529 576	580 720	229 549	476 553	511 820
Corrugated paper and paper-board and containers	353 568	353 264	342 702	381 166	375 150	370 671
Paints, varnishes and coatings	12 353	10 852	8 692	15 593	14 153	11 294
Basic iron and steel products	2 857 911	3 099 080	2 996 851	2 909 405	3 173 605	3 048 007
Steel pipe and tube mills	141 840	214 445	197 585	150 654	222 333	210 458
Basic precious and non-ferrous metal products	1 043 973	1 181 145	1 223 422	1 042 110	1 242 943	1 226 659
Metal structures, parts	1 331 310	1 300 676	1 308 900	1 333 617	1 287 524	1 312 000
Cutlery, hand tools and general hardware	28 956	25 874	25 813	29 806	23 157	26 597
Metal containers, e.g. cans and tins	57 365	74 877	75 016	63 258	79 491	82 642
Cables, wire products, springs	75 390	59 807	60 164	73 468	57 077	58 312
Metal fasteners	35 387	55 517	56 925	38 513	57 154	61 629
All other metal products	647 392	536 940	509 771	577 347	482 042	456 459
Domestic appliances	45 830	22 586	19 598	43 627	21 317	18 682
Electric motors, generators and transformers	445 376	542 197	515 629	447 843	525 416	521 164
Insulated wire and cables	162 781	301 687	316 708	164 136	294 440	319 553
Accumulators, primary cells and primary batteries	10 526	12 898	11 780	10 499	12 793	11 862
Television, radio and communication apparatus	828 721	1 204 166	1 157 914	838 174	1 233 899	1 177 902
Motor vehicles	1 688 311	2 019 231	2 007 565	1 753 506	2 088 296	2 073 767
Parts and accessories for motor vehicles	314 802	308 332	487 475	282 328	291 682	436 163
Furniture	218 617	237 949	253 985	203 763	247 575	237 763

* 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 August 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 the total manufacturing industry	13	<p>In order to calculate a production index for the total manufacturing industry, the production indices for the major groups are combined as follows:</p> <p>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.</p>
Seasonal adjustment	14	<p>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.</p>
Trend cycle	15	<p>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.</p>
Reliability of estimates	16	<p>Estimates are subject to sampling and non-sampling errors. Figures for the latest month are preliminary.</p>
Historical data	17	<p>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.</p>
Related publications	18	<p>Users may also wish to refer to the following publications which are available from Stats SA -</p> <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	<p>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.</p>
Rounding-off of figures	20	<p>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.</p>

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

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| 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 August 2000, by manufacturing major divisions, in table B.

Table B - Response rates for August 2000

Manufacturing major divisions	% response
Food and food products	76,8
Beverages	86,1
Textile	94,0
Total wearing apparel	87,1
Tanning and dressing of leather	57,6
Footwear	78,3
Wood and products of wood	82,5
Paper and paper products	80,6
Total publishing and printing	72,4
Coke and refined petroleum products	69,7
Basic chemicals	92,4
Other chemical products	88,5
Rubber products	87,0
Plastic products	71,1
Glass and glass products	91,7
Other non-metallic mineral products	62,3
Basic iron and steel products	78,1
Basic precious and non-ferrous metal products	68,0
Fabricated metal products	81,1
Total machinery and equipment	79,2
Electrical machinery, apparatus	72,8
Radio, television and communication apparatus	82,6
Professional equipment	71,4
Motor vehicles; trailers; parts and accessories	84,1
Other transport equipment	82,9
Furniture	80,3
Other manufacturing industries	76,5
Total	79,5

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 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 - <ul style="list-style-type: none">• 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 - <ul style="list-style-type: none">• 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.

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