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CHINA-US COMPARATIVE PRODUCTIVITY PERFORMANCE IN MANUFACTURING, 1952-2000

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ABSTRACT

This paper compares productivity levels in Chinese manufacturing with those in the USA for 13 manufacturing branches in the period 1952-2000. The comparison is based on the approach of industry of origin purchasing power parities, with 1995 as the benchmark.

The basic data used in this study are constructed by the authors' joint research project. With the help of China's National Bureau of Statistics, the data set now includes the new estimates of manufacturing branch-level capital stock and hours worked for this period.

With the US as the base country, this paper estimates total productivity levels for Chinese manufacturing branches, and attempts to explain the China-US TFP gaps by capital intensity, structural differences, size effects and the levels of education.

Keywords: Industry of origin purchasing power parities; Total factor productivity

JEL Classification: L60, O47, P27

Authors' note:

Due to data problems, in this incomplete writing, we have only included the outline and some preliminary results for discussion. More details will be available at the session.

This report will include:

Introduction

Problems of the previous studies

Methodological issues

Data construction

Discussion of results

Preliminary results:

Table 1: The 1995 Benchmark Statistics in China and US Manufacturing
(values in 1995 price)

	China				USA			
	GVO (mil. yuan)	GVA (mil. yuan)	No. Employed (x1000)	GVA per person (yuan)	GVO (mil. \$)	GVA (mil. \$)	No. Employed (x1000)	GVA per person (\$)
Food & kindred products	1,076,853 (12.94)	369,144 (16.69)	7,281 (8.86)	50,701	553,924 (14.98)	235,605 (13.47)	1,746 (9.17)	134,940
Textile products	801,322 (9.63)	153,403 (6.94)	8,557 (10.41)	17,927	76,958 (2.08)	32,236 (1.84)	884 (4.65)	36,467
Wearing apparel	378,339 (4.55)	87,515 (3.96)	3,783 (4.60)	23,134	69,947 (1.89)	35,846 (2.05)	763 (4.01)	46,978
Wood products	158,965 (1.91)	43,404 (1.96)	2,198 (2.67)	19,748	139,430 (3.77)	66,804 (3.82)	1,415 (7.44)	47,211
Paper, printing and publishing	268,368 (3.22)	67,162 (3.04)	3,127 (3.81)	21,476	246,381 (6.66)	127,462 (7.29)	2,376 (12.49)	53,645
Leather products	193,221 (2.32)	34,476 (1.56)	1,829 (2.23)	18,851	11,373 (0.31)	5,742 (0.33)	112 (0.59)	51,264
Chemicals and allied products	1,128,982 (13.56)	299,636 (13.55)	7,126 (8.67)	42,047	573,867 (15.52)	257,563 (14.73)	1,187 (6.24)	216,986
Rubber & plastic products	335,183 (4.03)	78,324 (3.54)	3,226 (3.93)	24,275	150,254 (4.06)	76,893 (4.40)	984 (5.17)	78,144
Building materials	625,092 (7.51)	206,191 (9.32)	12,500 (15.21)	16,496	76,731 (2.08)	44,411 (2.54)	558 (2.93)	79,590
Metals	1,156,007 (13.89)	299,098 (13.53)	8,888 (10.82)	33,652	457,922 (12.39)	196,890 (11.26)	2,175 (11.43)	90,524
Machinery and transport equip.	1,178,473 (14.16)	308,568 (13.95)	12,072 (14.69)	25,560	771,393 (20.87)	343,413 (19.63)	3,717 (19.53)	92,398
Electrical and electronic equipment	778,608 (9.35)	202,210 (9.14)	4,972 (6.05)	40,667	468,927 (12.69)	264,374 (15.11)	1,817 (9.55)	145,474
Miscellaneous mfg	244,503 (2.94)	62,182 (2.81)	6,614 (8.05)	9,401	99,546 (2.69)	61,868 (3.54)	1,296 (6.81)	47,738
Total Manufacturing	8,323,918 (100.00)	2,211,315 (100.00)	82,174 (100.00)	26,910	3,696,653 (100.00)	1,749,106 (100.00)	19,030 (100.00)	91,913

Sources:

Table 2: Unit Value Ratios by Major Manufacturing Branch, China/USA, 1995

	Number of products/product groups matched	US coverage ratio (%)	China coverage ratio (%)	UVR at 1995 US factor costs (Laspeyres)	UVR at 1995 Chinese factor costs (Paashe)	UVR Geometric mean (Fisher)	Relative price level (UVR/exchange rate)
Food and kindred prod	19	15.8	61.6	6.10	1.49	3.02	0.36
Textiles	9	21.7	54.8	6.04	4.89	5.44	0.65
Wearing apparel	5	26.6	10.5	7.25	7.11	7.18	0.86
Wood products	4	20.8	68.3	2.14	1.40	1.73	0.21
Paper, printing	5	8.5	60.8	7.99	7.53	7.76	0.93
Leather products	2	19.6	24.8	6.15	5.48	5.80	0.69
Chemicals	17	29.8	34.5	9.61	6.16	7.69	0.92
Rubber and plastics	3	6.1	20.6	10.77	2.57	5.26	0.63
Building materials	3	10.1	8.3	4.23	1.91	2.85	0.34
Metals	17	3.8	34.0	5.94	4.61	5.23	0.63
Machinery	22	13.4	11.2	9.38	5.14	6.94	0.83
Electrical & electronics	17	21.0	44.5	3.21	3.60	3.40	0.41
Miscellaneous mfg	2	1.8	0.2	3.45	0.50	1.31	0.16
Total manufacturing	125	15.8	34.2	7.02	2.82	4.45	0.53
Exchange rate (RMB/USD)				8.35	8.35	8.35	

Source:

Table 3a: China/US Comparative Level of Gross Value Added in Manufacturing in 1995

	PPPs at Chinese q	PPPs at US q	China GVA ml 95yuan	USA GVA ml 95yuan	China/USA (US=100)	China GVA ml 95USD	USA GVA ml 95USD	China/USA (US=100)	Geometric mean China/USA
Food and kindred prod	1.49	6.10	369,144	1,438,261	25.67	247,386	235,605	105.00	51.91
Textiles	4.89	6.04	153,403	194,820	78.74	31,354	32,236	97.26	87.51
Wearing apparel	7.11	7.25	87,515	259,785	33.69	12,304	35,846	34.33	34.00
Wood products	1.40	2.14	43,404	143,136	30.32	30,946	66,804	46.32	37.48
Paper, printing	7.53	7.99	67,162	1,018,551	6.59	8,919	127,462	7.00	6.79
Leather products	5.48	6.15	34,476	35,285	97.71	6,295	5,742	109.65	103.50
Chemicals	6.16	9.61	299,636	2,474,085	12.11	48,667	257,563	18.90	15.13
Rubber and plastics	2.57	10.77	78,324	828,449	9.45	30,457	76,893	39.61	19.35
Building materials	1.91	4.23	206,191	187,977	109.69	107,740	44,411	242.60	163.13
Metals	4.61	5.94	299,098	1,168,921	25.59	64,860	196,890	32.94	29.03
Machinery	5.14	9.38	308,568	3,222,178	9.58	60,071	343,413	17.49	12.94
Electrical & electronics	3.60	3.21	202,210	849,897	23.79	56,198	264,374	21.26	22.49
Miscellaneous mfg	0.50	3.45	62,182	213,722	29.09	124,769	61,868	201.67	76.60
Total Manufacturing	2.82	7.02	2,211,315	12,035,067	18.37	829,966	1,749,106	47.45	29.53

Source:

Table 3c: China/US Comparative Level of Gross Value of Output in Manufacturing in 1995

	PPPs at Chinese q	PPPs at US q	China GVO ml 95yuan	USA GVO ml 95yuan	China/USA (US=100)	China GVO ml 95yuan	USA GVO ml 95USD	China/USA (US=100)	Geometric mean China/USA
Food and kindred products	1.49	6.10	1,076,853	3,381,454	31.85	721,666	553,924	130.28	64.41
Textiles	4.89	6.04	801,322	465,101	172.29	163,780	76,958	212.82	191.49
Wearing apparel	7.11	7.25	378,339	506,931	74.63	53,192	69,947	76.05	75.34
Wood products	1.40	2.14	158,965	298,748	53.21	113,337	139,430	81.29	65.77
Paper, printing	7.53	7.99	268,368	1,968,839	13.63	35,639	246,381	14.47	14.04
Leather products	5.48	6.15	193,221	69,892	276.46	35,283	11,373	310.24	292.86
Chemicals	6.16	9.61	1,128,982	5,512,426	20.48	183,371	573,867	31.95	25.58
Rubber and plastics	2.57	10.77	335,183	1,618,836	20.71	130,337	150,254	86.74	42.38
Building materials	1.91	4.23	625,092	324,773	192.47	326,626	76,731	425.68	286.24
Metals	4.61	5.94	1,156,007	2,718,654	42.52	250,682	457,922	54.74	48.25
Machinery	5.14	9.38	1,178,473	7,237,824	16.28	229,420	771,393	29.74	22.01
Electrical & electronics	3.60	3.21	778,608	1,507,483	51.65	216,390	468,927	46.15	48.82
Miscellaneous mfg	0.50	3.45	244,503	343,882	71.10	490,600	99,546	492.83	187.19
Total Manufacturing	2.82	7.02	8,323,918	25,954,841	32.07	2,950,324	3,696,653	79.81	50.59

Source:

Table 3c: China/US Comparative Level of Labour Productivity in Manufacturing in 1995

	PPPs at Chinese q	PPPs at US q	China GVA per person 95yuan	USA GVA per person 95yuan	China/USA (US=100)	China GVA per person 95yuan	USA GVA per person 95USD	China/USA (US=100)	Geometric mean China/USA
Food and kindred products	1.49	6.10	50,701	823,746	6.15	33,978	134,940	25.18	12.45
Textiles	4.89	6.04	17,927	220,394	8.13	3,664	36,467	10.05	9.04
Wearing apparel	7.11	7.25	23,134	340,461	6.79	3,252	46,978	6.92	6.86
Wood products	1.40	2.14	19,748	101,157	19.52	14,080	47,211	29.82	24.13
Paper, printing	7.53	7.99	21,476	428,683	5.01	2,852	53,645	5.32	5.16
Leather products	5.48	6.15	18,851	315,048	5.98	3,442	51,264	6.71	6.34
Chemicals	6.16	9.61	42,047	2,084,318	2.02	6,829	216,986	3.15	2.52
Rubber and plastics	2.57	10.77	24,275	841,920	2.88	9,440	78,144	12.08	5.90
Building materials	1.91	4.23	16,496	336,876	4.90	8,619	79,590	10.83	7.28
Metals	4.61	5.94	33,652	537,435	6.26	7,298	90,524	8.06	7.10
Machinery	5.14	9.38	25,560	866,951	2.95	4,976	92,398	5.39	3.98
Electrical & electronics	3.60	3.21	40,667	467,662	8.70	11,302	145,474	7.77	8.22
Miscellaneous mfg	0.50	3.45	9,401	164,911	5.70	18,864	47,738	39.52	15.01
Total Manufacturing	2.82	7.02	26,910	645,230	4.17	9,543	91,913	10.38	6.58

Source:

Table 4: China/US Comparative Labour Productivity by Major Manufacturing Branch
1952-2000 (US=100; in 1995 Fisher UVRs)

	Total manufacturing	Food & kindred p	Textile products	Wearing apparel	Wood products	Paper & printing	Leather products
1952	2.77	15.38	13.90	2.10	2.25	0.85	1.57
1953	3.29	17.68	17.40	2.47	2.97	0.91	1.75
1954	3.42	16.84	17.16	2.45	2.96	0.95	2.20
1955	3.62	10.58	17.30	2.85	2.68	1.00	2.61
1956	4.64	11.94	20.55	4.49	4.24	1.29	3.41
1957	5.00	12.58	18.69	3.93	4.11	1.56	4.24
1958	2.50	5.03	14.44	2.79	6.97	0.89	3.04
1959	5.02	9.29	21.01	6.69	14.85	1.57	4.17
1960	5.32	7.82	17.56	4.94	15.59	1.98	4.74
1961	3.69	5.61	11.72	2.84	5.53	1.42	2.88
1962	4.09	6.40	12.07	3.89	6.19	1.72	2.64
1963	4.69	8.53	11.09	3.24	4.96	1.79	2.43
1964	5.16	10.79	12.41	3.72	5.12	1.86	2.31
1965	5.63	11.15	14.25	4.45	5.82	2.19	2.38
1966	6.18	11.41	15.30	4.49	5.67	2.50	3.20
1967	4.99	10.76	14.27	4.62	5.66	2.40	3.83
1968	4.47	11.03	13.79	3.85	4.91	2.08	3.96
1969	5.08	11.33	16.52	3.89	5.94	2.19	4.06
1970	5.74	11.14	15.79	3.99	6.35	2.23	4.57
1971	5.17	9.17	12.73	3.58	5.78	1.99	4.02
1972	4.90	9.12	11.61	3.98	5.82	1.92	3.87
1973	4.85	9.09	12.50	4.04	5.57	1.89	3.71
1974	4.67	9.89	12.52	4.29	5.60	1.79	3.32
1975	4.74	9.65	12.50	5.03	6.73	1.92	3.20
1976	3.96	8.78	9.96	5.45	6.84	1.70	2.93
1977	4.41	10.35	8.95	5.73	9.43	1.78	3.34
1978	3.94	8.86	8.62	4.34	15.39	1.71	2.66
1979	4.12	7.85	9.32	2.94	10.19	1.68	2.75
1980	4.01	8.66	8.06	2.59	10.61	1.51	2.36
1981	3.80	8.78	8.17	2.51	10.22	1.45	2.65
1982	3.95	8.67	7.66	2.29	10.20	1.48	2.19
1983	3.94	8.60	6.54	2.01	10.10	1.57	1.97
1984	3.92	8.71	6.17	1.87	9.20	1.62	1.80
1985	4.08	8.98	6.21	1.85	5.37	1.83	1.77
1986	4.14	10.29	5.93	3.44	5.29	1.82	1.99
1987	4.12	10.73	5.87	2.88	5.67	1.95	1.90
1988	4.31	10.98	6.21	3.39	6.39	2.09	2.00
1989	4.53	12.33	6.18	3.46	6.77	2.23	1.99
1990	4.50	11.87	5.63	3.35	6.76	2.32	2.12
1991	4.83	12.65	5.58	3.34	8.22	2.42	2.12
1992	5.06	13.30	5.78	3.67	8.49	2.66	2.64
1993	5.48	13.76	6.31	5.38	11.71	3.44	3.57
1994	5.58	13.29	6.63	5.92	16.39	3.56	3.93
1995	6.58	12.45	9.04	6.86	24.13	5.16	6.34
1996	6.03	13.50	7.92	7.99	17.60	4.54	6.03
1997	6.12	13.15	9.14	8.94	16.05	4.78	4.90
1998	5.88	13.29	8.34	9.62	7.83	4.05	3.05
1999	6.27	13.93	9.53	9.82	8.69	4.19	2.82
2000	6.55	14.30	9.44	10.84	7.88	5.03	2.93

Table 4: Continued

	Chemicals	Rubber & plastics	Building materials	Metal products	Machinery transport eq	Electrical equipment	Other manufacturing
1952	5.23	13.79	5.76	0.79	0.85	6.27	1.77
1953	5.13	15.07	6.26	1.12	1.09	8.44	2.32
1954	6.60	18.90	7.25	1.37	1.28	8.79	2.11
1955	6.66	18.85	6.30	2.40	1.41	8.87	1.87
1956	5.85	15.57	6.71	3.17	1.82	9.92	3.05
1957	6.40	17.68	9.29	3.39	2.24	16.19	3.42
1958	1.01	8.51	1.49	0.90	2.00	16.08	2.50
1959	1.84	7.70	2.88	2.68	3.46	25.33	5.97
1960	2.16	8.63	3.89	3.83	3.76	27.08	5.23
1961	2.18	6.20	3.83	3.49	1.52	14.86	4.36
1962	2.75	8.23	5.79	3.99	1.06	12.82	4.39
1963	4.48	9.16	7.66	6.00	1.18	10.99	3.91
1964	5.20	10.19	7.96	6.04	1.40	9.85	3.82
1965	5.29	11.10	7.09	6.15	1.64	8.74	4.61
1966	6.02	12.04	7.19	6.70	2.25	12.57	4.69
1967	4.86	9.38	4.89	4.56	1.30	8.84	3.96
1968	3.85	8.58	4.15	3.86	1.15	6.69	3.64
1969	4.57	9.93	4.31	4.53	1.69	9.87	3.63
1970	4.03	12.09	4.92	6.62	2.46	11.62	3.60
1971	3.39	9.59	4.70	6.57	2.22	9.73	3.70
1972	3.16	8.34	4.10	6.37	2.08	8.61	3.61
1973	2.99	7.75	3.60	6.40	2.10	8.60	4.50
1974	3.00	7.13	3.40	5.35	2.04	9.01	4.35
1975	3.04	6.58	3.44	6.38	1.98	8.37	4.40
1976	2.48	5.98	2.86	5.39	1.49	7.32	3.10
1977	2.47	5.83	3.13	6.49	1.48	6.78	4.25
1978	2.63	4.74	2.29	7.22	1.28	7.41	3.73
1979	2.88	4.40	2.51	7.27	1.52	8.31	4.15
1980	3.02	2.97	3.10	5.39	1.35	5.49	6.68
1981	2.65	2.11	3.12	4.59	1.26	4.99	6.55
1982	2.60	2.24	3.92	5.17	1.32	4.91	6.77
1983	2.34	2.51	3.57	5.93	1.37	5.55	5.06
1984	2.29	2.56	3.44	5.64	1.48	6.32	4.58
1985	2.35	2.69	3.59	5.58	1.73	7.57	4.60
1986	2.27	2.74	3.43	5.30	1.74	6.56	4.74
1987	1.98	2.86	3.75	5.50	1.82	6.54	5.42
1988	2.00	3.06	4.26	5.16	2.02	7.18	5.56
1989	1.95	3.19	4.31	5.61	2.04	6.76	8.78
1990	2.10	3.26	4.34	5.82	1.92	6.19	8.64
1991	2.25	3.50	5.27	6.00	2.21	6.39	10.28
1992	2.29	3.91	5.35	5.41	2.61	7.20	9.50
1993	2.43	4.63	6.53	5.12	2.69	7.39	11.31
1994	2.24	5.94	6.21	5.46	3.00	7.43	11.59
1995	2.52	5.90	7.28	7.10	3.98	8.22	15.01
1996	2.39	6.56	7.36	5.75	3.69	6.60	12.77
1997	2.64	5.82	7.30	5.59	3.36	6.56	16.60
1998	2.98	5.10	8.11	5.09	3.12	6.14	17.59
1999	3.28	5.44	8.37	5.27	3.71	6.77	21.00
2000	3.96	5.64	8.53	5.64	4.06	6.73	24.25

Table 5: China/US Comparative Level of Gross Value Added by Major Manufacturing Branch
1952-2000 (US=100; in 1995 Fisher UVRs)

	Total manufacturing	Food & kindred p	Textile products	Wearing apparel	Wood products	Paper & printing	Leather products
1952	2.04	5.19	21.92	2.18	3.88	0.23	0.69
1953	2.49	6.67	28.65	2.65	5.44	0.25	0.81
1954	3.01	7.29	33.89	3.14	6.80	0.30	1.19
1955	2.84	7.20	28.19	2.44	5.77	0.31	1.08
1956	3.38	7.49	34.74	3.16	7.45	0.37	1.32
1957	3.71	8.13	33.23	2.81	7.71	0.47	1.70
1958	5.55	9.68	46.25	3.66	13.46	0.65	1.99
1959	6.62	11.11	51.57	4.03	14.04	0.83	2.01
1960	6.86	8.61	41.08	2.81	15.30	0.87	2.44
1961	3.69	4.92	23.81	1.74	7.79	0.52	1.50
1962	3.13	4.86	20.07	1.83	7.03	0.50	1.05
1963	3.49	5.62	19.26	1.82	7.95	0.54	1.12
1964	4.00	7.40	23.99	2.09	8.25	0.56	1.03
1965	4.45	8.25	27.96	2.35	8.30	0.65	0.99
1966	4.85	8.76	29.99	2.47	8.48	0.74	1.33
1967	4.03	8.03	27.74	2.34	7.69	0.70	1.64
1968	3.65	8.08	26.01	1.80	6.07	0.60	1.61
1969	4.53	8.85	33.64	1.96	7.56	0.69	1.92
1970	6.20	9.93	36.40	2.25	8.91	0.81	2.82
1971	6.57	9.45	33.23	2.26	8.64	0.87	2.97
1972	6.51	9.87	29.90	2.44	7.84	0.87	3.13
1973	6.51	10.38	32.53	2.53	7.23	0.88	3.25
1974	6.71	11.96	34.73	2.78	7.23	0.88	3.28
1975	8.12	12.74	42.22	3.32	8.52	1.06	3.93
1976	7.18	12.06	33.08	3.30	7.20	0.98	3.64
1977	7.81	14.51	31.07	3.22	7.75	1.02	4.34
1978	8.54	13.97	33.93	2.82	8.47	1.14	4.68
1979	9.16	15.06	36.03	3.08	9.96	1.23	5.96
1980	10.33	16.52	41.09	4.02	11.31	1.41	7.52
1981	10.40	19.27	45.18	4.43	12.21	1.42	9.00
1982	11.85	20.97	49.87	4.66	14.15	1.54	8.44
1983	12.13	22.84	44.86	4.33	13.78	1.65	8.54
1984	12.42	26.77	45.05	4.57	13.05	1.80	9.53
1985	13.71	30.21	51.26	5.23	7.87	2.11	11.53
1986	15.36	35.56	53.58	10.13	7.60	2.29	15.39
1987	15.75	38.28	55.34	8.62	8.03	2.53	15.60
1988	16.78	40.51	61.26	10.31	8.90	2.73	15.95
1989	17.55	43.80	60.65	10.51	9.00	2.88	15.81
1990	17.80	42.36	57.68	11.37	9.20	3.04	18.57
1991	20.37	45.38	61.02	12.23	12.02	3.34	21.99
1992	22.18	49.89	60.78	14.80	12.50	3.89	29.18
1993	24.39	52.68	63.22	22.03	17.52	4.29	44.41
1994	25.15	52.74	64.22	26.05	25.06	4.71	56.05
1995	29.53	51.91	87.51	34.00	37.48	6.79	103.50
1996	27.10	55.40	74.46	44.24	28.34	6.22	101.21
1997	26.46	56.40	84.50	49.36	26.36	6.44	98.22
1998	23.15	52.40	70.52	55.21	10.09	5.07	58.33
1999	24.67	53.39	77.04	64.22	11.27	5.13	57.79
2000	26.29	54.12	77.55	82.90	10.66	6.13	66.63

Table 5: Continued

	Chemicals	Rubber & plastics	Building materials	Metal products	Machinery transport	Electrical equipment	Other manufacturing
1952	0.97	1.12	5.54	0.40	0.16	0.62	3.32
1953	1.09	1.38	6.65	0.55	0.22	0.85	4.41
1954	1.48	1.91	8.44	0.85	0.30	1.04	4.48
1955	1.46	1.75	9.00	1.10	0.31	0.99	3.28
1956	1.73	2.05	10.66	1.38	0.54	1.44	4.44
1957	1.96	2.50	13.75	1.56	0.71	2.47	4.88
1958	2.55	4.19	12.51	3.17	2.44	7.11	7.15
1959	2.94	3.30	13.35	4.88	3.42	9.85	9.46
1960	3.26	3.43	16.21	7.51	4.25	11.57	9.88
1961	1.98	2.32	10.89	4.09	1.39	5.09	5.46
1962	2.04	2.59	10.92	2.91	0.70	3.18	4.35
1963	2.38	2.83	11.42	3.50	0.71	2.67	4.64
1964	2.92	3.07	12.52	3.42	0.85	2.52	5.08
1965	3.58	3.22	13.43	3.78	1.02	2.32	6.46
1966	4.22	3.25	14.52	4.16	1.35	3.09	6.90
1967	3.56	2.81	11.61	2.81	0.86	2.29	5.81
1968	2.97	2.43	10.09	2.43	0.81	1.89	5.54
1969	3.89	3.05	12.72	3.10	1.36	3.19	6.41
1970	4.54	4.45	16.94	5.80	2.73	5.83	7.92
1971	4.84	4.34	19.69	7.15	3.33	6.79	7.98
1972	4.95	4.13	19.43	7.04	3.34	6.48	7.68
1973	4.92	4.03	18.37	6.77	3.32	6.20	9.46
1974	5.31	4.21	19.42	5.76	3.37	6.70	9.19
1975	6.09	5.54	25.92	8.06	4.13	8.07	10.38
1976	5.33	5.25	23.51	6.94	3.32	7.23	9.56
1977	5.57	5.10	26.93	8.19	3.34	6.66	9.82
1978	6.66	5.64	29.81	9.81	3.58	7.64	12.06
1979	7.02	6.06	32.39	10.20	3.84	7.47	13.74
1980	8.45	6.60	39.62	10.01	3.98	7.33	16.71
1981	7.43	5.21	44.75	8.87	3.59	6.75	17.04
1982	8.01	6.27	61.30	12.02	4.21	7.31	17.03
1983	7.41	7.23	58.00	14.79	4.49	8.32	13.41
1984	7.71	7.64	58.20	14.15	4.50	9.18	12.58
1985	8.30	8.45	65.14	14.90	5.36	11.85	13.16
1986	9.09	9.03	70.60	16.03	5.62	11.60	15.89
1987	8.28	9.28	80.32	17.53	5.85	12.83	19.20
1988	8.89	10.29	89.24	16.86	6.54	14.10	19.60
1989	8.81	9.96	87.07	18.08	6.33	13.49	29.56
1990	9.81	10.43	86.05	19.37	6.11	13.30	30.76
1991	11.12	12.04	109.30	21.22	7.57	15.40	37.65
1992	11.96	13.72	115.11	20.66	9.24	18.26	41.11
1993	13.18	15.63	137.76	21.47	9.48	20.16	54.50
1994	12.67	18.75	142.84	22.65	10.14	21.27	58.48
1995	15.13	19.35	163.13	29.03	12.94	22.49	76.60
1996	14.56	22.02	166.60	23.18	11.90	17.80	64.40
1997	16.20	20.64	156.08	22.03	10.45	17.38	68.34
1998	16.83	16.03	144.91	18.28	8.09	15.29	75.05
1999	18.00	17.34	148.72	18.52	9.10	17.24	91.31
2000	20.90	18.03	149.49	19.47	9.78	17.44	108.56