

Table 2-1. **Ratio of Gross Non-Residential Capital Stock to GDP, 1820-1992**

	USA	France	Germany	Netherlands	UK	Japan
machinery and equipment						
1820	.07	n.a.	n.a.	n.a.	.05	n.a.
1890	.46	n.a.	n.a.	n.a.	.11	.10
1913	.52	n.a.	n.a.	n.a.	.18	.25
1950	.64	.21	.39	.27	.31	.74
1973	.65	.50	.62	.61	.52	.58
1992	.86	.74	.70	.78	.65	1.07
non-residential structures						
1820	.88	n.a.	n.a.	n.a.	.63	n.a.
1890	2.59	n.a.	n.a.	n.a.	.72	.61
1913	2.78	n.a.	n.a.	n.a.	.66	.64
1950	1.81	1.42	1.42	1.79	.50	1.03
1973	1.47	1.05	1.32	1.36	.80	1.16
1992	1.57	1.52	1.63	1.53	1.17	1.95

Source: Maddison (1995a) and Appendix K.

Table 2-2. **Stock of Machinery and Equipment and Non-Residential Structures per Person Employed, Six Countries, 1820-1992**
(1990 international dollars)

	USA	France	Germany	Netherlands	UK	Japan
machinery and equipment						
1820	281	n.a.	n.a.	n.a.	238	n.a.
1870	1 367	n.a.	n.a.	n.a.	857	n.a.
1890	4 115	n.a.	n.a.	n.a.	1 114	194
1913	6 932	n.a.	n.a.	n.a.	2 021	695
1950	15 150	2 325	3 948	3 878	4 699	3 234
1973	26 259	15 778	18 513	20 394	13 893	13 287
1992	39 636	33 930	31 736	30 044	23 095	40 243
non-residential structures						
1820	3 503	n.a.	n.a.	n.a.	2 973	n.a.
1870	10 294	n.a.	n.a.	n.a.	6 254	n.a.
1890	23 270	n.a.	n.a.	n.a.	7 014	1 171
1913	37 905	n.a.	n.a.	n.a.	7 404	1 709
1950	42 673	15 795	14 364	25 686	7 556	4 518
1973	59 461	33 037	39 697	45 393	21 464	26 402
1992	72 625	69 232	70 119	57 918	41 797	73 135

Source: A. Maddison, "Standardised Estimates of Fixed Capital Stock: A Six Country Comparison", in Maddison (1995a), and Appendix J.

Table 2-3. **Years of Education Per Person Aged 15-64, Six Countries, 1820-1992**
(average for both sexes)

	USA	France	Germany	Netherlands	UK	Japan
1820	1.75	n.a.	n.a.	n.a.	2.00	1.50
1870	3.92	n.a.	n.a.	n.a.	4.44	1.50
1913	7.86	6.99	8.37	6.42	8.82	5.36
1950	11.27	9.58	10.40	8.12	10.60	9.11
1973	14.58	11.69	11.55	10.27	11.66	12.09
1992	18.04	15.96	12.17	13.34	14.09	14.87

Source: Appendix K and Maddison (1991) p. 64, updated. See Table 3-14 below for estimates for nine other countries. Primary education was given a weight of 1, secondary 1.4 and higher 2 in line with evidence on the relative earnings associated with different levels of education in these countries in Psacharopoulos (1975), p. 165.

Table 2-4. Merchandise Exports as Per Cent of GDP in Sample Countries
(exports and GDP at 1990 prices)

	1820	1870	1913	1929	1950	1973	1992
France	1.3	4.9	8.2	8.6	7.7	15.4	22.9
Germany	n.a.	9.5	15.6	12.8	6.2	23.8	32.6
Netherlands	n.a.	17.5	17.8	17.2	12.5	41.7	55.3
UK	3.1	12.0	17.7	13.3	11.4	14.0	21.4
Total Western Europe	n.a.	10.0	16.3	13.3	9.4	20.9	29.7
Spain	1.1	3.8	8.1	5.0	1.6	5.0	13.4
USSR/Russia	n.a.	n.a.	2.9	1.6	1.3	3.8	5.1
Australia	n.a.	7.4	12.8	11.2	9.1	11.2	16.9
Canada	n.a.	12.0	12.2	15.8	13.0	19.9	27.2
USA	2.0	2.5	3.7	3.6	3.0	5.0	8.2
Argentina	n.a.	9.4	6.8	6.1	2.4	2.1	4.3
Brazil	n.a.	11.8	9.5	7.1	4.0	2.6	4.7
Mexico	n.a.	3.7	10.8	14.8	3.5	2.2	6.4
Total Latin America	n.a.	9.0	9.5	9.7	6.2	4.6	6.2
China	n.a.	0.7	1.4	1.7	1.9	1.1	2.3
India	n.a.	2.5	4.7	3.7	2.6	2.0	1.7
Indonesia	n.a.	0.9	2.2	3.6	3.3	5.0	7.4
Japan	n.a.	0.2	2.4	3.5	2.3	7.9	12.4
Korea	0.0	0.0	1.0	4.5	1.0	8.2	17.8
Taiwan	-	-	2.5	5.2	2.5	10.2	34.4
Thailand	n.a.	2.1	6.7	6.6	7.0	4.5	11.4
Total Asia	n.a.	1.3	2.6	2.8	2.3	4.4	7.2
World	1.0	5.0	8.7	9.0	7.0	11.2	13.5

Source: Appendices C, E and I. As the export figures refer to the customs territory of the year cited, the GDP denominator refers to the same area and is taken from Appendix H; in the case of Korea in 1913 and 1929 the denominator was adjusted to include the whole country (see country note in Appendix B).

Table 2-5. Proportion of Employment by Major Economic Sector, 1820-1992

	USA	France	Germany	Netherlands	UK	Japan	China	Russia
Agriculture, Forestry and Fisheries								
1820	70.0	n.a.	n.a.	n.a.	37.6	n.a.	n.a.	n.a.
1870	50.0	49.2	49.5	37.0	22.7	70.1	n.a.	n.a.
1913	27.5	41.1	34.6	26.5	11.7	60.1	n.a.	70.0
1950	12.9	28.3	22.2	13.9	5.1	48.3	77.0	46.0
1992	2.8	5.1	3.1	3.9	2.2	6.4	58.6	17.0
Mining, Manufacturing, Construction & Utilities								
1820	15.0	n.a.	n.a.	n.a.	32.9	n.a.	n.a.	n.a.
1870	24.4	27.8	28.7	29.0	42.3	n.a.	n.a.	n.a.
1913	29.7	32.3	41.1	33.8	44.1	17.5	n.a.	n.a.
1950	33.6	34.9	43.0	40.2	44.9	22.6	7.0	29.0
1992	23.3	28.1	37.8	24.3	26.2	34.6	22.0	36.0
Services								
1820	15.0	n.a.	n.a.	n.a.	29.5	n.a.	n.a.	n.a.
1870	25.6	23.0	21.8	34.0	35.0	n.a.	n.a.	n.a.
1913	42.8	26.6	24.3	39.7	44.2	22.4	n.a.	n.a.
1950	53.5	36.8	34.8	45.9	50.0	29.1	16.0	25.0
1992	74.0	66.8	59.1	71.8	71.6	59.0	20.0	47.0

Source: Appendix K, Maddison (1991), Bairoch and Associates (1968), OECD, *Labour Force Statistics 1972-92*, Paris, 1994, and national sources.

Table 2-6. Successive Steps in Growth Accounting, 1820-1992
(annual average compound growth rates)

	USA	France	Germany	Netherlands	UK	Japan
	GDP					
1820-70	4.22	1.27	2.00	1.93	2.04	.31
1870-1913	3.94	1.63	2.81	2.20	1.90	2.34
1913-50	2.84	1.15	1.06	2.43	1.19	2.24
1950-73	3.92	5.02	5.99	4.74	2.96	9.25
1973-92	2.39	2.26	2.30	2.14	1.59	3.76
	Total Hours Worked					
1820-70	3.09	n.a.	n.a.	n.a.	.86	.21
1870-1913	2.02	-.10	.92	.92	.76	.45
1913-50	.35	-.75	.45	1.10	-.46	.40
1950-73	1.15	.01	.00	-.04	-.15	1.44
1973-82	1.27	-.46	-.38	-.07	-.57	.61
	Labour Productivity (GDP per hour worked)					
1820-70	1.10	n.a.	n.a.	n.a.	1.16	.09
1870-1913	1.88	1.74	1.87	1.27	1.13	1.89
1913-50	2.48	1.87	.60	1.31	1.66	1.85
1950-73	2.74	5.11	5.99	4.78	3.12	7.69
1973-92	1.11	2.73	2.69	2.21	2.18	3.13
	Total Non-Residential Capital Stock					
1820-70	5.46	n.a.	n.a.	n.a.	2.61	n.a.
1870-1913	5.53	n.a.	n.a.	n.a.	1.73	3.49 ^a
1913-50	2.01	n.a.	n.a.	n.a.	1.09	4.17
1950-73	3.27	4.80	5.93	4.55	5.17	9.18
1973-92	3.13	4.30	3.37	3.07	3.32	6.81
	Capital Productivity (GDP per unit of non-residential capital)					
1820-70	-1.18	n.a.	n.a.	n.a.	-.55	n.a.
1870-1913	-1.51	n.a.	n.a.	n.a.	.16	-.95 ^a
1913-50	.81	n.a.	n.a.	n.a.	.10	-1.85
1950-73	.63	.22	.05	.18	-2.10	.06
1973-92	-.72	-1.96	-1.04	-.90	-1.67	-2.85

Table 2-7(a). Labour Productivity Level (GDP per Hour Worked)
in Advanced Capitalist Countries, 1870-1992
(US level = 100)

	1870	1913	1929	1938	1950	1973	1992
Austria	62	57	44	39	32	65	83
Belgium	94	70	64	61	48	70	98
Denmark	67	66	68	61	46	68	75
Finland	37	35	34	36	32	57	70
France	60	56	55	62	45	76	102
Germany	70	68	58	56	35	71	95
Italy	46	41	38	44	34	66	85
Netherlands	103	78	84	72	51	81	99
Norway	48	43	45	50	43	60	88
Sweden	54	50	44	49	56	77	79
Switzerland	77	63	72	68	69	78	87
UK	115	86	74	69	62	68	82
Arith. Average	69	59	57	56	46	70	87
Australia	147	103	86	83	69	72	78
Canada	71	82	69	61	77	81	87
USA	100	100	100	100	100	100	100
Japan	20	20	24	25	16	48	69

Source: Table J-4.

Table 2-7(b). **Labour Productivity Level (GDP Per Hour Worked)**
in Medium and Low Income Countries, 1950-92
(US level = 100)

	1950	1973	1992		1950	1973	1992
Greece	20	46	59 ^a	Argentina	49	47	41
Ireland	30	43	71 ^a	Brazil	19	24	23
Portugal	20	42	48	Chile	37	38	37
Spain	21	46	69	Colombia	22	25	27
				Mexico	24	33	29
Arith. Average	23	44	62	Peru	23	27	15
				Venezuela	71	82	58
Czechoslovakia	29	34	28				
Hungary	21	28	25	Arith. Average	35	39	33
Poland	19	24	21				
USSR	24	28	19	Bangladesh	6	3	4
				China	7	6	10
Arith. Average	23	29	23	India	5	4	5
				Indonesia	8	8	12
				Pakistan	6	6	9
				Philippines	11	11	10
				South Korea	10	14	29
				Taiwan	9	18	38
				Thailand	6	7	15
				Arith. Average	8	9	15

a) 1991.

Source: Table J-4.

Table 2-8. **Falling Behind and Catching-up: Rates of Divergence from or Convergence Towards the US Labour Productivity Level (GDP Per Hour Worked), 1870-1992**
(annual average compound growth rates)

	1870-1950	1950-73	1973-92
Austria	-0.81	3.12	1.30
Belgium	-0.84	1.70	1.76
Denmark	-0.46	1.69	0.52
Finland	-0.20	2.62	1.09
France	-0.37	2.33	1.57
Germany	-0.88	3.18	1.53
Italy	-0.37	2.98	1.27
Netherlands	-0.87	2.01	1.05
Norway	-0.15	1.48	2.04
Sweden	0.04	1.39	0.17
Switzerland	-0.14	0.52	0.59
UK	-0.77	0.39	1.03
Arithmetic Average	-0.49	1.96	1.16
Australia	-0.95	0.21	0.39
Canada	0.10	0.23	0.35
Japan	-0.30	4.84	1.96
Greece		3.60	1.29 ^a
Ireland		1.56	2.87 ^a
Portugal		3.20	0.73
Spain		3.60	2.16
Arithmetic Average		2.99	1.76
Czechoslovakia		0.68	-1.06
Hungary		1.12	-0.49
Poland		1.03	-0.78
USSR		0.64	-1.92
Arithmetic Average		0.87	-1.06
Argentina		-0.19	-0.70
Brazil		1.02	-0.25
Chile		0.14	-0.20
Colombia		0.56	0.35
Mexico		1.25	-0.62
Peru		0.69	-2.87
Venezuela		0.63	-1.87
Arithmetic Average		0.59	-0.88
Bangladesh		-2.33	0.77
China		-0.65	2.88
India		-0.59	1.46
Indonesia		-0.11	2.00
Pakistan		0.08	1.77
Philippines		0.00	-0.56
South Korea		1.33	4.04
Taiwan		2.84	4.13
Thailand		0.94	3.90
Arithmetic Average		0.17	2.27

a) 1973-91.

Source: Derived from Table J-5.

Table 2-9. **Inequality of Pre-Tax Income of Households, 19 Countries**
(top decile per capita income as a multiple of that in bottom two deciles)

France (1970)	14.4	Argentina (1961)	11.2
Germany (1973)	10.5	Brazil (1970)	20.0
Netherlands (1967)	10.5	Chile (1968)	21.2
Sweden (1972)	8.1	Colombia (1974)	21.8
UK (1973)	9.1	Mexico (1969)	25.5
		Venezuela (1962)	25.0
Australia (1966-7)	7.2	India (1964-5)	12.4
Canada (1969)	12.6	Japan (1969)	7.5

USA (1972)	14.9	Korea (1970)	7.6
		South Africa (1965)	41.5
		Tanzania (1968)	16.4

Sources: Sawyer (1976) p. 14 for OECD countries; Lecaillon, Paukert, Morrisson and Germidis (1984), pp. 26-7 for other countries. Figures for South Africa refer to individual and not household income.

Table 2-6. (continued) **Successive Steps in Growth Accounting, 1820-1992**
(annual average compound growth rates)

	USA	France	Germany	Netherlands	UK	Japan
	Total Factor Productivity					
1820-70	-.15	n.a.	n.a.	n.a.	.15	n.a.
1870-1913	.33	n.a.	n.a.	n.a.	.31	-.31
1913-50	1.50	n.a.	n.a.	n.a.	.81	.36
1950-73	1.72	3.22	4.05	2.71	1.48	5.08
1973-92	.18	.73	1.54	.77	.69	1.04
	Foreign Trade Effect					
1913-50	.03	.02	-.09	.10	.01	.03
1950-73	.11	.37	.48	1.32	.32	.53
1973-92	.05	.12	.15	.32	.15	.09
	Structural and Labour Hoarding (Dishoarding) Effects					
1913-50	.29	.04	.00	n.a.	-.04	-.15
1950-73	.10	.36	.68	-.07	.10	2.10
1973-92	-.17	.15	.17	-.12	-.09	.09
	Scale Effect					
1913-50	.09	.03	.04	.07	.04	.07
1950-73	.12	.15	.18	.14	.09	.28
1973-92	.07	.07	.07	.06	.05	.11
	Unexplained Residual					
1913-50	1.09	n.a.	n.a.	n.a.	.80	.39
1950-73	1.39	2.34	2.71	1.32	.97	2.17
1973-92	.23	.39	1.15	.51	.58	.75

a) 1890-1913

Source: Panels 1 to 6 from Appendix K for Japan, UK and USA. For France, Germany and the Netherlands, labour inputs and labour productivity from Appendix J, capital inputs from Maddison (1995a). Other elements from Maddison (1995b). Total factor productivity is the ratio of GDP growth to the weighted average of associated inputs (labour, human capital, non-residential gross fixed capital, and land); with weights for all six countries as in Appendix K.