

*Appendix D*

**Growth and Levels of Performance  
in 27 Formerly Communist Countries**



Table D–1a. **GDP in East European Countries, 1990–99**  
(million 1990 international dollars)

	<i>Albania</i>	<i>Bulgaria</i>	<i>Czech Republic</i>	<i>Slovakia</i>	<i>Hungary</i>	<i>Poland</i>	<i>Romania</i>	<i>Former Yugoslavia</i>	<i>Total</i>
1990	8 125	49 779	91 706	40 854	66 990	194 920	80 277	129 953	662 604
1991	5 850	45 617	81 057	34 904	59 019	181 245	69 902	112 637	590 231
1992	5 426	42 277	80 640	32 641	57 212	185 958	63 779	91 224	559 157
1993	5 949	41 674	80 690	31 468	56 884	192 982	64 800	76 019	550 466
1994	6 446	42 441	82 481	32 977	58 561	202 934	67 351	78 982	572 173
1995	7 303	43 646	87 381	35 281	59 430	217 060	72 113	83 138	605 352
1996	7 963	39 210	90 725	37 586	60 227	230 188	75 005	87 250	628 154
1997	7 403	36 472	91 016	40 058	62 981	245 841	69 817	92 646	646 234
1998	7 999	37 786	88 897	41 818	66 089	258 220	64 715	95 337	660 861
1999	8 639	38 731	88 719	42 623	69 063	258 549	62 191		

Source: 1990–98 from OECD, *National Accounts of OECD Countries, 1988–1998*, Paris, 2000, and Statistics Division of Economic Commission for Europe, Geneva. 1999 Czech Republic, Hungary and Poland from OECD *Economic Outlook*, June 2000; 1999 Slovakia from OECD *Main Economic Indicators*, April 2000, p. 242; 1999 Bulgaria and Romania from IMF, *World Economic Outlook*, April 2000.

Table D–1b. **Population in East European Countries, 1990–99**  
(000)

	<i>Albania</i>	<i>Bulgaria</i>	<i>Czech Republic</i>	<i>Slovakia</i>	<i>Hungary</i>	<i>Poland</i>	<i>Romania</i>	<i>Former Yugoslavia</i>
1990	3 273	8 966	10 310	5 263	10 352	38 109	22 775	22 819
1991	3 259	8 914	10 309	5 283	10 352	38 242	22 728	22 961
1992	3 189	8 869	10 319	5 307	10 343	38 359	22 692	22 993
1993	3 154	8 495	10 329	5 329	10 326	38 456	22 660	22 883
1994	3 178	8 448	10 333	5 352	10 307	38 537	22 627	22 541
1995	3 219	8 399	10 327	5 368	10 285	38 590	22 582	22 357
1996	3 263	8 345	10 313	5 379	10 259	38 611	22 524	22 287
1997	3 300	8 291	10 298	5 388	10 232	38 615	22 463	22 390
1998	3 331	8 240	10 286	5 393	10 208	38 607	22 396	22 545
1999	3 365	8 195	10 281	5 396	10 186	38 609	22 234	22 679

Source: International Programs Center, US Bureau of the Census.

Table D–1c. **GDP Per Capita in East European Countries, 1990–99**  
(1990 international \$)

	<i>Albania</i>	<i>Bulgaria</i>	<i>Czech Republic</i>	<i>Slovakia</i>	<i>Hungary</i>	<i>Poland</i>	<i>Romania</i>	<i>Former Yugoslavia</i>
1990	2 482	5 552	8 895	7 762	6 471	5 115	3 525	5 695
1991	1 795	5 117	7 863	6 607	5 701	4 739	3 076	4 906
1992	1 701	4 767	7 815	6 151	5 531	4 848	2 811	3 967
1993	1 886	4 906	7 812	5 905	5 509	5 018	2 860	3 322
1994	2 028	5 024	7 982	6 162	5 682	5 266	2 977	3 504
1995	2 269	5 197	8 461	6 572	5 778	5 625	3 193	3 719
1996	2 440	4 699	8 797	6 988	5 871	5 962	3 330	3 915
1997	2 243	4 399	8 838	7 435	6 155	6 366	3 108	4 138
1998	2 401	4 586	8 643	7 754	6 474	6 688	2 890	4 229
1999	2 567	4 726	8 629	7 899	6 780	6 697	2 797	

Source: Derived from Tables D–1a and D–1b.

Table D–2a. **GDP in Successor Republics of Former Yugoslavia, 1990–98**  
(million 1990 international dollars)

	<i>Bosnia</i>	<i>Croatia</i>	<i>Macedonia</i>	<i>Slovenia</i>	<i>Serbia– Montenegro</i>
1990	16 530	33 139	7 394	21 624	51 266
1991	14 610	26 147	6 875	19 695	45 310
1992	10 535	23 080	6 323	18 612	32 674
1993	7 287	21 225	5 755	19 153	22 599
1994	7 484	22 473	5 648	20 165	23 212
1995	7 933	24 007	5 583	21 012	24 603
1996	8 400	25 434	5 624	21 742	26 050
1997	9 028	27 182	5 706	22 730	28 000
1998	9 261	27 858	5 871	23 625	28 722

Source: Statistics Division of Economic Commission for Europe, Geneva, and national sources (see Table A–f in Appendix A).

Table D–2b. **Population in Successor Republics of Former Yugoslavia, 1990–99**  
(000)

	<i>Bosnia</i>	<i>Croatia</i>	<i>Macedonia</i>	<i>Slovenia</i>	<i>Serbia– Montenegro</i>
1990	4 360	4 754	2 031	1 969	9 705
1991	4 371	4 796	2 039	1 966	9 790
1992	4 327	4 714	2 056	1 959	9 937
1993	4 084	4 687	2 071	1 960	10 080
1994	3 686	4 723	1 946	1 965	10 220
1995	3 282	4 701	1 967	1 970	10 437
1996	3 111	4 661	1 982	1 974	10 558
1997	3 223	4 665	1 996	1 973	10 534
1998	3 366	4 672	2 009	1 972	10 526
1999	3 482	4 677	2 023	1 971	10 526

Source: International Programs Center, US Bureau of the Census.

Table D–2c. **GDP Per Capita in Successor Republics of Former Yugoslavia, 1990–98**  
(000)

	<i>Bosnia</i>	<i>Croatia</i>	<i>Macedonia</i>	<i>Slovenia</i>	<i>Serbia– Montenegro</i>
1990	3 791	6 971	3 641	10 982	5 282
1991	3 342	5 452	3 372	10 018	4 628
1992	2 435	4 896	3 075	9 501	3 288
1993	1 784	4 528	2 779	9 772	2 242
1994	2 030	4 758	2 902	10 262	2 271
1995	2 417	5 107	2 838	10 666	2 357
1996	2 700	5 457	2 838	11 014	2 467
1997	2 801	5 827	2 859	11 521	2 658
1998	2 751	5 963	2 922	11 980	2 729

Source: Derived from D–2a and D–2b.

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Table D–3a. **GDP in Successor States of Former USSR, 1990–98**  
(million 1990 international dollars)

	<i>Europe</i>						<i>Europe/Asia</i>	
	<i>Belarus</i>	<i>Estonia</i>	<i>Latvia</i>	<i>Lithuania</i>	<i>Moldova</i>	<i>Ukraine</i>	<i>6 Country Total</i>	<i>Russian Federation</i>
1990	73 389	16 980	26 413	32 010	27 112	311 112	487 016	1 151 040
1991	72 491	15 280	23 666	30 189	22 362	284 003	447 991	1 094 081
1992	65 534	13 118	15 427	23 768	15 889	255 602	389 288	935 072
1993	60 596	12 010	13 117	19 928	15 695	219 457	340 803	853 194
1994	52 966	11 770	13 117	17 975	10 834	169 111	275 773	745 209
1995	47 430	12 268	13 091	18 570	10 639	148 456	250 454	714 357
1996	48 776	12 749	13 527	19 431	9 806	133 610	237 899	690 624
1997	54 315	14 098	14 709	20 855	9 972	129 423	243 372	696 609
1998	58 799	14 671	15 222	21 914	9 112	127 151	246 869	664 495

	<i>West Asia</i>			
	<i>Armenia</i>	<i>Azerbaijan</i>	<i>Georgia</i>	<i>3 Country Total</i>
1990	20 483	33 397	41 325	99 205
1991	18 077	33 159	32 612	83 848
1992	10 534	25 673	17 961	54 168
1993	9 602	19 736	12 704	42 042
1994	10 122	15 842	11 390	37 354
1995	10 816	13 989	11 682	36 487
1996	11 444	14 141	12 996	38 581
1997	11 835	14 979	14 455	41 269
1998	12 679	16 365	14 894	43 938

	<i>Central Asia</i>					
	<i>Kazakhstan</i>	<i>Kyrgyzstan</i>	<i>Tajikistan</i>	<i>Turkmenistan</i>	<i>Uzbekistan</i>	<i>5 Country Total</i>
1990	122 295	15 787	15 884	13 300	87 468	254 734
1991	108 830	14 537	14 537	12 673	87 027	237 604
1992	103 024	12 533	9 844	10 778	77 328	213 507
1993	93 636	10 590	8 243	10 935	75 565	198 969
1994	81 777	8 466	6 484	9 041	71 597	177 365
1995	75 106	7 999	5 675	8 388	70 980	168 148
1996	75 477	8 571	4 724	8 949	72 214	169 935
1997	76 716	9 415	4 803	7 931	75 913	174 778
1998	74 857	9 595	5 073	8 335	79 272	177 132

Source: Derived from indices in the statistical database of the Statistics Division, Economic Commission for Europe, Geneva.

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Table D-3b. Population in Successor States of Former USSR, 1990-98  
(000)

	<i>Europe</i>						<i>Europe/Asia</i>	
	<i>Belarus</i>	<i>Estonia</i>	<i>Latvia</i>	<i>Lithuania</i>	<i>Moldova</i>	<i>Ukraine</i>	<i>6 Country Total</i>	<i>Russian Federation</i>
1990	10 260	1 582	2 684	3 726	4 365	51 891	74 508	148 290
1991	10 271	1 566	2 662	3 742	4 363	52 001	74 605	148 624
1992	10 313	1 544	2 632	3 742	4 334	52 150	74 715	148 689
1993	10 357	1 517	2 586	3 730	3 618	52 179	73 987	148 520
1994	10 356	1 449	2 548	3 721	3 618	51 921	73 613	148 336
1995	10 329	1 484	2 516	3 715	3 611	51 531	73 186	148 141
1996	10 298	1 469	2 491	3 710	3 599	51 114	72 681	147 739
1997	10 268	1 458	2 469	3 706	3 587	50 697	72 185	147 304
1998	10 239	1 450	2 449	3 703	3 649	50 295	71 785	146 909

	<i>West Asia</i>			
	<i>Armenia</i>	<i>Azerbaijan</i>	<i>Georgia</i>	<i>3 Country Total</i>
1990	3 335	7 134	5 460	15 929
1991	3 612	7 242	5 464	16 318
1992	3 686	7 332	5 455	16 473
1993	3 732	7 399	5 440	16 571
1994	3 748	7 459	5 425	16 632
1995	3 760	7 511	5 417	16 688
1996	3 774	7 555	5 419	16 748
1997	3 786	7 603	5 431	16 820
1998	3 795	7 666	5 442	16 903

	<i>Central Asia</i>					
	<i>Kazakhstan</i>	<i>Kyrgyzstan</i>	<i>Tajikistan</i>	<i>Turkmenistan</i>	<i>Uzbekistan</i>	<i>5 Country Total</i>
1990	16 742	4 395	5 303	3 668	20 515	50 623
1991	16 878	4 453	5 465	3 762	20 958	51 516
1992	16 975	4 493	5 571	4 032	21 445	52 516
1993	16 964	4 482	5 638	4 308	21 948	53 340
1994	16 775	4 473	5 745	4 406	22 378	53 777
1995	16 540	4 514	5 835	4 508	22 784	54 181
1996	16 166	4 576	5 927	4 597	23 225	54 491
1997	15 751	4 367	6 018	4 657	23 656	54 449
1998	15 567	4 699	6 115	4 838	24 050	55 269

Source: As for Table D-3a.

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Table D–3c. **GDP Per Capita in Successor States of Former USSR, 1990–98**  
(1990 international dollars)

	<i>Europe</i>						<i>Europe/Asia</i>	
	<i>Belarus</i>	<i>Estonia</i>	<i>Latvia</i>	<i>Lithuania</i>	<i>Moldova</i>	<i>Ukraine</i>	<i>6 Country Total</i>	<i>Russian Federation</i>
1990	7 153	10 733	9 841	8 591	6 211	5 995	6 536	7 762
1991	7 058	9 757	8 890	8 068	5 125	5 461	6 005	7 361
1992	6 355	8 496	5 861	6 352	3 666	4 901	5 210	6 289
1993	5 851	7 917	5 072	5 343	4 338	4 206	4 606	5 745
1994	5 115	8 123	5 148	4 831	2 994	3 257	3 746	5 024
1995	4 592	8 267	5 203	4 999	2 946	2 881	3 422	4 822
1996	4 736	8 679	5 430	5 237	2 725	2 614	3 273	4 675
1997	5 290	9 669	5 957	5 627	2 780	2 553	3 372	4 729
1998	5 743	10 118	6 216	5 918	2 497	2 528	3 439	4 523

	<i>West Asia</i>			<i>3 Country Total</i>
	<i>Armenia</i>	<i>Azerbaijan</i>	<i>Georgia</i>	
1990	6 142	4 681	7 569	6 228
1991	5 005	4 579	5 969	5 138
1992	2 858	3 502	3 293	3 288
1993	2 573	2 667	2 335	2 537
1994	2 701	2 124	2 100	2 246
1995	2 877	1 862	2 157	2 186
1996	3 032	1 872	2 398	2 304
1997	3 126	1 970	2 662	2 454
1998	3 341	2 135	2 737	2 599

	<i>Central Asia</i>					<i>5 Country Total</i>
	<i>Kazakhstan</i>	<i>Kyrgyzstan</i>	<i>Tajikistan</i>	<i>Turkmenistan</i>	<i>Uzbekistan</i>	
1990	7 305	3 592	2 995	3 626	4 264	5 032
1991	6 448	3 265	2 660	3 369	4 152	4 612
1992	6 069	2 789	1 767	2 673	3 606	4 066
1993	5 520	2 363	1 462	2 538	3 443	3 730
1994	4 875	1 893	1 129	2 052	3 199	3 298
1995	4 541	1 772	973	1 861	3 115	3 103
1996	4 669	1 873	797	1 947	3 109	3 119
1997	4 871	2 156	798	1 703	3 209	3 210
1998	4 809	2 042	830	1 723	3 296	3 205

Source: Derived from Tables D–3a and D–3b.

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Table D-4. Confrontation of OECD and Maddison Estimates of 1990 Real GDP Levels in 15 Successor States of the Former Soviet Union

	<i>1996 GDP in million 1996 EKS dollars</i>	<i>GDP Volume Ratio 1990-96</i>	<i>1990 GDP Level in 1996 EKS dollars</i>	<i>1990 GDP Level in 1990 EKS dollars</i>	<i>Maddison Estimates of 1990 GDP Level in 1990 Geary- Khamis dollars</i>
Armenia	7 423	1.7898	13 286	11 467	20 483
Azerbaijan	14 501	2.31265	33 536	28 944	33 397
Belarus	53 198	1.5046	80 042	69 083	73 389
Estonia	9 761	1.33187	13 000	11 220	16 980
Georgia	15 844	3.1798	50 381	43 483	41 325
Kazakhstan	71 548	1.620295	115 929	100 056	122 295
Kyrgyzstan	9 547	1.8419	17 585	15 177	15 787
Latvia	12 584	1.9526	24 572	21 208	26 413
Lithuania	21 320	1.647368	35 122	30 313	32 010
Moldova	7 558	2.764838	20 897	18 036	27 112
Russian Federation	996 051	1.66667	1 660 085	1 432 790	1 151 040
Tajikistan	5 455	3.362405	18 342	15 831	15 884
Turkmenistan	13 510	1.4862	20 079	17 330	13 300
Ukraine	169 933	2.3285	395 690	341 513	311 112
Uzbekistan	46 350	1.211234	56 141	48 454	87 468
Total	1 454 583		2 554 687	2 204 905	1 987 995

Source: First column from *A PPP Comparison for the NIS, 1994, 1995 and 1996*, OECD, Paris, February 2000, Annex B, Table B-1. Column 2 is the ratio of 1990 GDP to that of 1996 (derived from Table D-3 above). Third column is column 1 multiplied by column 2. Fourth column is column 3 multiplied by US GDP deflator 1990-96 (0.863082). Last column shows my estimates (from Table A1-b of Appendix A). My figures are based on the ECE estimates for the former USSR (as shown in Table A1-h of Appendix A). The breakdown by republic for 1990 is from Bolotin (1992). Bolotin also used the ICP approach. I prefer my estimates because they are consistent with those I used for East European countries, because the Geary-Khamis approach is distinctly superior to the EKS approach, and because the quality of the data was probably better in the 1990 comparison than in 1996.

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## Bibliography

- ABEL, W. (1978), *Agrarkrisen und Agrarkonjunktur*, Parey, Hamburg and Berlin.
- ABRAMOVITZ, M. (1989), *Thinking About Growth*, Cambridge University Press, Cambridge.
- ABULAFIA, D. (1987), "Asia, Africa and the Trade of Medieval Europe", in POSTAN *et al.*, (eds.), vol. II, pp. 402–73.
- ABU-LUGHOD, J.L. (1989), *Before European Hegemony: The World System AD 1250–1350*, Oxford University Press, Oxford.
- ABU-LUGHOD, J.L. (1971), *Cairo, 1001 Years of the City Victorious*, Princeton University Press, New Jersey.
- ADB (Asian Development Bank) (1999), *Key Indicators of Developing Asian and Pacific Countries*, Oxford University Press, Oxford.
- ALDEN, D. (1973), *The Colonial Roots of Modern Brazil*, University of California Press, Berkeley.
- ALLEN, R.C. (1991), "The Two English Agricultural Revolutions, 1450–1850", in CAMPBELL AND OVERTON.
- AMIN, S. (1966), *L'économie du Maghreb*, Editions de Minuit, Paris.
- ARASARATNAM, S. (1990), "Recent Trends in the Historiography of the Indian Ocean, 1500 to 1800", *Journal of World History*, Fall, pp. 225–48.
- ARK, B. VAN (1999), "Economic Growth and Labour Productivity in Europe: Half a Century of East–West Comparisons", Research Memorandum GD–41, Groningen Growth and Development Centre.
- ARK, B. VAN (2000), "Measuring Productivity in the 'New Economy': Towards a European Perspective", *De Economist*, 148,1, pp. 87–105.
- ARK, B. VAN AND N. CRAFTS (1996), *Quantitative Aspects of Post–War European Economic Growth*, Cambridge University Press, Cambridge.
- ARK, B. VAN, S. KUIPERS AND G. KUPER (2000), *Productivity, Technology and Economic Growth*, Kluwer, Dordrecht.
- ASHTOR, E. (1976), *A Social and Economic History of the Near East in the Middle Ages*, University of California Press, Berkeley.
- ASHTOR, E. (1980), "The Volume of Medieval Spice Trade", *Journal of European Economic History*, vol. 9, No. 3, Winter, pp. 753–763.
- AUBIN, F. (ed.) (1970), *Études Song in Memoriam Etienne Balazs*, Mouton, Paris.
- BAGNALL, R.S. AND B.W. FRIER (1994), *The Demography of Roman Egypt*, Cambridge University Press, Cambridge.
- BAIROCH, P. (1967), *Diagnostic de l'évolution économique du tiers-monde 1900–1966*, Gauthiers–Villars, Paris.
- BAIROCH, P. AND ASSOCIATES (1968), *The Working Population and Its Structure*, Université Libre de Bruxelles, Brussels.
- BAIROCH, P. AND M. LEVY-LEBOYER (1981), *Disparities in Economic Development since the Industrial Revolution*, Macmillan, London.
- BALCEROWICZ, L. (1995), *Socialism, Capitalism, Transformation*, Central European University Press, Budapest, London and New York.

- BANENS, M. (2000), "Vietnam: a Reconstitution of its 20th Century Population History", in BASSINO, GIACOMETTI AND ODAKA (2000).
- BARAN, P.A. (1957), *The Political Economy of Growth*, Prometheus Paper Back, New York.
- BARCLAY, G.W. et al. (1976), "A Reassessment of The Demography of Traditional Rural China", *Population Index*, Winter, pp. 606–35.
- BARDET, J-P. AND J. DUPAQUIER (1997), *Histoire des populations de l'Europe*, Fayard, Paris, 2 vols.
- BASSINO, J-P., J-D. GIACOMETTI AND K. ODAKA (2000), *Quantitative Economic History of Vietnam, 1900–1990*, Institute of Economic Research, Hitotsubashi University.
- BATISTA, D, C. MARTINS, M. PINHEIRO AND J. REIS (1997), "New Estimates of Portugal's GDP, 1910–1958", Bank of Portugal, Lisbon.
- BAUGH, A.C. AND T. CABLE (1993), *A History of the English Language*, Macmillan, London.
- BAUMOL, W.J. (1986), "Productivity Growth, Convergence and Welfare: What the Long Run Data Show", *American Economic Review*, December.
- BELOCH, J. (1886), *Die Bevölkerung der griechisch-römischen Welt*, Duncker and Humblot, Leipzig.
- BELOCH, K.J. (1961), *Bevölkerungsgeschichte Italiens*, de Gruyter, Berlin.
- BERGSON, A. (1953), *Soviet National Income and Product in 1937*, Columbia University Press, New York.
- BERTOLA, L., L. CALICCHIO, M. CAMOU AND L. RIVERO (1998), *El PIB de Uruguay*, Universidad de la Republica, Montevideo.
- BETHELL, L. (ed.) (1984–1991), *Cambridge History of Latin America*, 8 vols., Cambridge University Press, Cambridge.
- BEVAN, D., P. COLLIER AND J. GUNNING (1999), *The Political Economy of Poverty, Equity and Growth: Indonesia and Nigeria*, Oxford University Press, Oxford.
- BHANOJI RAO, V.V. (1976), *National Accounts of West Malaysia, 1947–1971*, Heinemann, Singapore.
- BHATTACHARYA, D. (1987), "A Note on the Population of India, 1000–1800 AD" in *Le Peuplement du Monde avant 1800*, Société de Démographie Historique, Paris.
- BIDEAU, A., B. DESJARDINS AND H. PEREZ-BRIGNOLI (1997), *Infant and Child Mortality in the Past*, Clarendon Press, Oxford.
- BIELLENSTEIN, H. (1987), "Chinese Historical Demography AD 2 – 1982", *Bulletin of the Museum of Far Eastern Antiquities*, Stockholm, No. 59.
- BIRABEN, J.N. (1972), "Certain Demographic Characteristics of the Plague Epidemic in France, 1720–1722" in GLASS AND REVELLE.
- BIRABEN, J.N. (1979), "Essai sur l'évolution du nombre des hommes", *Population*, Jan–Feb., pp. 13–25.
- BLACKBURN, R. (1997), *The Making of New World Slavery*, Allen and Unwin, London.
- BLAYO, Y. (1975), "La population de la France de 1740 à 1860" and "La mortalité en France de 1740 à 1829", *Population*, November, pp. 71–122 and 124–142, respectively.
- BLOMME, J. AND H. VAN DER WEE (1994), "The Belgian Economy in a Long-Term Historical Perspective: Economic Development in Flanders and Brabant, 1500–1812", in MADDISON AND VAN DER WEE.
- BLOOM, D.E. AND J.D. SACHS (1998), "Geography, Demography and Economic Growth in Africa", *Brookings Papers on Economic Activity*, 2, pp. 207–296.
- BOLOTIN, B.M. (1992), "The Former Soviet Union as Reflected in National Accounts Statistics", in HIRSCH.
- BOOMGAARD, P. (1993), "Economic Growth in Indonesia, 500–1990", in SZIRMAI, VAN ARK AND PILAT.
- BOOTH, A. AND A. REID (1994), "Population, Trade and Economic Growth in South-East Asia in the Long Term: An Exploratory Analysis 1400–1990", in MADDISON AND VAN DER WEE.

- BORAH, W.C. (1976), "The Historical Demography of Aboriginal and Colonial America: An Attempt at Perspective", in DENEVAN, pp. 13–34.
- BORAH, W. AND S.F. COOK (1963), *The Aboriginal Population of Central Mexico on the Eve of the Spanish Conquest*, University of California, Berkeley.
- BOSERUP, E. (1965), *The Conditions of Agricultural Growth*, Allen and Unwin, London.
- BOSERUP, E. (1981), *Population and Technology*, Blackwell, Oxford.
- BOWLEY, A.L. (1942), *Studies in the National Income*, Cambridge University Press, Cambridge.
- BOWMAN, A.K. AND E. ROGAN (1999), *Agriculture in Egypt from Pharaonic to Modern Times*, Oxford University Press, Oxford.
- BOXER, C.R. (1974), *Four Centuries of Portuguese Expansion, 1414–1825: A Succinct Survey*, Witwatersrand University Press, Johannesburg.
- BRAUDEL, F. (1985), *Civilisation and Capitalism, 15th–18th Century*, 3 vols., Fontana, London.
- BRAUDEL, F. AND F. SPOONER (1967), "Prices in Europe from 1450 to 1750", in RICH AND WILSON.
- BRAUDEL, F. AND E. LAROUSSE (eds.) (1977), *Histoire économique et sociale de la France*, Vol. 2, P.U.F., Paris.
- BRAY, F. (1984), *Agriculture*, Vol. VI:2 in NEEDHAM (1954–2000).
- BRAY, F. (1986), *The Rice Economies: Technology and Development in Asian Societies*, Blackwell, Oxford.
- BREWER, J. (1989), *The Sinews of Power: War, Money and the English State, 1688–1783*, Unwin Hyman, London.
- BREWER, J. AND R. PORTER (eds.) (1993), *Consumption and the World of Goods*, Routledge, London.
- BRUIJN, J.R. AND F.S. GAASTRA (eds.) (1993), *Ships, Sailors and Spices, East India Companies and their Shipping in the 16th, 17th and 18th Centuries*, NEHA, Amsterdam.
- BULBECK, D., A. REID, L.C. TAN AND Y. WU (1998), *Southeast Asian Exports since the Fourteenth Century*, KITLV Press, Leiden.
- BUTLIN, N.G. (1983), *Our Original Aggression*, Allen and Unwin, Sydney.
- BUTLIN, N.G. (1993), *Economics and the Dreamtime*, Cambridge University Press, Melbourne.
- CAMPBELL, B.M.S. AND M. OVERTON (eds.) (1991), *Land, Labour and Livestock: Historical Studies in European Agricultural Productivity*, Manchester University Press.
- CARR–SAUNDERS, A.M. (1964), *World Population*, Cass, London.
- CASELLI, G. (1991), "Health Transition and Cause Specific Mortality", in SCHOFIELD, REHER AND BIDEAU.
- CHANDLER, A.D., JR. (1990), *Scale and Scope: The Dynamics of Industrial Capitalism*, Harvard.
- CHANG, CHUNG–LI (1962), *The Income of the Chinese Gentry*, Greenwood, Westport.
- CHAO, K. (1986), *Man and Land in Chinese History*, Stanford.
- CHAUDHURI, K.N. (1978), *The Trading World of Asia and the English East India Company, 1660–1760*, Cambridge University Press, Cambridge.
- CHAUDHURI, K.N. (1982), "Foreign Trade", in RAYCHAUDHURI AND HABIB.
- CHAUDHURY, S. (1999), *From Prosperity to Decline: Eighteenth Century Bengal*, Manohar, New Delhi.
- CHAUDHURY, S. AND M. MORINEAU (1999), *Merchants, Companies and Trade: Europe and Asia in the Early Modern Era*, Cambridge University Press, Cambridge.
- CHESNAIS, J.–C. (1987), *La revanche du tiers–monde*, Laffont, Paris.
- CHOU, K.R. (1966), *The Hong Kong Economy*, Academic Publications, Hong Kong.
- CIPOLLA, C.M. (1969), *Literacy and Development in the West*, Penguin Books, London.

- CIPOLLA, C.M. (1970), *European Culture and Overseas Expansion*, Pelican, London.
- CIPOLLA, C.M. (ed.) (1972–76), *The Fontana Economic History of Europe*, 6 vols., Collins/Fontana Books, London.
- CIPOLLA, C.M. (1976), *Before the Industrial Revolution: European Society and Economy, 1000–1700*, Norton, New York.
- CLARK, C. (1940), *The Conditions of Economic Progress*, Macmillan, London.
- CLARK, C. (1967), *Population Growth and Land Use*, Macmillan, London.
- CLARK, G. (1991), “Yields per Acre in English Agriculture, 1250–1860: Evidence from Labour Inputs”, *Economic History Review*, August, pp. 445–60.
- CLARK, G.N. (1968), *Science and Social Welfare in the Age of Newton*, Clarendon Press, Oxford.
- COALE, A.J. AND P. DEMENY (1983), *Regional Model Life Tables and Stable Populations*, Academic Press, New York.
- COATSWORTH, J.H. (1978), “Obstacles to Economic Growth in Nineteenth Century Mexico”, *American Historical Review*, February, pp. 80–100.
- COATSWORTH, J.H. (1989), “The Decline of the Mexican Economy, 1800–1860” in LIEHR.
- COLLIER, P. AND J.W. GUNNING (1999), “Explaining African Performance”, *Journal of Economic Literature*, March, pp. 64–111.
- COOK, D.N. (1981), *Demographic Collapse: Indian Peru, 1520–1620*, Cambridge University Press, Cambridge.
- COOK, S.F. AND L.B. SIMPSON (1948), *The Population of Central Mexico in the Sixteenth Century*, University of California, Berkeley.
- COOPER, J.P. (1967), “The Social Distribution of Land and Men in England, 1436–1700”, *Economic History Review* 20, pp. 419–440.
- CRAFTS, N.F.R. (1983), “British Economic Growth, 1700–1831: A Review of the Evidence”, *Economic History Review*, May, pp. 177–199.
- CRAFTS, N.F.R. AND C.K. HARLEY (1992), “Output Growth and the British Industrial Revolution: A Restatement of the Crafts–Harley View”, *Economic History Review*, November, pp. 703–730.
- CRAIG, A.M. (1961), *Choshu in the Meiji Restoration*, Harvard University Press, Cambridge, Ma.
- CRAWCOUR, E.S. (1963), “Changes in Japanese Commerce in the Tokugawa Period”, *Journal of Asian Studies*, pp. 387–400.
- CROSBY, A.W. (1972), *The Columbian Exchange: Biological and Cultural Consequences of 1492*, Greenwood Press, Westport, Connecticut.
- CROSBY, A.W. (1986), *Ecological Imperialism: The Biological Expansion of Europe, 900–1900*, Cambridge University Press, Cambridge.
- CROUZET, F. (1964), “Wars, Blockade, and Economic Change in Europe, 1792–1815”, *Journal of Economic History*, December, pp. 567–88.
- CROUZET, F. (1985), *De la supériorité de l’Angleterre sur La France*, Perrin, Paris.
- CURTIN, P.D. (1969), *The Atlantic Slave Trade: A Census*, University of Wisconsin Press, Madison.
- CURTIN, P.D. (1984), *Cross-cultural Trade in World History*, Cambridge University Press, Cambridge.
- DANIELS, J.D. (1992), “The Indian Population of North America in 1492”, *William and Mary Quarterly*, pp. 298–320.
- DAS GUPTA, A. AND M.N. PEARSON (1987), *India and the Indian Ocean, 1500–1800*, New Delhi.
- DAVID, P.A. (1967), “The Growth of Real Product in the United States Before 1840: New Evidence, Controlled Conjectures”, *Journal of Economic History*, June.
- DAVID, P.A. (1991), “Computer and Dynamo: The Modern Productivity Paradox in a Not Distant Mirror”, in *Technology and Productivity: The Challenge for Economic Policy*, OECD, Paris, pp. 315–48.

- DAVIES, R.T. (1964), *The Golden Century of Spain*, Macmillan, London.
- DAVIS, K. (1951), *The Population of India and Pakistan*, Princeton.
- DAVIS, L. AND ASSOCIATES (eds.) (1972), *American Economic Growth: An Economist's History of the United States*, Harper and Row, New York.
- DAVIS, R. (1962), *The Rise of the English Shipbuilding Industry*, Macmillan, London.
- DAY, C. (1921), *A History of Commerce*, Longmans Green, New York.
- DEANE, P. (1955), "The Implications of Early National Income Estimates for the Measurement of Long-Term Economic Growth in the United Kingdom", *Economic Development and Cultural Change*, pp. 3–38.
- DEANE, P. (1955–6), "Contemporary Estimates of National Income in the First Half of the Nineteenth Century", *Economic History Review*, VIII, 3, pp. 339–354.
- DEANE, P. (1956–7), "Contemporary Estimates of National Income in the Second Half of the Nineteenth Century", *Economic History Review*, IX, 3, pp. 451–61.
- DEANE P. (1957), "The Industrial Revolution and Economic Growth: The Evidence of Early British National Income Estimates", *Economic Development and Cultural Change*, pp. 159–74.
- DEANE, P. AND W.A. COLE (1964), *British Economic Growth 1688–1958*, Cambridge University Press, Cambridge.
- DEANE, P. (1968), "New Estimates of Gross National Product for the United Kingdom, 1830–1914", *Review of Income and Wealth*, June, pp. 95–112.
- DENEVAN, W.M. (ed.) (1976), *The Native Population of the Americas in 1492*, University of Wisconsin.
- DENISON, E.F. AND W.C. HARALDSON (1945), "The Gross National Product of Germany 1936–1944", Special Paper 1, (mimeographed appendix to Galbraith, et al.
- DICKSON, D., C. O'GRADA AND S. DAULTREY (1982), "Hearth Tax, Household Size and Irish Population Change 1672–1981", *Proceedings of the Royal Irish Academy*, Vol. 82 C, No. 6, Dublin.
- DICKSON, P.M.G. (1967), *The Financial Revolution in England*, Macmillan, London.
- DOMAR, E.D. (1989), *Capitalism, Socialism and Serfdom*, Cambridge University Press, Cambridge.
- DORE, R.P. (1965), *Education in Tokugawa Japan*, University of California Press, Berkeley.
- DUBLIN, L.I., A.J. LOTKA AND M. SPIEGELMAN (1963), *Length of Life*, Ronald Press, New York.
- DUPAQUIER, J. (1997), "La connaissance démographique", in BARDET AND DUPAQUIER, Vol. 1, pp. 218–38.
- DURAND, J.D. (1974), *Historical Estimates of World Population: An Evaluation*, University of Pennsylvania, Philadelphia.
- DYSON, T. (ed.) (1989), *India's Historical Demography*, Curzon, Riverdale.
- EBRD (European Bank for Reconstruction and Development), (1999), *Transition Report 1999*, London.
- ECE (Economic Commission for Europe), (1994), *International Comparison of Gross Domestic Product in Europe 1990*, Geneva.
- ECLAC, (Economic Commission for Latin America and the Caribbean) (1978), *Series Historicas del Crecimiento de America Latina*, Santiago, Chile.
- ECLAC (1996), *Preliminary Overview of the Economy of Latin America and the Caribbean*, Santiago, Chile.
- EISNER, G. (1961), *Jamaica, 1830–1930: a Study in Economic Growth*, Manchester University Press.
- ELTIS, D. (1995), "The Total Product of Barbados 1667–1701", *Journal of Economic History*, vol. 55:2, pp. 321–38
- ENGERMAN, S.L. AND R.E. GALLMAN (1986), *Long Term Factors in American Economic Growth*, NBER, University of Chicago Press, Chicago.

- ENGERMAN, S.L. AND R.E. GALLMAN (1996), *The Cambridge History of the United States*, Vol. 1, Cambridge University Press, Cambridge.
- ESCAP (Economic and Social Commission for Asia and the Pacific), (1999), *Escap Comparisons of Real Gross Domestic Product and Purchasing Power Parities, 1993*, Bangkok.
- EUROSTAT (Statistical Office of the European Communities), (1989), *Comparison of Price Levels and Economic Aggregates 1985: The Results for 22 African Countries*, Luxemburg.
- FAGERBERG, J. (1994), "Technology and International Differences in Growth Rates", *Journal of Economic Literature*, September.
- FAIRBANK, J.K. (ed.) (1968), *The Chinese World Order*, Harvard University Press, Cambridge, Ma.
- FAIRBANK, J.K. (ed.) (1983), *The Cambridge History of China*, Vol. 12, Cambridge University Press, Cambridge.
- FAROQHI, S., B. MCGOWAN, D. QUATAERT, AND S. PAMUK (1994), *An Economic and Social History of the Ottoman Empire, 1600–1914*, Vol. 2, Cambridge University Press, Cambridge.
- FARRIS, W.W. (1985), *Population, Disease and Land in Early Japan, 645–900*, Harvard.
- FEINSTEIN, C.H. (1998), "Pessimism Perpetuated: Real Wages and the Standard of Living in Britain during and after the Industrial Revolution", *Journal of Economic History*, September, pp. 625–58.
- FERNANDES, F. (1969), *The Negro in Brazilian Society*, Columbia University Press, New York.
- FEUERWERKER, A. (1983), "The Foreign Presence in China", IN FAIRBANK.
- FIRESTONE, O.J. (1958), *Canada's Economic Development, 1867–1953*, Bowes and Bowes, London.
- FOGEL, R.W. (1964), *Railroads and American Economic Growth*, Johns Hopkins, Baltimore.
- FOGEL, R.W. (1986), "Nutrition and the Decline in Mortality since 1700: Some Preliminary Findings", in ENGERMAN AND GALLMAN.
- FOGEL, R.W. AND S.L. ENGERMAN (1974), *Time on the Cross: The Economics of American Negro Slavery*, Little Brown, London.
- FOY, C., Y.–H. KIM AND H. REISEN (2000), *Sustainable Recovery in Asia: Mobilising Resources for Development*, OECD Development Centre, Paris (Preface by Braga de Macedo and Chino).
- FRANK, A.G. (1998), *Reorient: Global Economy in the Asian Age*, University of California Press, Berkeley.
- FREYRE, G. (1959), *New World in the Tropics*, Knopf, New York.
- GALBRAITH, J.K., et al. (1945), *The Effects of Strategic Bombing on the German War Economy*, US Strategic Bombing Survey, Washington, D.C.
- GALENSON, D.W. (1996), "The Settlement and Growth of the Colonies, Population, Labour and Economic Development", in ENGERMAN AND GALLMAN.
- GALLMAN, R.E. (1972), "The Pace and Pattern of American Economic Growth", in DAVIS AND ASSOCIATES.
- GALLOWAY, P.R. (1994), "A Reconstitution of the Population of North Italy from 1650 to 1881 using Annual Inverse Projection with Comparisons to England, France and Sweden", *Journal of Population*, 10, pp. 222–74.
- GERSCHENKRON, A. (1965), *Economic Backwardness in Historical Perspective*, Praeger, New York.
- GILBERT, M. AND I.B. KRAVIS (1954), *An International Comparison of National Products and Purchasing Power of Currencies*, OEEC, Paris.
- GILLE, H. (1949), "The Demographic History of the Northern European Countries in the Eighteenth Century", *Population Studies*, III:1, June, pp. 3–65.
- GLAMANN, K. (1981), *Dutch Asiatic Trade, 1620–1740*, Nijhoff, the Hague.
- GLASS, D.V. (1965), "Two Papers on Gregory King", in GLASS AND EVERSLEY (1965), pp. 159–221.
- GLASS, D.V. (1966), *London Inhabitants Within the Walls 1695*, London Record Society, London.

- GLASS, D.V. AND D.E.C. EVERSLEY (eds.) (1965), *Population in History: Essays in Historical Demography*, Arnold, London.
- GLASS, D.V. AND E. GREBENIK (1966), "World Population, 1800–1950", in H.J. HABAKKUK AND M. POSTAN, *Cambridge Economic History of Europe*, Vol. VI:1, Cambridge University Press, Cambridge.
- GLASS, D.V. AND R. REVELLE (1972), *Population and Social Change*, Arnold, London.
- GOITEIN, S.D. (1967), *A Mediterranean Society*, vol. 1, *Economic Foundations*, University of California Press, Berkeley.
- GOLDSMITH, R.W. (1984), "An Estimate of the Size and Structure of the National Product of the Roman Empire", *Review of Income and Wealth*, September.
- GOODMAN, D. AND C.A. RUSSELL (1991), *The Rise of Scientific Europe, 1500–1800*, Hodder and Stoughton, London.
- GORDON, R.J. (2000), "Interpreting the 'One Big Wave in US Long-Term Productivity Growth'", in VAN ARK, KUIPERS AND KUPER.
- GOUBERT, P. (1965), "Recent Theories and Research in French Population Between 1500 and 1700", in GLASS AND EVERSLEY.
- GRAUNT, J. (1676), *Natural and Political Observations upon the Bills of Mortality*, fifth edition, reprinted in HULL (1899).
- HABAKKUK, H.J. AND M. POSTAN (eds.) (1966), *The Cambridge Economic History of Europe*, vol. VI, Cambridge University Press, Cambridge.
- HABIB, I. (1982), "Technology and Economy of Moghul India", *Indian Economic and Social History Review*, XVII(1), pp. 1–34.
- HABIB, I. (1995), *Essays in Indian History*, Tulika, New Delhi.
- HALL, J.W. (ed.) (1991), *Early Modern Japan*, Vol. 4 of *The Cambridge History of Japan*, Cambridge University Press, Cambridge.
- HALL, J.W., N. NAGAHARA, AND K. YAMAMURA (1981), *Japan Before Tokugawa*, Princeton.
- HALLEY, E. (1693), "An Estimate of the Degrees of Mortality of Mankind, drawn from curious tables of the births and funerals at the city of Breslaw; with an attempt to ascertain the price of annuities upon lives", *Philosophical Transactions of the Royal Society*, Vol. XVII, No. 198, pp. 596–610.
- HANLEY, S.B. AND K. YAMAMURA (1977), *Economic and Demographic Change in Preindustrial Japan*, Princeton.
- HANLEY, S.B. (1997), *Everyday Things in Premodern Japan*, University of California Press, Berkeley.
- HANSEN, B. AND G.A. MARZOUK (1965), *Development and Economic Policy in the UAR (Egypt)*, North Holland, Amsterdam.
- HARLEY, C.K. (1988), "Ocean Freight Rates and Productivity, 1740–1913: The Primacy of Mechanical Invention Reaffirmed", *Journal of Economic History*, December, pp. 851–76.
- HAWKE, G.R. (1985), *The Making of New Zealand*, Cambridge University Press, Melbourne.
- HAYAMI, A. (1973), *Kinsei Noson no Rekishi Jinkogakuteki Kenkyu* (A Study of Historical Demography of Pre-Modern Rural Japan), Toyo Keizai Shimposha, Tokyo.
- HAYAMI, A. (1986a), "Population Trends in Tokugawa Japan, 1600–1868", paper presented at the 46th session of the International Statistical Institute Congress.
- HAYAMI, A. (ed.) (1986b), *Preconditions to Industrialization in Japan*, International Economic History Conference, Berne.
- HAYAMI, A. AND M. MIYAMOTO (eds.) (1988), *Keizai Shakai no seritsu: 17–18 seiki, Nihon keizai-shi*, Vol. 1, Iwanami Shoten, Tokyo.
- HAYAMI, Y., V.W. RUTTAN AND H.M. SOUTHWORTH (eds.) (1979), *Agricultural Growth in Japan, Taiwan, Korea and the Philippines*, Asian Productivity Center, Honolulu.

- HAYAMI, Y. AND V.W. RUTTAN (1985), *Agricultural Development*, second edition, Johns Hopkins, Baltimore.
- HEMMING, J. (1978), *Red Gold: The Conquest of the Brazilian Indians*, Macmillan.
- HENRY L. AND D. BLANCHET (1983), "La population de l'Angleterre de 1514 à 1871", *Population*, 4–5, pp. 781–826.
- HENRY L. AND Y. BLAYO (1975), "La population de la France de 1740 à 1860", *Population*, November.
- HIGMAN, B.W. (1996), "Economic and Social Development in the British West Indies", in ENGERMAN AND GALLMAN.
- HIRSCH, S. (ed.) (1992), *Memo 3: In Search of Answers in the Post-Soviet Era*, Bureau of National Affairs, Washington, D.C.
- HLAING, A. (1964), "Trends of Economic Growth and Income Distribution in Burma 1870–1940", *Journal of the Burma Research Society*.
- HO, P.T. (1959), *Studies on the Population of China, 1368–1953*, Harvard University Press, Cambridge, Ma.
- HO, P.T. (1970), "An Estimate of the Total Population of Sung–Chin China", in AUBIN.
- HOFFMANN, W.G. (1965), *Das Wachstum der deutschen Wirtschaft seit der Mitte des 19. Jahrhunderts*, Springer, Berlin.
- HOFMAN, A.A. (2000), *The Economic Development of Latin America in the Twentieth Century*, Elgar, Cheltenham.
- HODGES, R. AND D. WHITEHOUSE (1998), *Mohammed, Charlemagne and the Origins of Europe*, Duckworth, London.
- HOLMES, G.S. (1977), "Gregory King and the Social Structure of Pre-Industrial England", *Transactions of the Royal Historical Society*, 5th series, Vol. 27, pp. 41–68.
- HOOLEY, R.W. (1968), "Long Term Growth of the Philippine Economy, 1902–1961", *Philippine Economic Journal*.
- HONDA, G. (1997), "Differential Structure, Differential Health: Industrialisation in Japan, 1868–1940", in STECKEL AND FLOUD.
- HONJO, E. (1935), *The Social and Economic History of Japan*, Kyoto.
- HOPKINS, K. (1980), "Taxes and Trade in the Roman Empire (200 B.C.–400 A.D.)", *Journal of Roman Studies*, Vol. LXX, pp. 101–25.
- HORIOKA, C.Y. (1990), "Why is Japan's Household Saving Rate So High? A Literature Survey", *Journal of Japanese and International Economies*, 4.
- HOURLANI, G.F. (1951), *Arab Seafaring in the Indian Ocean in Ancient and Early Medieval Times*, Princeton.
- HSHUEH, TIEN-TUNG AND LI, QIANG (1999), *China's National Income, 1952–1995*, Westview Press, Boulder, Colorado.
- HULL, C.H. (ed.) (1899), *The Economic Writings of Sir William Petty*, 2 vols, Cambridge University Press, Cambridge.
- IBGE (1960), *O Brasil em Numeros*, Rio de Janeiro.
- IKRAM, K. (1980), *Egypt: Economic Management in a Period of Transition*, Johns Hopkins, Baltimore.
- IMF (International Monetary Fund) (1999), *World Economic Outlook*, Washington, D.C.
- INALCIK, H. (1994), *An Economic and Social History of the Ottoman Empire, 1300–1600*, Vol. 1, Cambridge University Press, Cambridge.
- ISHII, R. (1937), *Population Pressure and Economic Life in Japan*, King, London.
- ISRAEL, J.I. (1989), *Dutch Primacy in World Trade, 1585–1740*, Clarendon Press, Oxford.
- ISRAEL, J. (1995), *The Dutch Republic*, Clarendon Press, Oxford.
- JANNETTA, A.B. (1986), *Epidemics and Mortality in Early Modern Japan*, Princeton.
- JANNETTA, A.B. AND S.H. PRESTON (1991), "Two Centuries of Mortality Change in Central Japan: The Evidence from a Temple Death Register", *Population Studies*, 45, pp. 417–36.



- JARRETT, H.S. AND S-N. SARKAR (1949), *Ain-I-Akbari of Abul Fazl-I-Allami*, Royal Asiatic Society of Bengal, Calcutta.
- JONES, E.L. (1981), *The European Miracle*, Cambridge University Press, Cambridge.
- JONES, V. (1978), *Sail the Indian Sea*, Gordon and Cremonesi, London.
- JORGENSEN, D.W. AND K.J. STIROH (2000), "Raising the Speed Limit: US Economic Growth in the Information Age", *Brookings Papers on Economic Activity I*, pp. 125–236.
- KALLAND, A. AND J. PEDERSON (1984), "Famine and Population in Fukuoka Domain during the Tokugawa Period", *Journal of Japanese Studies*, 10, pp. 31–72.
- KEENE, D. (1969), *The Japanese Discovery of Europe, 1720–1820*, Stanford.
- KENDRICK, J.W. (1961), *Productivity Trends in the United States*, Princeton.
- KENNEDY, P. (1987), *The Rise and Fall of the Great Powers*, Random House, New York.
- KEYNES, J.M. (1919), *The Economic Consequences of the Peace*, Macmillan, LONDON.
- KIM, K.S. AND M. ROEMER (1979), *Growth and Structural Transformation: The Republic of Korea*, Harvard University Press, Cambridge, Mass.
- KING, G. (1696), *Natural and Political Observations and Conclusions upon the State and Condition of England*, in BARNETT (ed.), Johns Hopkins (1936).
- KIRSTEN, E., E.W. BUCHHOLZ AND W. KÖLLMANN (1956), *Raum und Bevölkerung in der Weltgeschichte*, Ploetz-Verlag, Würzburg.
- KLEIN, H.S. (1999), *The Atlantic Slave Trade*, Cambridge University Press, Cambridge.
- KNODEL, J.E. (1988), *Demographic Behavior in the Past*, Cambridge University Press, Cambridge.
- KORNAI, J. (1992), *The Socialist System: The Political Economy of Communism*, Clarendon Press, Oxford.
- KRAVIS, I.B., A. HESTON AND R. SUMMERS (1982), *World Product and Income, International Comparisons of Real Gross Product*, Johns Hopkins, Baltimore.
- KROEBER, A.L. (1939), *Cultural and National Areas of Native North America*, Berkeley.
- KUHN, D. (1988), *Textile Technology: Spinning and Reeling*, Vol. 5, Part IX of Needham, Cambridge University Press, Cambridge.
- KUMAR, D. AND M. DESAI (1983), *Cambridge Economic History of India*, Vol. 2, Cambridge.
- KUZNETS, S. (1966), *Modern Economic Growth*, Yale.
- KUZNETS, S. (1971), *Economic Growth of Nations*, Harvard.
- KUZNETS, S. (1973), *Population, Capital and Growth: Selected Essays*, Norton, New York.
- KUZNETS, S. (1979), *Growth, Population and Income Distribution*, Norton, New York.
- KWON, T.H. (1993), "Reconstructing Population Phenomena in Chosun Korea", International Workshop on Historical Demography, Reitaku University, Chiba, Japan.
- KWON, T.H. AND Y-H. SHIN (1977), "On Population Estimates of the Yi Dynasty, 1392–1910", *Tong-A Munhwa*, 14 (in Korean).
- LAL, D. (1988), *The Hindu Equilibrium: Cultural Stability and Economic Stagnation*, Oxford University Press, Oxford.
- LANDERS, J. (1993), *Death and the Metropolis: Studies in the Demographic History of London, 1670–1830*, Cambridge University Press, Cambridge.
- LANDES, D.S. (1966), "Technological Change and Development in Western Europe, 1750–1914", in HABAKKUK AND POSTAN.
- LANDES, D.S. (1969), *The Unbound Prometheus*, Cambridge University Press, Cambridge.

- LANDES, D.S. (1998), *The Wealth and Poverty of Nations*, Little Brown, London.
- LANE, F.C. (1966), *Venice and History: Collected Papers*, Johns Hopkins Press, Baltimore.
- LANE, F.C. (1973), *Venice: A Maritime Republic*, Johns Hopkins Press, Baltimore.
- LANE, F.C. AND R.C. MUELLER (1985), *Money and Banking in Medieval and Renaissance Venice*, vol. 1, Johns Hopkins Press, Baltimore.
- LASLETT, P. (1969), "John Locke, the Great Recoinage, and the Origins of the Board of Trade" in YOLTON.
- LASLETT, P. (ed.) (1973), *The Earliest Classics: John Graunt and Gregory King*, Gregg International, London.
- LEBERGOTT, S. (1984), *The Americans: An Economic Record*, Norton, New York.
- LEBOUTTE, R. (ed.) (1996), *Proto-industrialization*, Droz, Geneva.
- LEE, H.K. (1936), *Land Utilization and Rural Economy in Korea*, Oxford University Press.
- LEE, J.Z AND C. CAMPBELL (1997), *Fate and Fortune in Rural China*, Cambridge University Press, Cambridge.
- LEE, J.Z. AND F. WANG (forthcoming), *Malthusian Mythology and Chinese Reality: The Population History of One Quarter of Humanity: 1700–2000*.
- LEFF, N.H. (1982), *Underdevelopment and Development in Brazil*, 2 vols., Allen and Unwin, London.
- LENIHAN, P. (1997), "War and Population, 1649–52", *Irish Economic and Social History*, XXIV, pp. 1–21.
- LE ROY LADURIE, E. (1966), *Les paysans de Languedoc*, Mouton, Paris.
- LE ROY LADURIE, E. (1977), "Les masses profondes: la paysannerie", in BRAUDEL AND LAROUSSE.
- LE ROY LADURIE, E. (1978), *Le territoire de l'historien*, 2 vols., Gallimard, Paris.
- LEVATHES, L. (1994), *When China Ruled the Seas*, Simon and Schuster, New York.
- LIEHR, R. (1989), *La formacion de las economias latinoamericanas en la epoca de Simon Bolivar*, Colloquium Verlag, Berlin.
- LIM, C.H. (1967), *Economic Development of Modern Malaya*, Oxford University Press, Kuala Lumpur.
- LINDERT, P.H. (1980), "English Occupations, 1670–1811", *Journal of Economic History*, XL, 4, pp. 685–713.
- LINDERT, P.H. AND J.G. WILLIAMSON (1982), "Revising England's Social Tables, 1688–1812", *Explorations in Economic History*, 19, 1982, pp. 385–408.
- LIVI BACCI, M. AND D.S. REHER (1993), "Other Paths to the Past: from Vital Series to Population Patterns", in REHER AND SCHOFIELD.
- LORIMER, F. (1946), *The Population of the Soviet Union: History and Prospects*, League of Nations, Geneva.
- LOVEJOY, P.E. (1982), "The Volume of the African Slave Trade: A Synthesis", *Journal of African History*, pp. 473–75.
- LUNDBERG, E. (1968), *Instability and Economic Growth*, Yale University Press, New Haven.
- MACEDO, J. BRAGA DE (1995), "Convertibility and Stability 1834–1994: Portuguese Currency Experience Revisited", in *Ensaio de Homenagem a Francisco Pereira de Moura*, UTL, Lisbon.
- MACFARLANE, A. (1997), *The Savage Wars of Peace*, Blackwell, Oxford.
- MADDISON, A. (1962), "Growth and Fluctuation in the World Economy, 1870–1960", *Banca Nazionale del Lavoro Quarterly Review*, June.
- MADDISON, A. (1969), *Economic Growth in Japan and the USSR*, Allen and Unwin, London.
- MADDISON, A. (1970), *Economic Progress and Policy in Developing Countries*, Allen and Unwin, London.
- MADDISON, A. (1971), *Class Structure and Economic Growth: India and Pakistan Since the Moghuls*, Allen and Unwin, London.
- MADDISON, A. (1972), "Explaining Economic Growth", *Banca Nazionale del Lavoro Quarterly Review*, 102, September.

- MADDISON, A. (1976), "Economic Policy and Performance in Europe, 1913–70", in CIPOLLA.
- MADDISON, A. (1980), "Monitoring the Labour Market", *Review of Income and Wealth*, June.
- MADDISON, A. (1982), *Phases of Capitalist Development*, Oxford University Press, Oxford.
- MADDISON, A. (1983), "A Comparison of Levels of GDP Per Capita in Developed and Developing Countries, 1700–1980", *Journal of Economic History*, March, pp. 27–41.
- MADDISON, A. (1985), *Two Crises: Latin America and Asia, 1929–38 and 1973–83*, OECD Development Centre, Paris.
- MADDISON, A. (1987a), "Growth and Slowdown in Advanced Capitalist Economies: Techniques of Quantitative Assessment", *Journal of Economic Literature*, June.
- MADDISON, A. (1987b), "Recent Revisions to British and Dutch Growth, 1700–1870 and their Implications for Comparative Levels of Performance", in MADDISON AND VAN DER MEULEN (1987).
- MADDISON, A. (1989a), *The World Economy in the Twentieth Century*, OECD Development Centre, Paris.
- MADDISON, A. (1989b), "Dutch Income in and from Indonesia 1700–1938", *Modern Asian Studies*, pp. 645–70.
- MADDISON, A. (1990a), "The Colonial Burden: A Comparative Perspective", in SCOTT AND LAL.
- MADDISON, A. (1990b), "Measuring European Growth: the Core and the Periphery", in E. AERTS AND N. VALERIO, *Growth and Stagnation in the Mediterranean World*, Tenth International Economic History Conference, Leuven.
- MADDISON, A. (1991a), *Dynamic Forces in Capitalist Development*, Oxford University Press, Oxford.
- MADDISON, A. (1991b), *A Long Run Perspective on Saving*, Research Memorandum 443, Institute of Economic Research, University of Groningen (a shorter version appeared in the *Scandinavian Journal of Economics*, June 1992, pp. 181–96).
- MADDISON, A. (1995a), *Monitoring the World Economy 1820–1992*, OECD Development Centre, Paris.
- MADDISON, A. (1995b) *Explaining the Economic Performance of Nations: Essays in Time and Space*, Elgar, Aldershot.
- MADDISON, A. (1995c), "The Historical Roots of Modern Mexico: 1500–1940", in MADDISON (1995b).
- MADDISON, A. (1996), "Macroeconomic Accounts for European Countries", in VAN ARK AND CRAFTS.
- MADDISON, A. (1997), "The Nature and Functioning of European Capitalism: A Historical and Comparative Perspective", *Banca Nazionale del Lavoro Quarterly Review*, December.
- MADDISON, A. (1998a), *Chinese Economic Performance in the Long Run*, OECD Development Centre, Paris.
- MADDISON, A. (1998b), "Measuring the Performance of A Communist Command Economy: An Assessment of the CIA Estimates for the USSR", *Review of Income and Wealth*, September.
- MADDISON, A. (1999a), "Poor until 1820", *Wall Street Journal*, January 11th, p.8.
- MADDISON, A. (1999b), "Book Review", of Hanley (1997), *Journal of Japanese and International Economies*, 13, pp. 150–151.
- MADDISON, A. AND B. VAN ARK (1994), "The International Comparison of Real Product and Productivity", paper presented at IARIW meetings, St. Andrews, New Brunswick, Canada.
- MADDISON, A. AND ASSOCIATES (1992), *The Political Economy of Economic Growth: Brazil and Mexico*, Oxford University Press, New York.
- MADDISON, A. AND G. PRINCE (eds.) (1989), *Economic Growth in Indonesia, 1820–1940*, Foris, Dordrecht.
- MADDISON, A. AND H. VAN DER MEULEN (eds.) (1987), *Economic Growth in Northwestern Europe: The Last 400 Years*, Research Memorandum 214, Institute of Economic Research, University of Groningen.
- MADDISON, A. AND H. VAN DER WEE (eds.) (1994), *Economic Growth and Structural Change: Comparative Approaches over the Long Run*, Proceedings of the Eleventh International Economic History Congress, Milan, September.

- MADDISON, A., D.S. PRASADA RAO AND W. SHEPHERD (eds.) (2001), *The Asian Economies in the Twentieth Century*, Elgar, Aldershot.
- MALANIMA, P. (1995), *Economia Preindustriale*, Mondadori, Milan.
- MALANIMA, P. (1998a), *La Fina del Primato*, Mondadori, Milan.
- MALANIMA, P. (1998b), "Italian Cities 1300–1800: A Quantitative Approach", *Revista de Storia Economica*, August, pp. 91–126.
- MANCALL, P.C. AND T. WEISS (1999), "Was Economic Growth Likely in British North America?", *Journal of Economic History*, March, pp. 17–40.
- MARCILIO, M.L. (1984), "The Population of Colonial Brazil", in BETHELL (1984), Vol. 2.
- MARCEWSKI, J. (1961), "Some Aspects of the Economic Growth of France, 1660–1958", *Economic Development and Cultural Change*, April.
- MARI BHAT, P.N. (1989), "Mortality and Fertility in India, 1881–1961: A Reassessment", in DYSON.
- MATHIAS, P. (1957), "The Social Structure in the Eighteenth Century: A Calculation by Joseph Massie", *Economic History Review*, pp. 30–45.
- McEVEDY, C. (1967), *The Penguin Atlas of Ancient History*, Penguin Books, London.
- McEVEDY, C. (1997), *The New Penguin Atlas of Medieval History*, Penguin Books, London.
- McEVEDY, C. AND R. JONES (1978), *Atlas of World Population History*, Penguin, Middlesex.
- McNEILL, W.H. (1964), *Europe's Steppe Frontier*, University of Chicago Press, Chicago.
- McNEILL, W.H. (1974), *Venice: The Fringe of Europe*, University of Chicago Press, Chicago.
- McNEILL, W.H. (1977), *Plagues and Peoples*, Anchor Books, Doubleday, New York.
- MEIER, G.M. AND D. SEERS (eds.) (1984), *Pioneers in Development*, Oxford University Press, Oxford.
- MERKEL, W. AND S. WAHL (1991), *Das geplünderte Deutschland*, IWG, Bonn.
- MERRICK, T.W. AND D.H. GRAHAM (1979), *Population and Development in Brazil 1800 to the Present*, Johns Hopkins University Press, Baltimore and London.
- METZER, J. (1998), *The Divided Economy of Mandatory Palestine*, Cambridge University Press, Cambridge.
- MITCHELL, B.R. (1975), *European Historical Statistics, 1750–1970*, Macmillan, London.
- MITCHELL, B.R. AND P. DEANE (1962), *Abstract of British Historical Statistics*, Cambridge University Press, Cambridge.
- MITCHELL, B.R. AND H.G. JONES (1971), *Second Abstract of British Historical Statistics*, Cambridge University Press, Cambridge.
- MIZOGUCHI, T. (1999), *Long Term Economic Statistics of Taiwan: 1905–1990*, Institute of Economic Research, Hitotsubashi University, Tokyo.
- MIZOGUCHI, T. AND M. UMEMURA (1988), *Basic Economic Statistics of Japanese Colonies, 1895–1938*, Toyo Keizai Shinposha, Tokyo.
- MOOSVI, S. (1987), *The Economy of the Moghul Empire c.1595: A Statistical Study*, Oxford University Press, Delhi.
- MORELAND, W.H. (1920), *India at the Death of Akbar: An Economic Study*, Atmar Ram, Delhi (1962 reprint).
- MORINEAU, M. (1985), *Incroyables gazettes et fabuleux métaux*, Cambridge University Press, Cambridge.
- MORISON, S.E. (1971), *The European Discovery of America: The Northern Voyages, A.D. 500–1600*, Oxford University Press, Oxford.
- MORISON, S.E. (1974), *The European Discovery of America: The Southern Voyages, A.D. 1492–1616*, Oxford University Press, Oxford.

- MOTE, F.W. AND D. TWITCHETT (eds.) (1988), *The Cambridge History of China, The Ming Dynasty, 1368–1644*, Part 1, Cambridge University Press, Cambridge.
- MOWERY, D.C. AND N. ROSENBERG (1989), *Technology and the Pursuit of Economic Growth*, Cambridge University Press, Cambridge.
- MULHALL, M.G. (1896), *Industries and Wealth of Nations*, Longmans, London.
- MULHALL, M.G. (1899), *The Dictionary of Statistics*, Routledge, London, 4th edition.
- MYERS, R.H. (ed.) (1996), *The Wealth of Nations in the Twentieth Century*, Hoover Institution, Stanford.
- NAKAMURA, J.I. (1966), *Agricultural Production and the Economic Development of Japan, 1873–1922*, Princeton.
- NAKAMURA, S. (1968), *Meiji Ishin no Kiso Kozo*.
- NAOROJI, D. (1901), *Poverty and Un-British Rule in India*, London, Government of India Reprint, Delhi, 1962.
- NDULU, B. AND S.A. O'CONNELL (1999), "Governance and Growth in Sub-Saharan Africa", *Journal of Economic Perspectives*, Summer, pp. 41–66.
- NEEDHAM, J. AND ASSOCIATES (1954–2000), *Science and Civilisation in China*, 50 major sections, many co-authors, many volumes, Cambridge University Press, Cambridge.
- NEF, J.U. (1987), "Mining and Metallurgy in Medieval Civilisation", in POSTAN *et al.* (eds.), vol. II, pp. 693–762.
- NISHIKAWA, S. (1987), "The Economy of Choshu on the Eve of Industrialisation", *Economic Studies Quarterly*, December.
- NORTH, D.C. (1966), *Growth and Welfare in the American Past*, Prentice Hall, New Jersey.
- NORTH D.C. (1968), "Sources of Productivity Change in Ocean Shipping, 1600–1850", *Journal of Political Economy*, September–October, pp. 953–70.
- NORTH D.C. (1990), *Institutions, Institutional Change and Economic Performance*, Cambridge University Press, Cambridge.
- Ó GRÁDA, C. (1988), *Ireland Before and After the Famine*, Manchester University Press, Manchester.
- OECD (1979), *Demographic Trends 1950–1990*, Paris.
- OHKAWA, K. (1957), *The Growth Rate of the Japanese Economy since 1878*, Kinokuniya, Tokyo.
- OHKAWA, K., M. SHINOHARA, AND M. UMEMURA (eds.) (1966–1988), *Estimates of Long-Term Economic Statistics of Japan since 1868*, 14 volumes, Toyo Keizai Shinposha, Tokyo.
- OHKAWA, K. AND M. SHINOHARA (eds.) (1979), *Patterns of Japanese Economic Development: A Quantitative Appraisal*, Yale.
- OHLIN, G. (1955), *The Positive and Preventive Check: A Study of the Rate of Growth of Pre-Industrial Populations*, Harvard Ph.D thesis, reprinted by Arno Press, New York, 1981.
- OKAMOTO, Y. (1972), *The Namban Art of Japan*, Heibonsha, Tokyo.
- OLINER, S.D. AND D.E. SICHEL (2000), "The Resurgence of Growth in the Late 1990s: Is Information Technology the Story?", Federal Reserve Board, Washington, D.C., February.
- OLIVER, R. AND J.D. FAGE (1995), *A Short History of Africa*, Penguin Books, London.
- O'ROURKE, K.H. AND J.G. WILLIAMSON (1999), *Globalization and History*, MIT Press, Cambridge, Ma.
- OVERTON, M. (1996), *Agricultural Revolution in England: The Transformation of the Agrarian Economy, 1500–1850*, Cambridge University Press, Cambridge.
- PAIGE, D. AND G. BOMBACH (1959), *A Comparison of National Output and Productivity of the UK and the United States*, OECD, Paris.
- PANNIKAR, K.M. (1953), *Asian and Western Dominance*, Allen and Unwin, London.
- PARKER, G. (1979), *Spain and the Netherlands, 1599–1659*, Fontana/Collins, London.

- PARRY, J.H. (1967), "Transport and Trade Routes", in RICH AND WILSON.
- PARRY, J.H. (1974), *The Discovery of the Sea*, Weidenfeld and Nicolson, London.
- PATINKIN, D. (1960), *The Israeli Economy: The First Decade*, Falk Project, Jerusalem.
- PEBRER, P. (1833), *Taxation, Revenue, Expenditure, Power, Statistics of the Whole British Empire*, Baldwin and Cradock, London.
- PERKINS, D.W. (1969), *Agricultural Development in China, 1368–1968*, Aldine, Chicago.
- PERRIN, N. (1979), *Giving up the Gun: Japan's Reversion to the Sword, 1543–1879*, Godine, Boston.
- PETTY, W. (1690), *Political Arithmetick*, in HULL (1899), Vol. 1.
- PETTY, W. (1997), *The Collected Works of Sir William Petty*, 8 volumes, Routledge/Thoemes Press, London (includes Hull's (1899) collection of Petty's economic writings; E.G. Fitzmaurice's (1895) biography of Petty; Lansdowne's (1927 and 1928) collection of Petty papers and the Southwell–Petty correspondence; Larcom's (1851) edition of Petty's Irish Land Survey, and critical appraisals by T.W. Hutchinson and others).
- PHELPS BROWN, H. AND S.V. HOPKINS (1981), *A Perspective on Wages and Prices*, Methuen, London.
- PIRENNE, H. (1939), *Mohammed and Charlemagne*, Allen and Unwin, London.
- POLAK, J.J. (1943), *The National Income of the Netherlands Indies, 1921–1939*, New York.
- POMERANZ, K. (2000), *The Great Divergence*, Princeton University Press, Princeton.
- POSTAN, M.M., et al. (eds.) (1963–87), *The Cambridge Economic History of Europe*, vol. I (1966), vol. II (1987) and vol. III (1963), Cambridge University Press, Cambridge.
- POTTER, J. (1965), "The Growth of Population in America, 1700–1860", in GLASS AND EVERSELEY.
- PRAKASH, O. (1998), *European Commercial Enterprise in Pre-colonial India*, Cambridge University Press, Cambridge.
- PRESTON, S.H AND E. VAN DER WALLE (1978), "Urban French Mortality in the Nineteenth Century", *Population Studies*, 32, 2, pp. 275–297.
- PROCACCI, G. (1978), *History of the Italian People*, Penguin Books, London.
- PURCELL, V. (1965), *The Chinese in Southeast Asia*, Oxford University Press, Kuala Lumpur.
- QAISAR, A.J. (1982), *The Indian Response to European Technology and Culture, A.D. 1498–1707*, Oxford University Press, Bombay.
- RANIS, G. AND T.P. SCHULTZ (eds.) (1988), *The State of Development Economics*, Blackwell, Oxford.
- RAPP, R.T. (1976), *Industry and Economic Decline in Seventeenth Century Venice*, Harvard University Press, Cambridge, Ma.
- RAYCHAUDHURI, T. AND I. HABIB (1982) (eds.) *The Cambridge Economic History of India*, Cambridge University Press, Cambridge.
- REHER, D.S. AND R. SCHOFIELD (eds.) (1993), *Old and New Methods in Historical Demography*, Clarendon Press, Oxford.
- REID, A. (1988), *Southeast Asia in the Age of Commerce, 1450–1680, Vol. 1, The Lands Below the Winds*, Yale, New Haven.
- REID, A. (1993), *Southeast Asia in the Age of Commerce, 1450–1680, Vol. 2, Expansion and Crisis*, Yale, New Haven.
- REISEN, H. AND M. SOTO (2000), "The Need for Foreign Savings in Post-Crisis Asia" (see FOY, KIM AND REISEN) in BRAGA DE MACEDO AND CHINO (Preface by).
- RUOEN, R. (1997), *China's Economic Performance in An International Perspective*, OECD Development Centre, Paris.
- RICCIOLI, G.B. (1672), *Geographiae et Hydrographiae Reformatae, Libri Duodecim*, Venice.

- RICH, E.E. AND C.H. WILSON (1967), *The Cambridge History of Europe*, Vol. IV, Cambridge University Press, Cambridge.
- RICHARDS, E.G. (1998), *Mapping Time*, Oxford University Press, Oxford.
- RICHARDS, J.F. (1983), *Precious Metals in the Later Medieval and Early Modern Worlds*, Carolina Academic Press, Durham, North Carolina.
- ROBERTSON, J. (1984), "Japanese Farm Manuals: A Literature of Discovery", *Peasant Studies*, 11, Spring, pp. 169–194.
- ROMANELLI, G. (ed.) (1997), *Venice: Art and Architecture*, Könemann, Cologne.
- ROMER, P.M. (1986), "Increasing Returns and Long Run Growth", *Journal of Political Economy*, 94, No. 5.
- ROSENBLAT, A. (1945), *La Poblacion Indigena de America Desde 1492 Hasta la Actualidad*, ICE, Buenos Aires.
- ROSENBLAT, A. (1967), *La Poblacion de America en 1492*, Colegio de Mexico, Mexico D.F.
- ROSTOW, W.W. (1960), *The Stages of Economic Growth*, Cambridge University Press, Cambridge.
- ROSTOW, W.W. (ed.) (1963), *The Economics of Take-Off into Sustained Growth*, Macmillan, London.
- ROSTOW, W.W. (1990), *Theorists of Economic Growth from David Hume to the Present*, Oxford University Press, Oxford.
- ROTHERMUND, D. (1999), "The Changing Pattern of British Trade in Indian Textiles, 1701–57", in CHAUDHURY AND MORINEAU.
- ROSENZWEIG, F. (1963), "La economia Novo-Hispaña al comenzar del siglo XIX", *Revista de Ciencias Politicas y Sociales*, UNAM, July–September.
- ROZMAN, G. (1973), *Urban Networks in Ch'ing China and Tokugawa Japan*, Princeton University Press, Princeton.
- RUSSELL, J.C. (1948), *British Medieval Population*, University of New Mexico, Albuquerque.
- RUSSELL, J.C. (1958), *Late Ancient and Medieval Population*, American Philosophical Society, Philadelphia.
- RUSSELL, P. (2000), *Prince Henry "The Navigator": A Life*, Yale University Press, New Haven.
- SAITO, O. (1979), "Who Worked When: Life Time Profiles of Labour Force Participation in Cardington and Corfe Castle in the Late Eighteenth and Mid-Nineteenth Centuries", *Local Population Studies*, pp. 14–29.
- SAITO, O. (1996), "Gender, Workload and Agricultural Progress: Japan's Historical Experience in Perspective", in LEBOUTTE.
- SAITO, O. (1997), "Infant Mortality in Pre-Transition Japan: Levels and Trends", in BIDEAU, DESJARDINS AND PEREZ BRIGNOLI.
- SALTER, W.E.G. (1960), *Productivity and Technical Change*, Cambridge University Press, Cambridge.
- SANCHEZ-ALBORNOZ, N. (1984), "The Population of Colonial Spanish America", in BETHELL, vol. 2.
- SANCHEZ-ALBORNOZ, N. (1986), "The Population of Latin America, 1850–1930", in BETHELL, vol. 4.
- SARKAR, N.K. (1957), *The Demography of Ceylon*, Ceylon Government Press, Colombo.
- SCHMOOKLER, J. (1966), *Invention and Economic Growth*, Harvard University Press, Cambridge, Ma.
- SCHOFIELD, R., D. REHER AND A. BIDEAU (1991), *The Decline of Mortality in Europe*, Clarendon Press, Oxford.
- SCHULTZ, T.W. (1961), "Investment in Human Capital", *American Economic Review*, March.
- SCHUMPETER, J.A. (1939), *Business Cycles*, McGraw Hill, New York.
- SCHWARTZ, S.B., (1985), *Sugar Plantations in the Formation of Brazilian Society: Bahia, 1550–1835*, Cambridge University Press, Cambridge.
- SCOTT, M. AND D. LAL (eds.) (1990), *Public Policy and Economic Development: Essays in Honour of Ian Little*, Clarendon Press, Oxford.

- SELLA, D. (1979), *Crisis and Continuity: The Economy of Spanish Lombardy in the Seventeenth Century*, Harvard University Press, Cambridge, Ma.
- SHAMMAS, C. (1993), "Changes in English and Anglo-American Consumption from 1550 to 1800", in BREWER AND PORTER.
- SHEA, D.E. (1976), "A Defence of Small Population Estimates for the Central Andes in 1520", in DENEVAN (1976), pp. 157–80.
- SIMONSEN, R.C. (1962), *Historia Economica do Brasil (1500–1820)*, Editora Nacional, São Paulo.
- SIVASUBRAMONIAN, S. (2000), *The National Income of India in the Twentieth Century*, Oxford University Press, New Delhi.
- SIVASUBRAMONIAN, S. (2001), "Twentieth Century Economic Performance of India", in MADDISON, PRASADA RAO AND SHEPHERD.
- SLICHER VAN BATH, B.H. (1963), *The Agrarian History of Western Europe, AD 500–1850*, Arnold, London.
- SMITH, A. (1776), *An Inquiry into the Nature and Causes of the Wealth of Nations*, University of Chicago Reprint, 1976.
- SMITH, T.C. (1959), *The Agrarian Origins of Modern Japan*, Stanford.
- SMITH, T.C. (1969), "Farm Family By-Employments in Preindustrial Japan", *Journal of Economic History*, December.
- SMITH, T.C. (1977), *Nakahara: Family Farming and Population in a Japanese Village, 1717–1830*, Stanford University Press, Stanford, California.
- SMITH, T.C. (1988), *Native Sources of Japanese Industrialization, 1750–1920*, University of California, Berkeley.
- SMITS, J.P., E. HORLINGS AND J.L. VAN ZANDEN (2000), *The Measurement of Gross National Product and Its Components, 1800–1913*, Groningen Growth and Development Centre Monograph Series, No. 5.
- SNODGRASS, D.R. (1966), *Ceylon: An Export Economy in Transition*, Irwin, Illinois.
- SNOOKS, G.D. (1993), *Economics Without Time*, Macmillan, London.
- SNOOKS, G.D. (1996), *The Dynamic Society: Exploring the Sources of Global Change*, Routledge, London.
- SNOOKS, G.D. (1997), *The Ephemeral Civilisation*, Routledge, London.
- SOLOW, R.M. (1956), "A Contribution to the Theory of Economic Growth", *Quarterly Journal of Economics*, February.
- SOLOW, R.M. (1960), "Investment and Technical Progress", in ARROW, KARLIN AND SUPPES (eds.) *Mathematical Methods in the Social Sciences*, Stanford University Press.
- SOLOW, R.M. (1962), "Technical Progress, Capital Formation and Economic Growth", *American Economic Review*, May.
- SPOONER, F.C. (1972), *The International Economy and Monetary Movements in France, 1493–1725*, Harvard University Press, Cambridge, Ma.
- SPULBER, N. (1966), *The State and Economic Development in Eastern Europe*, Random House, New York.
- STECKEL, R.H. AND R. FLOUD (1997), *Health and Welfare during Industrialisation*, University of Chicago Press, Chicago.
- STEENSGAARD, N. (1972), *Carracks, Caravans and Companies*, Copenhagen.
- STONE, R. (1997), *Some British Empiricists in the Social Sciences 1650–1900*, Cambridge University Press, Cambridge.
- STUDENSKI, P. (1958), *The Income of Nations: Theory, Measurement and Analysis: Past and Present*, New York University Press, Washington Square.
- SUBRAHMANYAM, S. (1997), *The Career and Legend of Vasco de Gama*, Cambridge University Press, Cambridge.



- SUH, S.C. (1978), *Growth and Structural Changes in the Korean Economy, 1910–40*, Harvard University Press, Cambridge, Ma.
- SUMMERS, R. AND A. HESTON (1991), "The Penn World Table (Mark 5): An Expanded Set of International Comparisons 1950–1988", *Quarterly Journal of Economics*, May, supplemented by January 1995 diskette of P.W.T. Mark 5.6.
- SZERESZEWSKI, R. (1965), *Structural Changes in the Economy of Ghana*, Weidenfeld and Nicolson, London.
- SZERESZEWSKI, R. (1968), *Essays on the Structure of the Jewish Economy in Palestine and Israel*, Falk Project, Jerusalem.
- SZIRMAI, A., B. VAN ARK AND D. PILAT (eds.) (1993), *Explaining Economic Growth: Essays in Honour of Angus Maddison*, North Holland, Amsterdam.
- TAEUBER, I.B. (1958), *The Population of Japan*, Princeton University Press, New Jersey.
- TAWNEY, A.J. AND R.H. (1934), "An Occupational Census of the Seventeenth Century", *Economic History Review*, October.
- TAYLOR, G.R. (1964), "American Economic Growth Before 1840: An Exploratory Essay", *Journal of Economic History*, December, pp. 427–444.
- TEMPLE, W. (1693), *Observations upon the United Provinces of the Netherlands*, Tonson, London.
- TERRISE, M. (1975), "Aux origines de la méthode de reconstitution des familles: les Suédois d'Estonie", *Population*, numéro spécial.
- THIRSK, J. (1978), *Economic Policies and Projects: The Development of a Consumer Society in Early Modern England*, Oxford University Press, Oxford.
- THOMAS, R.P. (1965), "A Quantitative Approach to the Study of the Effects of British Imperial Policy upon Colonial Welfare: Some Preliminary Findings", *Journal of Economic History*, December.
- THOMAS, R.P. (1968), "The Sugar Colonies of the Old Empire: Profit and Loss to Great Britain", *Economic History Review*.
- THORNTON, R. (1987), *American Indian Holocaust and Survival: A Population History since 1492*, University of Oklahoma, Norman.
- TIBBETTS, G.R. (1981), *Arab Navigation in the Indian Ocean before the Coming of the Portuguese*, Royal Asiatic Society of Great Britain and Ireland
- TRACY, J.D. (ed.) (1990), *The Rise of Merchant Empires: Long Distance Trade in the Early Modern Period, 1350–1750*, Cambridge University Press.
- TWITCHETT, D. AND F.W. MOTE (eds.) (1998), *The Cambridge History of China*, Vol. 8, *The Ming Dynasty*, Part 2, 1368–1644, Cambridge University Press, Cambridge.
- UBELAKER, D.H. (1976), "Prehistoric New World Population Size: Historical Review and Current Appraisal of North American Estimates", *American Journal of Physical Anthropology*, pp. 661–6.
- UNGER, R.W. (1980), *The Ship in the Medieval Economy, 600–1600*, Croom Helm, London.
- UNGER, R.W. (1992), "The Tonnage of Europe's Merchant Fleets, 1300–1800", *The American Neptune* (52), pp. 247–61.
- UN POPULATION DIVISON (1973), *The Determinants and Consequences of Population Trends*, New York.
- UN POPULATION DIVISON (1999), *World Population Prospects: The 1998 Revision*, New York.
- URLANIS, B.Ts. (1941), *Rost Naseleennie v Evrope*, Ogiz, Moscow.
- VALLIN, J. (1991), "Mortality in Europe from 1720 to 1914", in SCHOFIELD, REHER AND BIDEAU.
- VAMPLEW, W. (ed.) (1987), *Australians: Historical Statistics*, Cambridge University Press, Cambridge.
- VAN DER ENG, P. (1998), "Exploring Exploitation: The Netherlands and Colonial Indonesia, 1870–1940", *Revista de Historia Economica* XVI, 1, pp. 291–320.

- VAUBAN, S. (1707), *La dime royale* (1992 edition, with introduction by E. Le Roy Ladurie, Imprimerie nationale, Paris).
- VERLINDEN, C. (1963), "Markets and Fairs", in POSTAN *et al.* (eds.) Vol. III, pp. 126–136.
- VERLINDEN, C. (1972), "From the Mediterranean to the Atlantic", *Journal of European Economic History*, pp. 625–46.
- VISARIA, L. AND P. VISARIA (1983), "Population: 1757–1947", in KUMAR AND DESAI.
- VOGEL, W. (1915), "Zur Grösse der europäischen Handelsflotten im 15., 16. und 17. Jahrhundert", in D. Schäfer (ed.) *Forschungen und Versuche zur Geschichte des Mittelalters und der Neuzeit*, Fischer, Jena.
- VON GLAHN, R. (1996), *Fountain of Fortune: Money and Monetary Policy in China, 1000–1700*, University of California Press, California.
- VRIES, J. DE (1974), *The Dutch Rural Economy in the Golden Age, 1500–1700*, Yale.
- VRIES, J. DE (1976), *Economy of Europe in an Age of Crisis, 1600–1750*, Cambridge University Press, Cambridge.
- VRIES, J. DE (1984), *European Urbanization 1500–1800*, Methuen, London.
- VRIES, J. DE (1985), "The Population and Economy of the Preindustrial Netherlands", *Journal of Interdisciplinary History*, XV:4, pp. 661–82.
- VRIES, J. DE (1993), "Between Purchasing Power and the World of Goods: Understanding the Household Economy in Early Modern Europe", in BREWER AND PORTER.
- VRIES, J. DE AND A. VAN DER WOUDE (1997), *The First Modern Economy: Success, Failure and Perseverance of the Dutch Economy, 1500–1815*, Cambridge University Press, Cambridge.
- WAKE, C.H.H. (1979), "The Changing Pattern of Europe's Pepper and Spice Imports, ca 1400–1700", *Journal of European Economic History*, vol. 8(2), pp. 361–403.
- WAKE, C.H.H. (1986), "The Volume of European Spice Imports at the Beginning and End of the Fifteenth Century", *Journal of European Economic History*, vol 15(3), pp. 621–35.
- WALL, R. (1983), "The Household: Demographic and Economic Change in England, 1650–1970", in WALL *et al.*
- WALL, R., J. ROBIN AND P. LASLETT (1983), *Family Forms in Historic Europe*, Cambridge University Press, Cambridge.
- WALTER, J. AND R. SCHOFIELD (1989), *Famine, Disease and the Social Order in Early Modern Society*, Cambridge University Press, Cambridge.
- WARMINGTON, E.H. (1928), *The Commerce Between the Roman Empire and India*, Cambridge University Press, Cambridge.
- WESTERGAARD, H. (1932), *Contributions to the History of Statistics*, King, London (Kelley reprint, 1969).
- WHITE, L. (1962), *Medieval Tehnology and Social Change*, Clarendon Press, Oxford.
- WHITWORTH, C. (ed.) (1771), *The Political and Commercial Works of Charles Davenant*, 5 vols., Horsefield, London.
- WILLCOX, W.F. (1931), "Increase in the Population of the Earth and of the Continents since 1650", in W.F. WILLCOX (ed.) *International Migrations*, Vol. II, National Bureau of Economic Research, New York, pp. 33–82.
- WILLIAMS, E. (1970), *From Columbus to Castro: The History of the Caribbean 1492–1969*, Deutsch, London.
- WILLIAMSON, J.G. (1995), "The Evolution of Global Markets Since 1830: Background Evidence and Hypotheses", *Explorations in Economic History*, 32, pp. 141–196.
- WILSON, C. AND G. PARKER (eds.) (1977), *An Introduction to the Sources of European Economic History, 1500–1800*, Weidenfeld and Nicolson, London.
- WOLF, J. (1912), *Die Volkswirtschaft der Gegenwart und Zukunft*, Deichert, Leipzig, 1912.
- WORLD BANK (2000), *Global Development Finance*, Washington, D.C.
- WRIGLEY, E.A. (1967), "A Simple Model of London's Importance in Changing English Society and Economy 1650–1750", *Past and Present*, July, pp. 44–70.

- WRIGLEY, E.A. (1988), *Continuity, Chance and Change*, Cambridge.
- WRIGLEY, E.A. AND R.S. SCHOFIELD (1981), *The Population History of England 1541–1871*, Arnold, London.
- WRIGLEY, E.A., R.S. DAVIES, J.E. OEPPEN AND R.S. SCHOFIELD (1997), *English Population History from Family Reconstitution 1580–1837*, Cambridge University Press, Cambridge.
- WYCKOFF, A.W. (1995), "The Impact of Computer Prices on International Comparisons of Labour Productivity", *Economies of Innovation and New Technology*, vol. 3, pp. 277–93.
- XU, XIANCHUN (1999), "Evaluation and Adjustments of China's Official GDP by the World Bank and Prof. Maddison", *Journal of Econometric Study of Northeast Asia*, Vol. 1, No. 2.
- YAMADA, S. AND Y. HAYAMI (1979), "Agricultural Growth in Japan, 1880–1970", in HAYAMI, RUTTAN AND SOUTHWORTH, pp. 33–48 and 230–64.
- YAMAMURA, K. (1974), *A Study of Samurai Income and Entrepreneurship*, Harvard.
- YAMAMURA, K. (1981), "Returns on Unification Economic Growth in Japan, 1550–1650", in HALL et al.
- YAMAMURA, K. AND T. KAMIRI (1983), "Silver Mines and Sung Coins — A Monetary History of Medieval and Modern Japan in International Perspective", in RICHARDS.
- YASUBA, Y. (1987), "The Tokugawa Legacy: A Survey", *Economic Studies Quarterly*, December, pp. 290–308.
- YOLTON, J.W. (ed.) (1969), *John Locke: Problems and Perspectives*.
- YOSHIDA, T. (1911), *Ishinshi Hachi Ko*, Fuzanbo, Tokyo.
- YUN, B. (1994), "Proposals to Quantify Long-Run Performance in the Kingdom of Castile, 1550–1800", in MADDISON AND VAN DER WEE.
- ZAMBARDINO, R.A. (1980), "Mexico's Population in the Sixteenth Century: Demographic Anomaly or Mathematical Illusion?", *Journal of Interdisciplinary History*, pp. 1–27.
- ZANDEN, J.L. VAN (1987), "De economie van Holland in de periode 1650–1805: groei of achteruitgang? Een overzicht van bronnen, problemen en resultaten", *Bijdrage en Mededelingen Geschiedenis der Nederlanden*.

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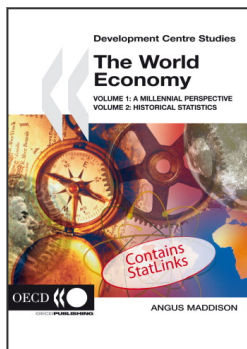
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