

Online Supplementary Material for

Racing to Zipf's Law:

Race and Metropolitan Population Size 1910-2020

Ricardo T. Fernholz

Claremont McKenna College

Rory Kramer

Villanova University

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Table A-1 of this supplementary material lists the White and Black populations of, respectively, the top five U.S. White and Black population-ranked metro areas as well as the populations of the metro areas of rank 10, 50, 100, and 150 from 1910-2020. Table A-2 lists the names of the top five White and Black population-ranked metro areas from 1910-2020. Figures A-1-A-20 plot the estimated tail indexes for the U.S. White and Black city population distributions from 1920-2010 using different rank truncation cutoffs. Figures A-21-A-26 show the average growth rates of different size-ranked metro areas for each decade from 1910-2020 for U.S. White and Black populations. Note that the data for all tables and figures in this appendix are from the U.S. Census.

Year		Population Rank								
		1	2	3	4	5	10	50	100	150
1910	White	5,163	2,651	2,134	1,578	1,427	651	163	77	42
	Black	130	127	117	107	98	63	17	3	1
1920	White	6,067	3,273	2,521	1,840	1,691	936	200	100	54
	Black	191	171	141	136	130	96	20	4	1
1930	White	7,594	4,189	2,835	2,233	2,135	1,167	261	129	65
	Black	399	367	255	174	168	127	26	6	2
1940	White	8,172	4,262	2,863	2,788	2,205	1,199	275	137	77
	Black	515	335	303	229	199	152	29	7	2
1950	White	8,706	4,623	4,092	3,187	2,654	1,333	351	181	102
	Black	820	536	480	358	338	200	44	11	3
1960	White	9,407	6,148	5,301	3,662	3,195	1,536	463	225	132
	Black	1,228	890	671	559	487	257	56	18	5
1970	White	9,534	6,030	5,685	3,951	3,424	1,976	543	263	169
	Black	1,883	1,228	843	763	757	348	67	25	10
1980	White	11,245	5,539	5,468	4,096	3,618	2,147	598	277	168
	Black	2,628	1,545	950	948	885	457	79	33	18
1990	White	10,412	5,488	5,169	4,126	3,590	2,255	650	321	186
	Black	2,866	1,530	1,048	998	973	612	100	39	23
2000	White	9,792	5,397	4,419	4,016	3,545	2,514	696	342	215
	Black	3,262	1,709	1,299	1,230	1,147	728	130	48	28
2010	White	9,234	5,204	4,057	3,876	3,409	2,578	681	357	219
	Black	3,179	1,733	1,670	1,477	1,264	932	156	56	34
2020	White	8,712	4,825	3,762	3,691	3,292	2,648	703	365	218
	Black	3,259	2,129	1,659	1,641	1,334	932	183	68	38

Table A-1: White and Black populations (thousands) of U.S. cities with largest 1-5, 10, 50, 100, 150 ranked White and Black populations, 1910-2020.

Year		Population Rank				
		1	2	3	4	5
1910	White	New York	Chicago	Philadelphia	Boston	Pittsburgh
	Black	Philadelphia	Washington, DC	Baltimore	New York	New Orleans
1920	White	New York	Chicago	Philadelphia	Boston	Pittsburgh
	Black	Philadelphia	New York	Washington, DC	Baltimore	Birmingham
1930	White	New York	Chicago	Philadelphia	Los Angeles	Boston
	Black	Philadelphia	New York	Chicago	Baltimore	Birmingham
1940	White	New York	Chicago	Philadelphia	Los Angeles	Detroit
	Black	New York	Philadelphia	Chicago	Washington, DC	Baltimore
1950	White	New York	Chicago	Los Angeles	Philadelphia	Detroit
	Black	New York	Chicago	Philadelphia	Detroit	Washington, DC
1960	White	New York	Los Angeles	Chicago	Philadelphia	Detroit
	Black	New York	Chicago	Philadelphia	Detroit	Washington, DC
1970	White	New York	Los Angeles	Chicago	Philadelphia	Detroit
	Black	New York	Chicago	Philadelphia	Los Angeles	Detroit
1980	White	New York	Chicago	Los Angeles	Philadelphia	Boston
	Black	New York	Chicago	Los Angeles	Philadelphia	Detroit
1990	White	New York	Chicago	Los Angeles	Philadelphia	Boston
	Black	New York	Chicago	Washington, DC	Philadelphia	Los Angeles
2000	White	New York	Chicago	Los Angeles	Philadelphia	Boston
	Black	New York	Chicago	Washington, DC	Atlanta	Philadelphia
2010	White	New York	Chicago	Los Angeles	Philadelphia	Boston
	Black	New York	Atlanta	Chicago	Washington, DC	Philadelphia
2020	White	New York	Chicago	Los Angeles	Philadelphia	Boston
	Black	New York	Atlanta	Washington, DC	Chicago	Philadelphia

Table A-2: U.S. cities with largest 1-5 ranked White and Black populations, 1910-2020.

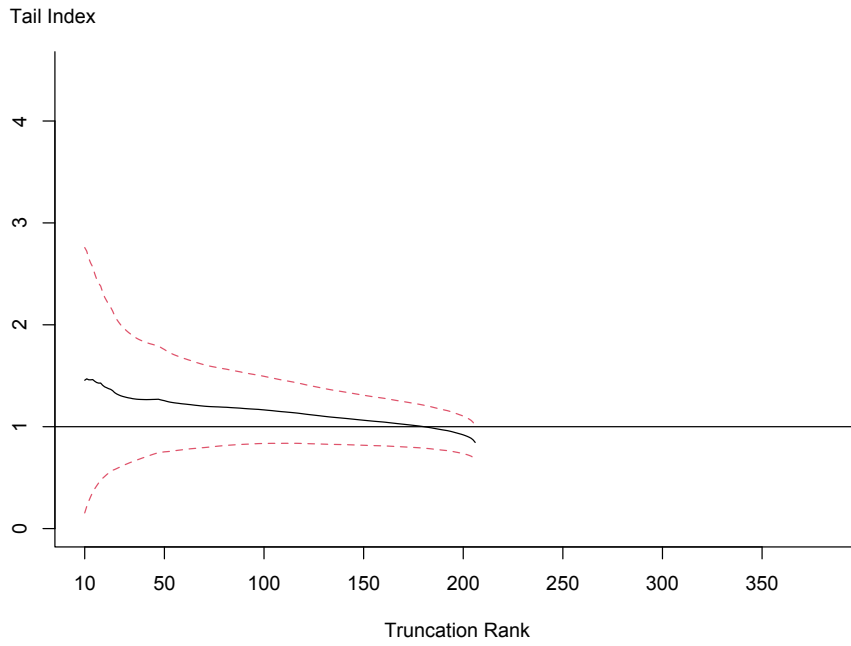


Figure A-1: Power law tail index and 95% confidence interval for U.S. White city size distribution, 1920.

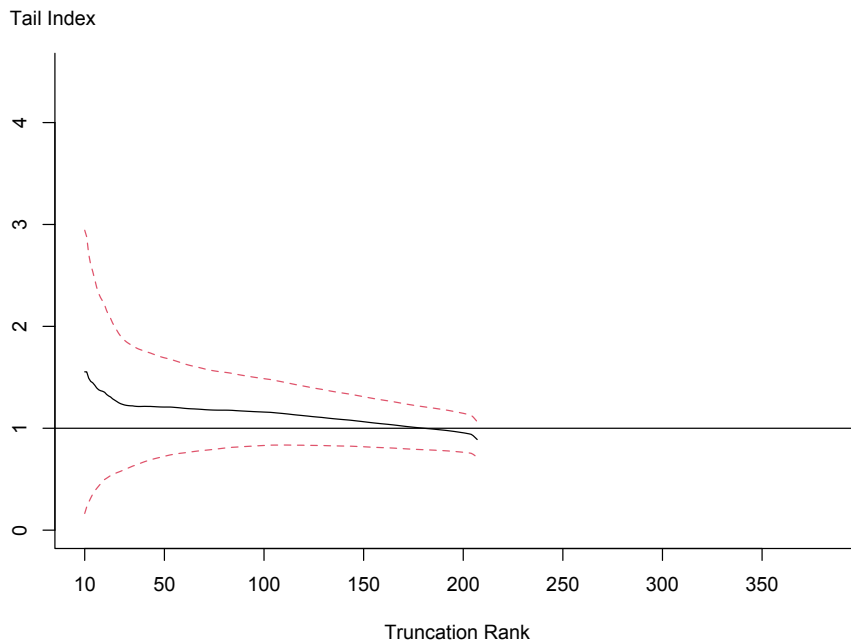


Figure A-2: Power law tail index and 95% confidence interval for U.S. White city size distribution, 1930.

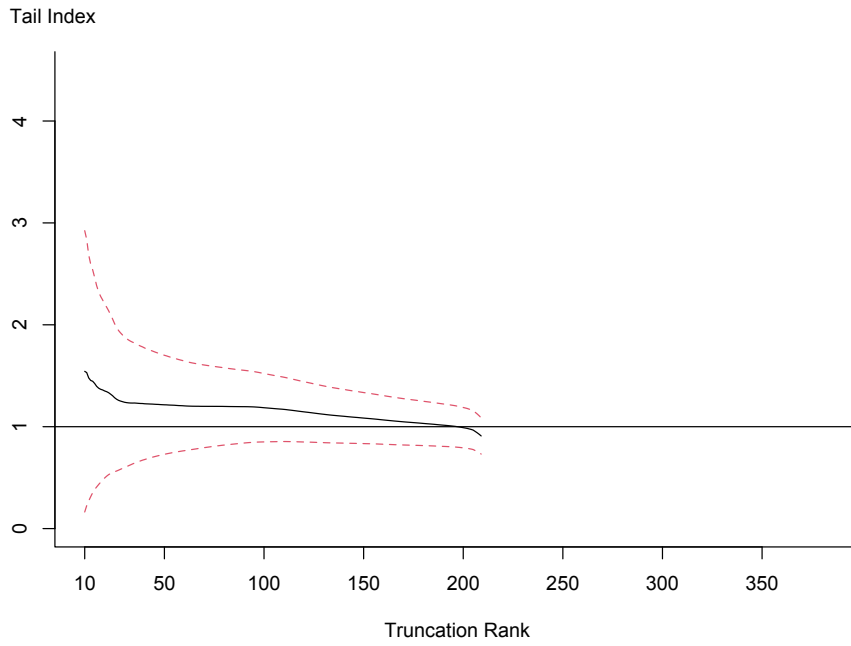


Figure A-3: Power law tail index and 95% confidence interval for U.S. White city size distribution, 1940.

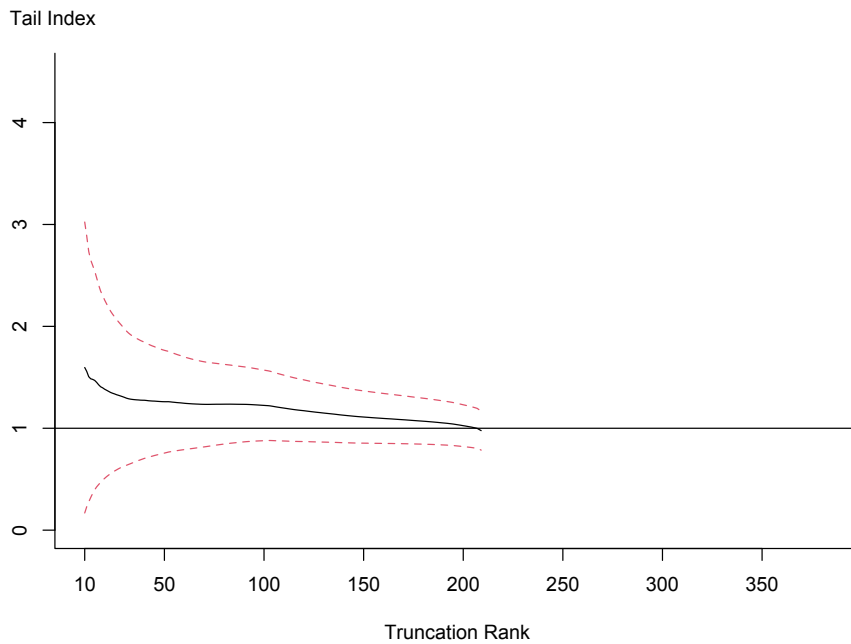


Figure A-4: Power law tail index and 95% confidence interval for U.S. White city size distribution, 1950.

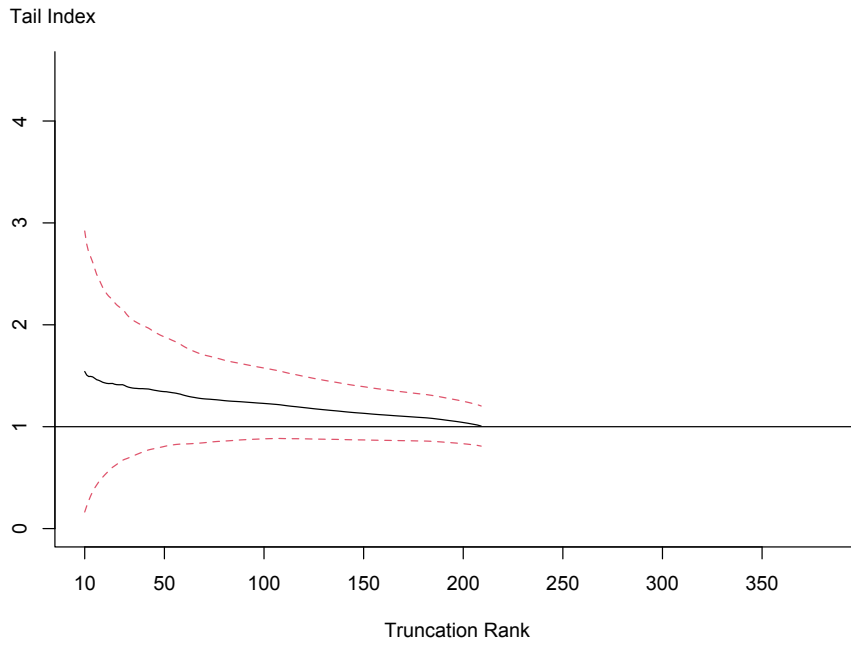


Figure A-5: Power law tail index and 95% confidence interval for U.S. White city size distribution, 1960.

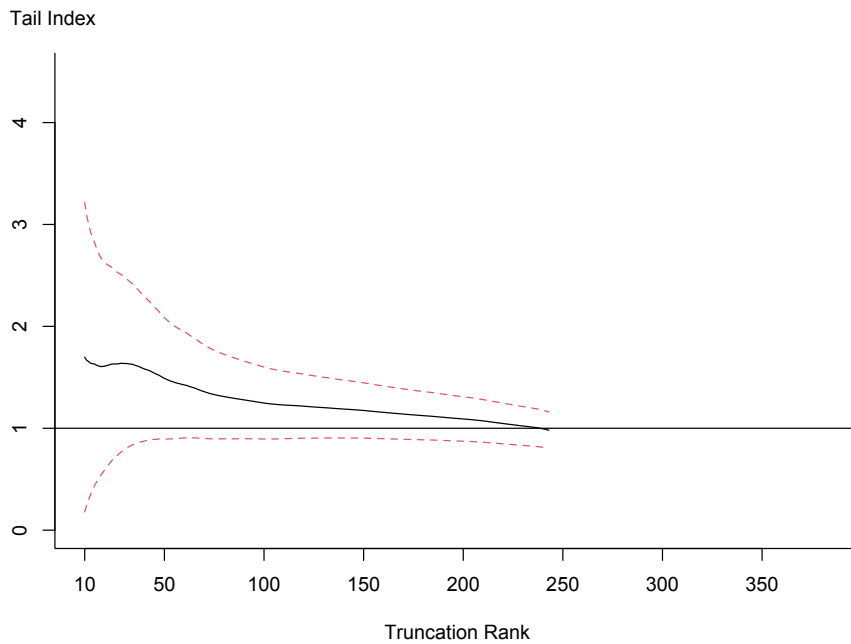


Figure A-6: Power law tail index and 95% confidence interval for U.S. White city size distribution, 1970.

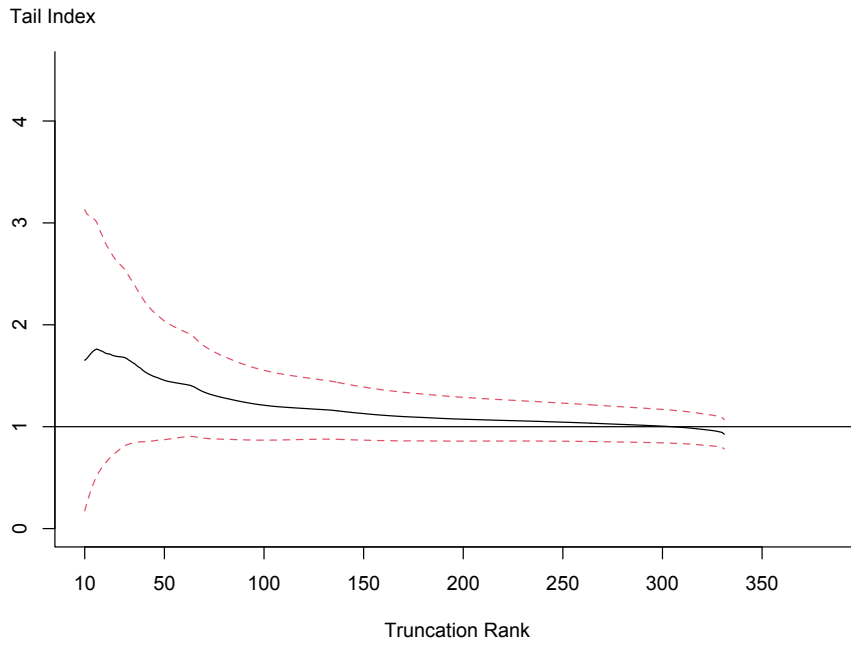


Figure A-7: Power law tail index and 95% confidence interval for U.S. White city size distribution, 1980.

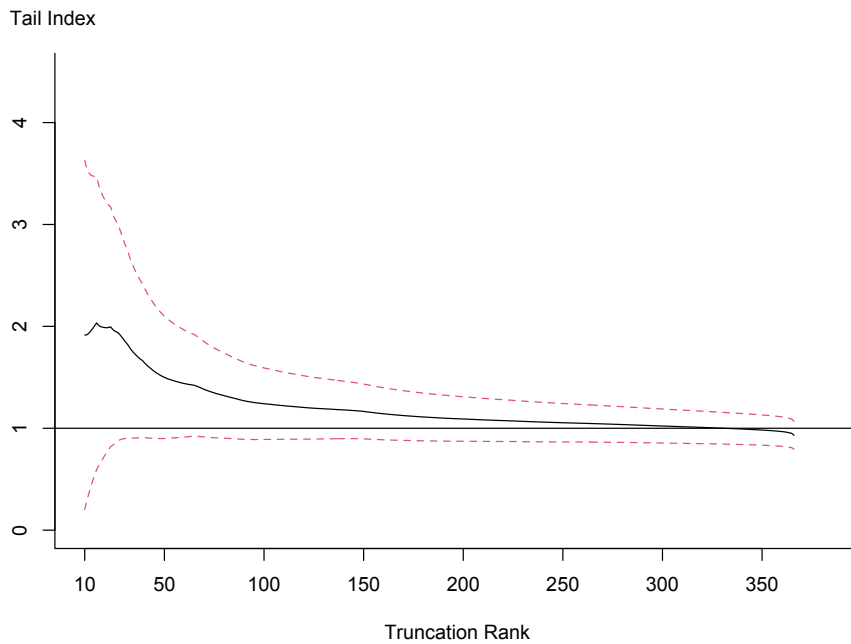


Figure A-8: Power law tail index and 95% confidence interval for U.S. White city size distribution, 1990.

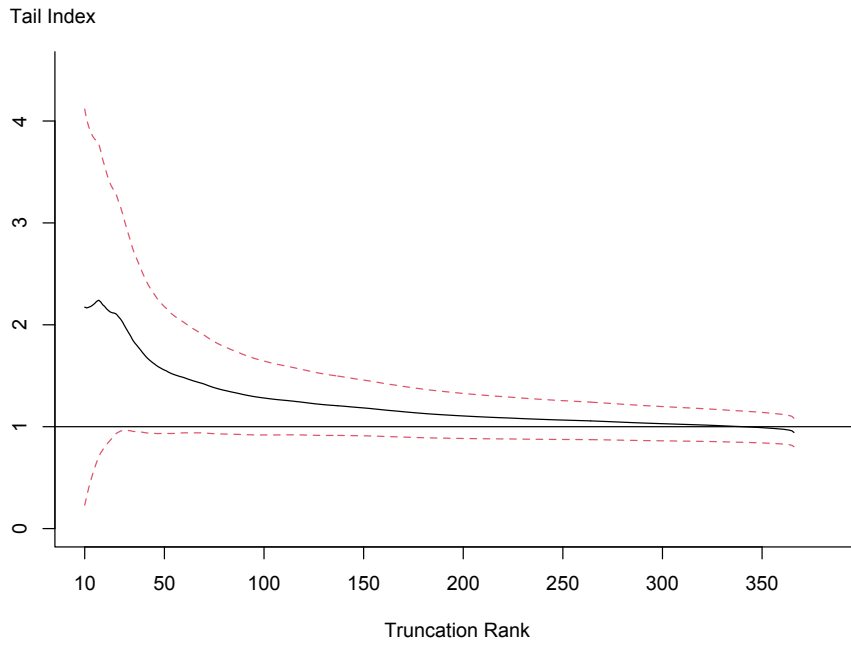


Figure A-9: Power law tail index and 95% confidence interval for U.S. White city size distribution, 2000.

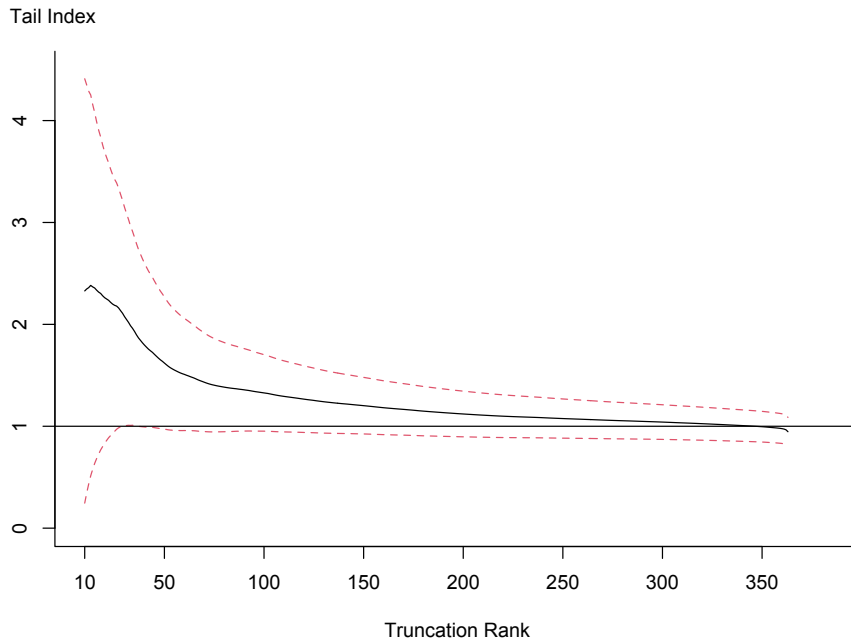


Figure A-10: Power law tail index and 95% confidence interval for U.S. White city size distribution, 2010.

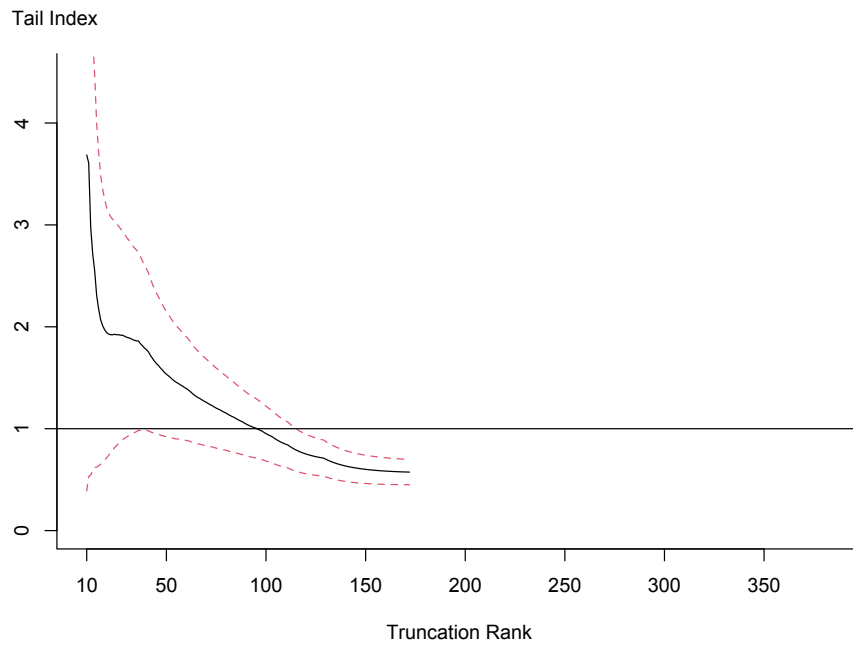


Figure A-11: Power law tail index and 95% confidence interval for U.S. Black city size distribution, 1920.

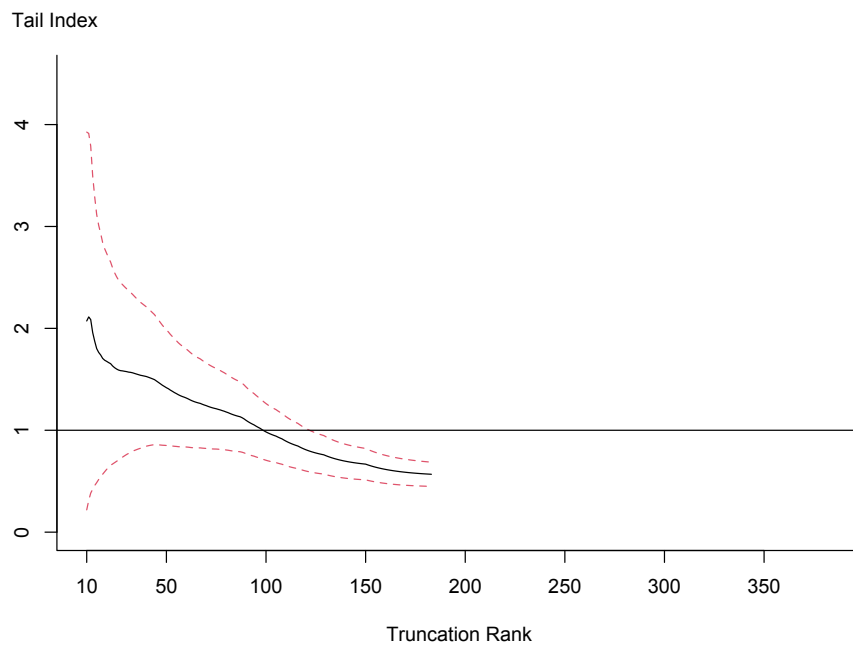


Figure A-12: Power law tail index and 95% confidence interval for U.S. Black city size distribution, 1930.

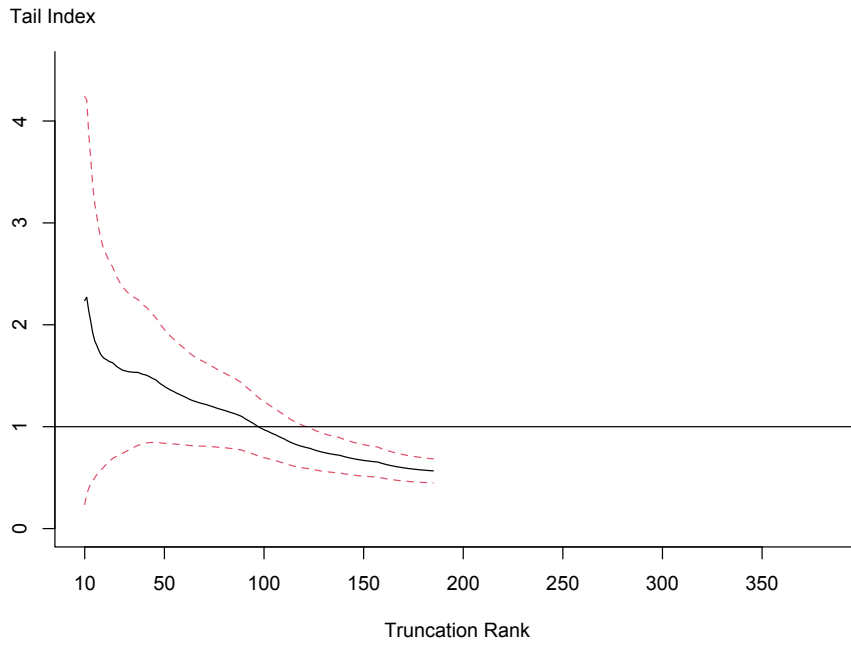


Figure A-13: Power law tail index and 95% confidence interval for U.S. Black city size distribution, 1940.

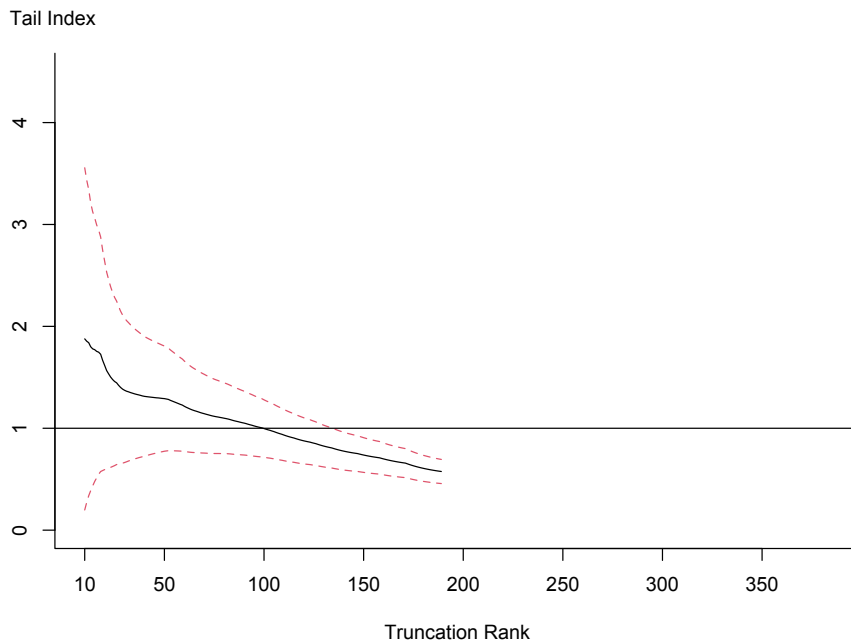


Figure A-14: Power law tail index and 95% confidence interval for U.S. Black city size distribution, 1950.

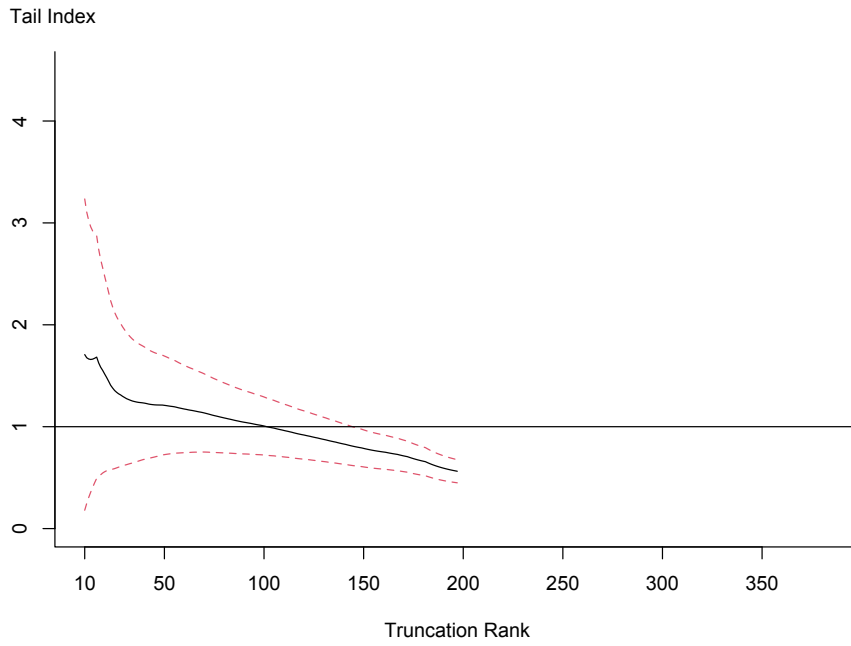


Figure A-15: Power law tail index and 95% confidence interval for U.S. Black city size distribution, 1960.

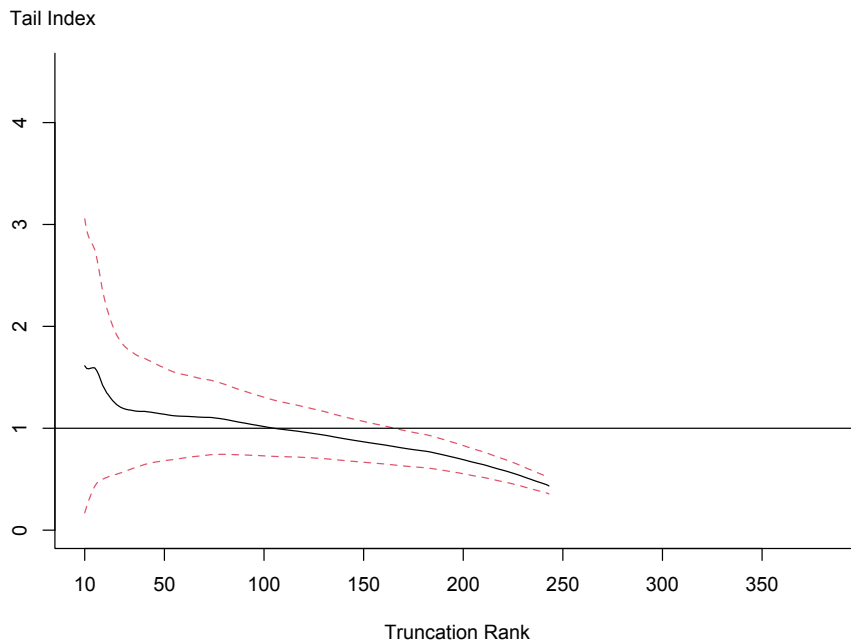


Figure A-16: Power law tail index and 95% confidence interval for U.S. Black city size distribution, 1970.

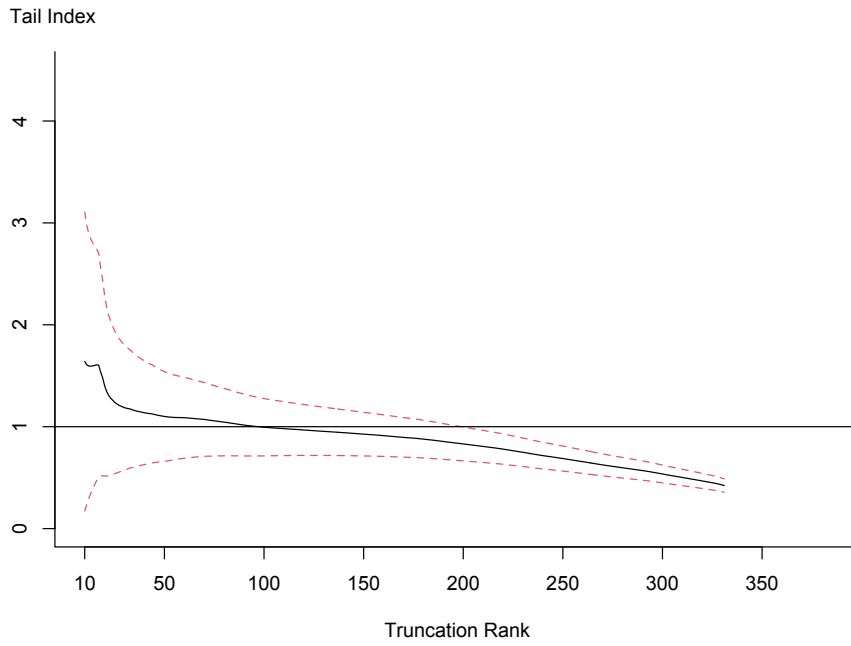


Figure A-17: Power law tail index and 95% confidence interval for U.S. Black city size distribution, 1980.

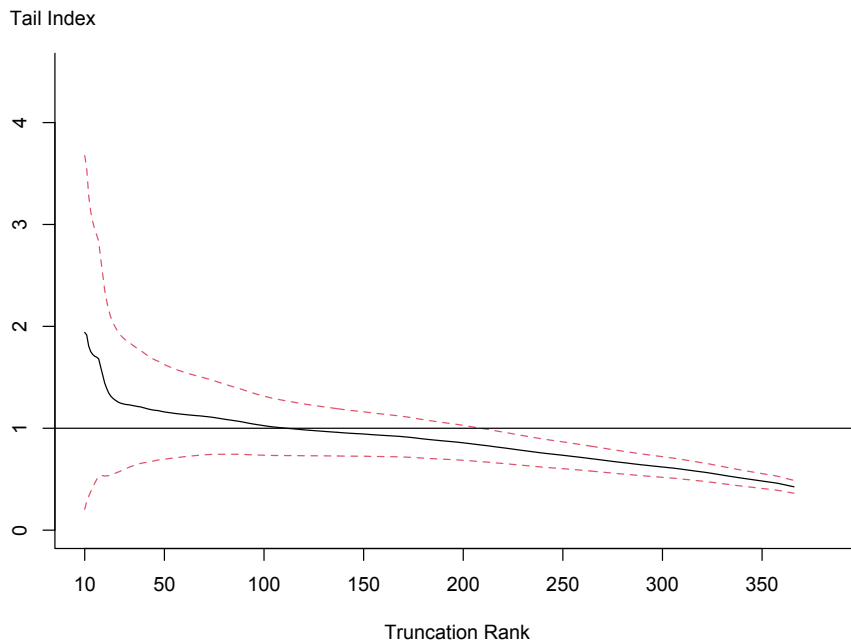


Figure A-18: Power law tail index and 95% confidence interval for U.S. Black city size distribution, 1990.

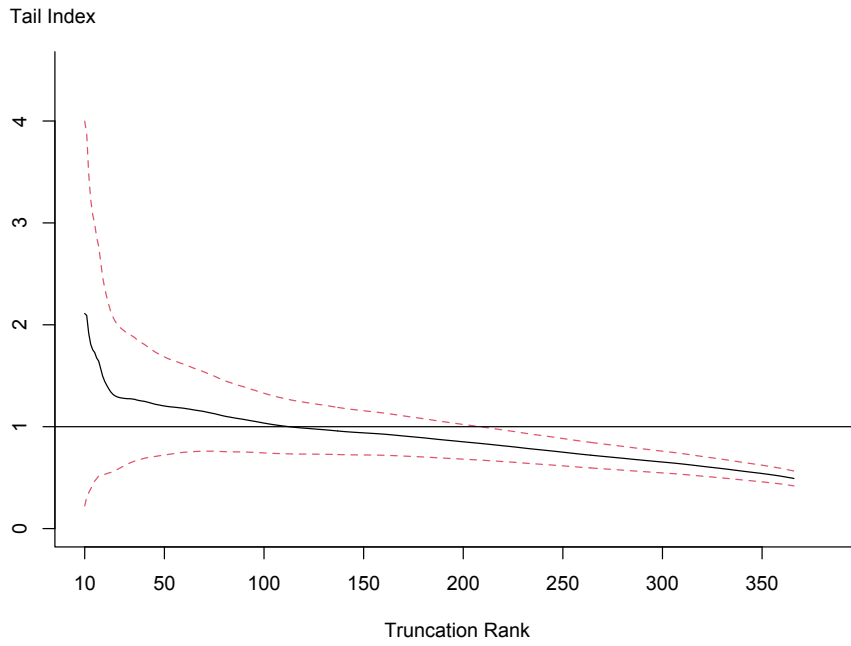


Figure A-19: Power law tail index and 95% confidence interval for U.S. Black city size distribution, 2000.

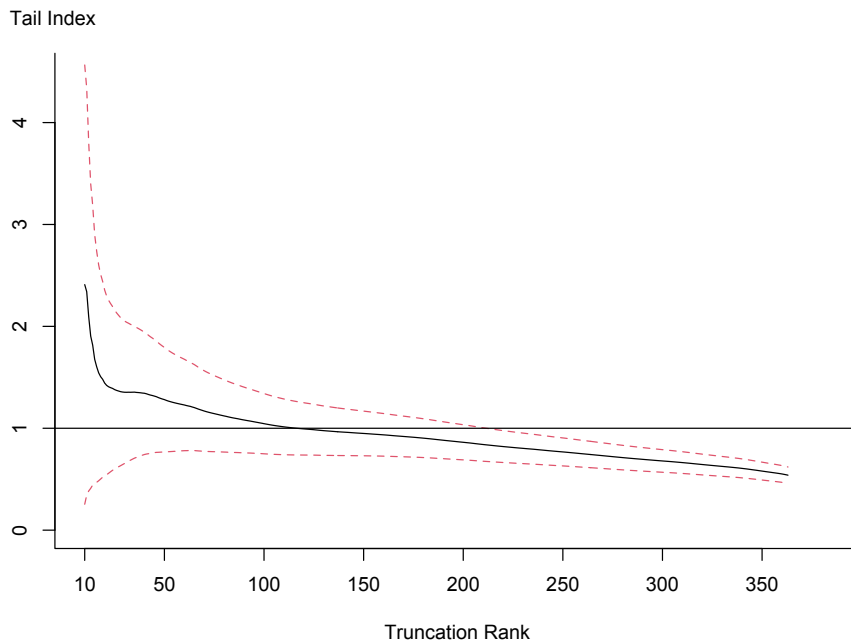


Figure A-20: Power law tail index and 95% confidence interval for U.S. Black city size distribution, 2010.

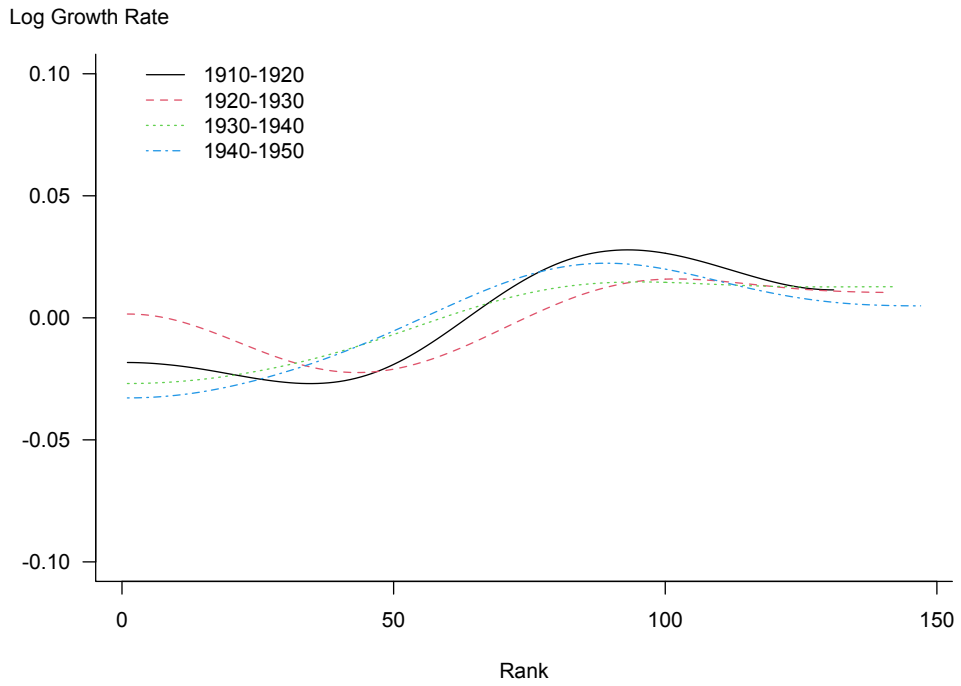


Figure A-21: Growth rates of different size-ranked U.S. White cities, 1910-1950.

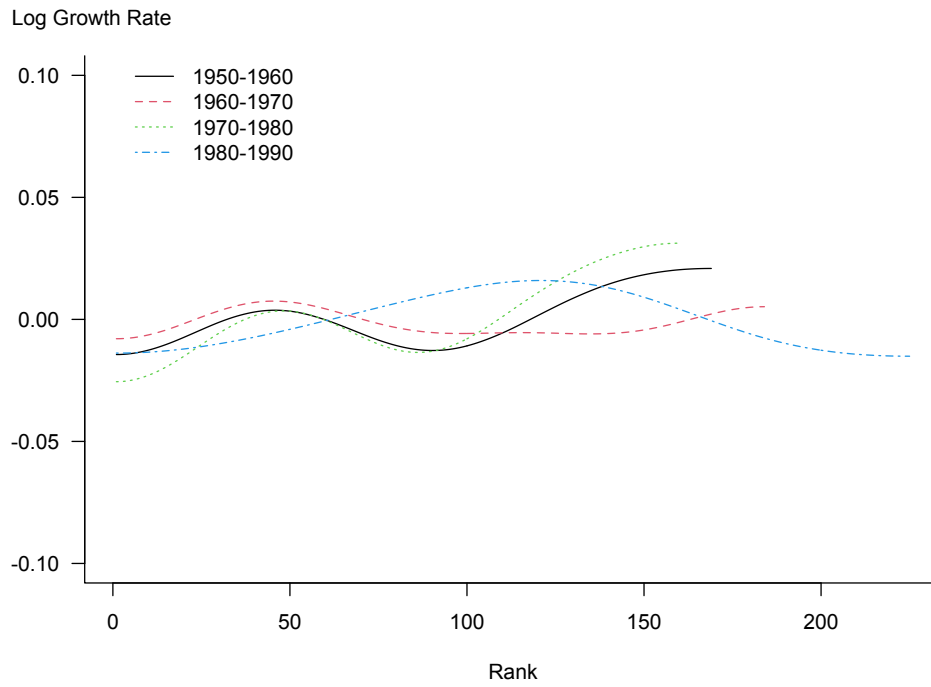


Figure A-22: Growth rates of different size-ranked U.S. White cities, 1950-1990.

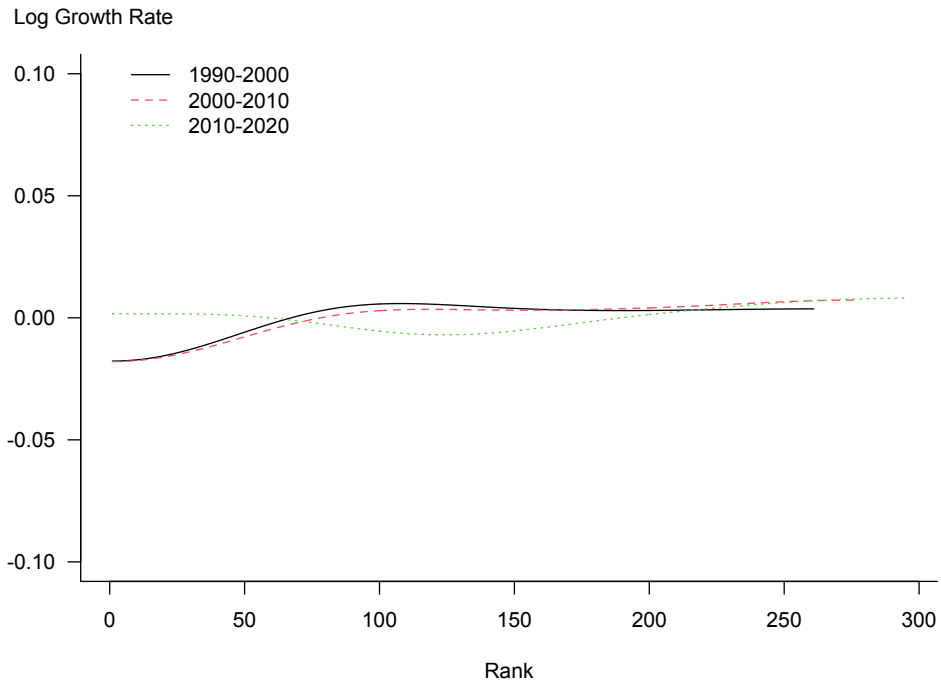


Figure A-23: Growth rates of different size-ranked U.S. White cities, 1990-2020.

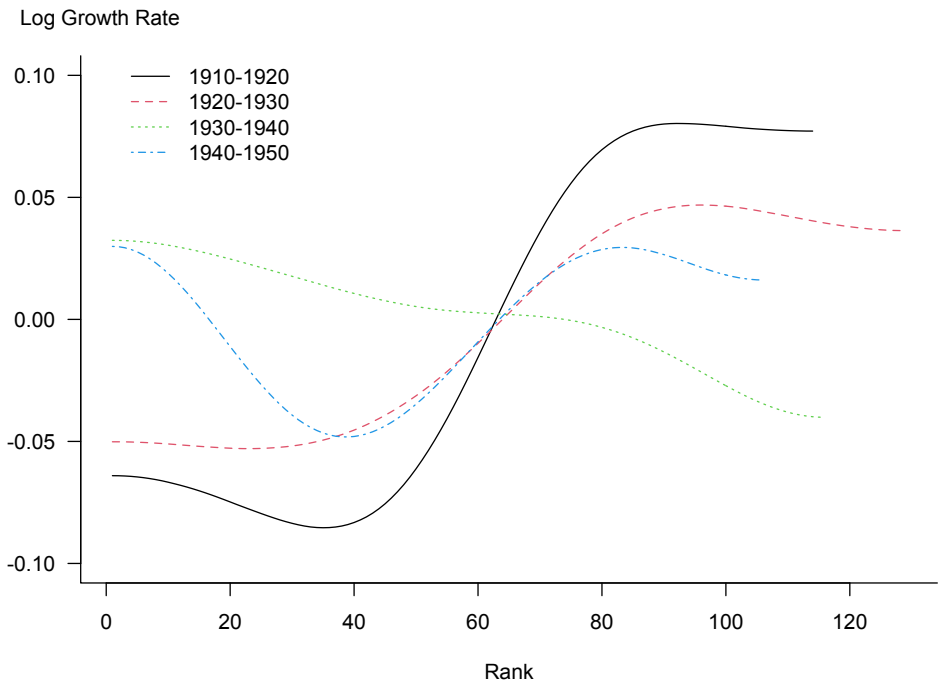


Figure A-24: Growth rates of different size-ranked U.S. Black cities, 1910-1950.

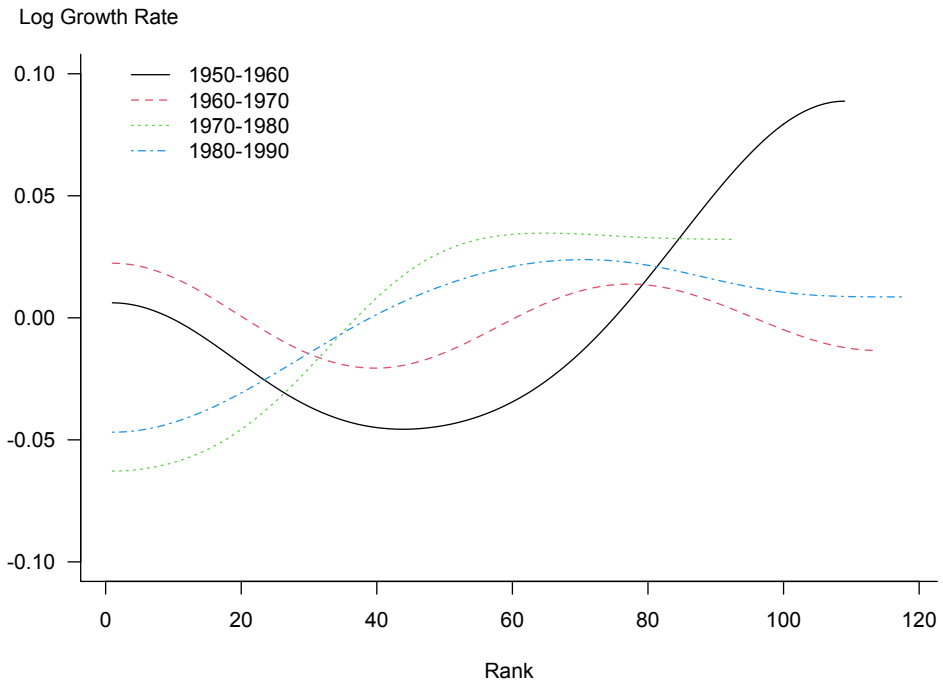


Figure A-25: Growth rates of different size-ranked U.S. Black cities, 1950-1990.

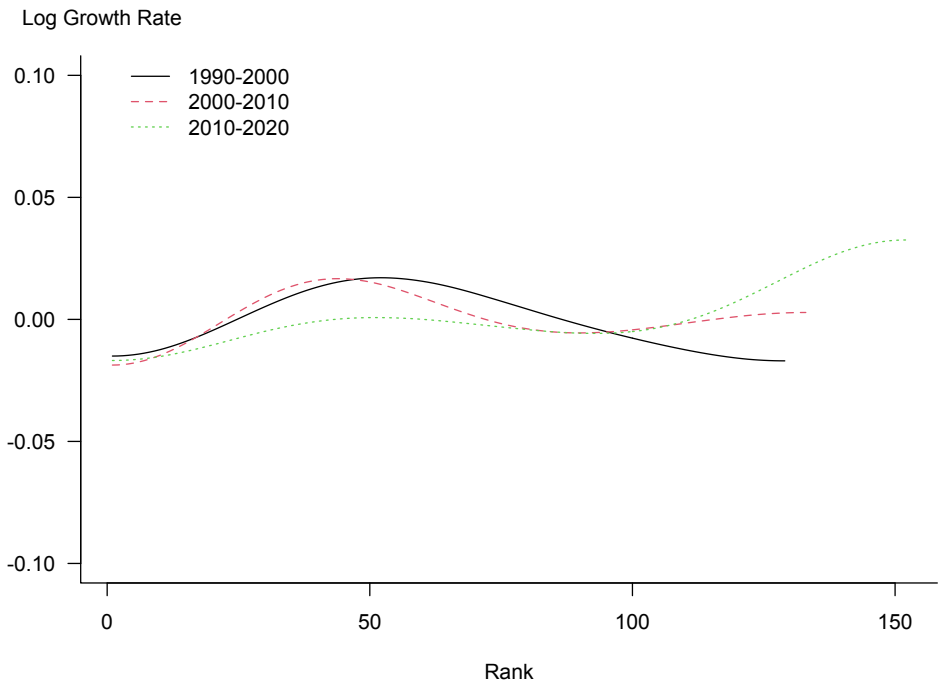


Figure A-26: Growth rates of different size-ranked U.S. Black cities, 1990-2020.