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# World population 1800-1938: a new-born estimate

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# Motivation(s)

- i) for historians: the number of people is a key information on any society
- ii) The motivation for demographers: without data on birth and death rates, yearly series of population are the least bad measure of the demographic transition
- iii) The motivation for economists: demographic transition is a key component of unified growth theories

# The conventional wisdom (only 'original' estimates)

	1800	1850	1900	1920	1930	1950
Willcox (1940)	919	1091	1571		1995 §	
Carr-Saunders (1936)	906	1171	1608		2057°	
Swaroop (1951)	728		1171			2378d
Bennett (1954)	919	1163	1555			2368d
Clark (1967)	890		1668			
McEvedy and Jones (1978)	900	1200	1625			2500
Biraben (1979)	954	1241	1633			2520
Klein Goldewijk and Battjes (1995)			1638	1914	2084	2511
League of Nations/UN				1834	2008	2532
UN 1999	980	1260	1650	1860	2070	2520
Maddison (2010)	1042*	1276	1563	1863	2299#	2528
HYDE 3.1	990	1263	1654	1912	2092	2545
* 1820; ** 1870; § 1935; ° 1933; #1940						

# Problem(s)

- i) Data for benchmark years for all countries or for most of them (Maddison)
- ii) Mostly top-down approach (total population by continent, not by political entity), from unclear sources
- iii) Bottom-up estimates for vaguely defined areas (Mc Evedy Jones 1978) or for polities at 1995 boundaries (Maddison)
- iv) They neglect most recent research (Maddison's estimates of the 1990s)

# Aim of the project

Estimating yearly series of population at current borders from 1800 to 1938 for all existing polities – and thus computing world population bottom-up

# Sources

- i) modern estimates of yearly series, based on registers population – usually taken from ‘standard’ sources (e.g. Historical Statistics USA)
- ii) Linear interpolation between censuses, adjusting original figures whenever necessary
- iii) Backward projections with (location-specific) data on crude birth/death rates (Galloway 1994 for Italy)
- iv) Estimates from tax records, military rolls and the like
- v) Guesstimates (e.g. from Western travellers and/or consuls)

# The case of Africa

- i) no data for (almost all) Sub-Saharan Africa before conquest
- ii) Censuses after conquest – interwar years almost complete, on paper, but systematic undervaluation
- iii) Thus pioneering work by Manning (2010): extrapolation backwards from 1950 (census assumed reliable) with assumed growth rates – baseline equal to India, adjusted according to local conditions
- iv) More recent work by Frankema and Jerven (2015): extrapolation from 1960 with different adjustment of Indian rates

# The situation so far

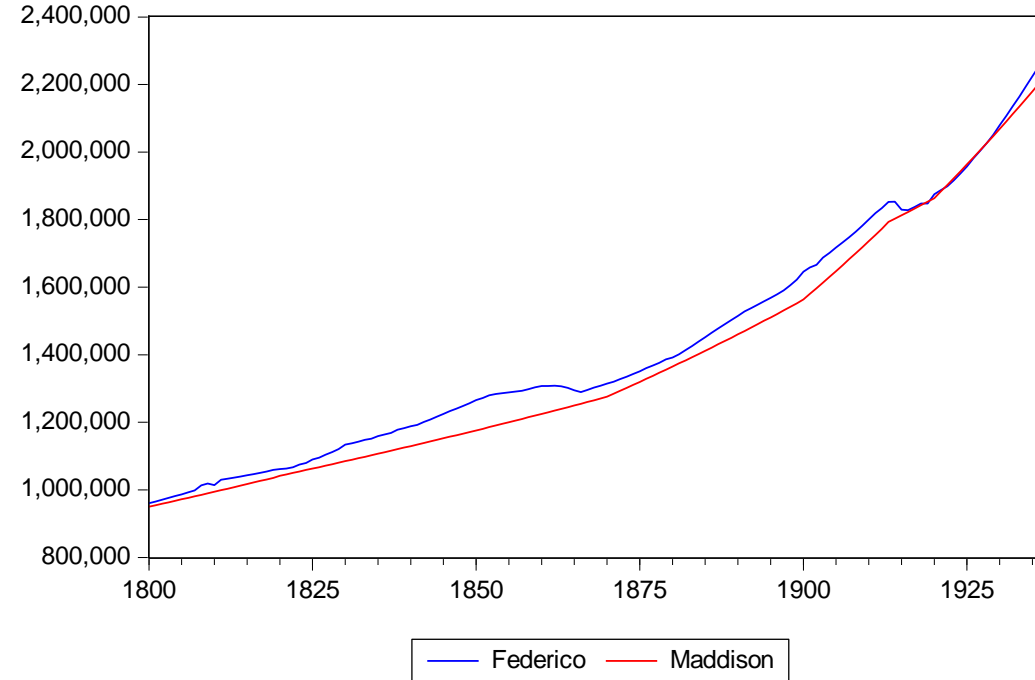
- i) very preliminary estimate completed for all polities, as part of the research project on trade with Antonio Tena [Carlos III]
- ii) Data from secondary sources collected
- iii) I am revising the preliminary estimate
- iv) Still to do: quality assesment (Durand) and the interval of confidence (Feinstein)



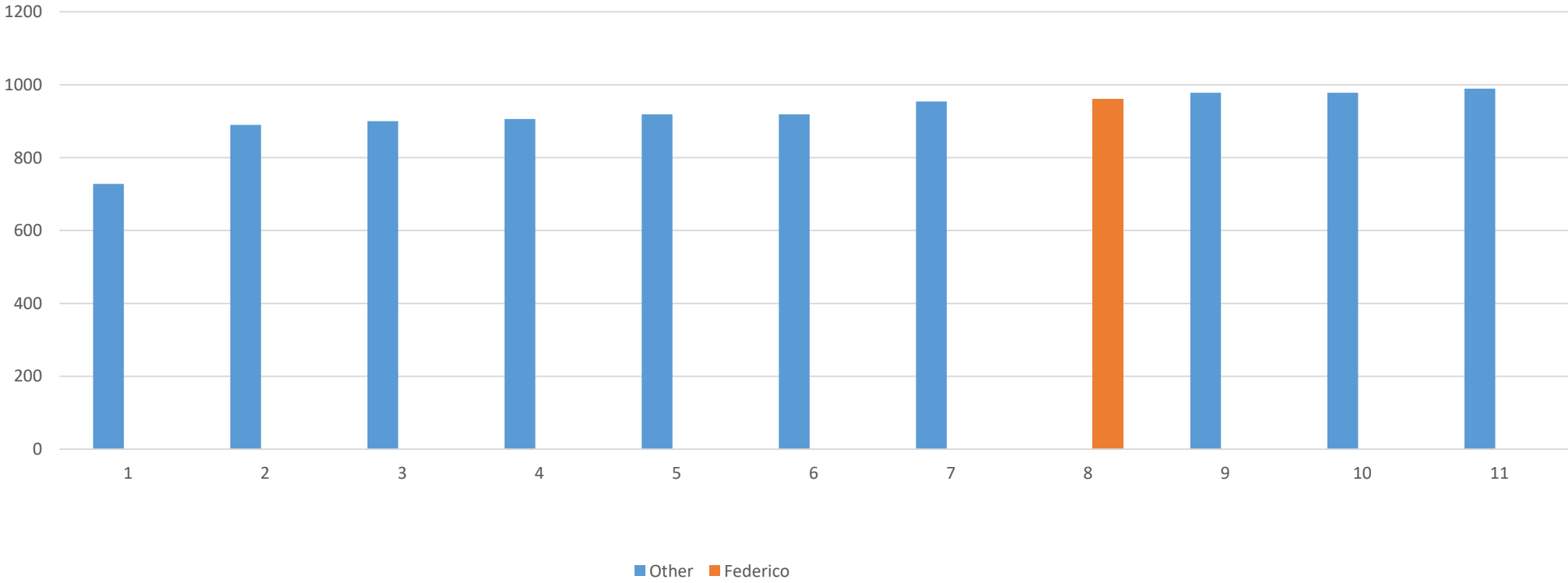
# In particular

- i) Series for advanced countries ready
- ii) New series for South America from Yanez et al (2014) and for Caribbean Bulmer Thomas (2012)
- iii) New estimates for Africa 1850-1938 from Frankema-Jerven 2015 extrapolated to 1800 with rates by Manning (2010 and 2014)
- v) Large countries European periphery and Asia 'ready'
- vi) Small countries in all continents and area consistency (double counting, omissions) still in progress: will they make any difference?

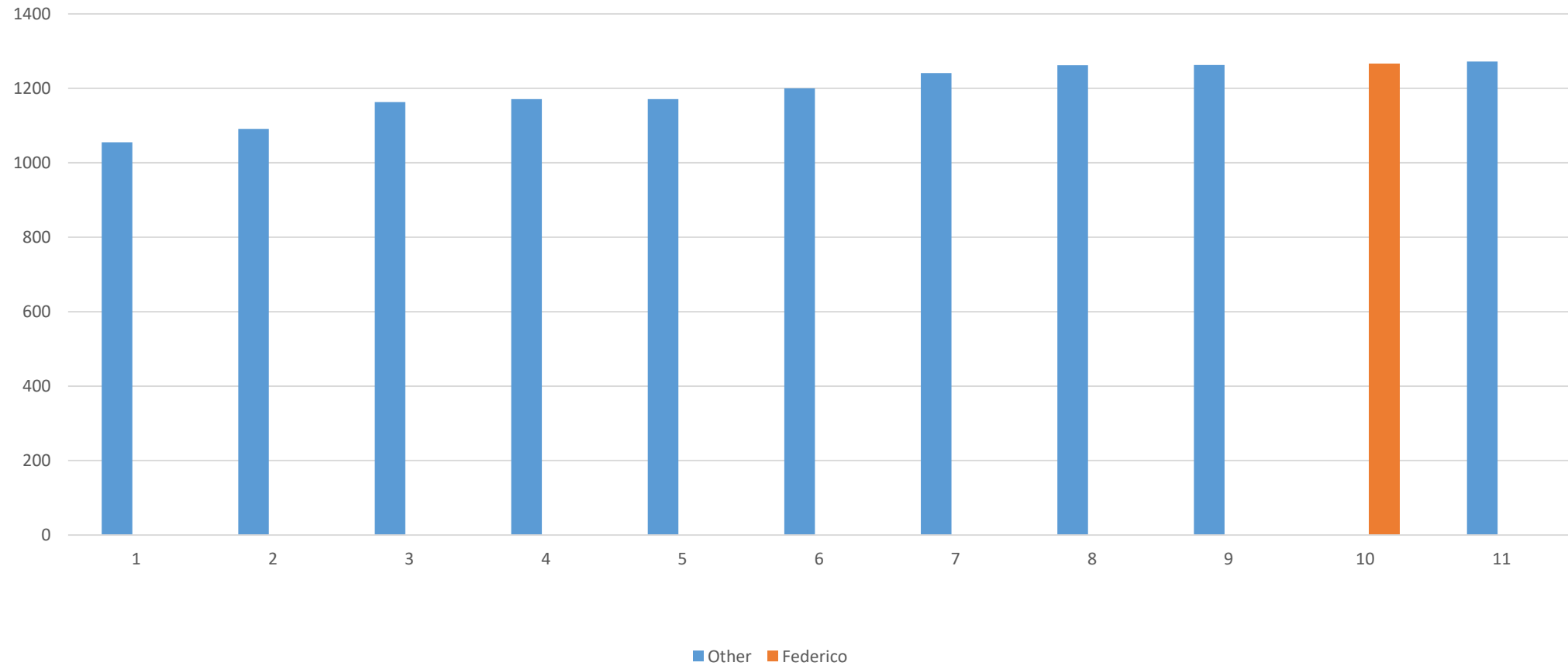
# Main results: the new series



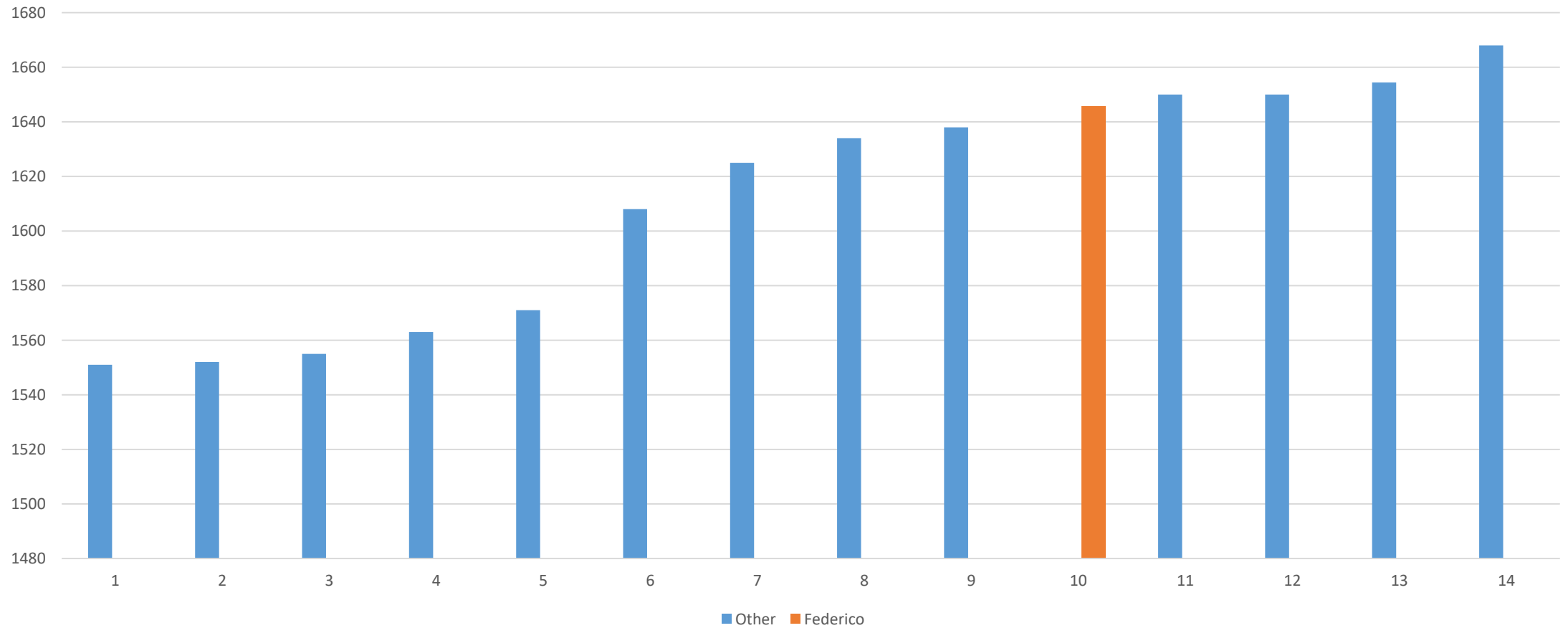
# A comparison with other estimates, 1800



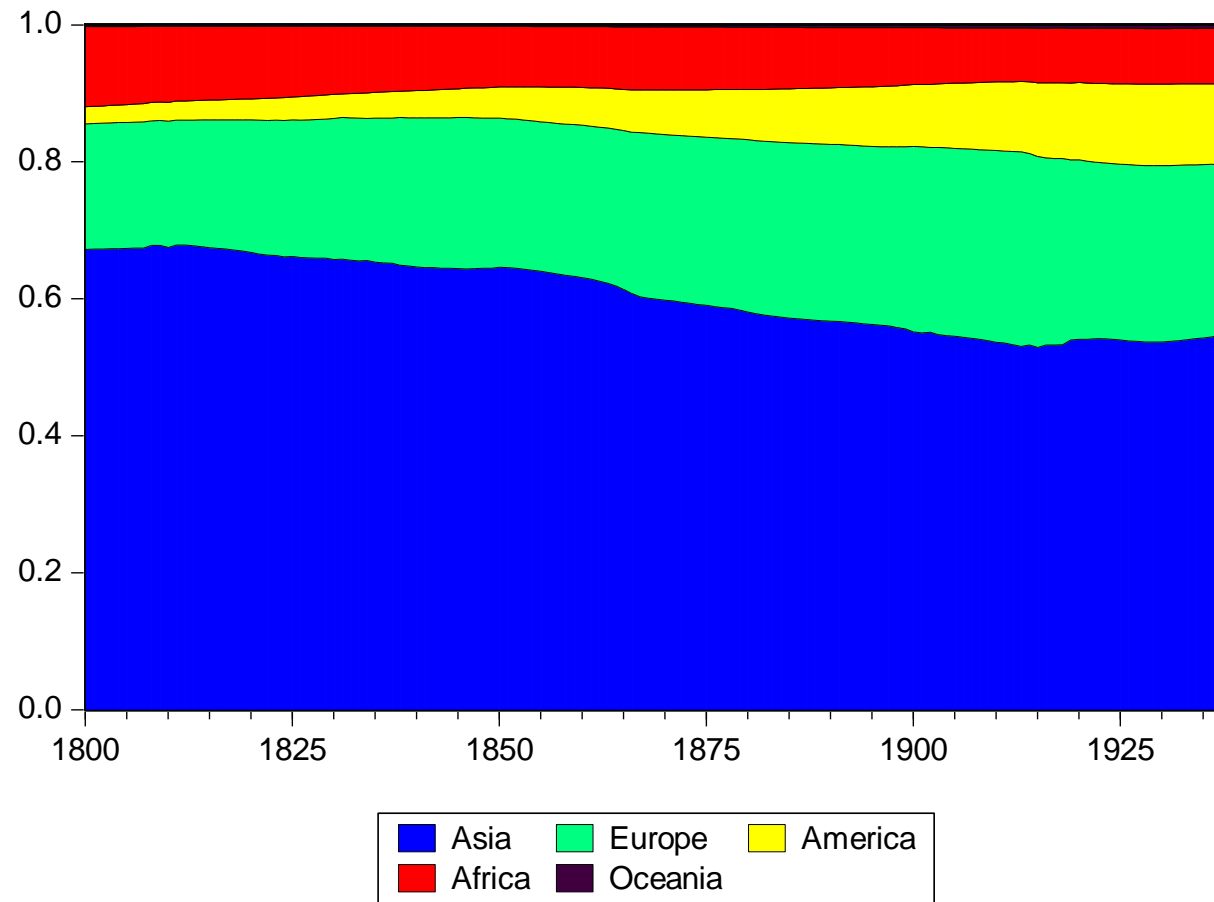
# A comparison with other estimates, 1850



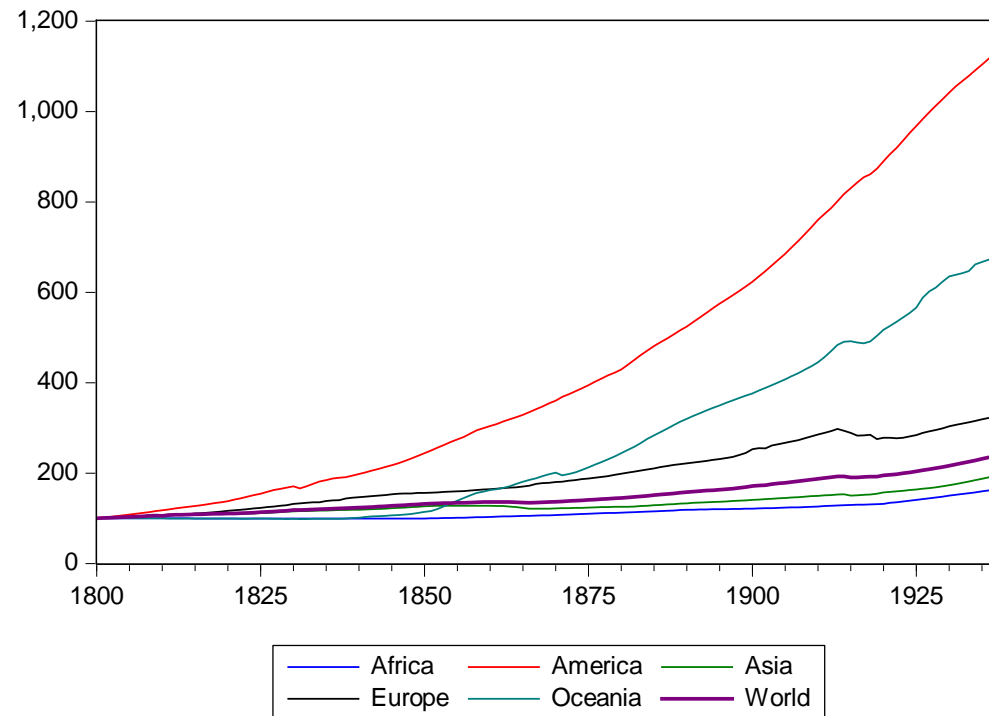
# A comparison with other estimates, 1850



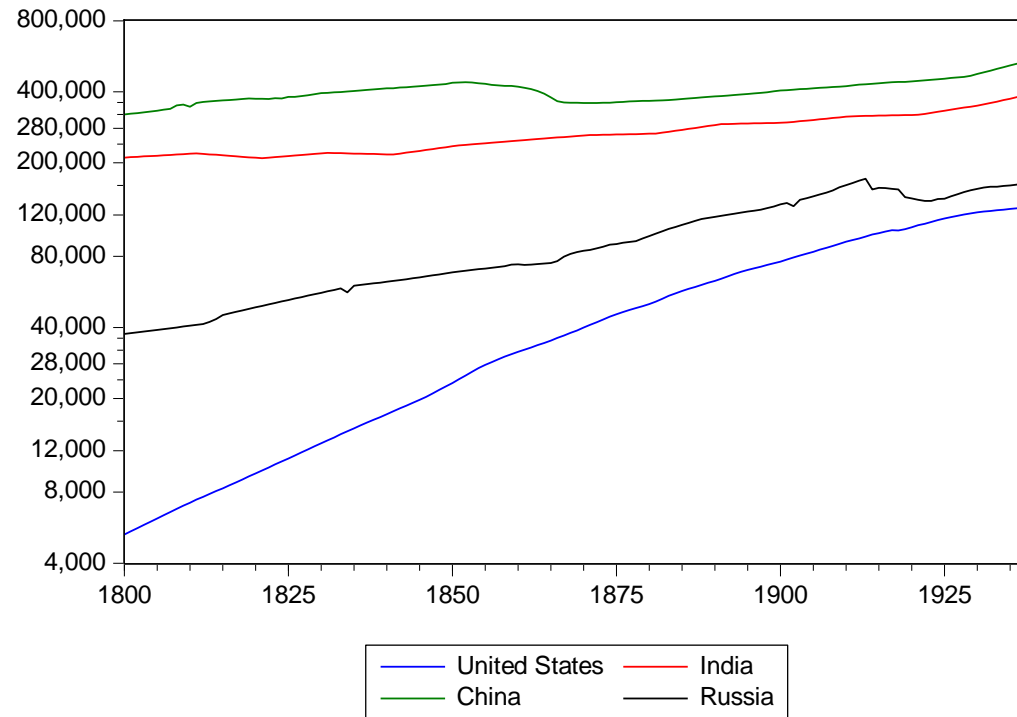
# Shares by continent?



# The demographic transition?



# Four big countries (log scale)





# Conclusions

- i) Conventional wisdom captures the big picture
- ii) But it misses the big crises (Tai'ping, WWI+Spanish influenza) and thus it undervalues the potential growth of population
- iii) Population growth in some agrarian societies, with abundant land (Russia) but also with limited supply (China, India after ca 1850) – demographic transition?

But

everything is provisional...

Thank you for holding your breath