

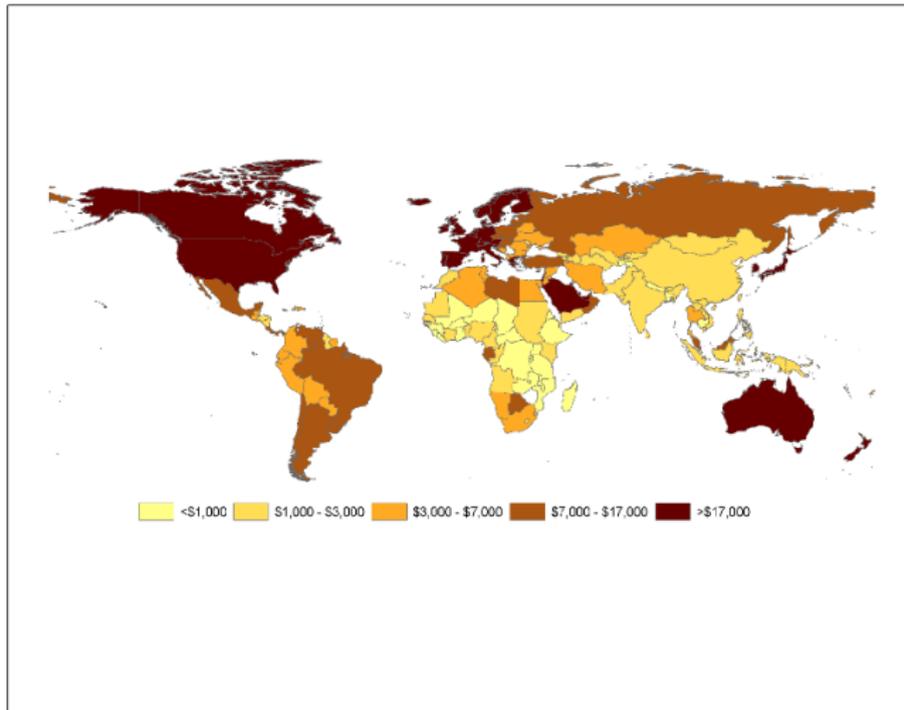
Growth and Comparative Development - An Overview

Oded Galor

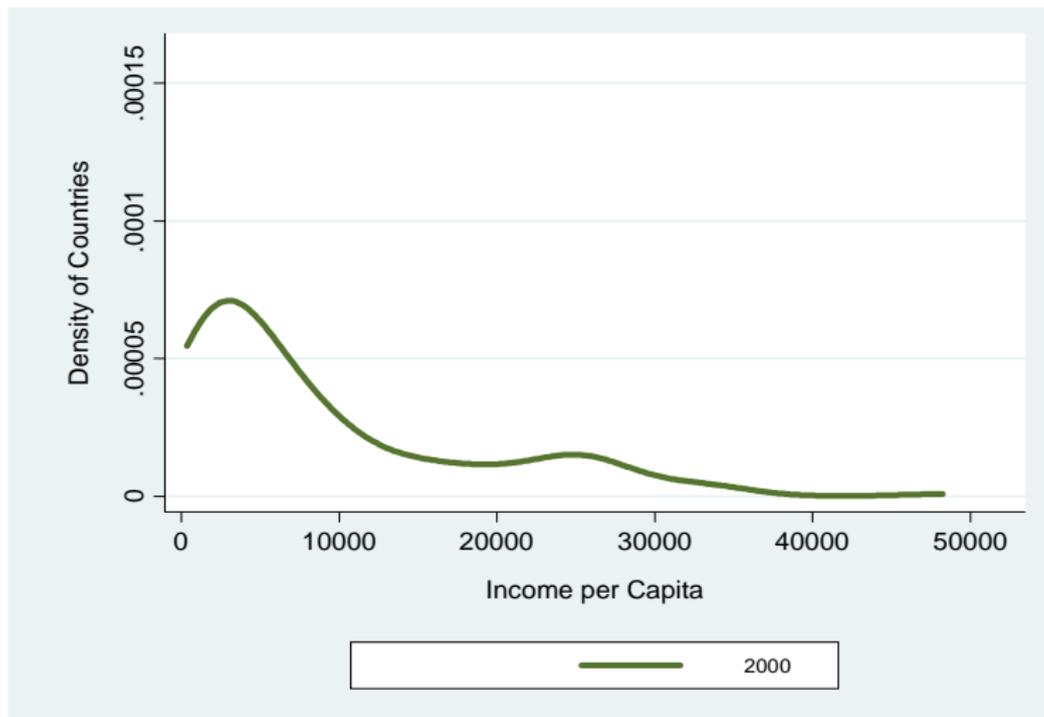
Department of Economics
Brown University

Warwick Summer School in Economic Growth - July 8, 2013

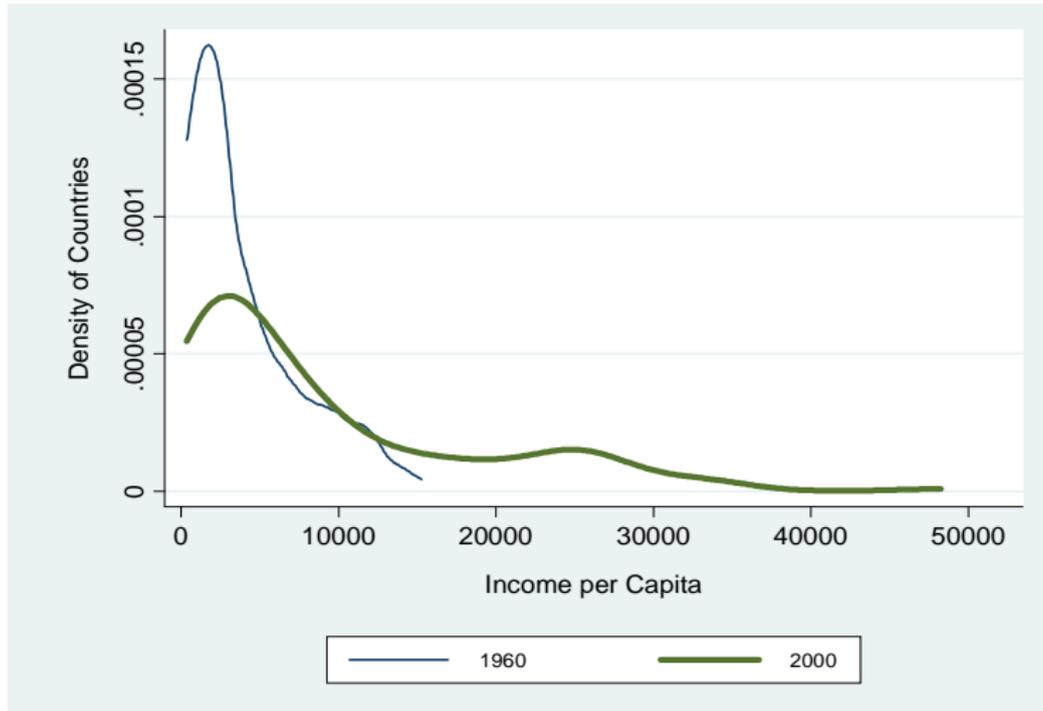
Regional Variations in Income Per Capita: 2000



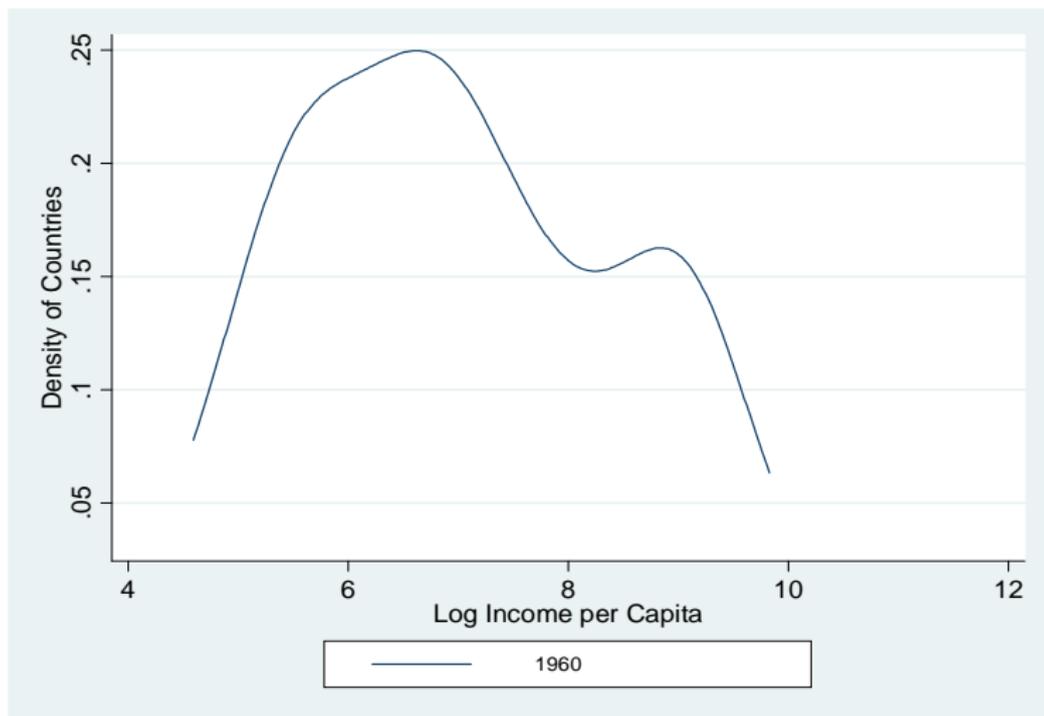
Cross-Country Variations in Income Per Capita: 2000



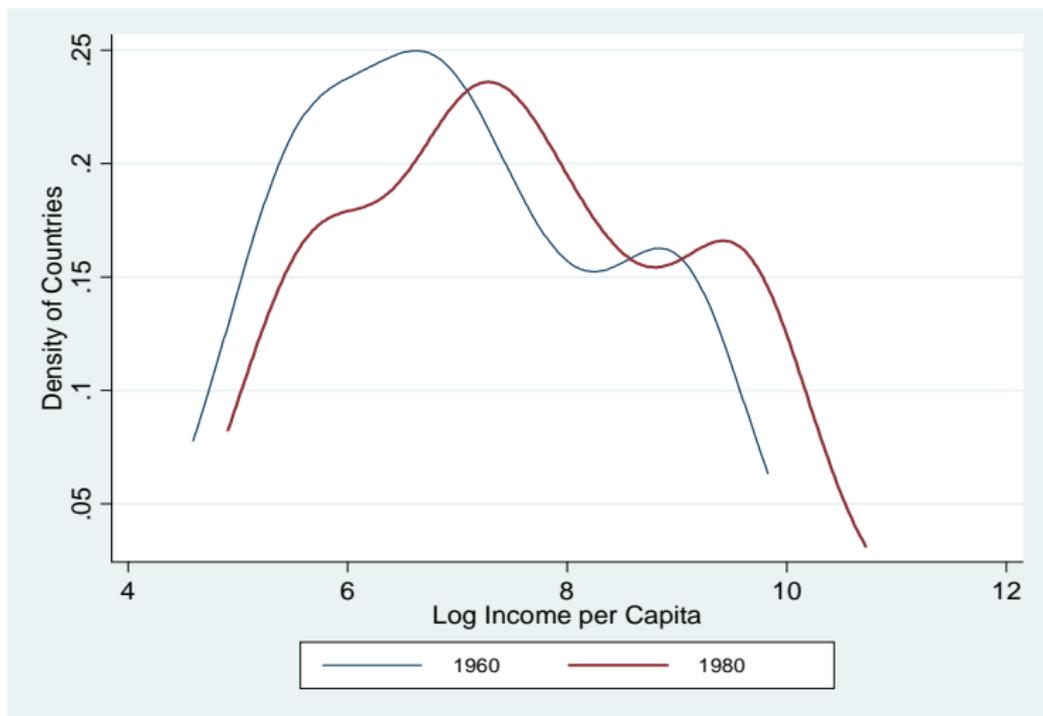
Evolution of Disparity in Income Per Capita: 1960–2000



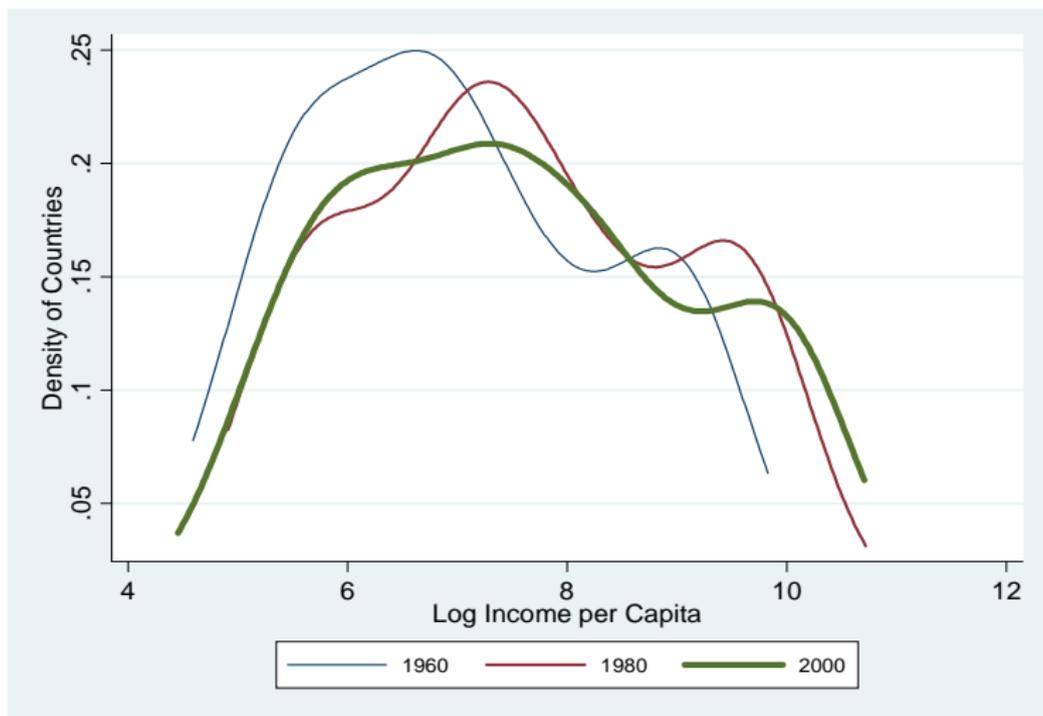
World Income Distribution: 1960



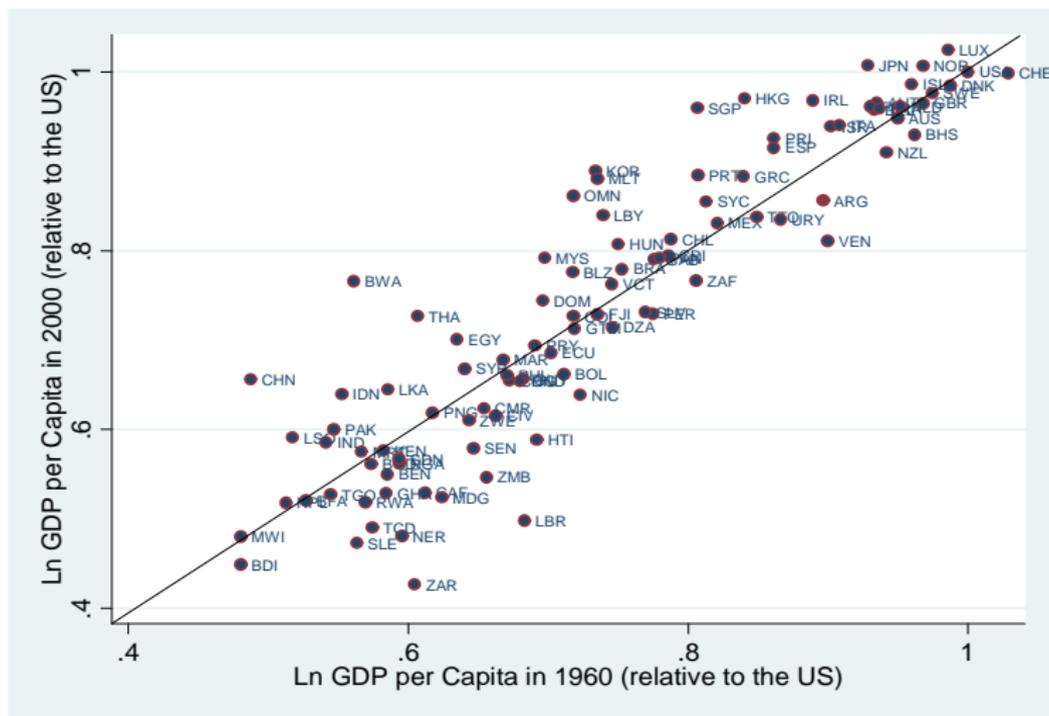
World Income Distribution: 1960–1980



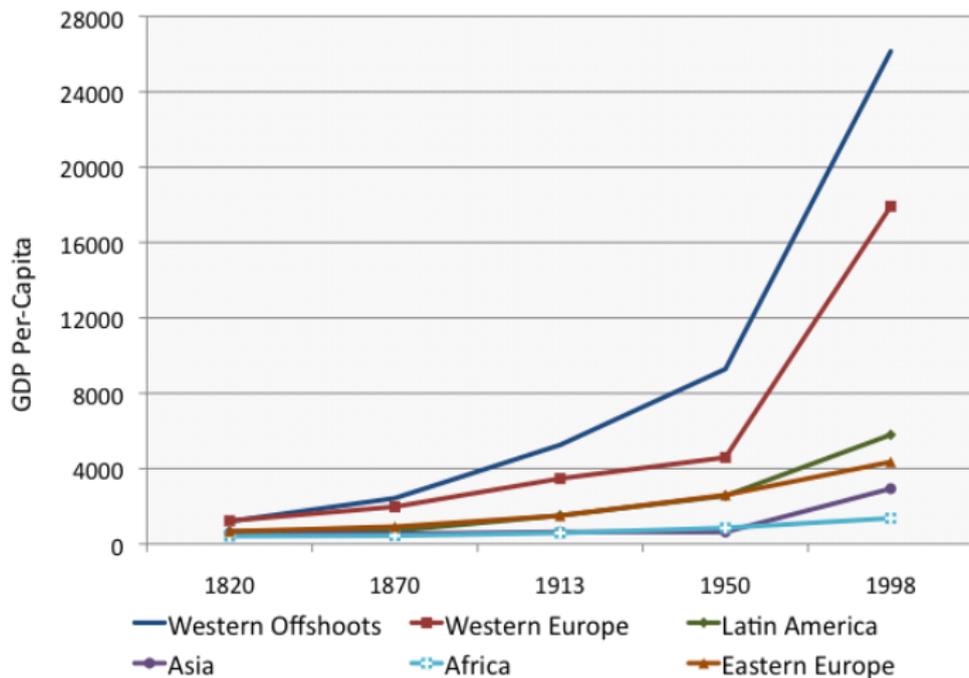
World Income Distribution: 1960–2000 – Persistent Inequality



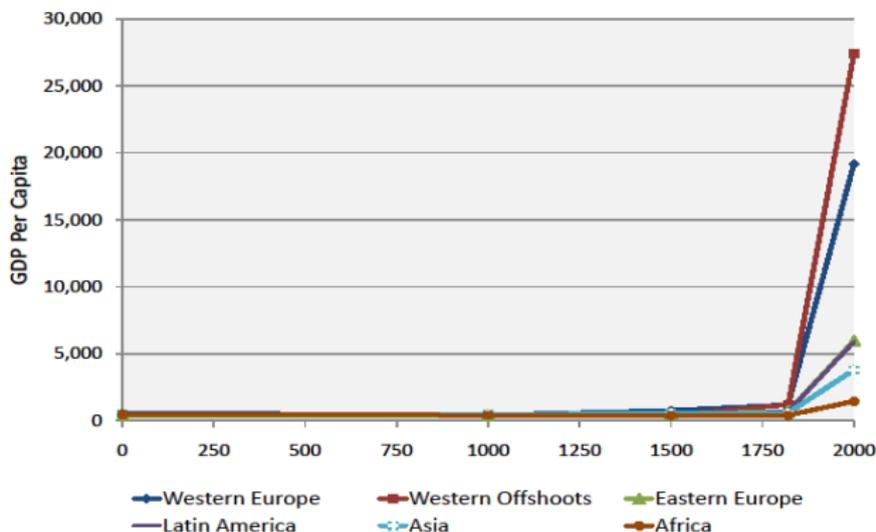
Lack of Convergence across the Globe: 1960–2000



Divergence Across Regions: 1820-2000



Disparity in Income Per capita Across Regions: 1–2000



Disparity in Income per Capita across Countries: 1-2008

	Income per Capita			
	0	1000	1820	2008
Western Offshoots	400	400	1,202	30,152
Western Europe	576	427	1,194	21,672
Latin America	400	400	691	6,973
Asia	456	470	581	5,611
Africa	472	425	420	1,780
Rich/Poor (ratio)	1.4	1.2	2.9	16.9

Major Puzzles - Comparative Economic Development

- What is the origin of the vast inequality in income per capita across countries and regions?
- What accounts for the great divergence in per capita income across countries in the past two centuries?
- What are the factors that prevented the convergence of poor economies toward the richer ones?

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- The Malthusian Epoch

Developed Countries	Emergence of Homo sapiens - 1750
LDCs	Emergence of Homo sapiens - 1900

- The Post Malthusian Regime

Developed Countries	1750 - 1870
LDCs	1900 -

- The Modern Growth Regime

Developed Countries	1870 - present
LDCs	

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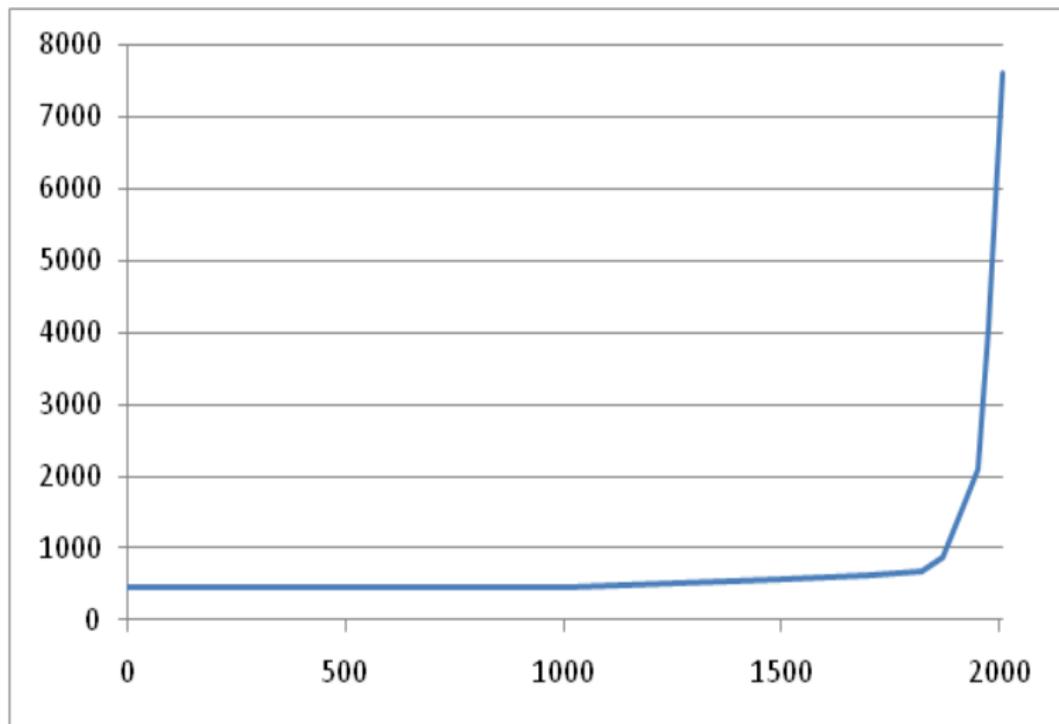
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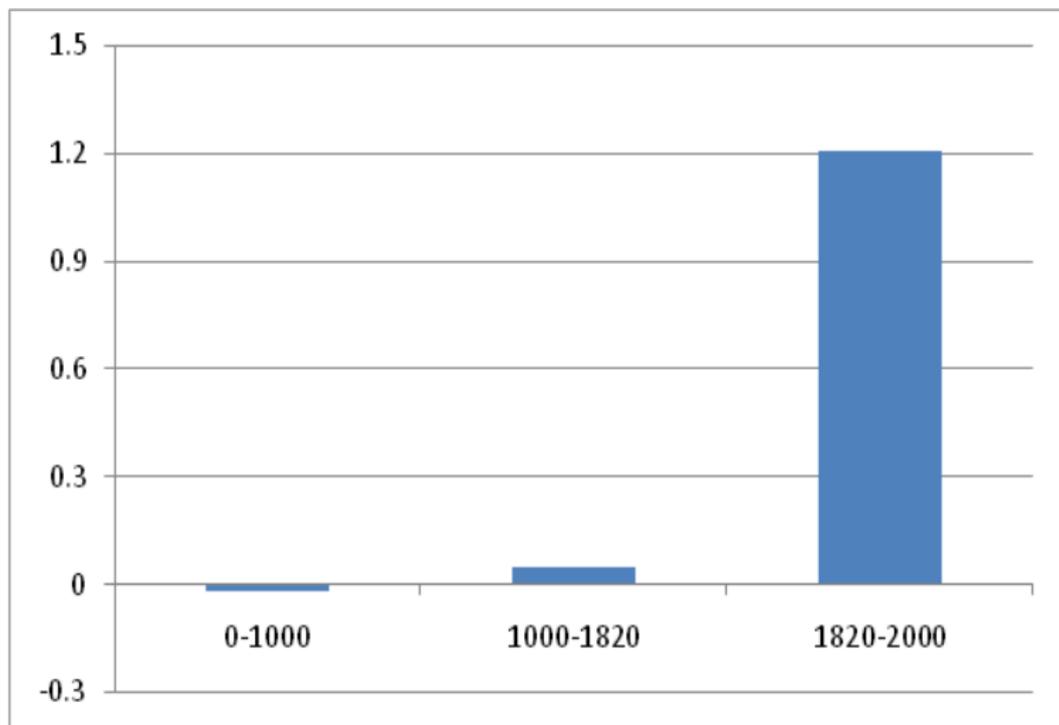
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World Income per Capita: 1–2008 – From Stagnation to Growth



Growth of World Income Per Capita: 1-2000 – From Stagnation to Growth



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 - \implies An increase in the size of the population
 - \implies No effect on the level of income per capita in the long run
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- Technological advanced or land rich economies
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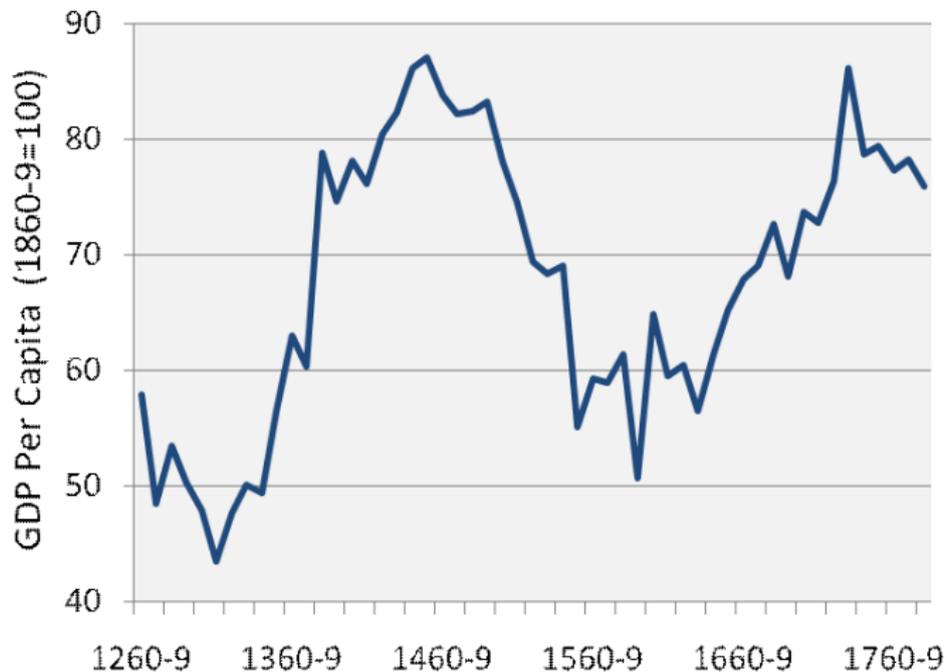
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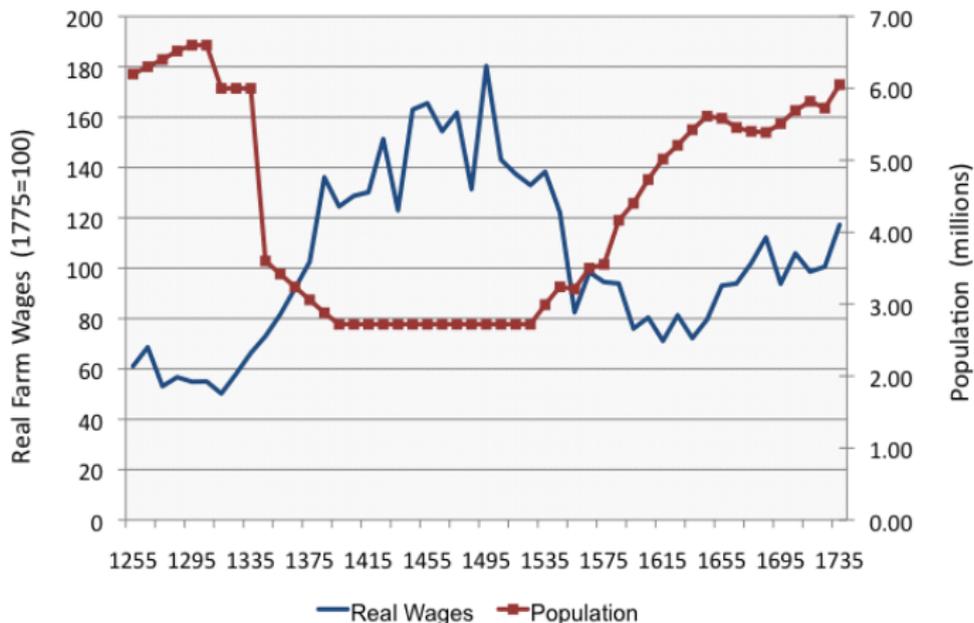
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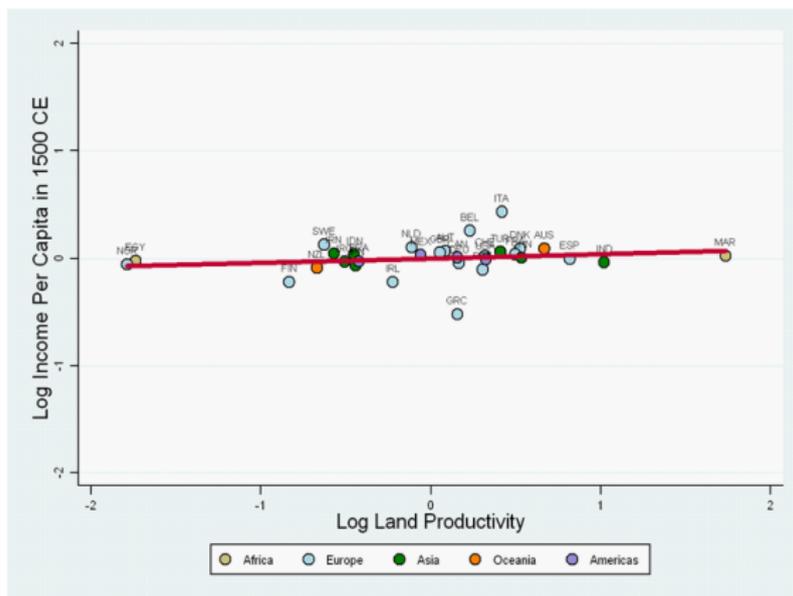
Malthusian Fluctuations in Income Per Capita: England, 1260–1760



Malthusian Adjustments of Income and Population: England, 1250–1750



Land Productivity and Income Per Capita in 1500 CE



Conditional on transition timing, geographical factors, and continental fixed effects

The Post-Malthusian Regime

Economies take-off from a Malthusian equilibrium:

- Population growth is still positively affected by the level of income per capita
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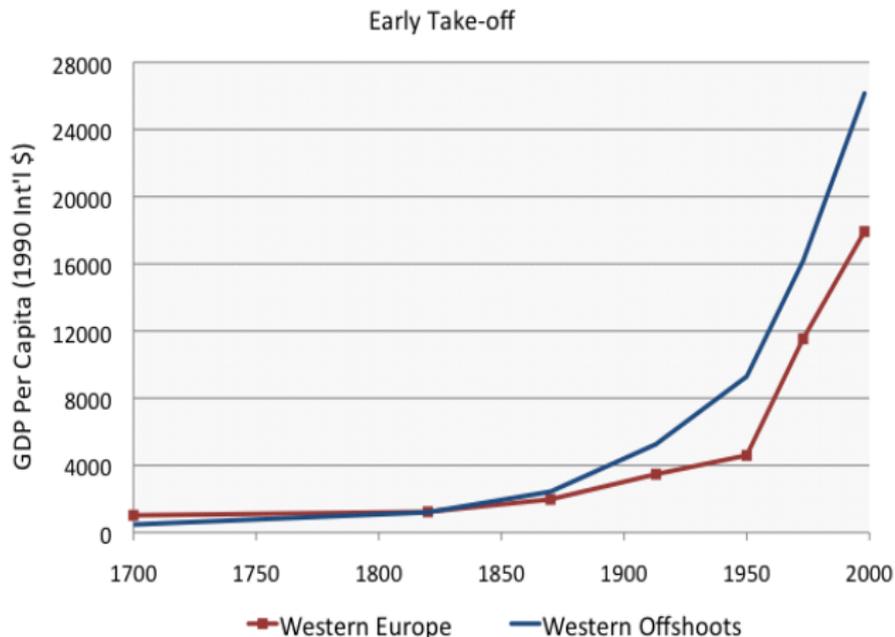
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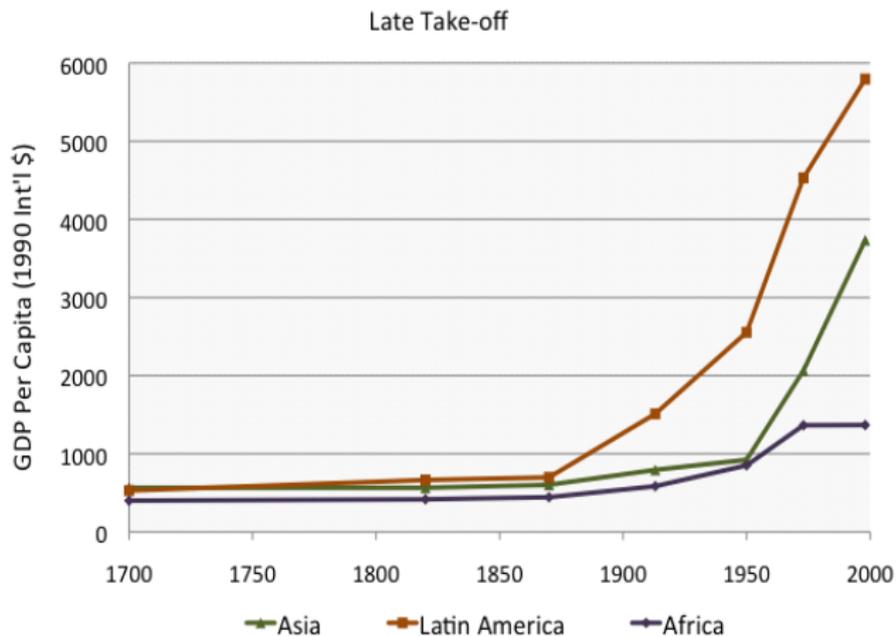
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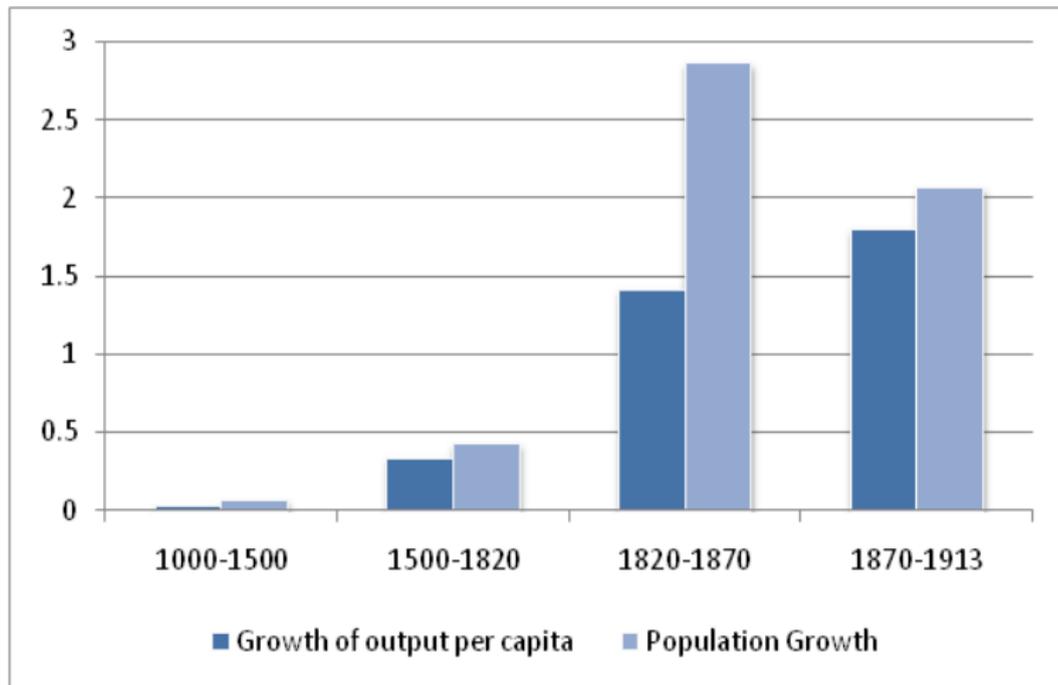
Regional Variation in the Timing of the Take-off: Early Take-Off



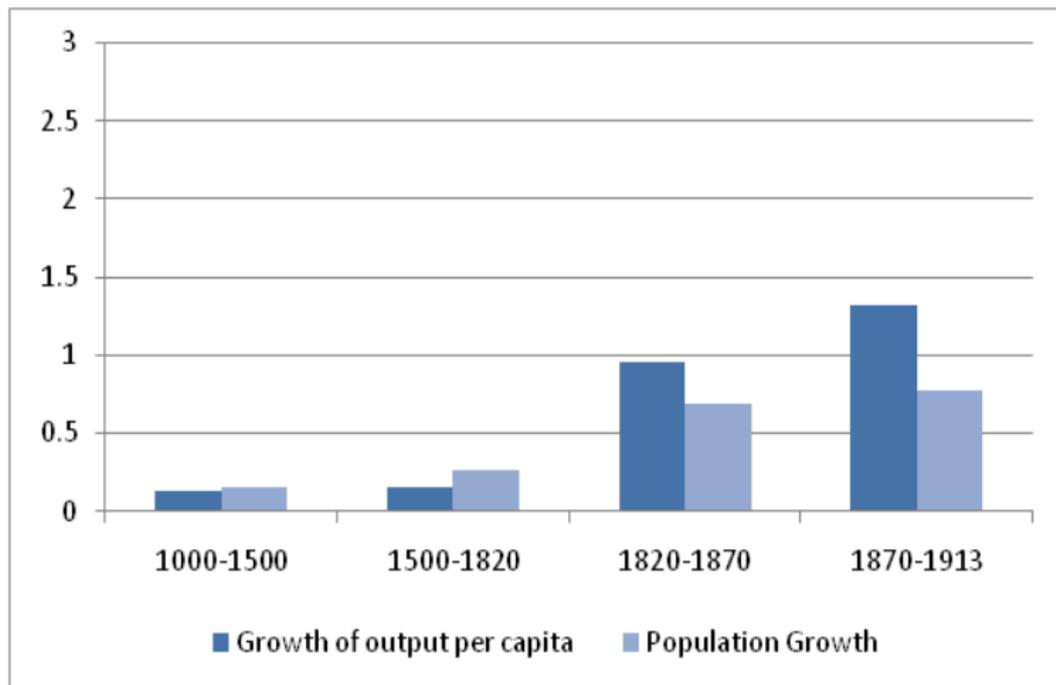
Regional Variation in the Timing of the Take-off: (Levels) Late Take-Off



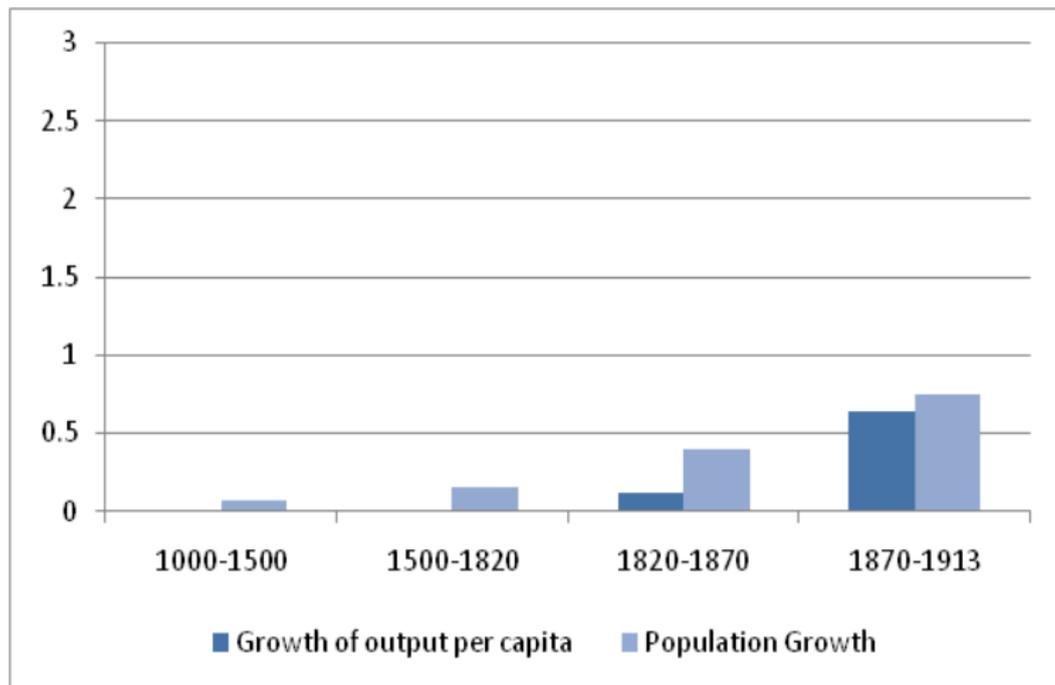
Growth of GDP Per Capita and Population: Western Offshoots, 1500-2000



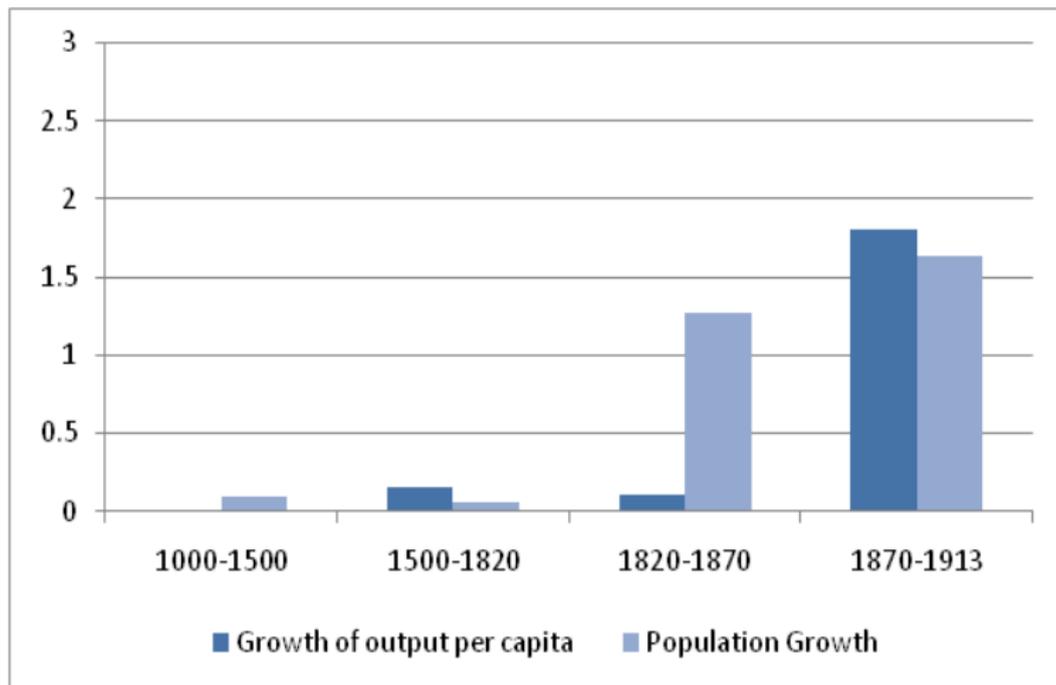
Growth of GDP Per Capita and Population: Western Europe, 1500-2000



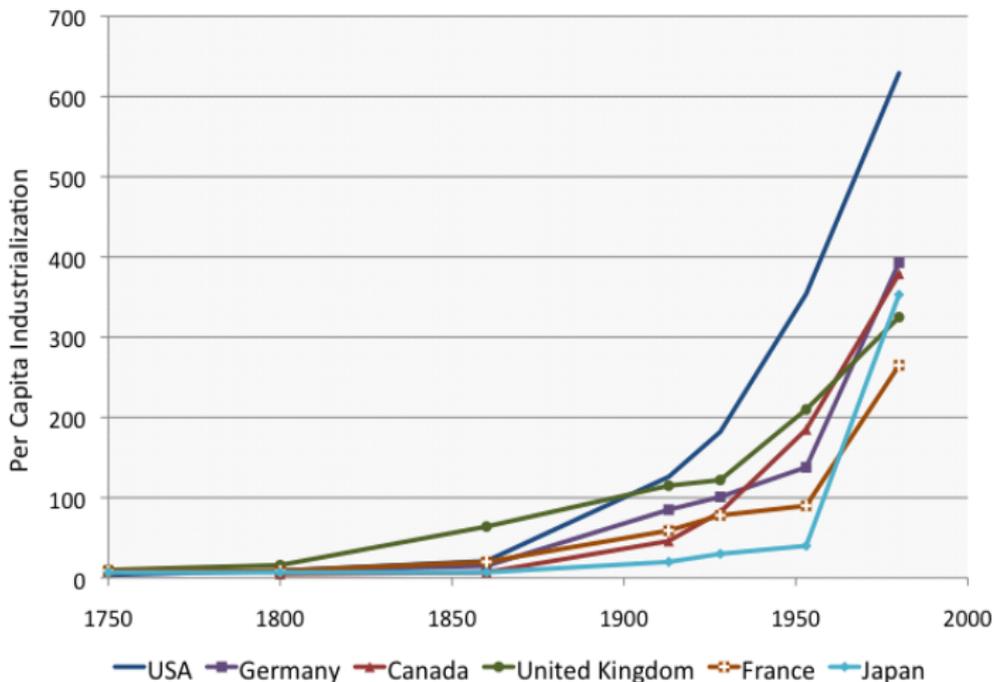
Growth of GDP Per Capita and Population: Africa 1500-2000



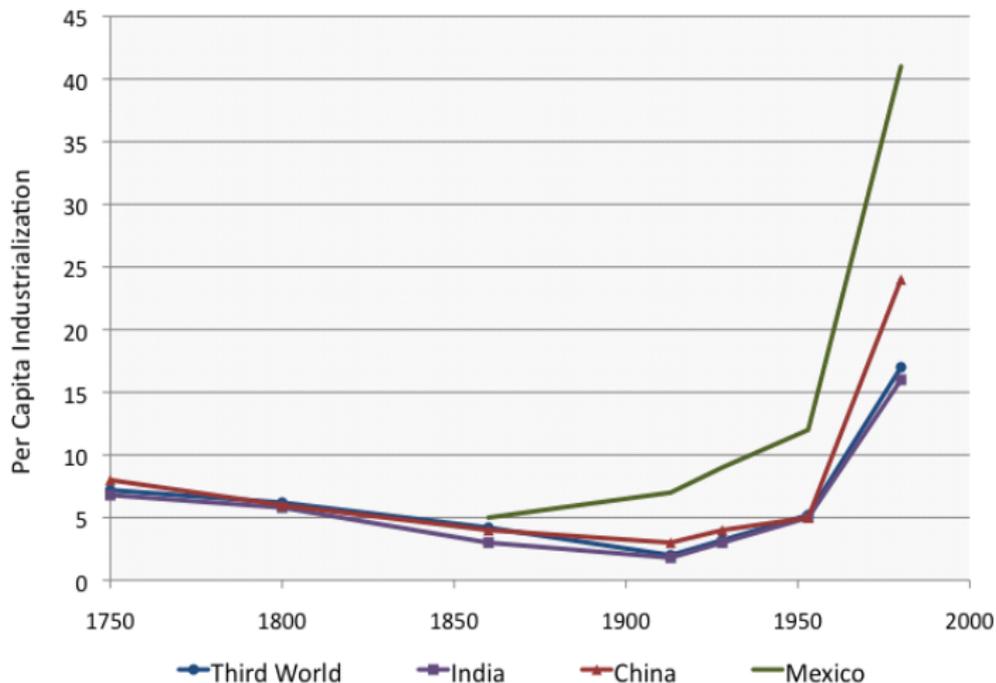
Growth of GDP Per Capita and Population: Latin America 1500-2000



Industrialization: Developed Economies



Industrialization: Less Developed Economies



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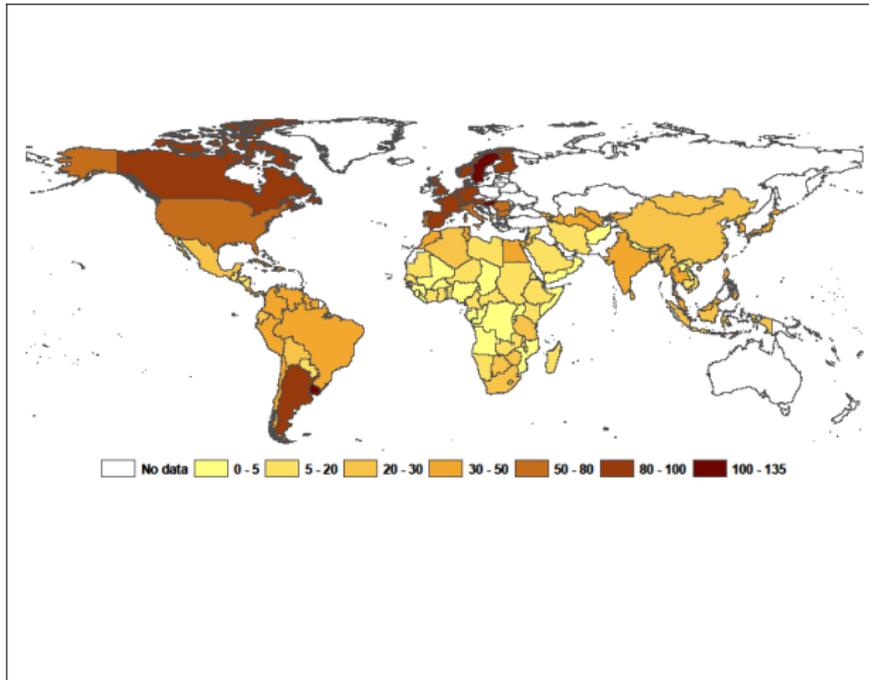
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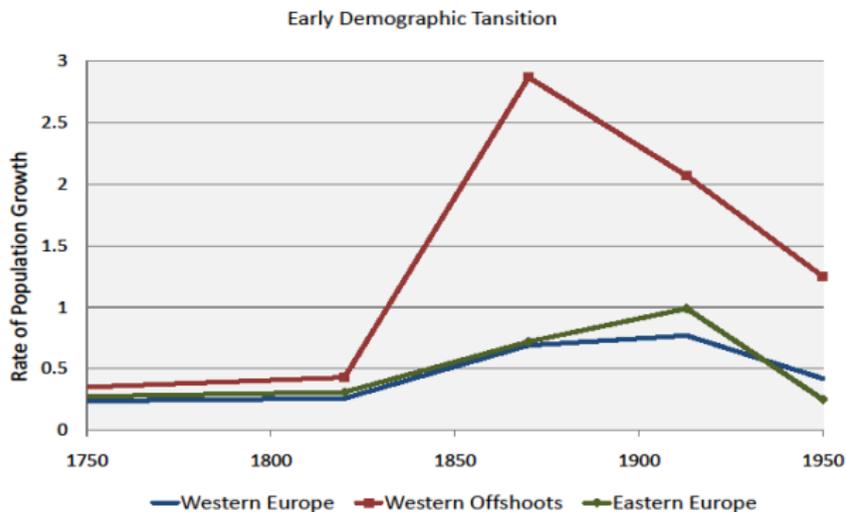
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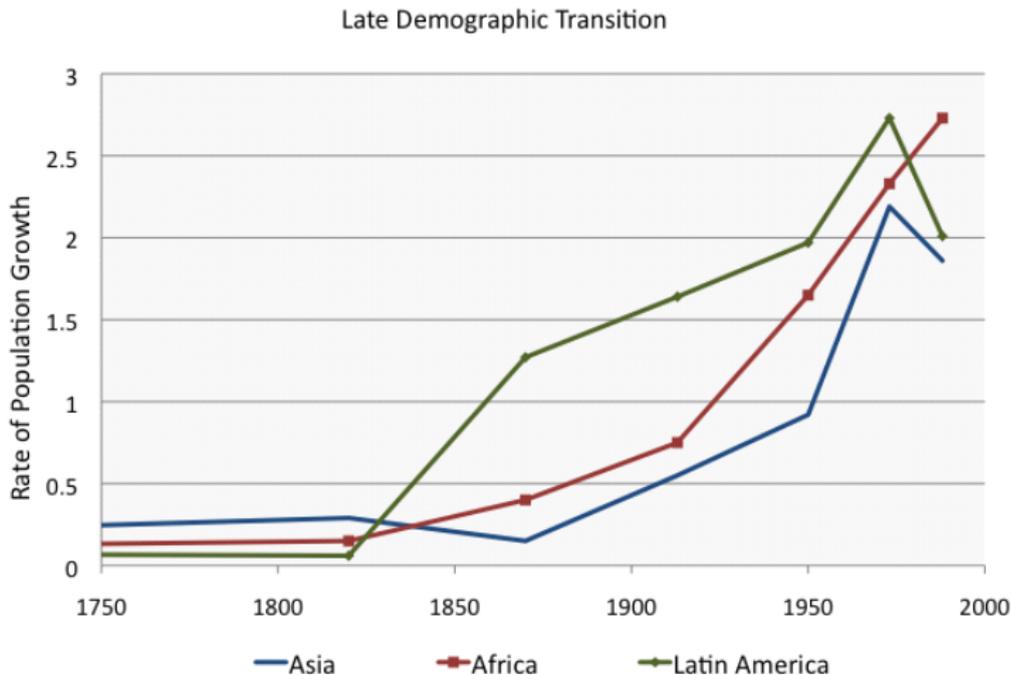
Timing of the Demographic Transition across Regions



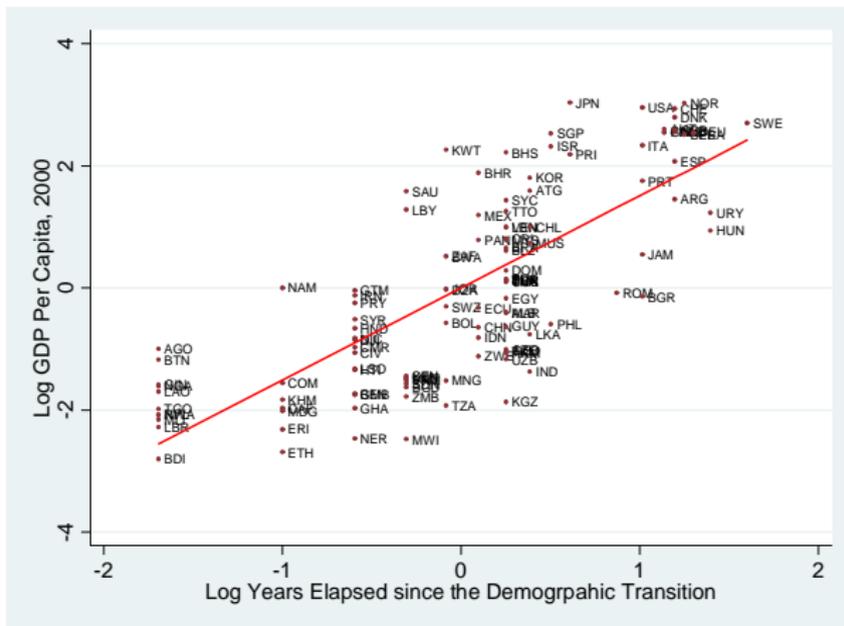
Demographic Transition across Regions: Early Transition



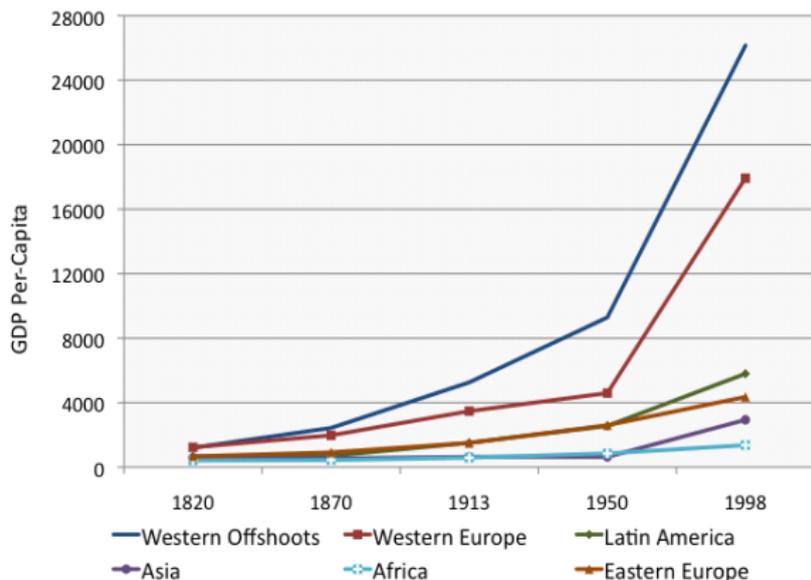
Demographic Transition across Regions: Late Transition



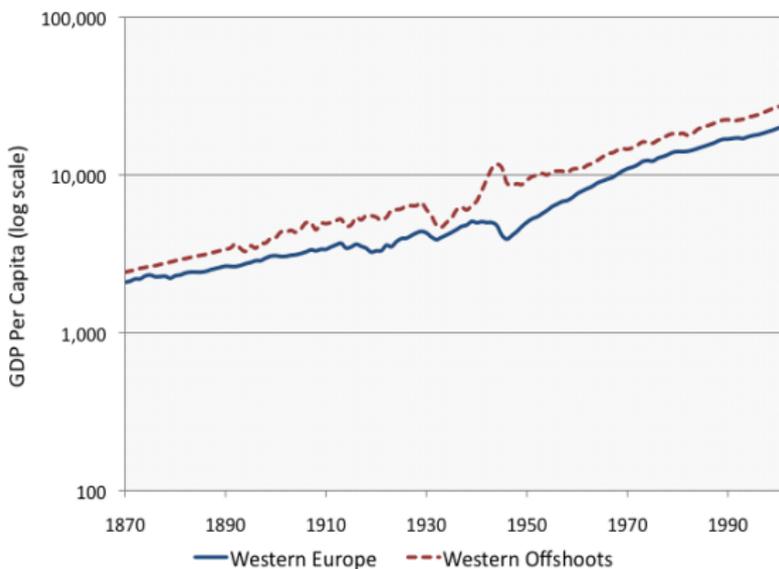
Time Elapsed since the Demographic Transition and Income per Capita, 2000



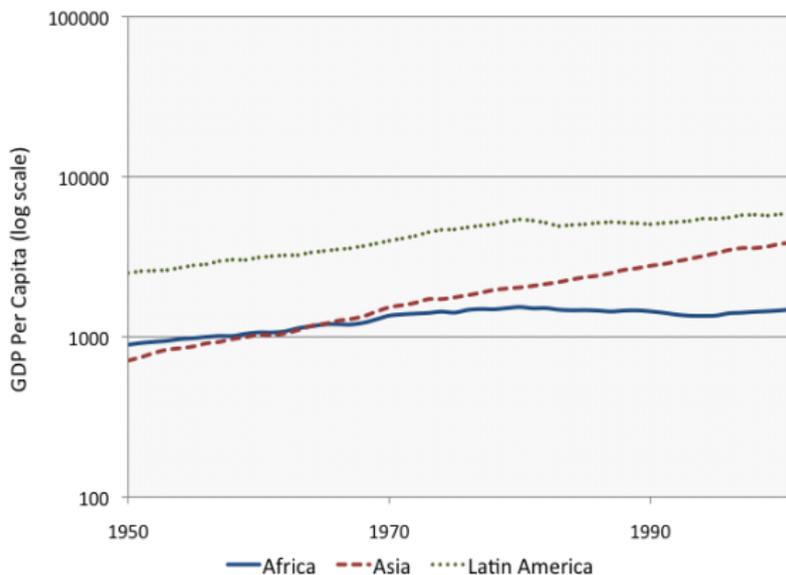
Variations in the timing of the Transition: Divergence in Income per Capita



Sustained Economic Growth: Western Europe and Western Offshoots, 1870-2001



Growth of Income Per Capita: Africa, Asia and Latin America, 1950-2001



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- What accounts for the epoch of stagnation that characterized most of human history?
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- Factor Accumulation:
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 - Human capital accumulation (Lucas, JME 1998)
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- Colonialism & persistence of institutions / human capital
 - Reversal of fortune (Engerman-Sokolof, 1997; Acemoglu et al., AER 2001, QJE 2002)
 - Exclusive (Extractive) institutions in densely populated areas
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Ultimate Causes of Growth – Persistence of Geographical Factors

- Biogeographical conditions that lead to the onset of the Neolithic Revolution
 - Persistent effect of technological head-start associated with an earlier onset of the Neolithic Revolution (Diamond, 1997, Olsson-Hibbs, EER, 2005, Ashraf-Galor, AER 2011, AER 2013)
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 - Persistent effect via extractive institutions (Engerman-Sokolof, 1997)
 - \implies Concentration of landownership:
 - Persistent effect via delayed in education reforms (Galor-Moav-Vollrath, Restud, 2009)

Ultimate Causes of Growth – Persistence of Geographical Factors

- Range of soil quality
 - \implies geographical specific human capital \implies reduced mobility
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 - Free city states and the emergence of social capital (Guiso et al., 2008)
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