On the Historical Origins of Comparative Development

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Introduction

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- Differences in other dimensions: Physiology (av. height: 20 cm); Longevity (30 years, at birth); Schooling (6-7 years, on average)
- How do we explain this variation?

- "Economic growth" in per capita income is a recent phenomenon ...

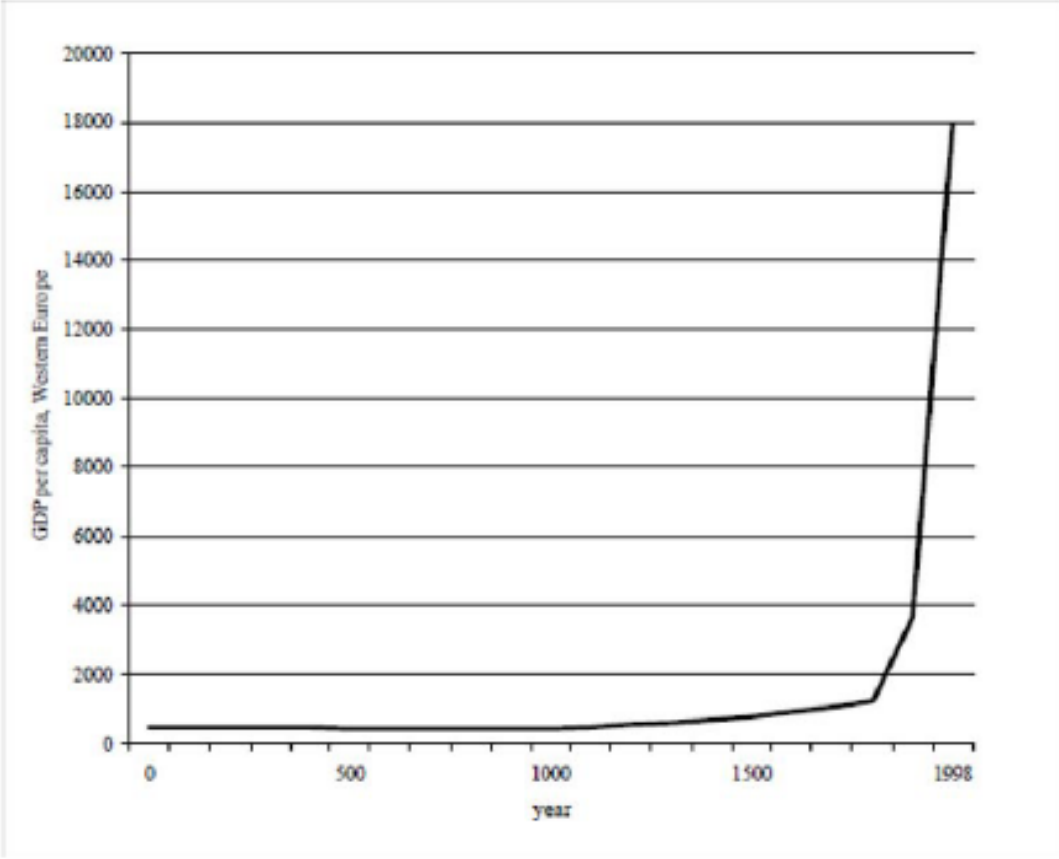
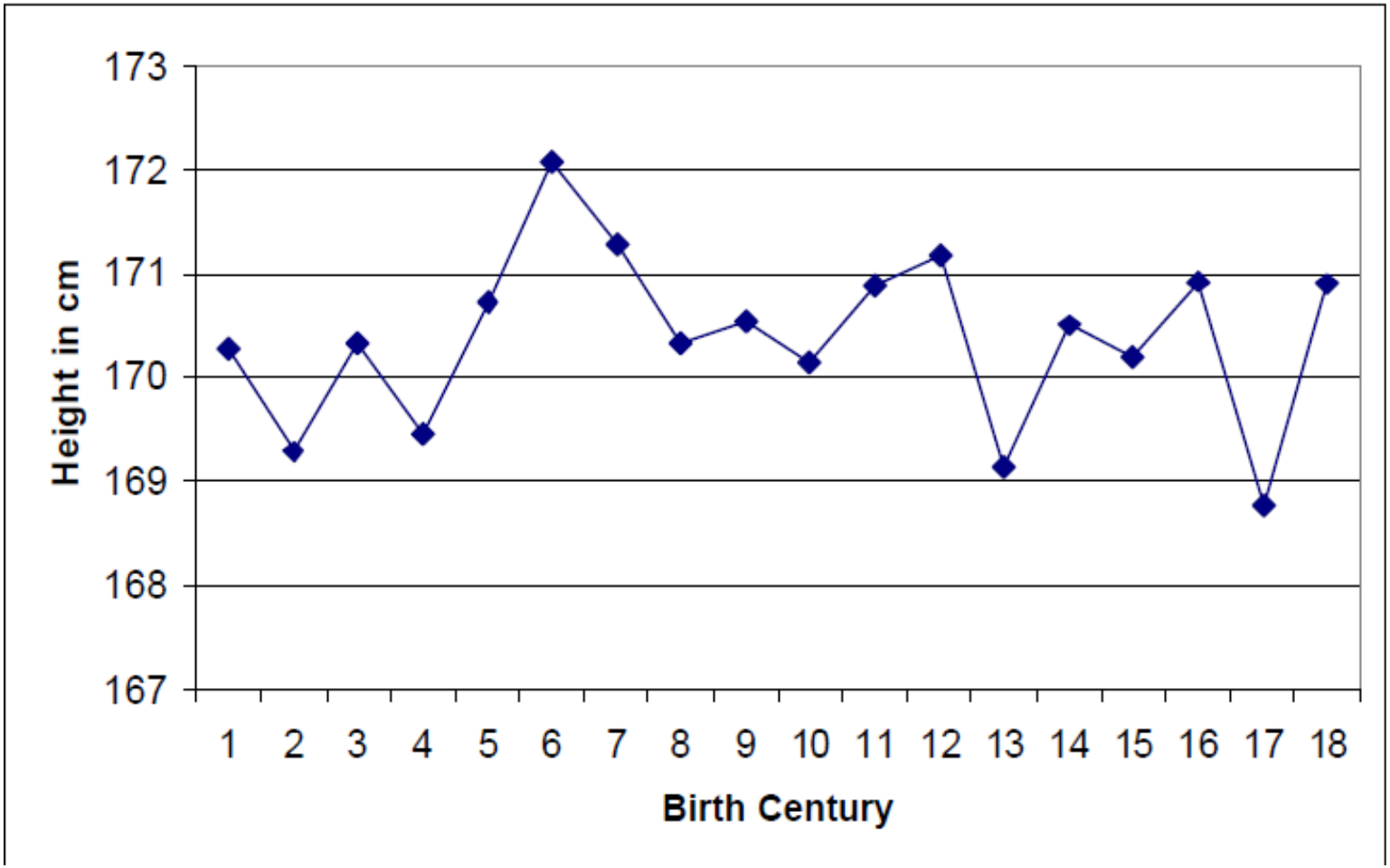


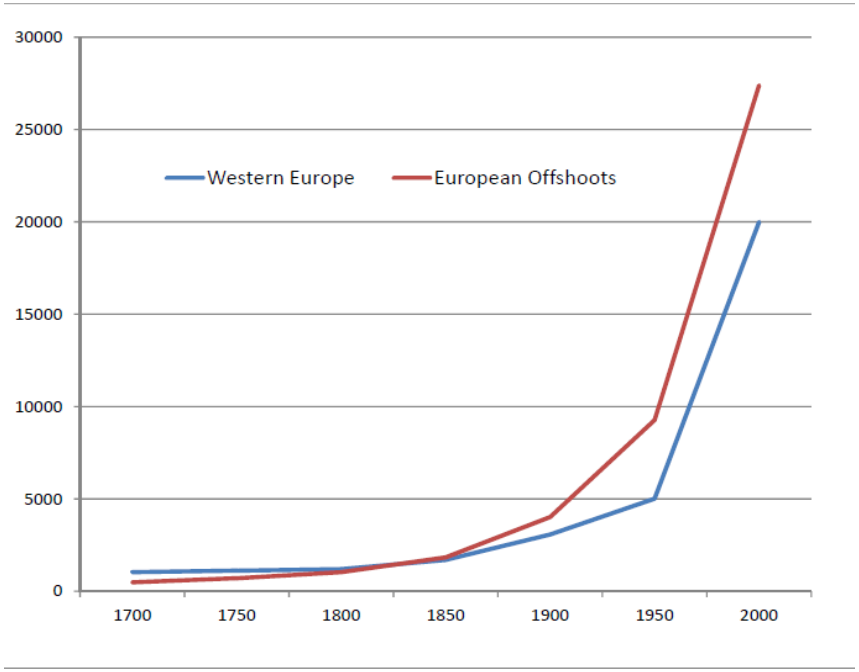
Figure: GDP per capita, Year 0-2000 C.E. Source: Maddison (2001)

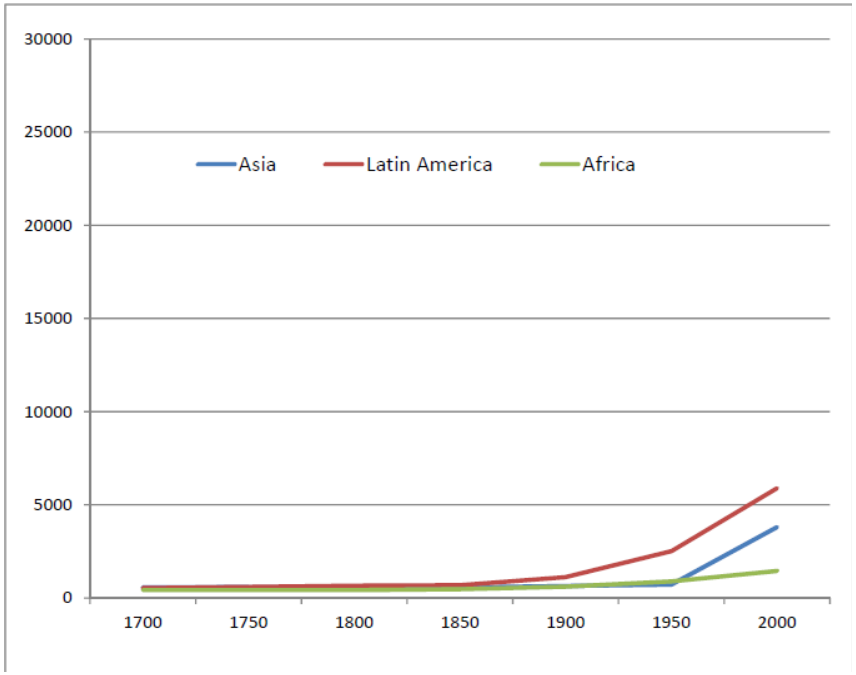
- But did living standards (really) stagnate on average?

Corroborating the historians work on the evolution of living standards: Stagnation in physiological development in Western Europe 1 C.E. to 1800 C.E.



- Eventually growth took off (19th century).
- But not at the same time everywhere...





- Differentiated timing of "take-off' led to divergence, and the emergence of cross-country income inequality

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- **What economic forces made this transition possible?**
- **What forces prompted a delay in the transition? Historical roots of global inequality.**

Plan for the talk

- The mechanics of stagnation
- The mechanics of the take-off
- The causes of the differentiated timing of the take-off
- Influence from "history" on contemporary comparative development
- Concluding remarks and (preliminary) policy perspectives

The Mechanics of Stagnation

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- Taken together provides a powerful force towards stagnation

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- Size of market and technical change (Aiyar et al, 2008); nutritional investments in off-spring (Dalgaard and Strulik, 2011)

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- **But why did the FT occur? Why should it's effect be so great on the evolution of living standards?**

The mechanincs of the take-off

- "Unified growth theory" (Galor, 2005; 2011): from stagnation to growth

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- Mechanism? Increasing **educational requirements** (e.g., Galor and Weil, 2000); **lower mortality** (Cervaletti and Sunde, 2005); **occupational structure and urban life** makes it more expensive to have many children, Dalgaard and Strulik (2011)

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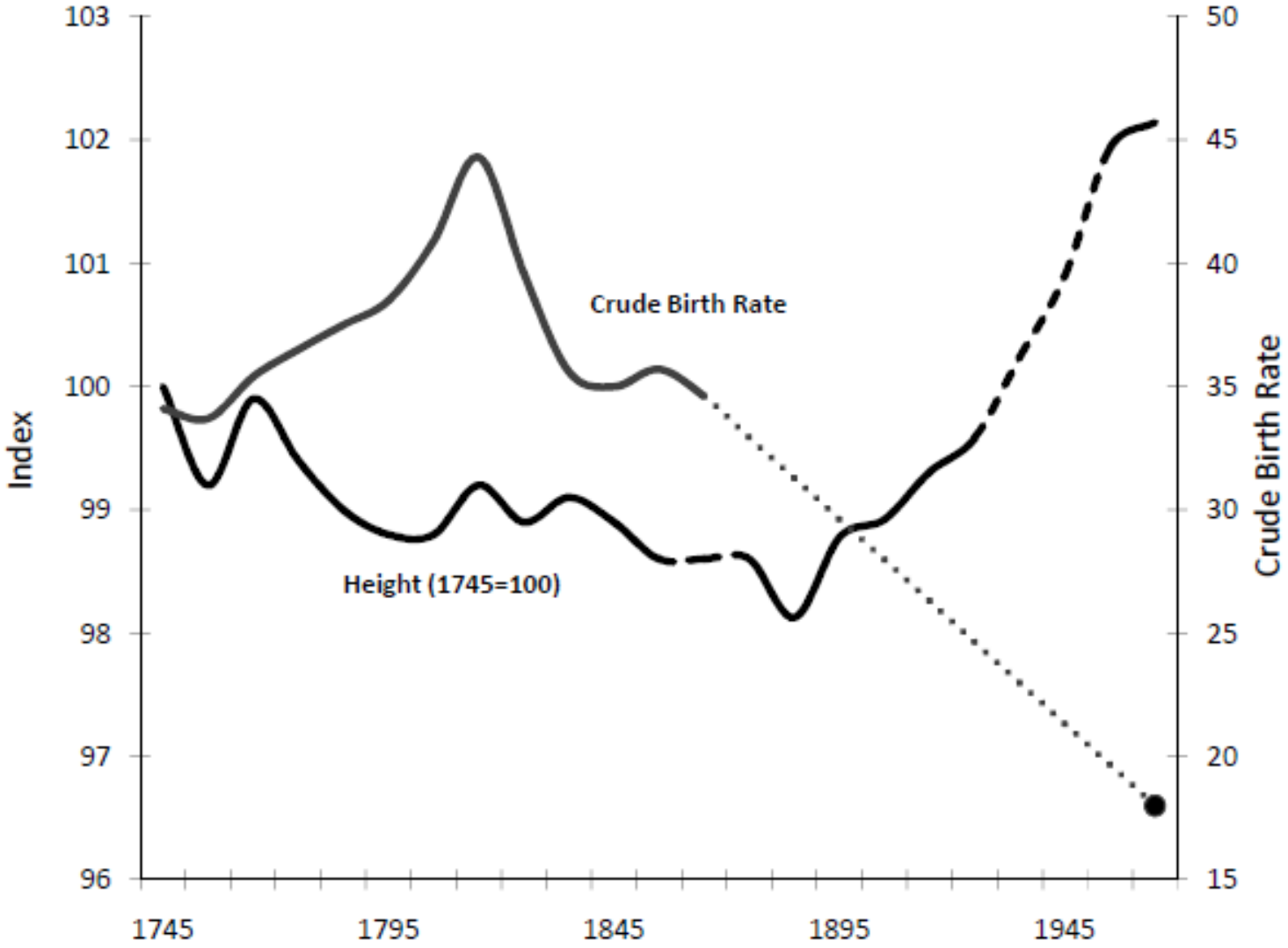
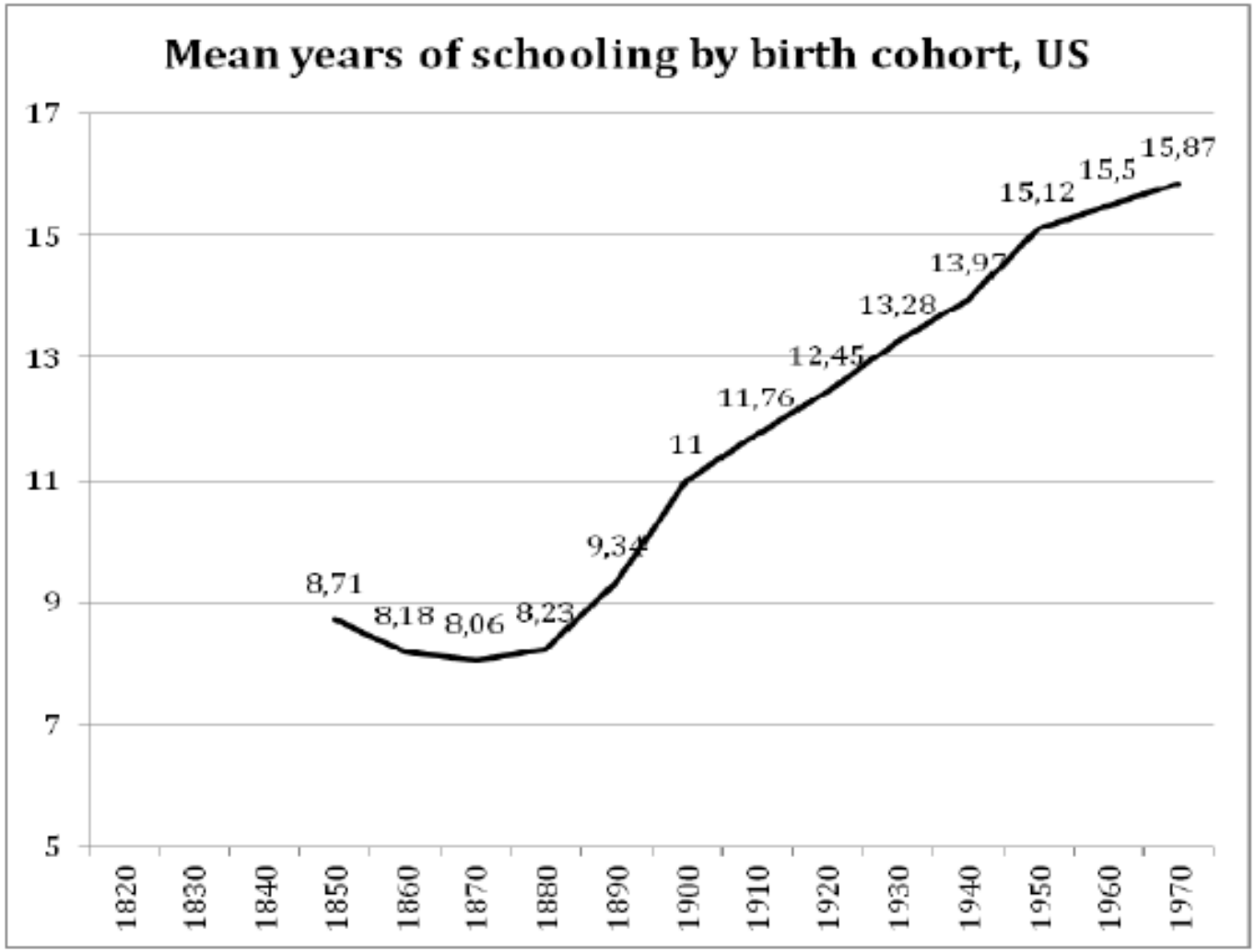
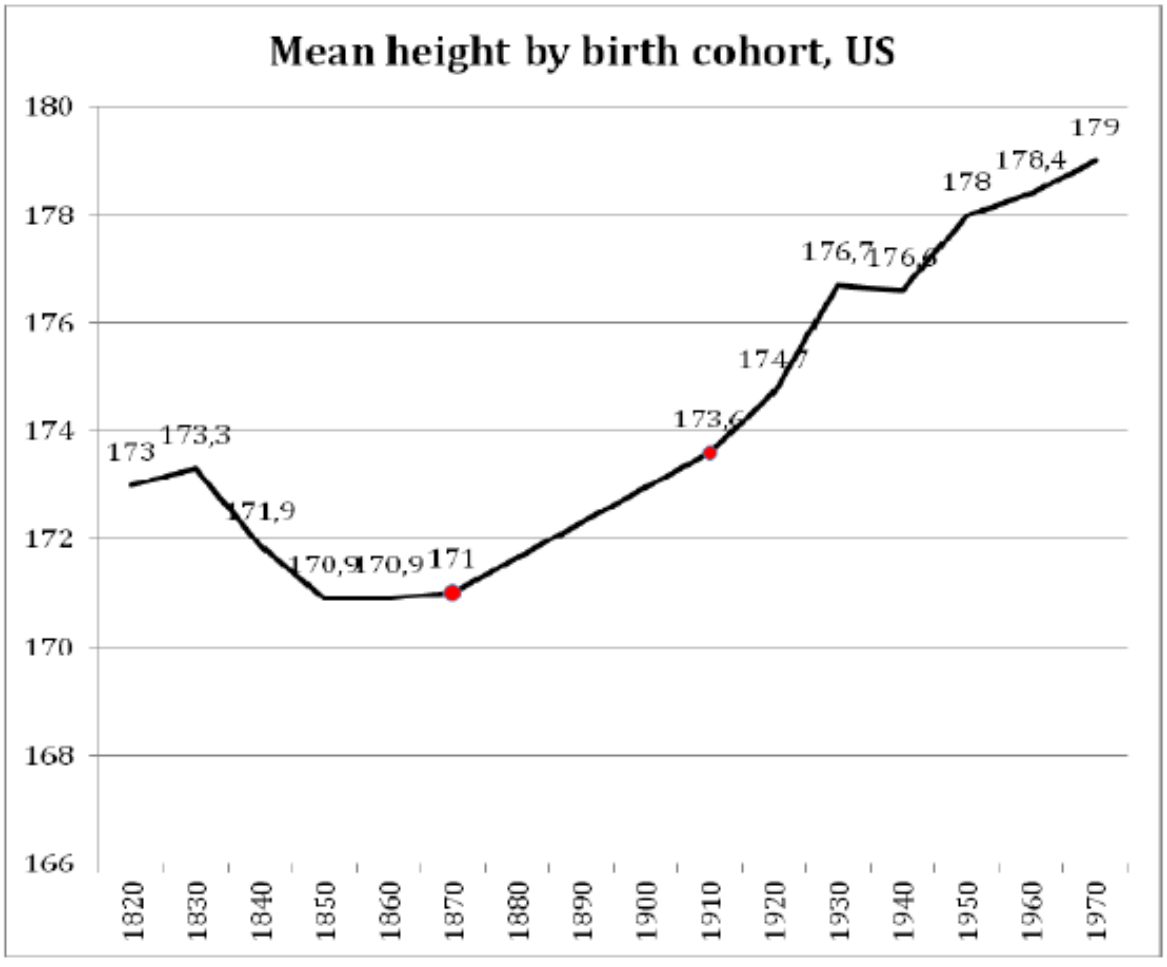
- Check: Fertility transition involves a *hump-shaped* path for birth rates. What's the facts on "quality investments"?

Figure 2: Crude Birth Rate and Average Height 1745-1960: England

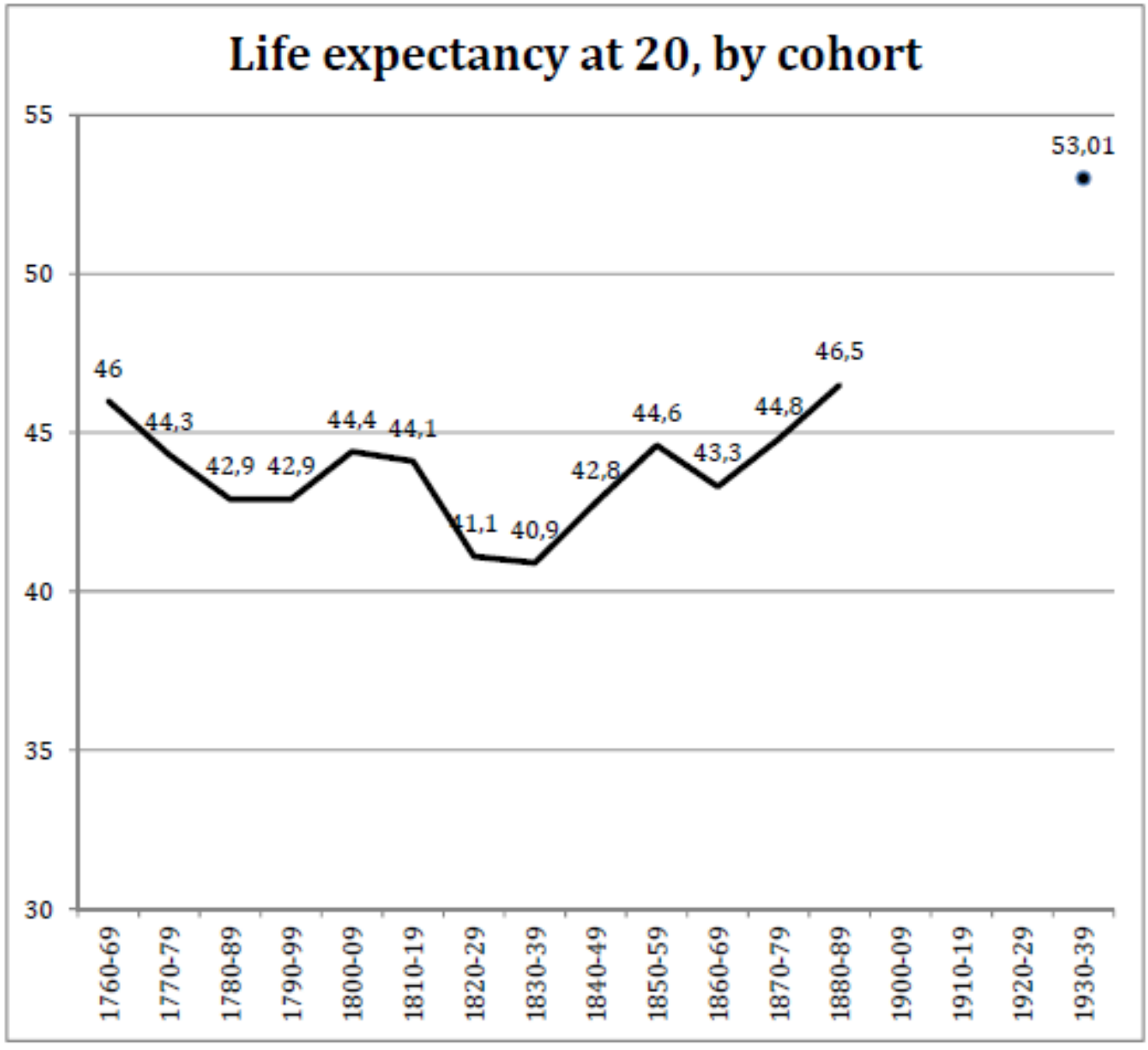




Data source: Hazan (2009)



Data sources: Komlos (1987, 2007). Note: Before 1870 the data speaks to army recruits, after 1910 it is based on population surveys (white men).


Life expectancy at 20, by cohort
55
50
45
40
35
30
46
44,3
42,9
42,9
44,4
44,1
41,1
40,9
42,8
44,6
43,3
44,8
46,5
53,01
1760-69
1770-79
1780-89
1790-99
1800-09
1810-19
1820-29
1830-39
1840-49
1850-59
1860-69
1870-79
1880-89
1900-09
1910-19
1920-29
1930-39

- Fertility transition: lowers fertility but greater investments in *each* child

Economic implications:

- More education and better health are productive in themselves
- Also: fascilitates technological change.(Virturous circle: Investments in child "quality" $\longrightarrow$ faster technological change $\longrightarrow$ more investments in quality).
- Reductions in fertility increases per capita resources $\longrightarrow$ stimulates average productivity
- Demographic divided (labor force/population ratio increases)

Bottom line: A key *proximate* determinant of comparative development (physiological and economical) is the timing of the *fertility transition.* But why did it diffuse so slowly across the world?

Causes of a differentiated timing of the fertility transition

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  - **Cultural links** (e.g., Caldwell and Caldwell, 2001; Spolaore and Wacziarg, 2010; Ashraf and Galor, 2012)

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  - **Institutions** (e.g. Acemoglu et al, 2001; Hariri, 2012; Cuberes and Basso, 2011)
- But what of the reduced form? Timing of the fertility transition $\longrightarrow$ current prosperity

The influence of “history” on comparative development

- Unified growth theory suggests, that the *timing of the fertility transition* a key determinant of current income differences. Once this has occured convergence may occur (Solow, 1956 and many since)
- And certainly "convergence" *is* part of the "story" (think e.g.: Japan)

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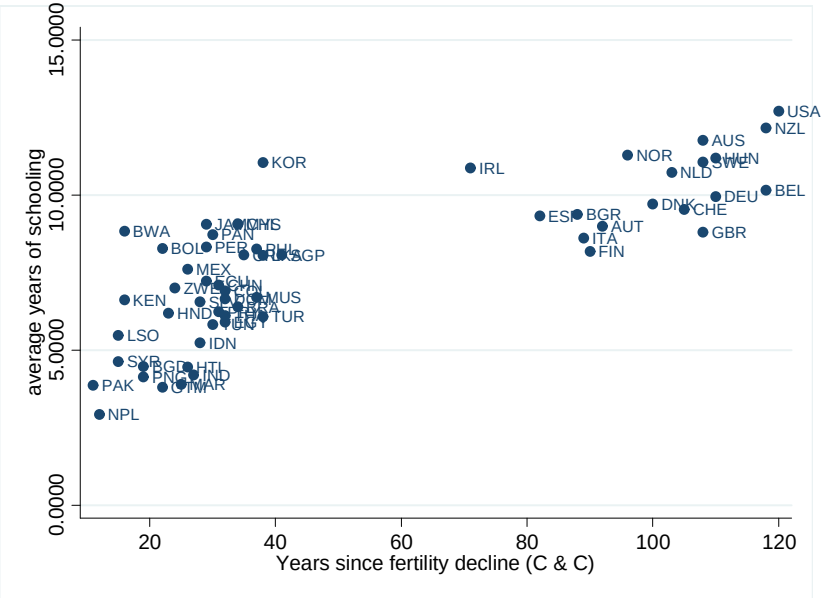
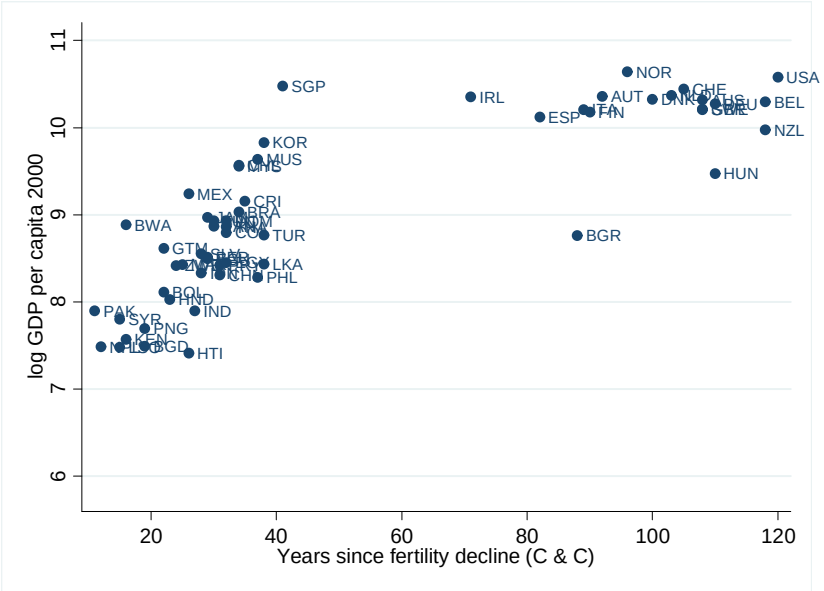
- Key finding: 1 year delay in fertility transition lowers average income in 2000 by about 2 pct
- At 2 percent income doubles in 30-35 years. Early fertility transitions in 19th century; some countries have yet to undergo it today! Also shown: influence of fertility transition *via* human capital accumulation (direct and indirect)





- Rapid increases in schooling early on; diminishing influence as the economy "matures"

Concluding remarks

- Historically, stagnation was the norm; growth, not stagnation, is the "unusual" phenomenon
- Two unique events: The take-off in growth in income per capita and the fertility transition
- Differentiated timing of the fertility transition is an important historical determinant of current income differences
- Policy: marked differences in the likely impact from policy initiatives before and after the fertility transition
- Before: Any productivity gains from e.g. foreign aid likely to be converted into larger populations (e.g. Acemoglu and Johnson, 2007; Cervaletti and Sunde, 2011; Cuberes and Tsui, 2011)
- After: Same policies may stimulate growth (e.g. Cervaletti and Sunde, 2009)