

*Human Development
in the Age of Globalization*

Leandro Prados de la Escosura
(Universidad Carlos III and CEPR)

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From Per Capita Income to Multidimensional Well-being

- *Utility*
 - *Welfare*
 - *Subjective Well-being*
- *Opulence*
- *Freedom (capabilities)*

Human Development: A Capabilities Approach to Well-being

- **Human Development: *enlarging people's choices***
 - **A *healthy and long life,*
access to knowledge,
and a **decent *living standard*****
- => *human development*, a measure of **positive freedom****

Contributions

- A new *Augmented Human Development Index (AHDI)* that adds *freedom* to a revised *HDI* for **115-162** countries over **1870-2015**
- An overview of international *well-being* trends and distribution in the age of *globalisation*
- A breakdown of *AHD* long run *gains* into the contribution of its different *dimensions*

Measuring Human Development

- **proxies for *HD dimensions***
 - *longevity* and *education*, measures of **achievement** but also of **capability**
 - *per capita income*, an *input* that turns into a **capability**, => enters in the index at *declining* rate

Measuring Human Development

- How to homogenise *indicators* for different dimensions?
- UNDP choice: A *linear* transformation of the *original* values

$$I = (\mathbf{x} - \mathbf{Mo}) / (\mathbf{M} - \mathbf{Mo})$$

\mathbf{x} , **original*** *value* of a dimension of welfare, \mathbf{Mo} and \mathbf{M} , *maximum* and *minimum* values (goalposts)

* except *per capita income* expressed on **logarithmic** form

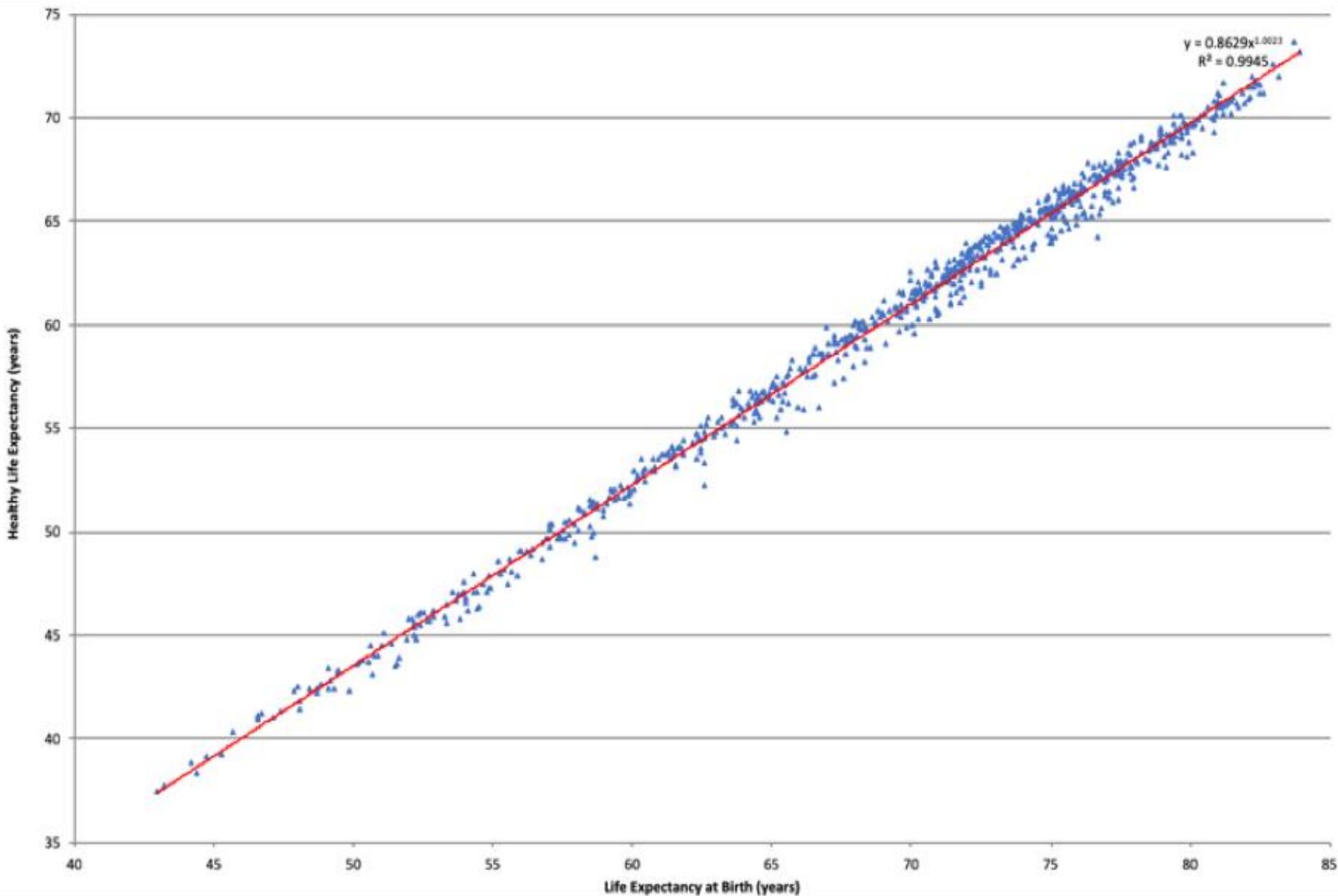
- An unweighted geometric average of all three dimensions,

$$HDI = (I_{Health} \cdot I_{Education} \cdot I_{\ln Income})^{1/3}$$

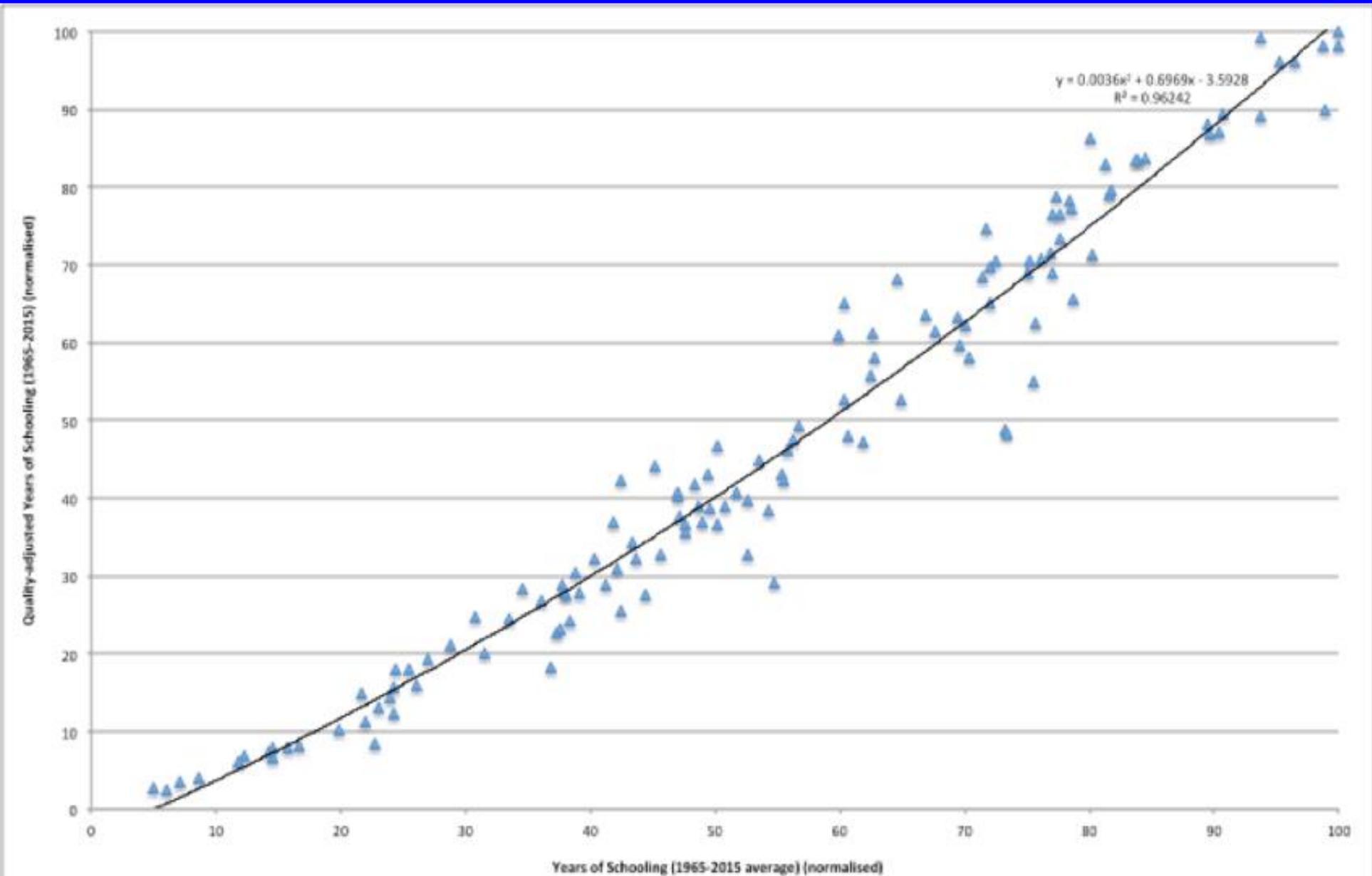
- *Life expectancy at birth* and *Years of schooling*, *bounded* variables
- *Life expectancy at birth* and *Years of schooling*, **crude** measures of *access to knowledge* and *healthy life*

Healthy Life Expectancy and Life Expectancy at Birth 1990-2016

(Global Burden of Disease Study, 2016)



Quality-adjusted and Raw Years of Schooling (1965-2015) (normalised)



Allowing for Quality in Health and Education

- *Healthy life expectancy* increases as *LEB* expands
 - as *LEB* rises, *disability* declines for each *age-cohort*
=> the *quality of life* rises
- The *quality* of education improves as *schooling* increases
- More years of *life expectancy* and *schooling*
=> better *health* and *education* in childhood and youth

From Cross-section Patterns to Time Trends

- A *non-linear* transformation needed for *LEB* and *SCHL*, as an indicator reaches *higher* levels, its *increases* represent *higher* achievements than
if the *increase* occurred at a *lower* level
=> a **convex achievement function**

$$f(x, Mo, M) = (\log(M - Mo) - \log(M - x)) / \log(M - Mo)$$

x , country values; M and Mo , maximum and minimum values

Agency and Freedom

- UN *human development index* includes achievements
... but *not freedom to choose* them
- But *without agency and freedom*
=> the *HDI*, just an index of *basic needs*
- Adding up *liberal democracy*

Augmented *Human Development Index*

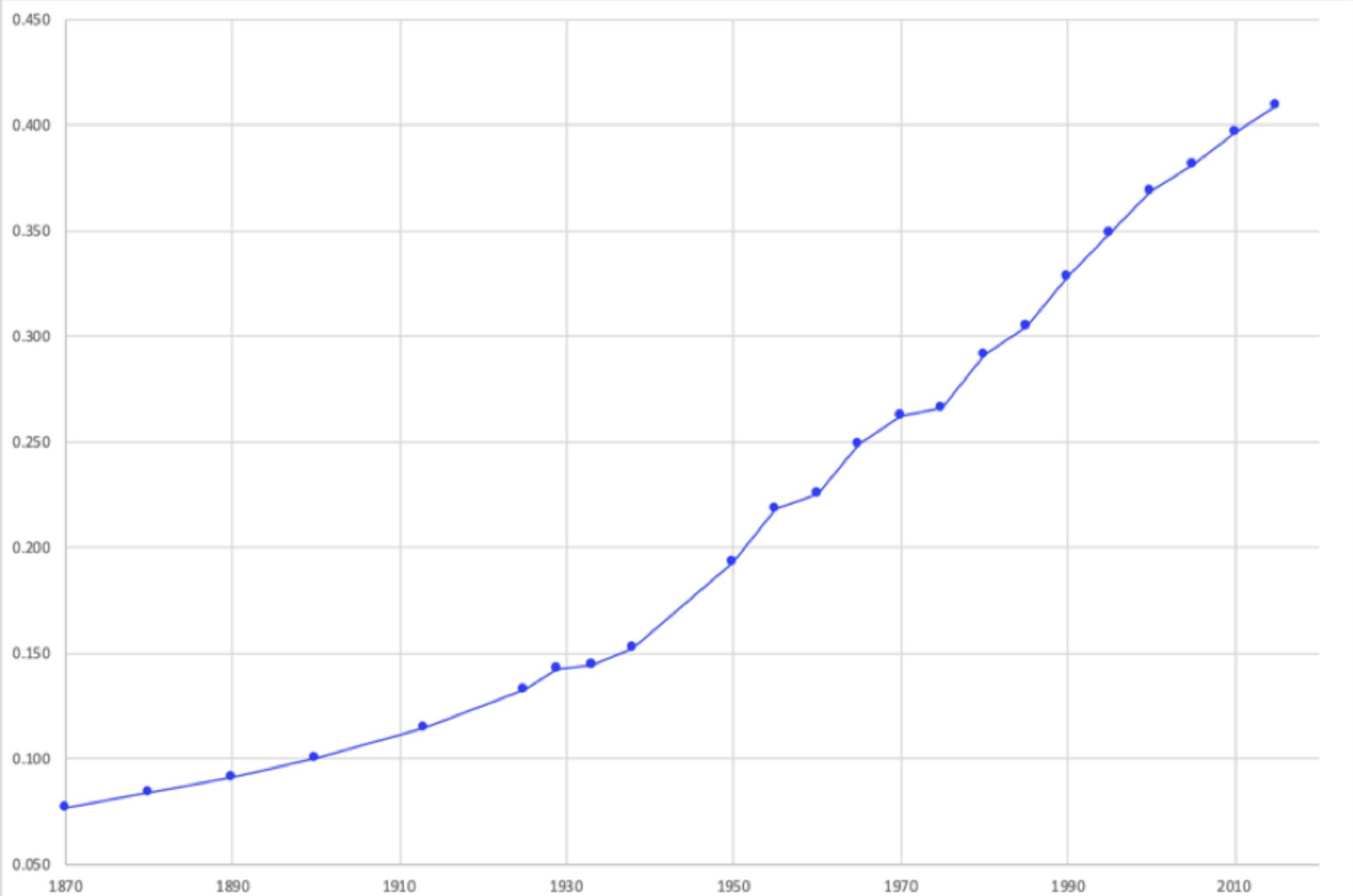
- **Social dimensions** (*life expectancy at birth, schooling*), transformed with a **convex achievement function**
- **Liberal democracy**, **linearly** transformed as the index allows for *quantity* and *quality* changes
- **Yet ... per capita income** enters at *declining* rate => **concave** transformation (*log GDP per head*)
- **All combined** with an equal-weight **geometric average**

$$AHDI = (I_{\text{k Health}} \cdot I_{\text{k Education}} \cdot I_{\text{lnIncome}} \cdot I_{\text{Liberal Democracy}})^{1/4}$$

Augmented *Human Development* since 1870

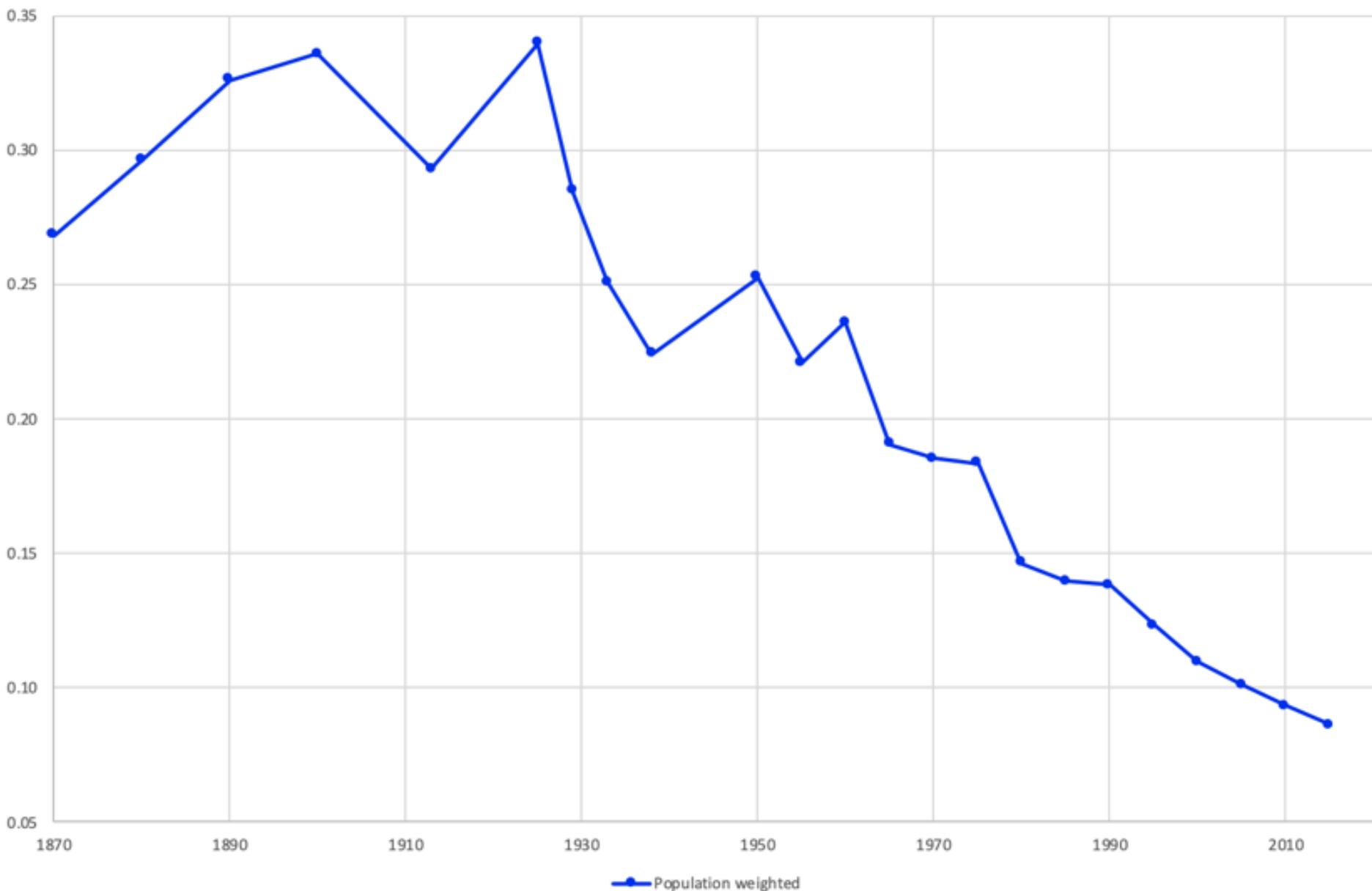
- How much has *AHD* improved?
- How have its *gains* been distributed?

Augmented Human Development Index, 1870-2015



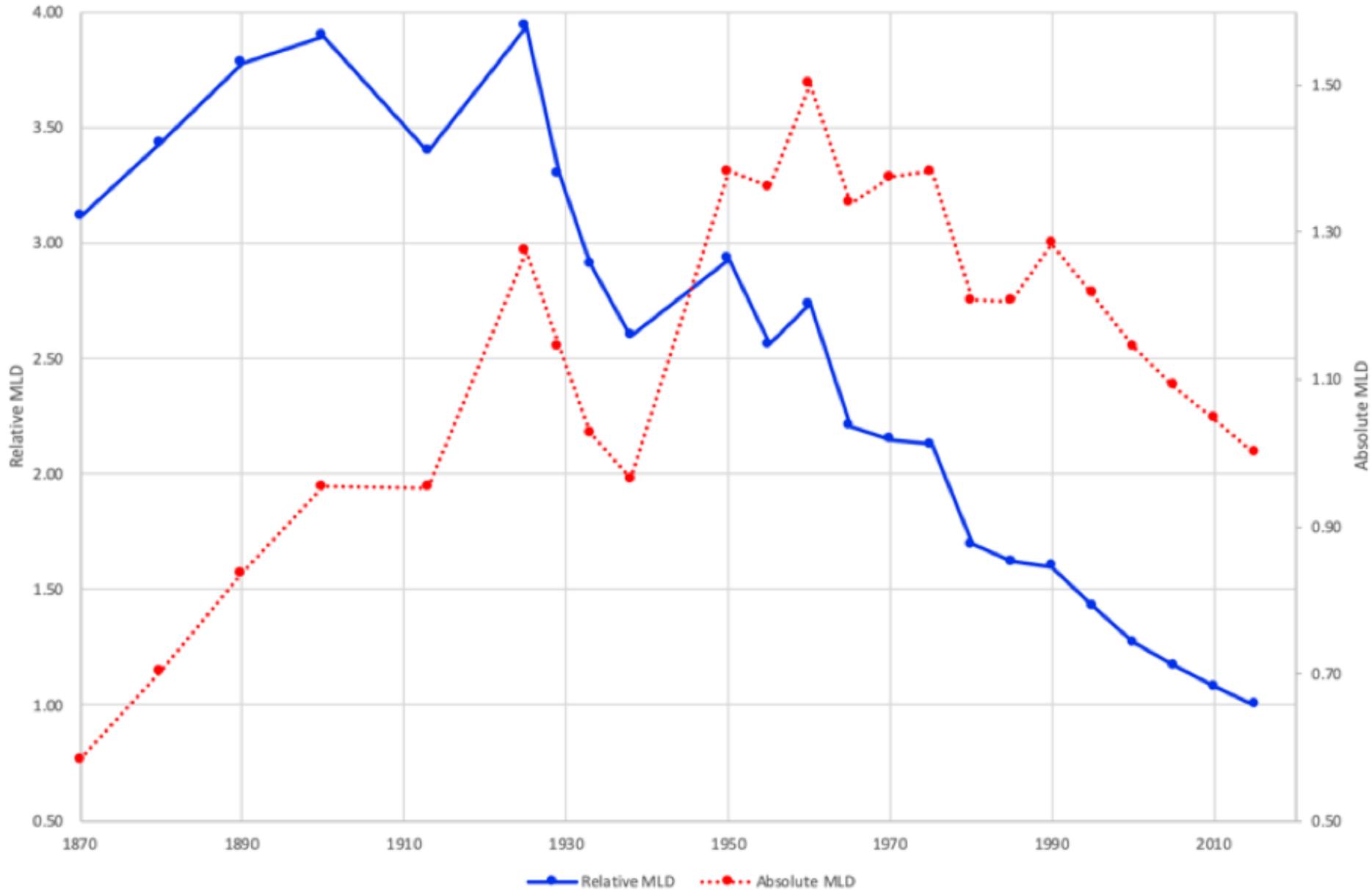
AHD Relative International Inequality, 1870-2015

(MLD population-weighted)



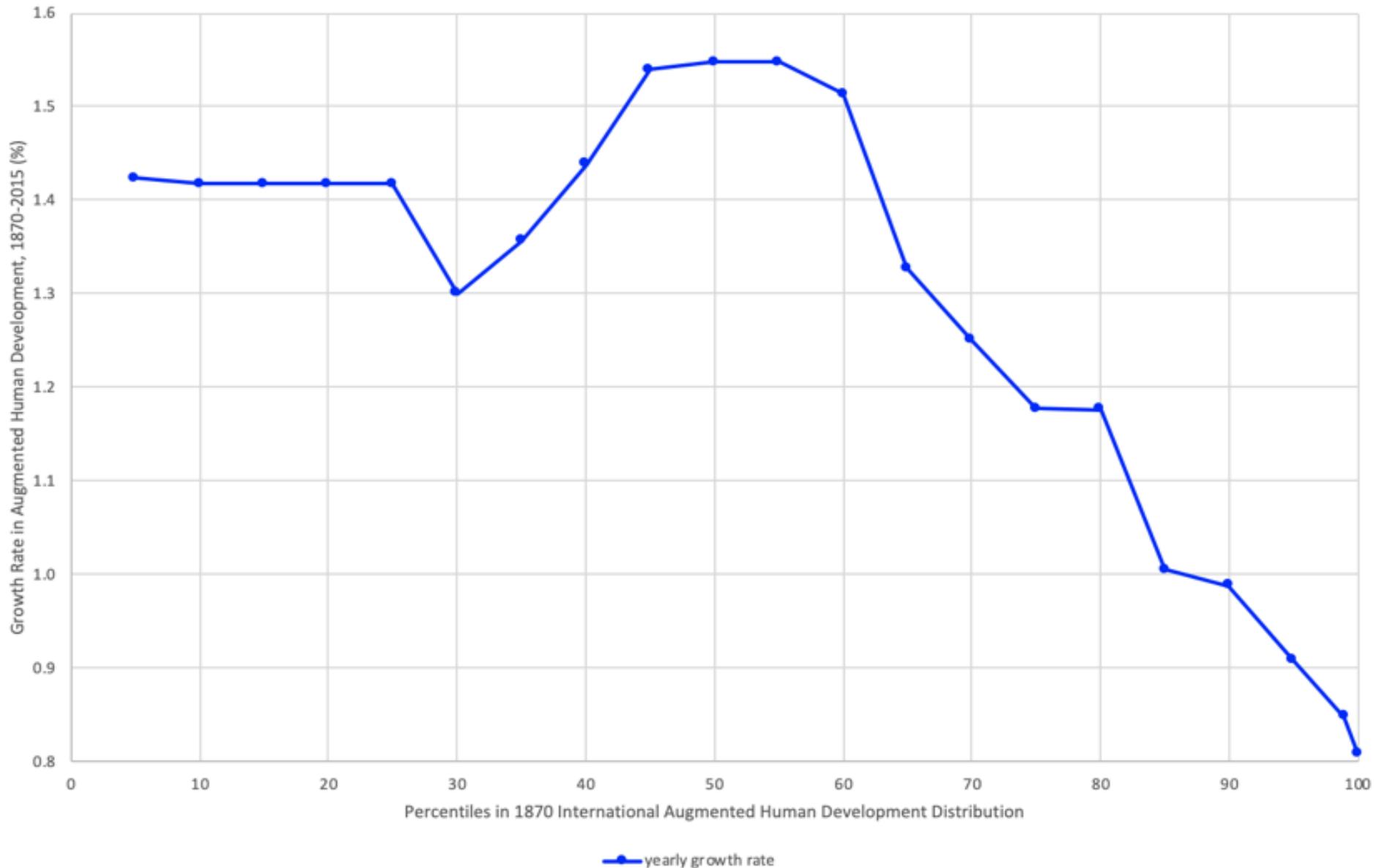
AHD Relative and Absolute International Inequality

(population weighted) (2015 = 1)



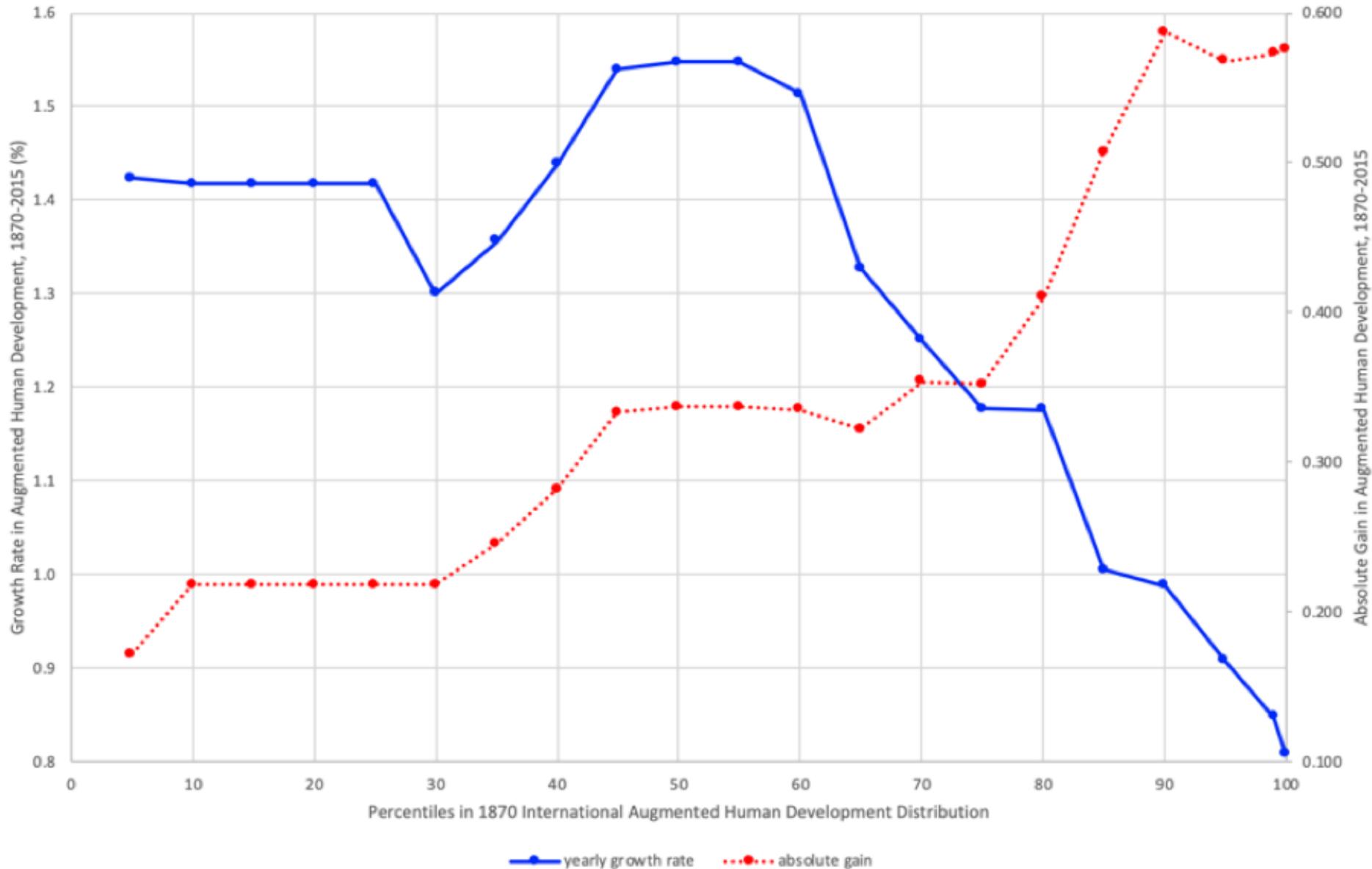
A Look at AHD Gains Distribution

Relative Growth Incidence Curve, 1870-2015



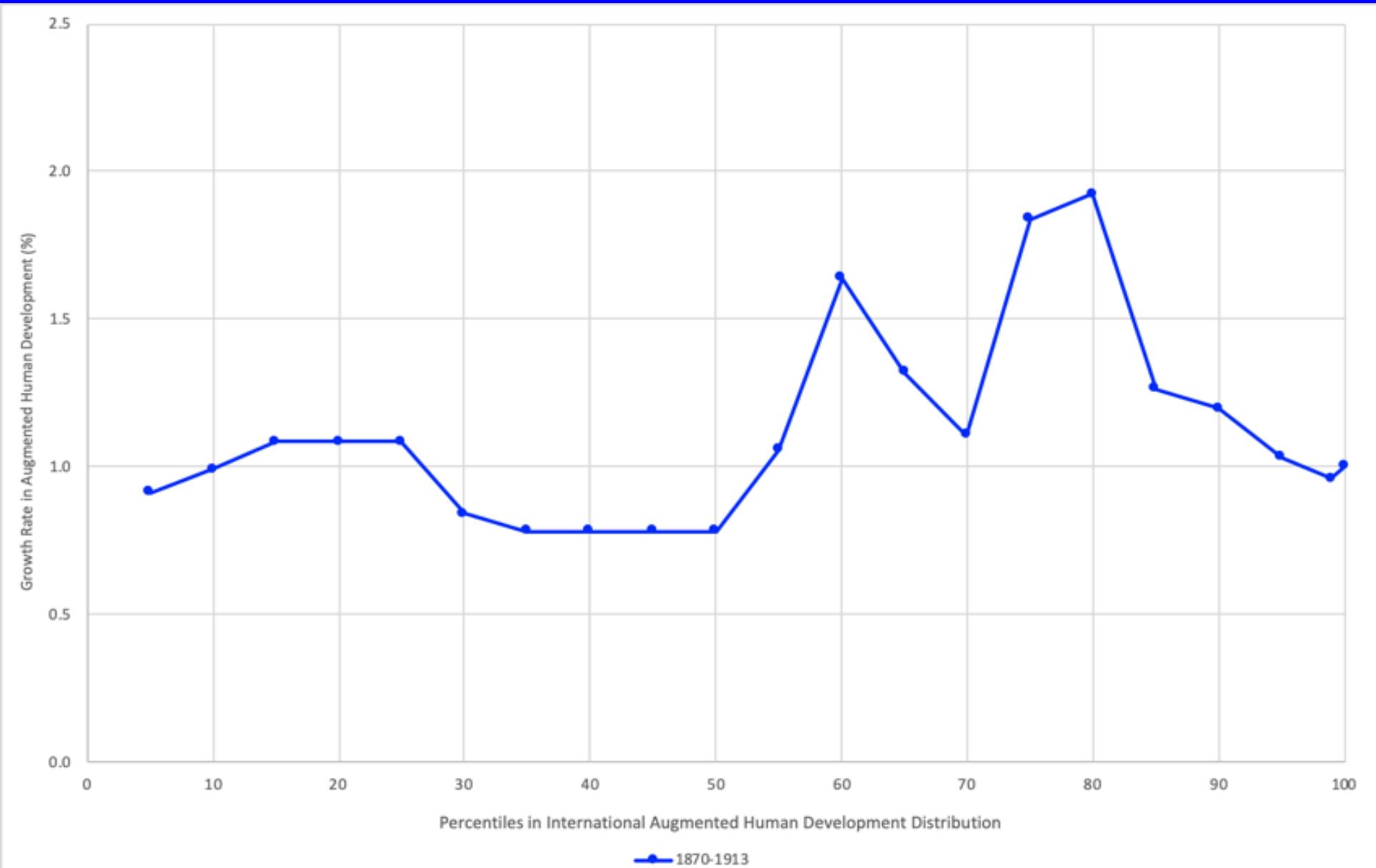
A Look at AHD Gains Distribution

Absolute and Relative Growth Incidence Curves, 1870-2015



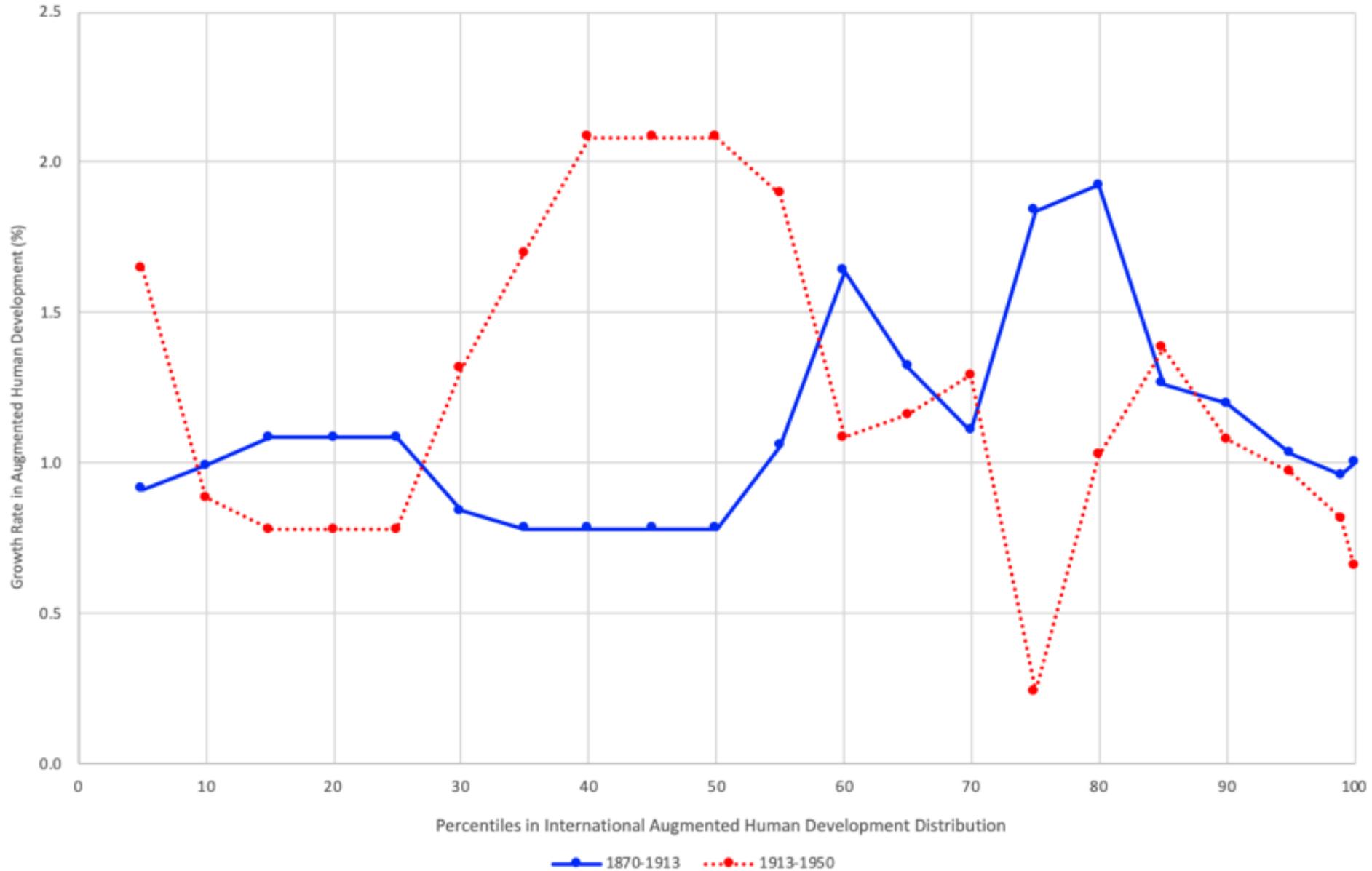
AHD Gains Distribution 1870-1913

Relative Growth Incidence Curve (balanced panel)



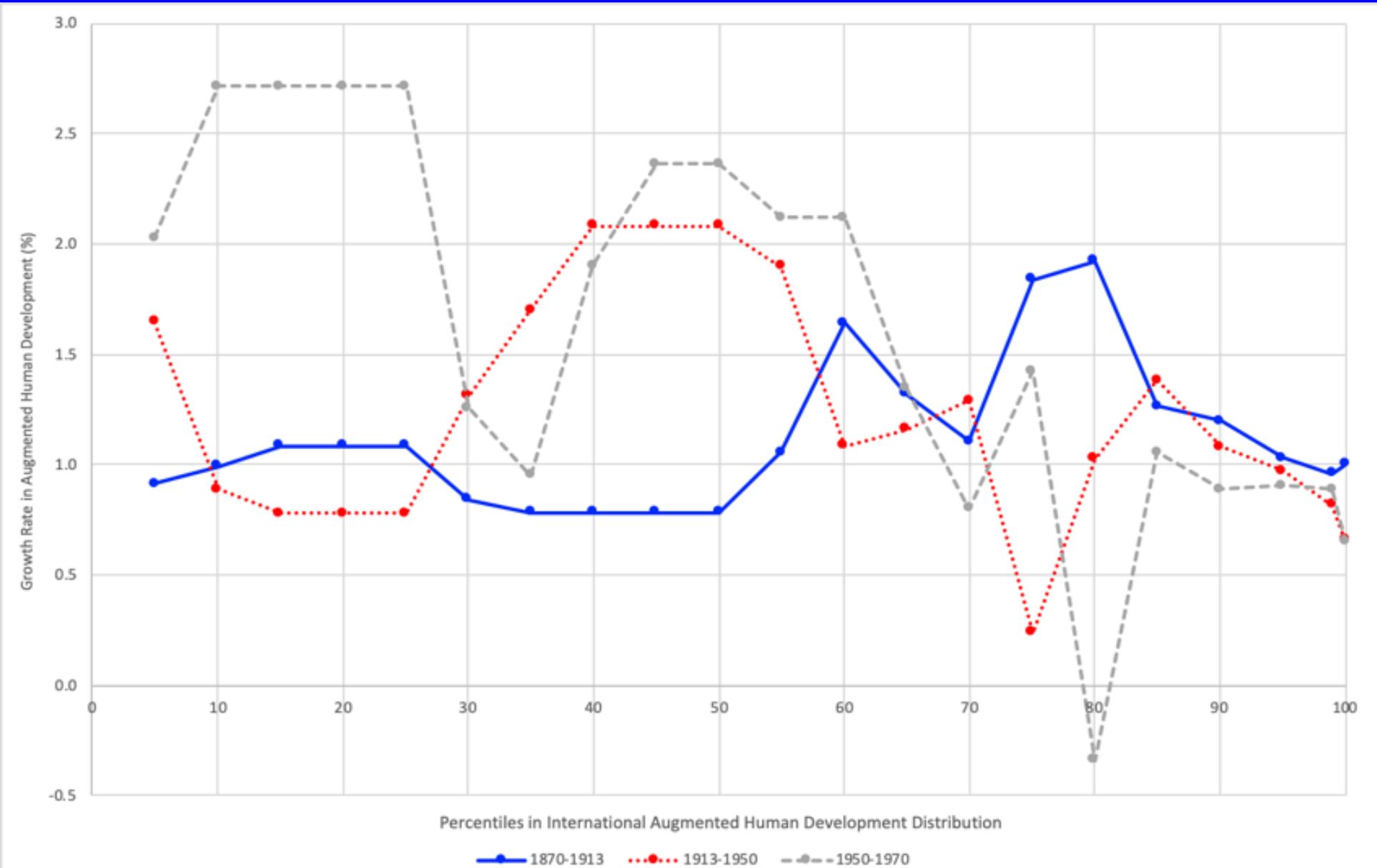
AHD Gains Distribution 1870-1913 vs 1913-50

Relative Growth Incidence Curves (balanced panel)



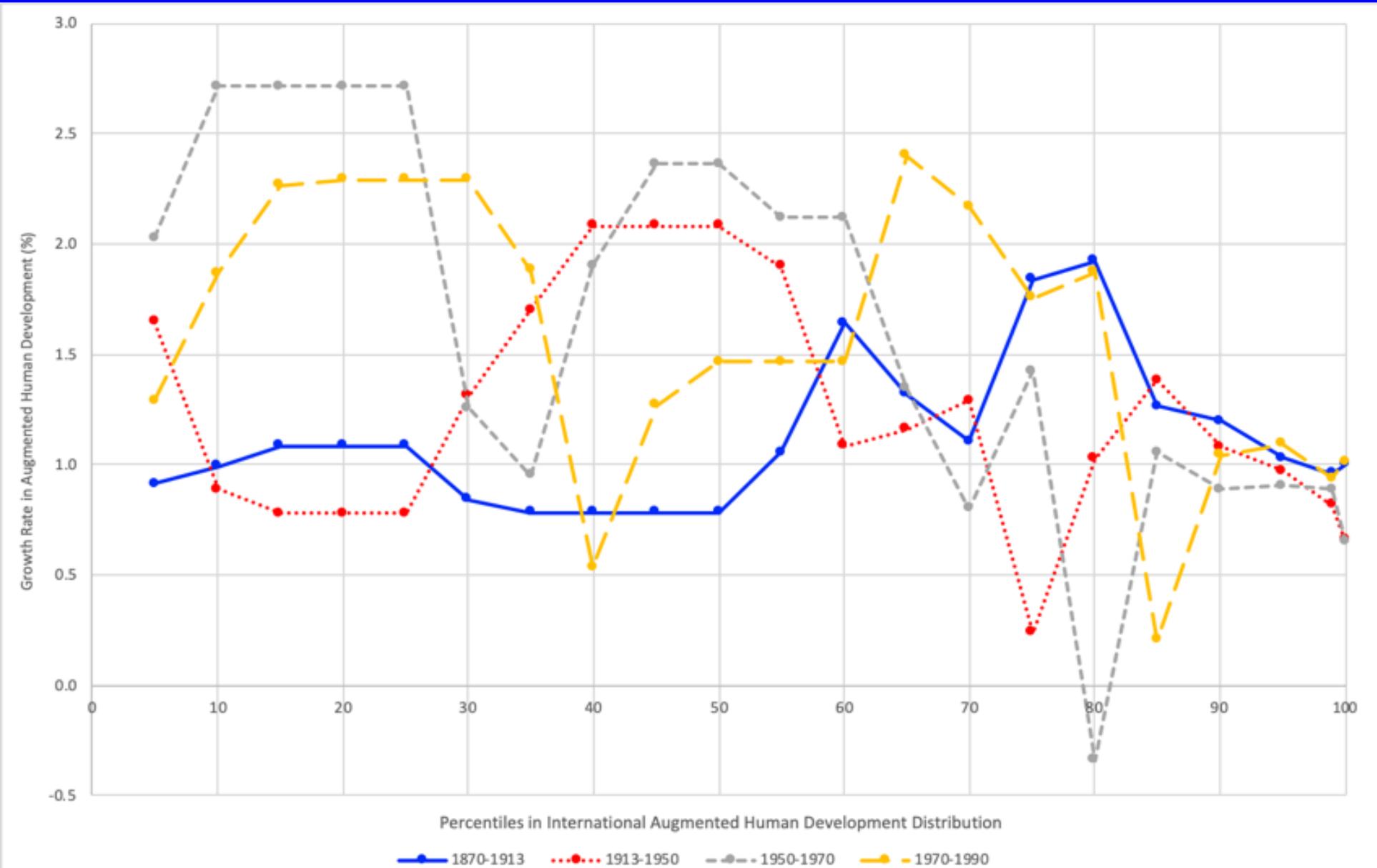
AHD Gains Distribution 1870-1913, 1913-50, 1950-70

Relative Growth Incidence Curves (balanced panel)



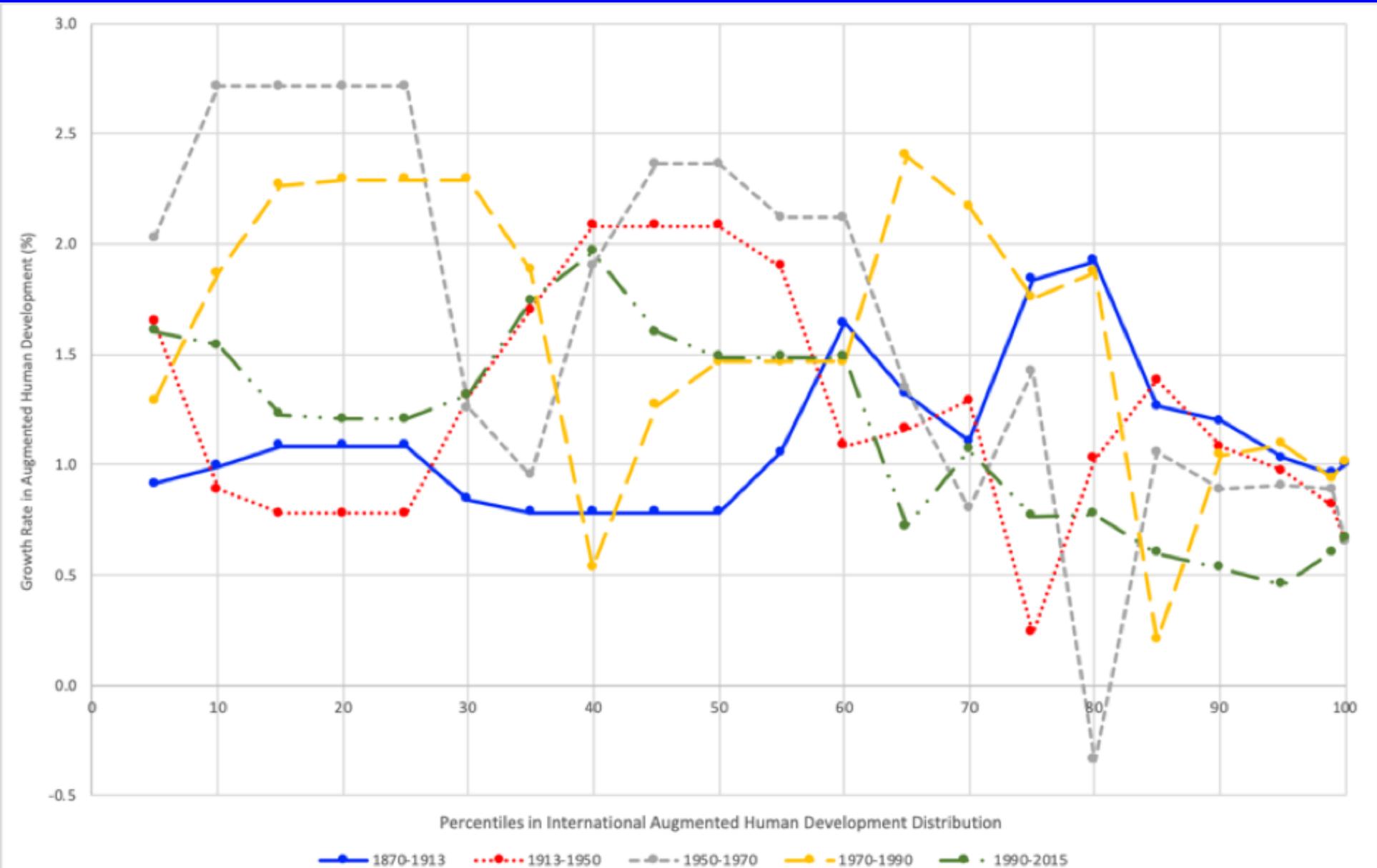
AHD Gains Distribution 1870-1913, 1913-50, 1950-70, 1990-2015

Relative Growth Incidence Curves (balanced panel)

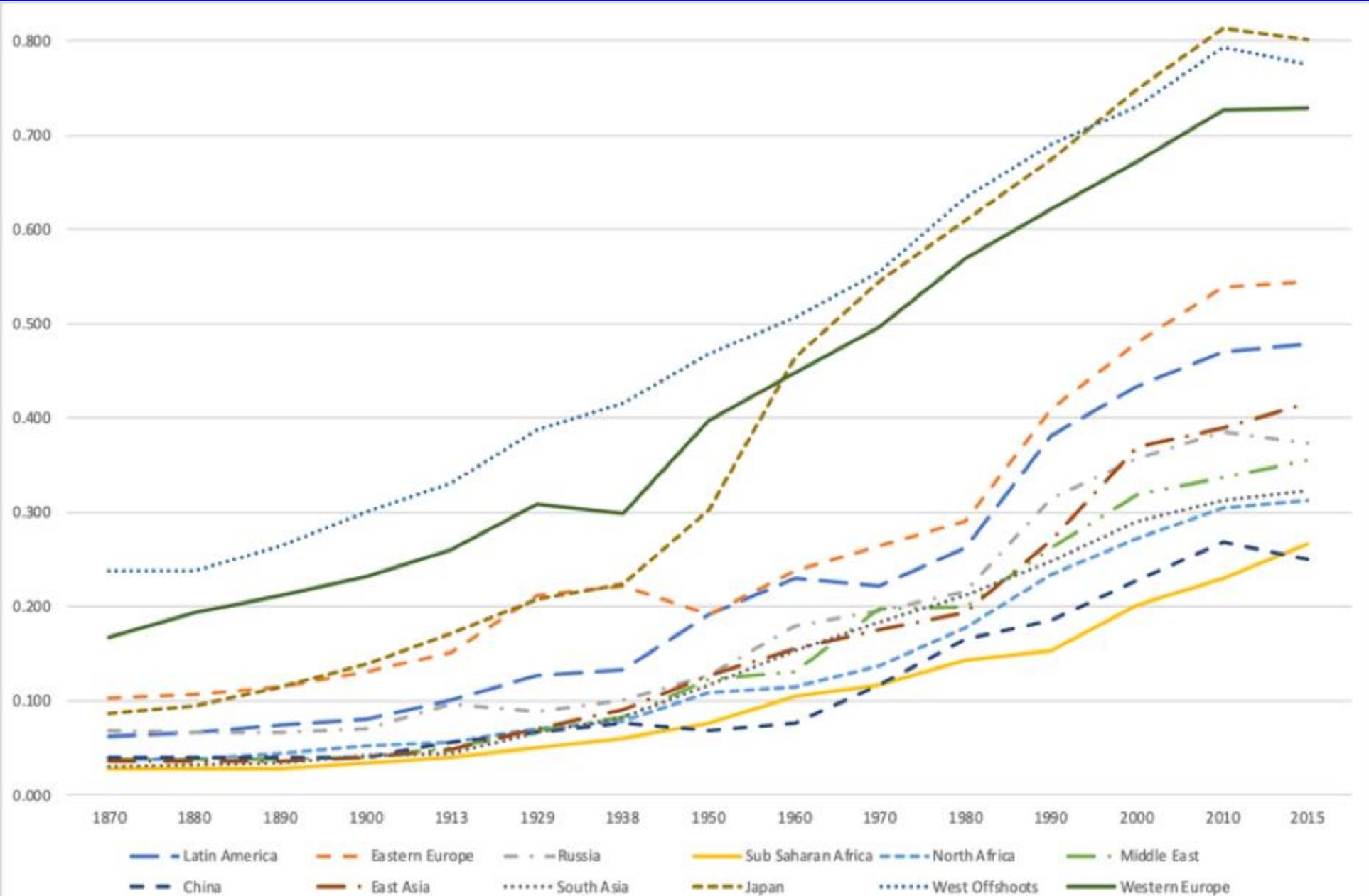


AHD Gains Distribution: Main Phases

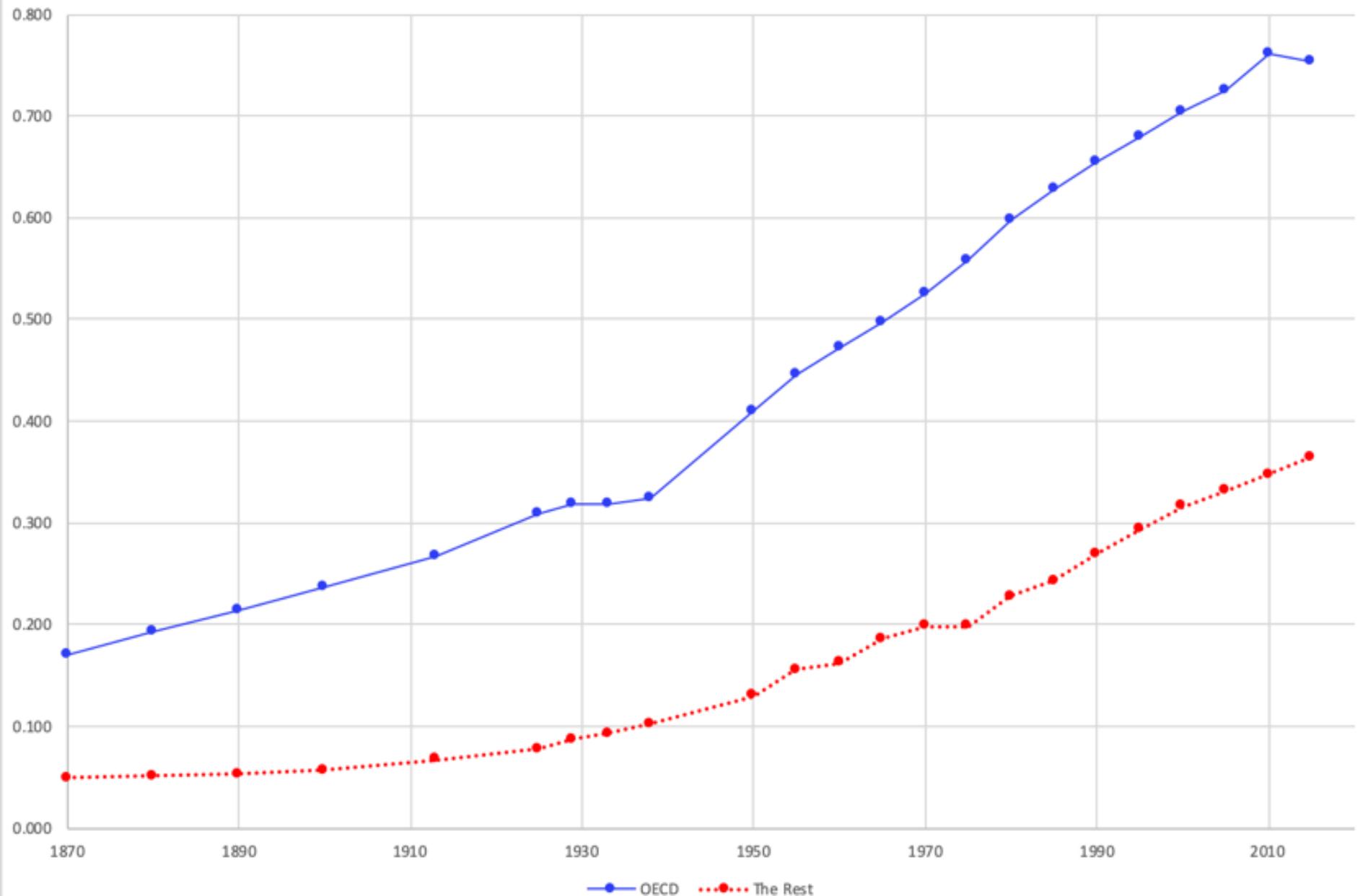
Relative Growth Incidence Curves (balanced panel)



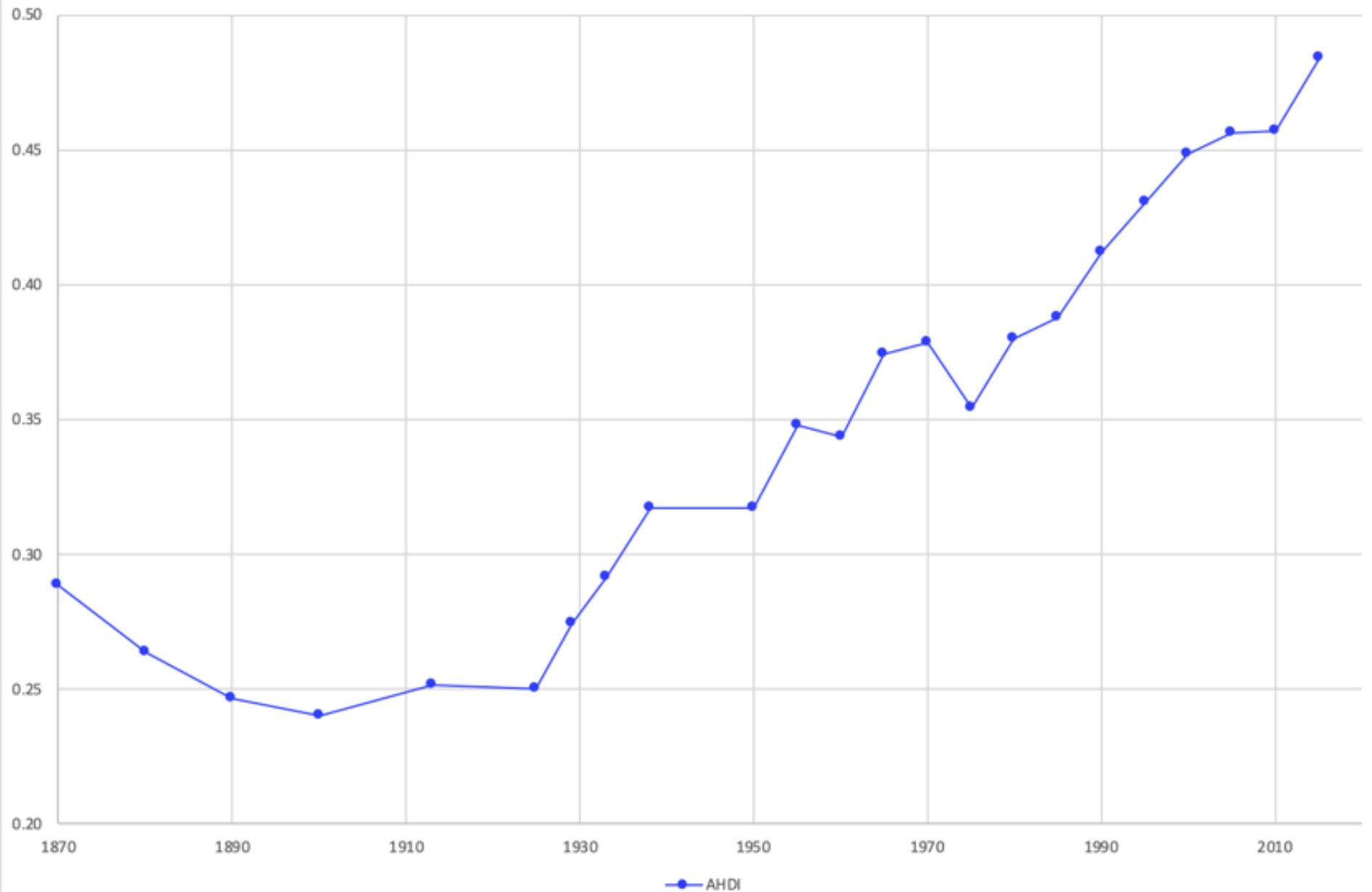
AHD across World Regions



AHD: The OECD and The Rest



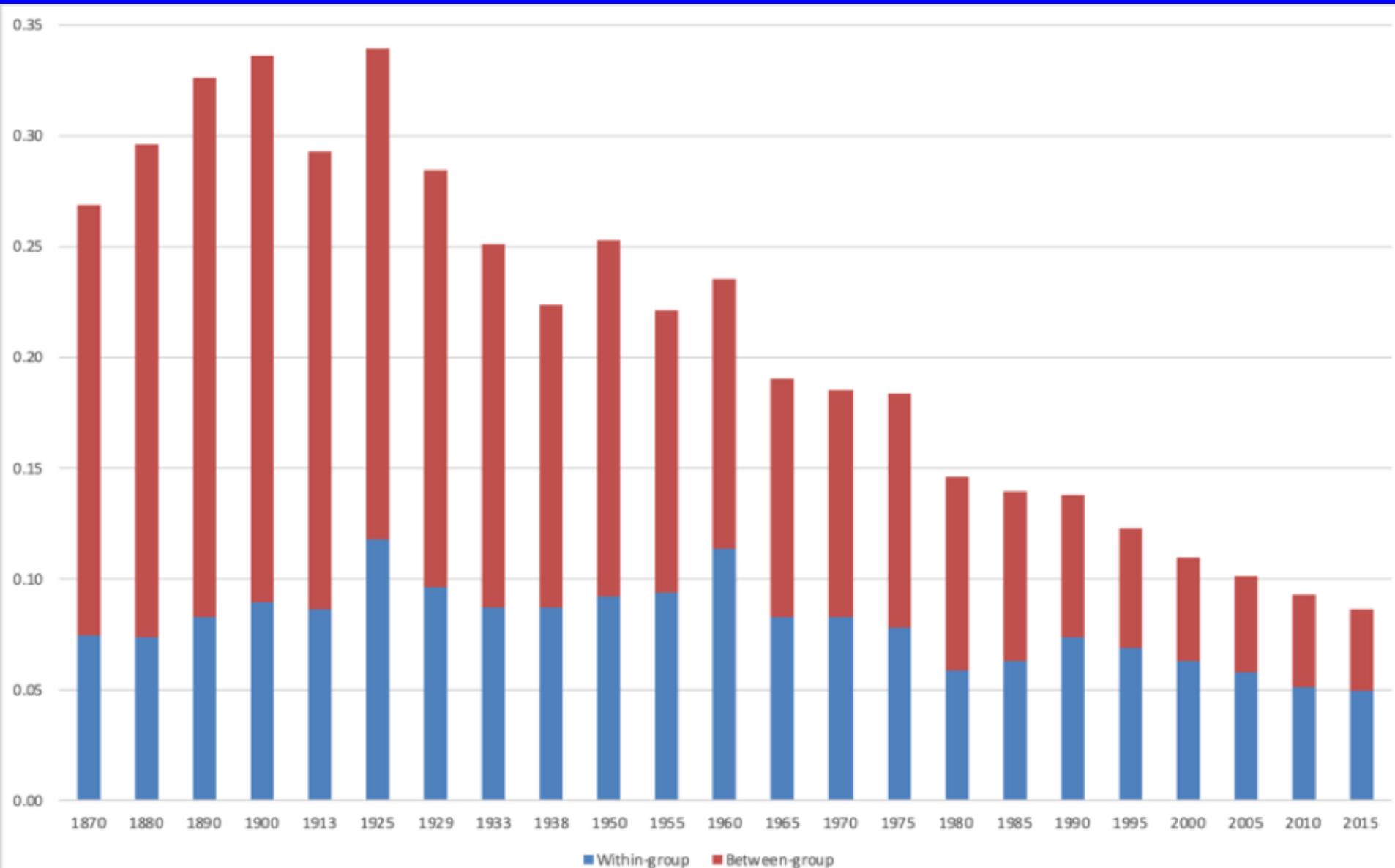
Relative AHD in The Rest (OECD = 1)



AHD International Inequality Breakdown

OECD-The Rest

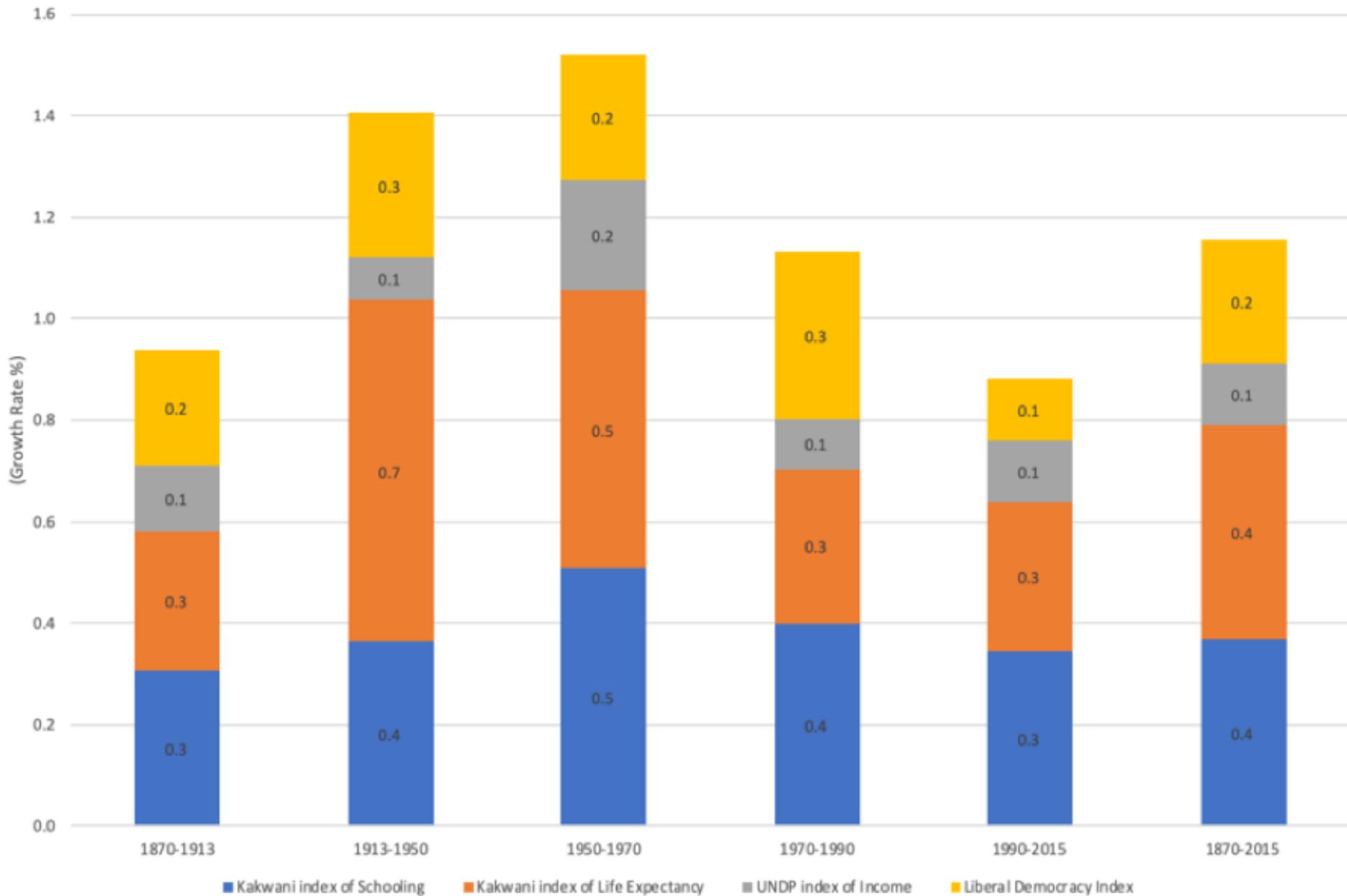
MLD (pop-weighted)



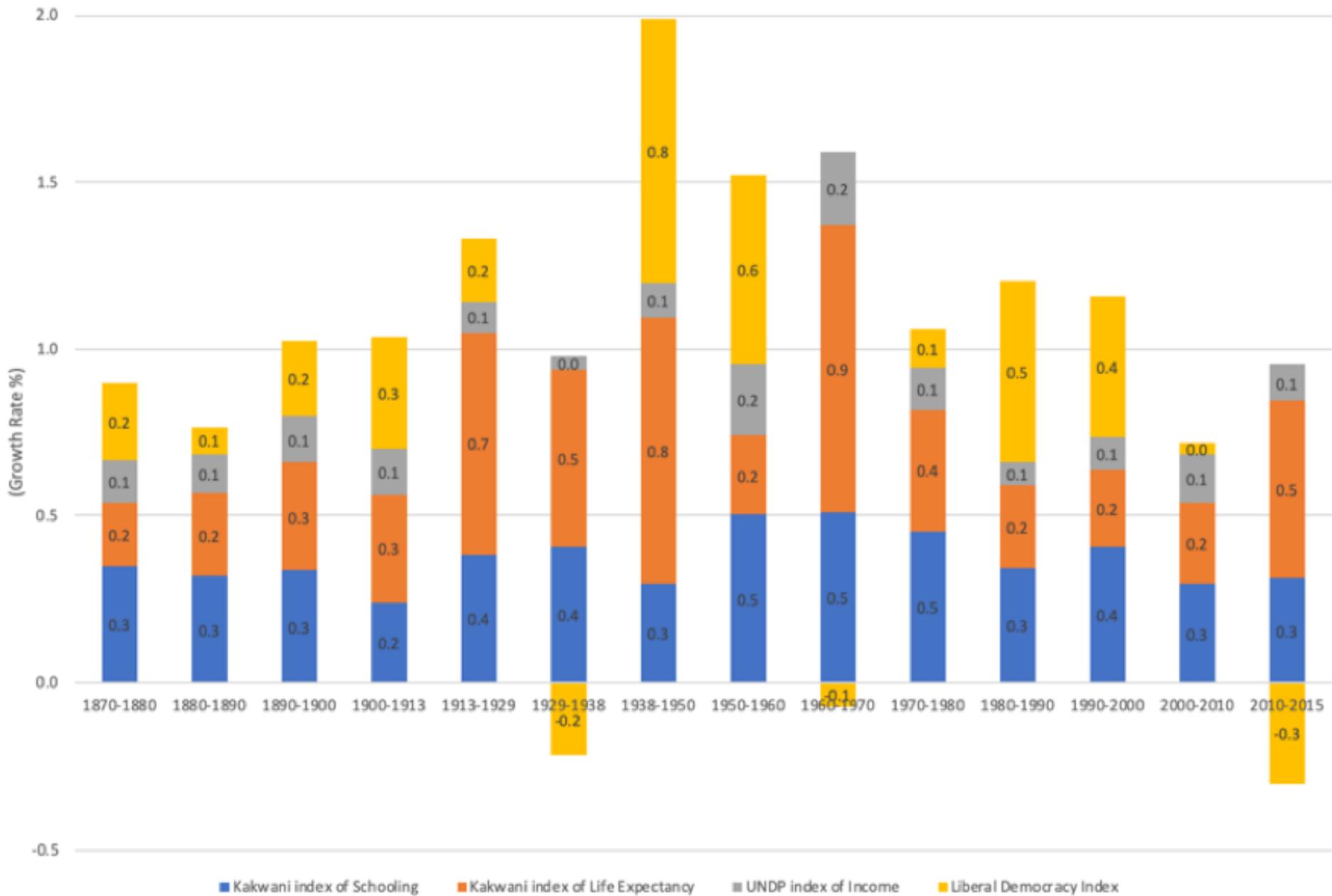
Augmented *Human Development* since 1870

- What are *AHD* drivers?

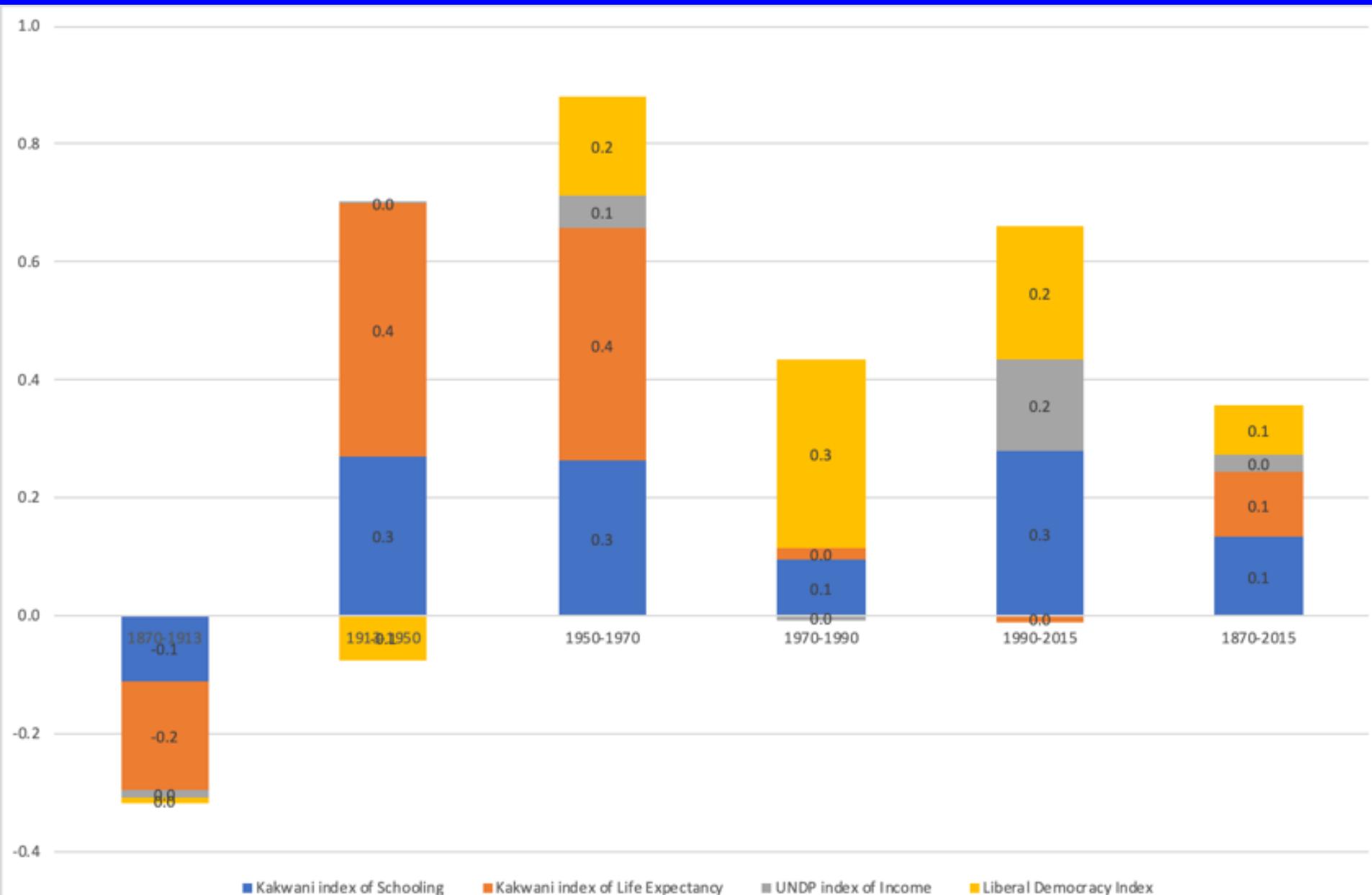
AHD Drivers in the World (Growth Rates, %)



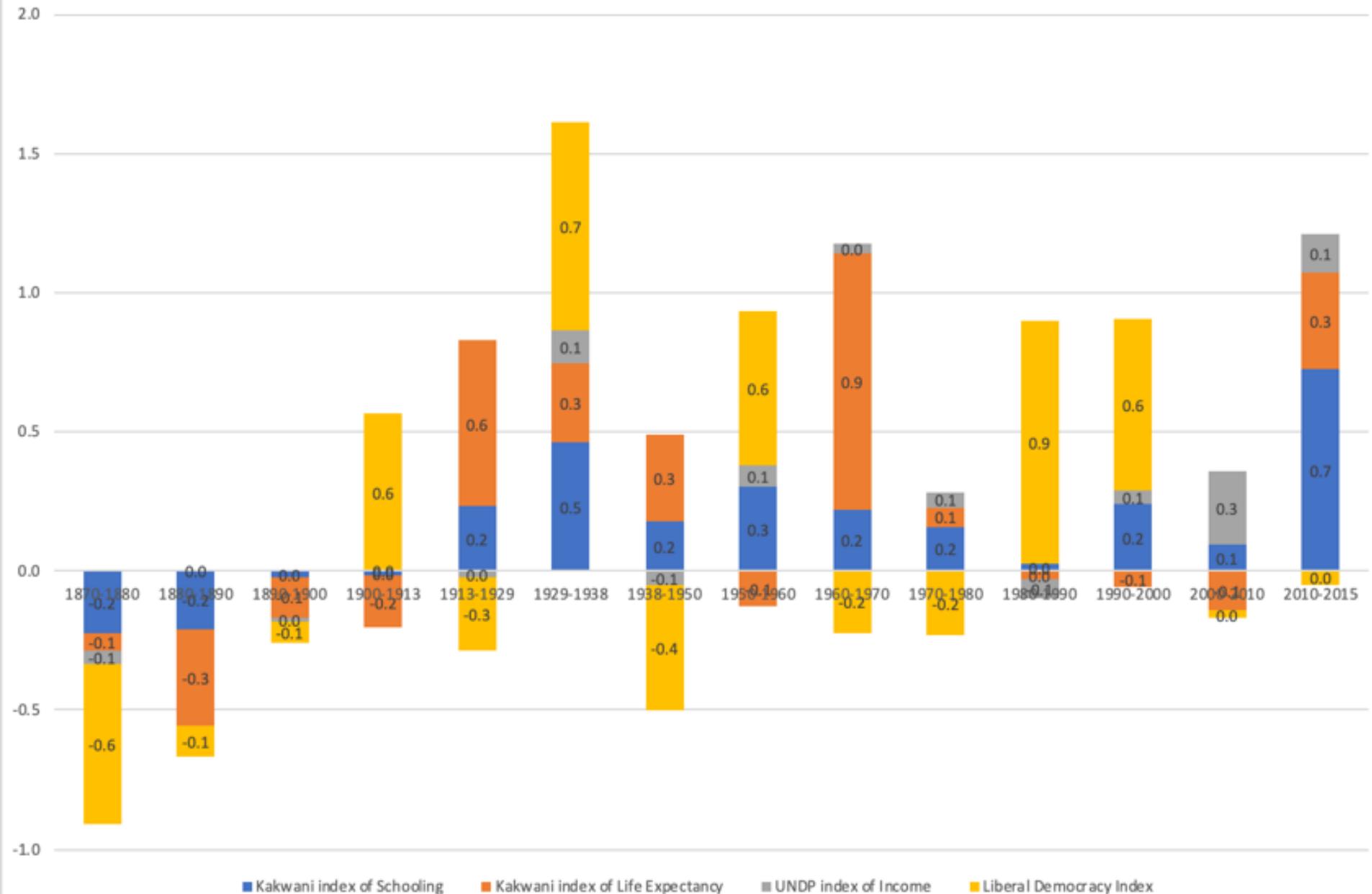
AHD Drivers in the World (Growth Rates, %)



Drivers of AHD Catching-Up to OECD in The Rest (%)



Drivers of AHD Catching-Up to OECD in The Rest (%)

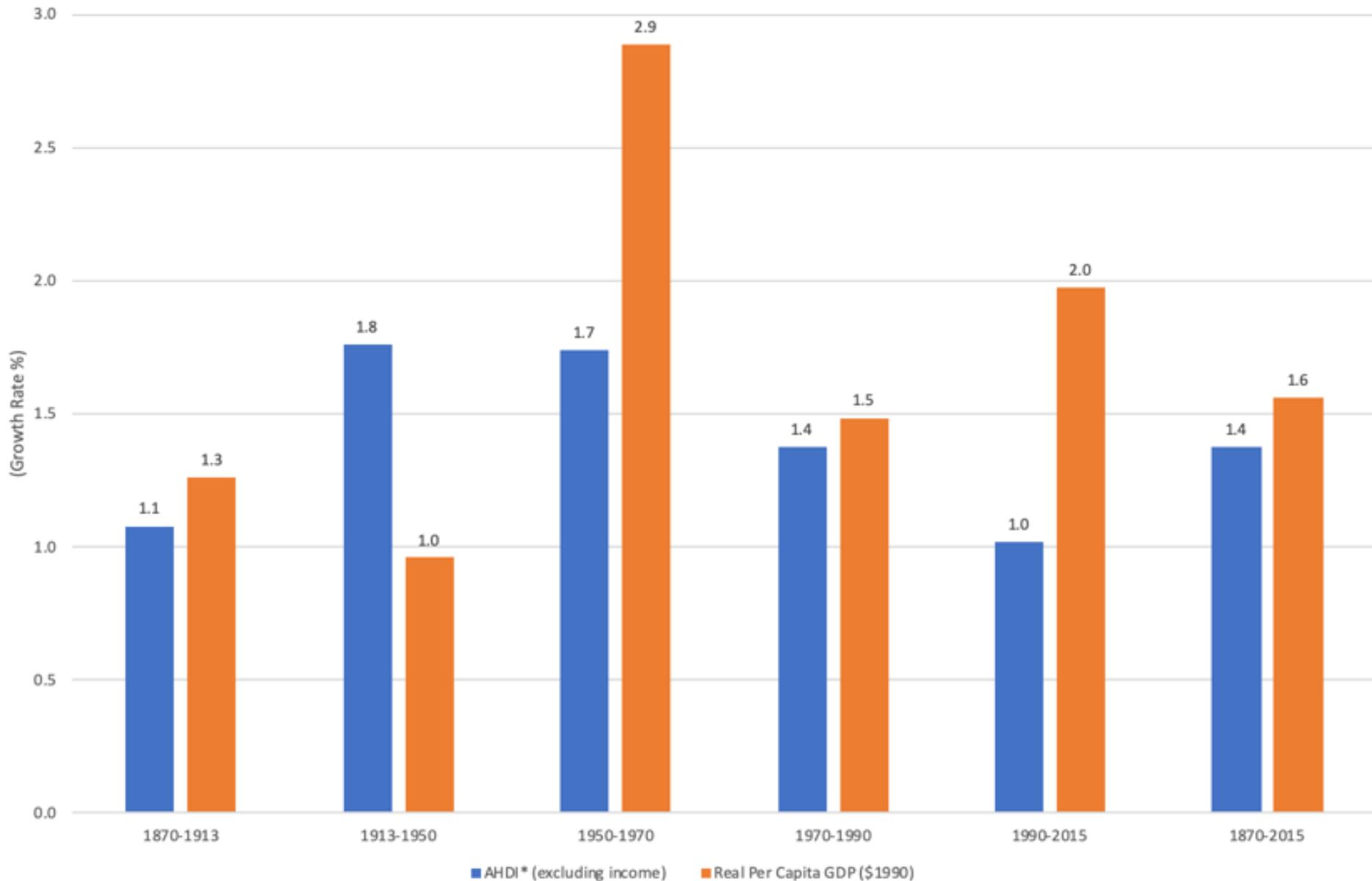


Augmented *Human Development* since 1870

- Do trends in *AHD* and *per capita income* concur?

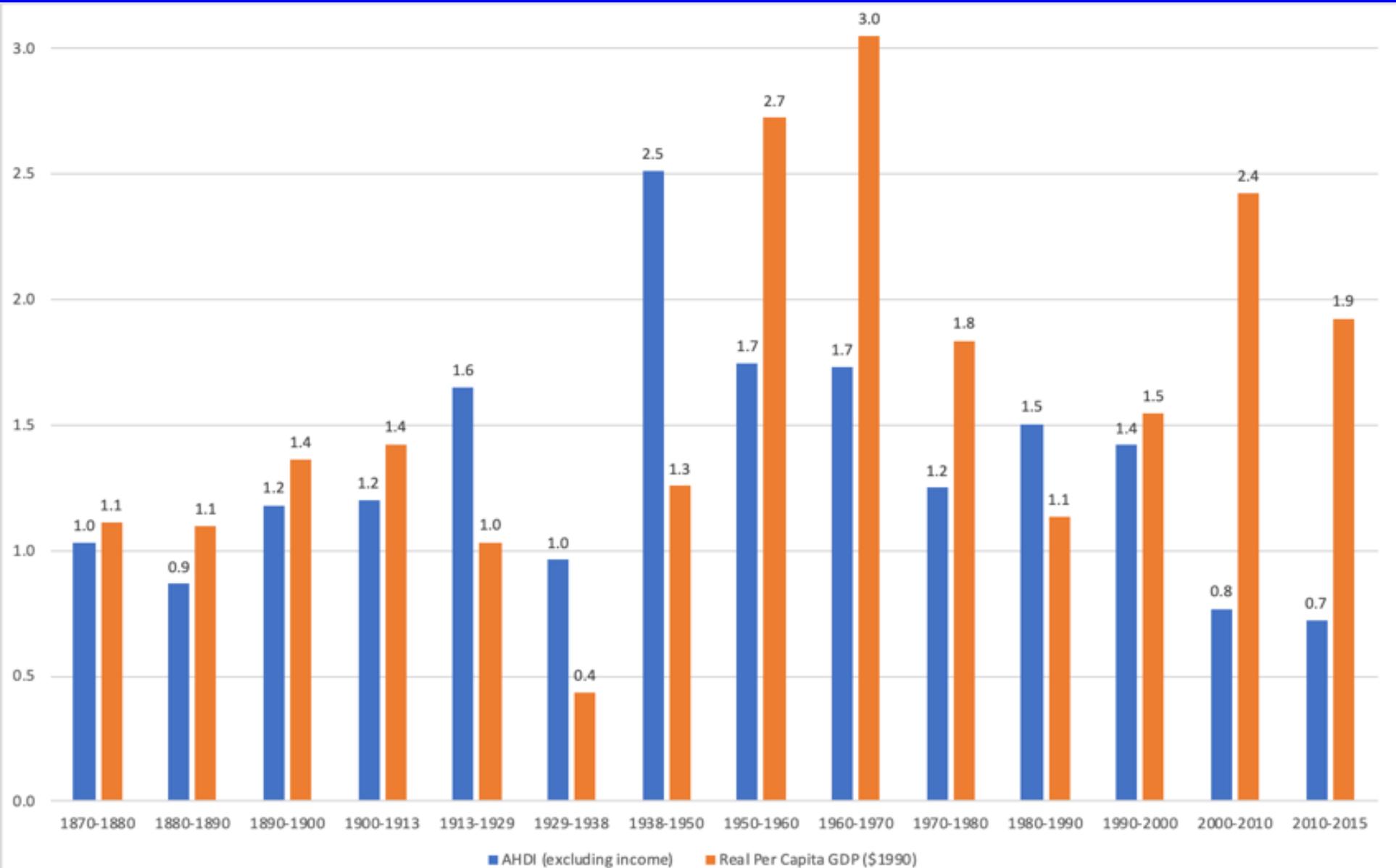
Trends in AHD and GDP per Head*

*Growth Rates (%) * excluding the income dimension*



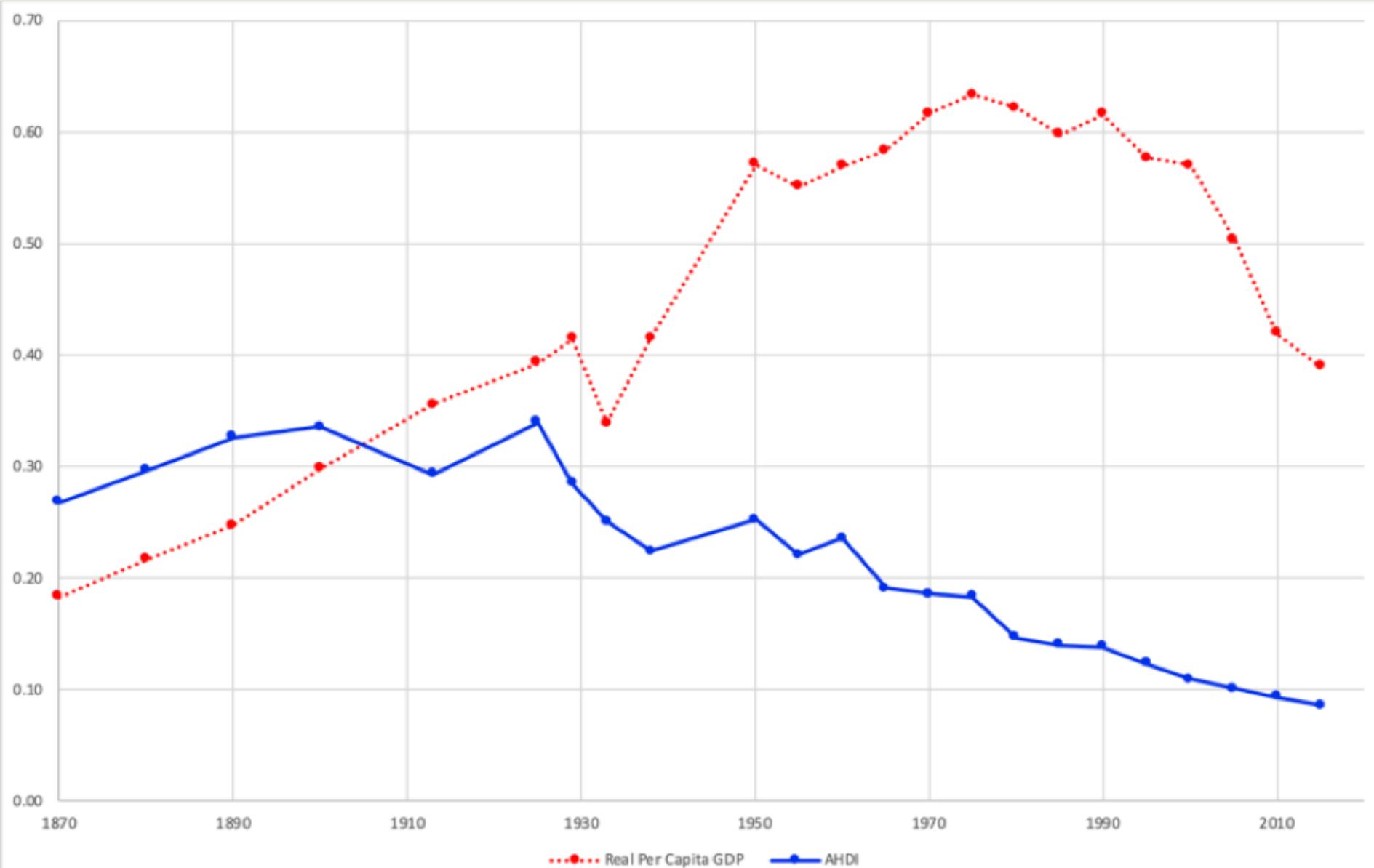
Trends in AHD and GDP per Head*

*Growth Rates (%) * excluding the income dimension*

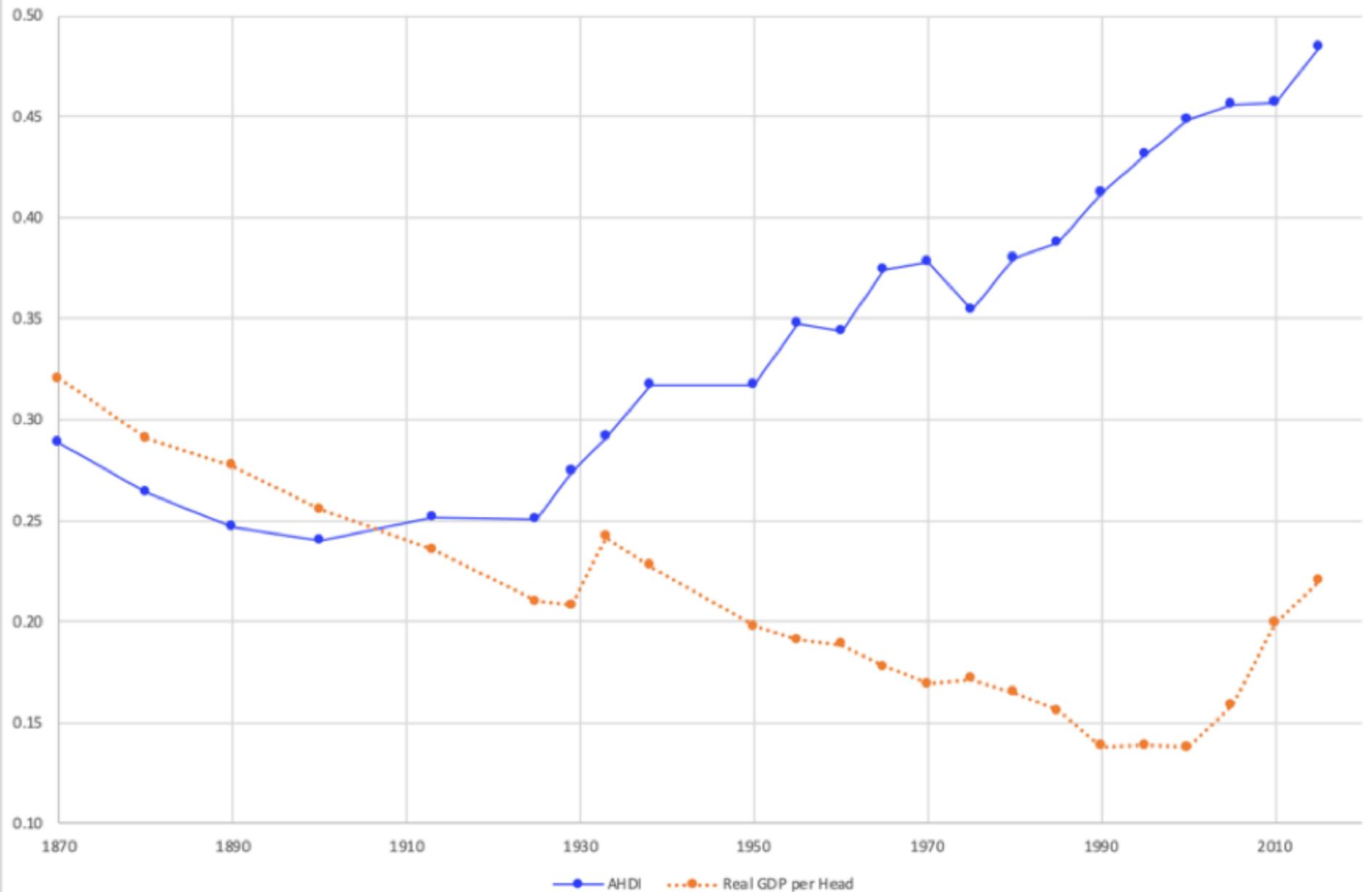


AHD and Income International Inequality

[MLD] (population weighted)



Relative AHD and GDPpc in The Rest (OECD = 1)



Main Findings

- *Augmented Human Development (AHD)* grew around the world since **1870**, in **1913-70**, especially, but significant room for improvement still exists
- *Relative inequality* in *AHD* increased up to **WWI**; long run **decline** from the **late 1920s**
- *Absolute inequality* in *AHD* rose up to the **mid-20th century**; it fell from **1960** onwards
- **Middle and low AHD** countries achieved **larger relative gains** in the long run, but the **top 10 per cent** of countries obtained the **largest absolute gains**,
 - *AHD gains* varied across the **distribution** during different *phases of globalisation*
- *Augmented Human Development* **unevenly spread** across world **regions**
 - The *absolute gap* between the *OECD* and the *Rest* **deepened** over time,
 - The *relative gap* fell from the **late 1920s**, driven by *longevity* up to **1970**; then, *freedom*
- **Development puzzle: GDP per person** and *AHD* trends **not** always **match**
 - *AHD* major *gains* during early 20th century *globalisation backlash* due to *longevity* and *education*
 - *Relative international inequality*: grew in *per capita income* until the **early 1970s**; fell since the **1990s**.
In terms of *AHD* steadily **reduced** since the **late 1920s**
 - *OECD-Rest* **relative gap**: declining in *AHD*, growing in *per capita income*