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SCHOOL OF PUBLIC HEALTH
Powerful ideas for a healthier world

ECONOMICS OF DEPOPULATION

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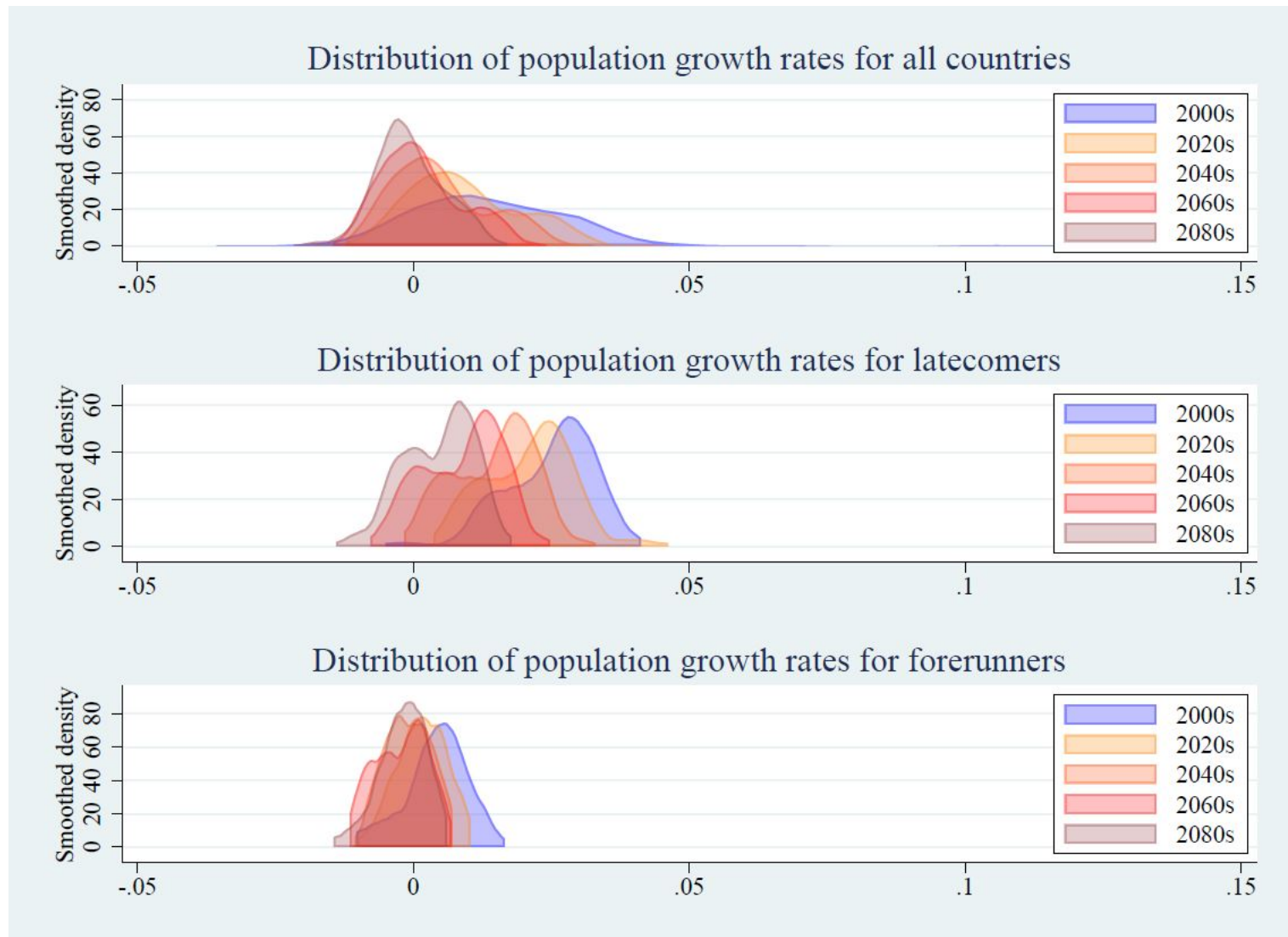
Wittgenstein Centre Conference 2021
“The Causes and Consequences of Depopulation”

Agenda

- Depopulation: Facts, Force, Future
- The Association between Depopulation and Population Aging
- Depopulation, Population Aging, and Dementia

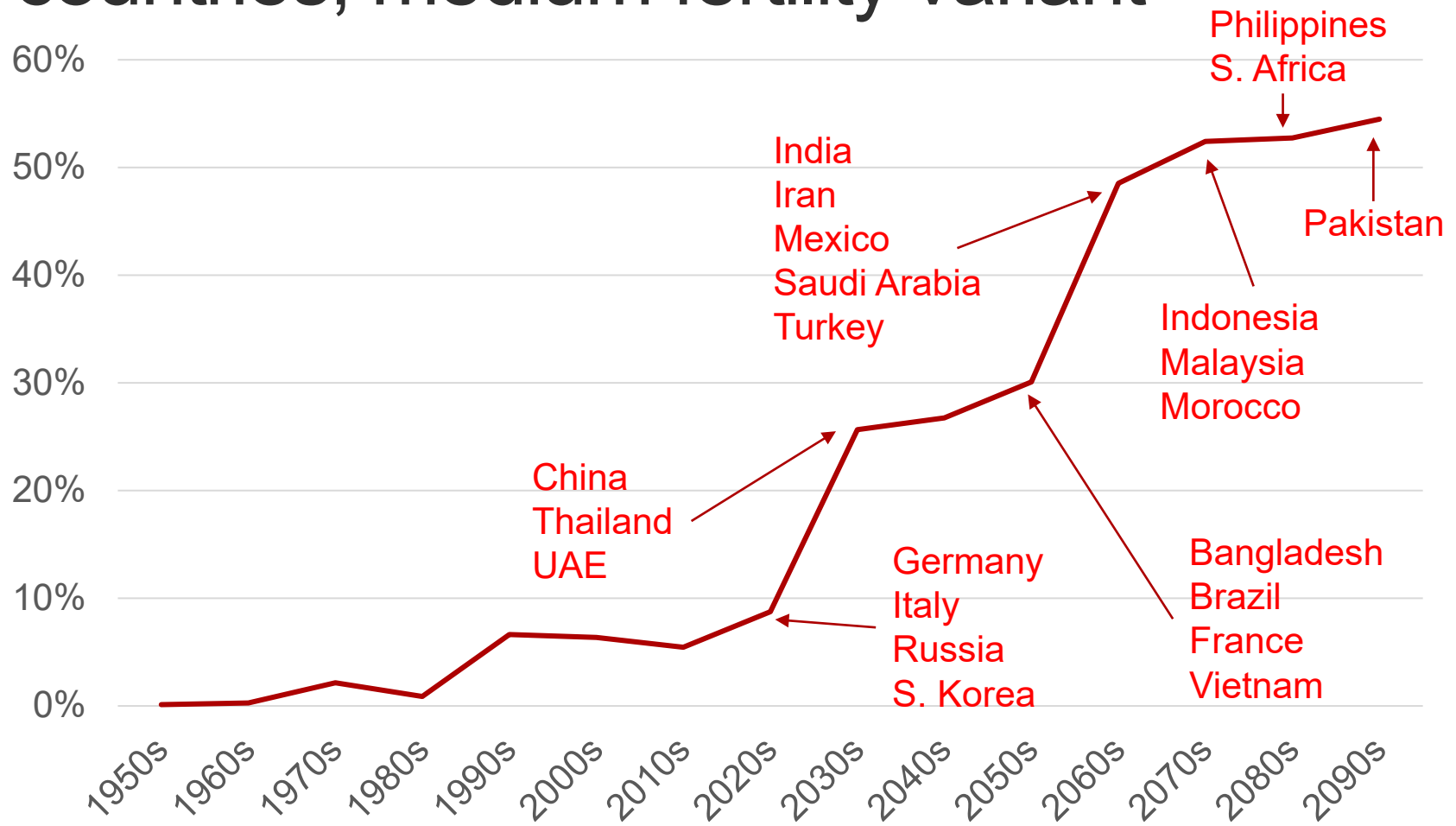
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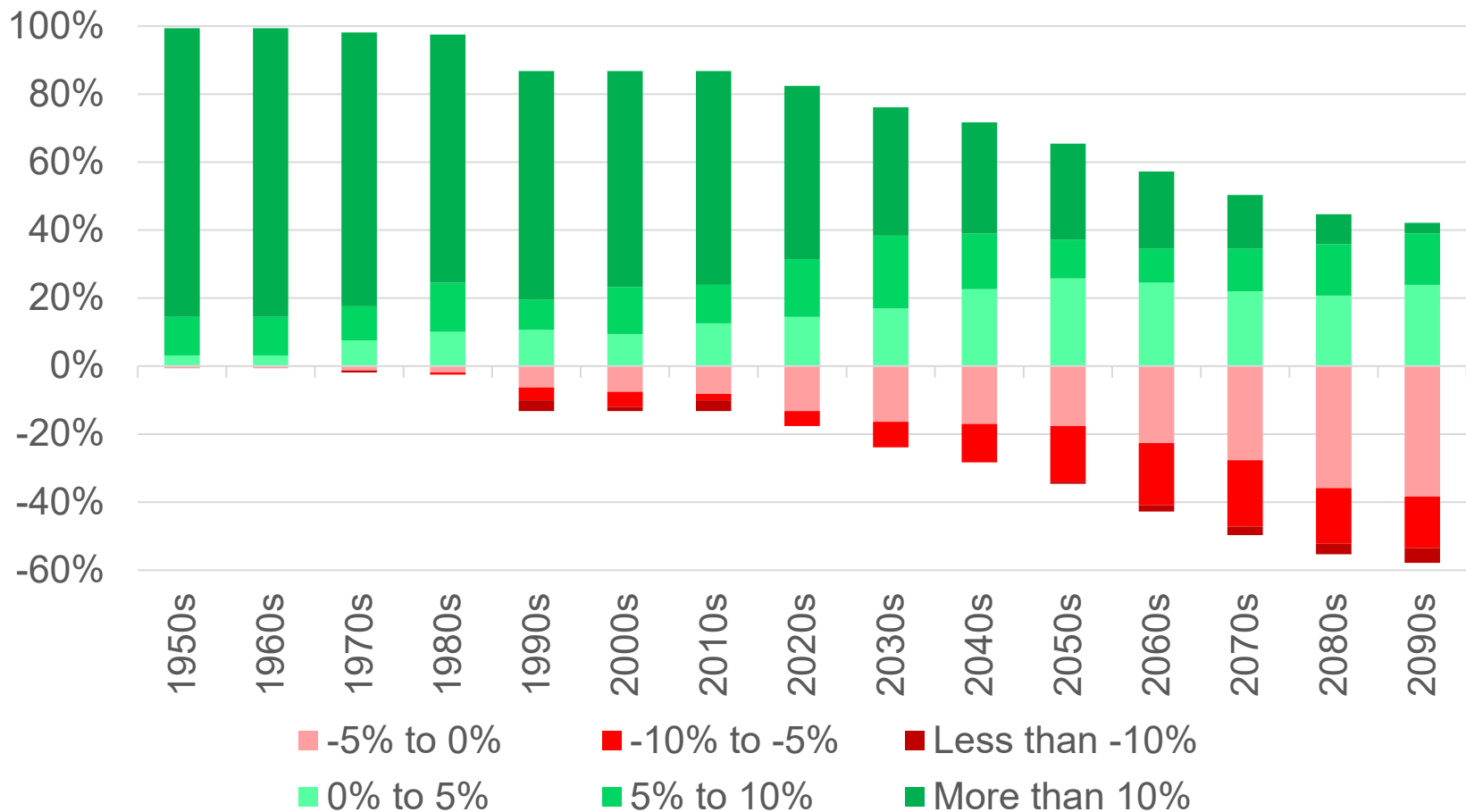
Source: UN Population Division, 2019 Revision

Share of world population in depopulating countries, medium fertility variant



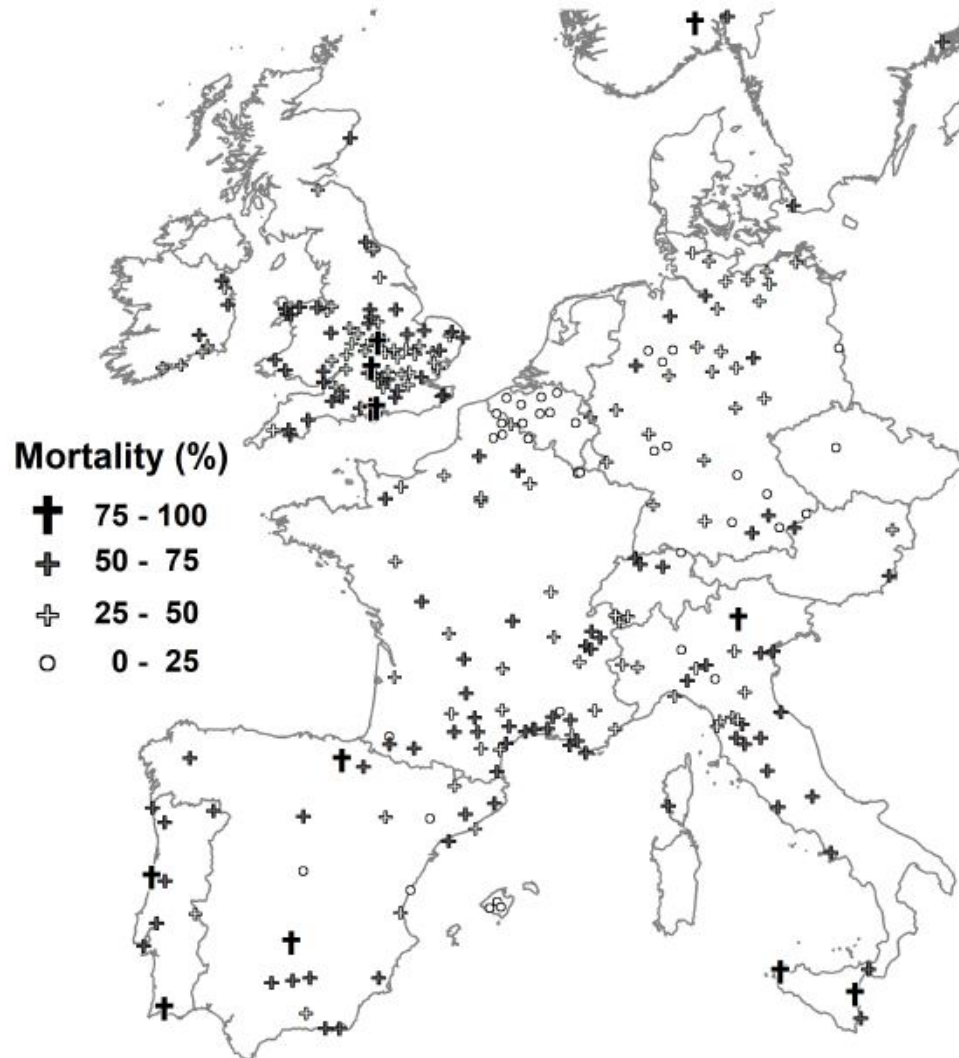
Source: UN Population Division, 2019 Revision

Decadal population growth, medium fertility variant (population 1M+ in 2020)

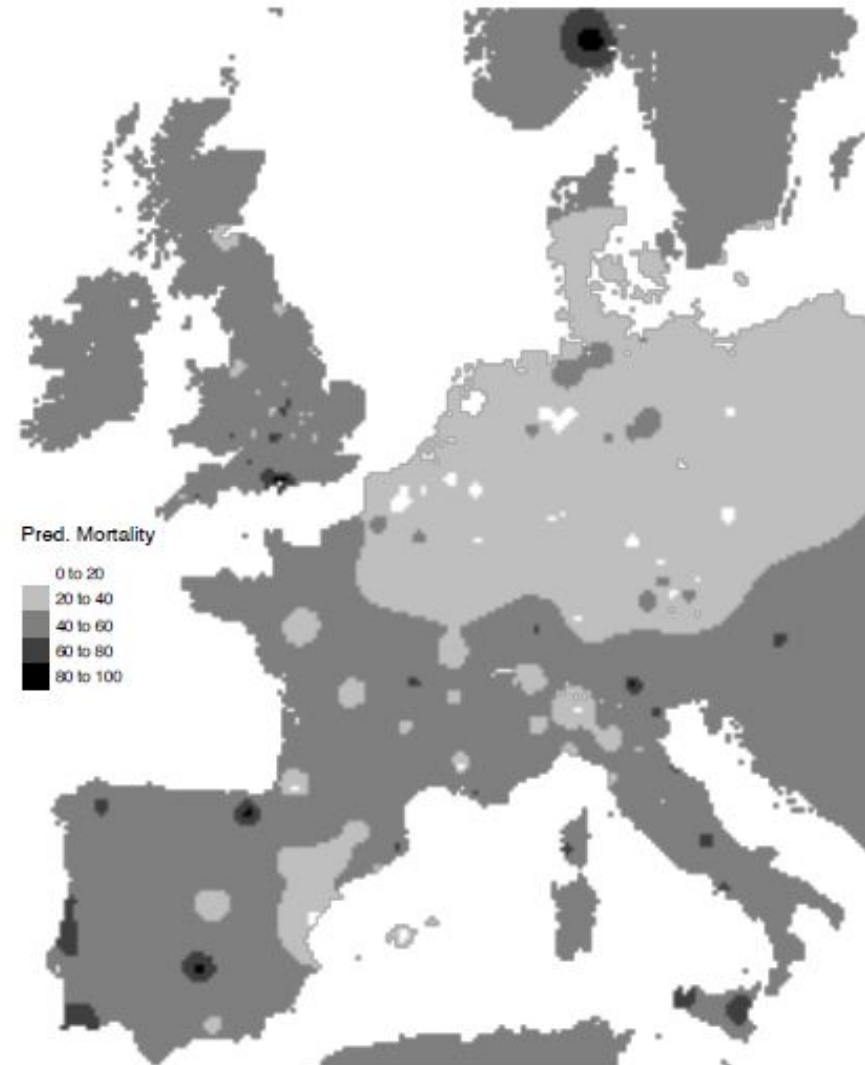


Source: UN Population Division, 2019 Revision

Urban Black Death mortality rates (%), 1347-1352

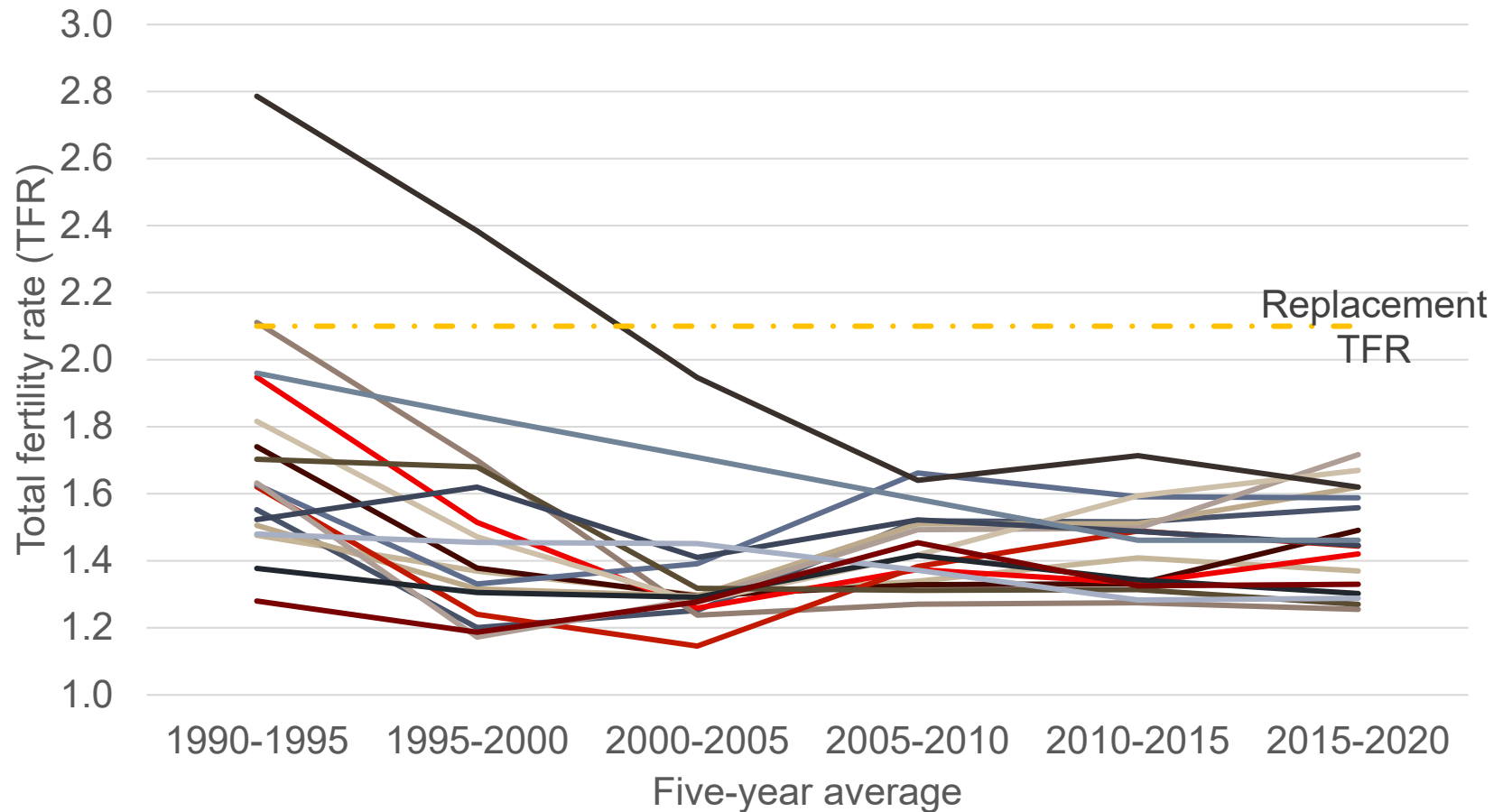


Spatially averaged Black Death mortality rates (%), 1347-1352



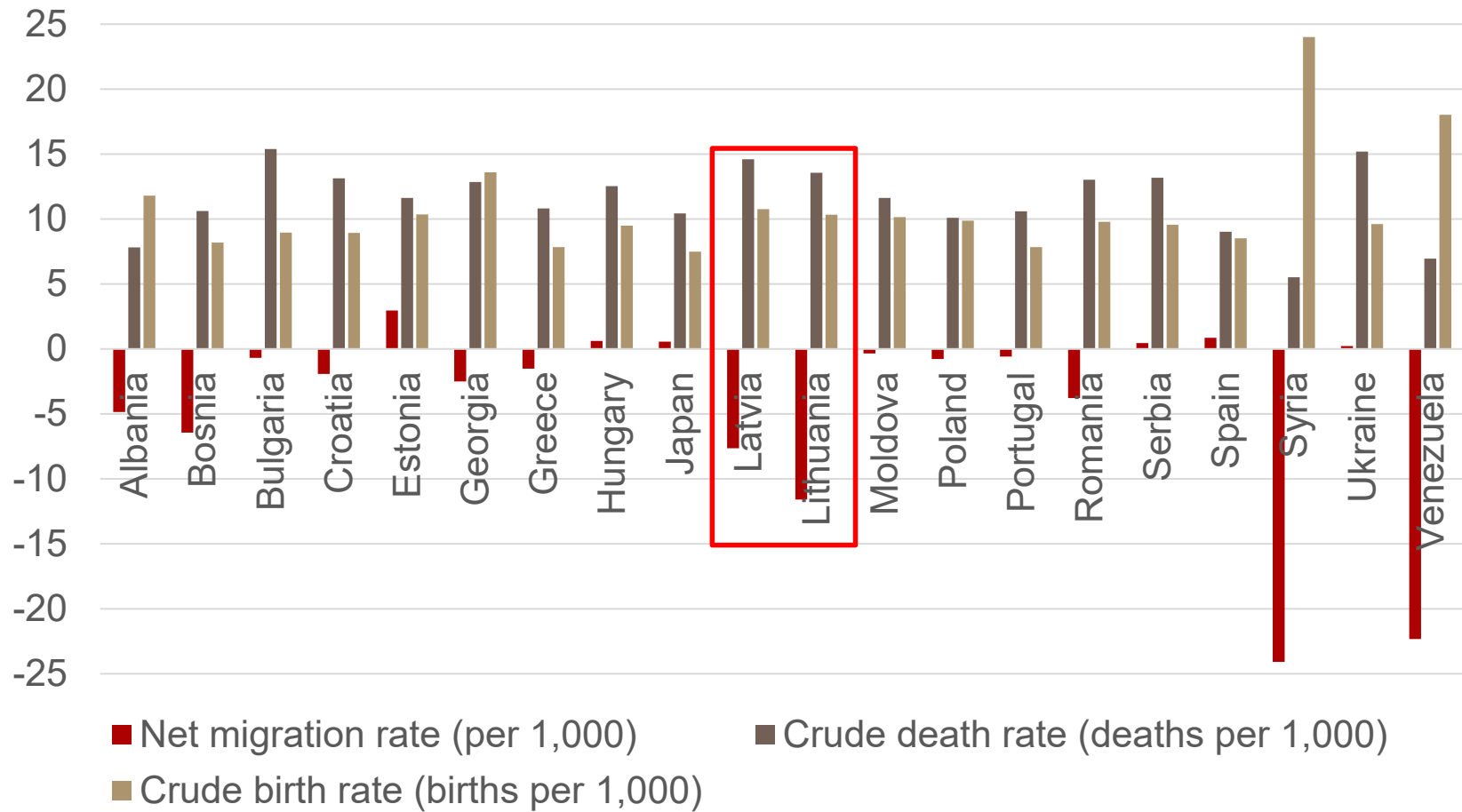
Source: Jedwab et al. (2020)

Total fertility rates of countries depopulating during 2010-2020



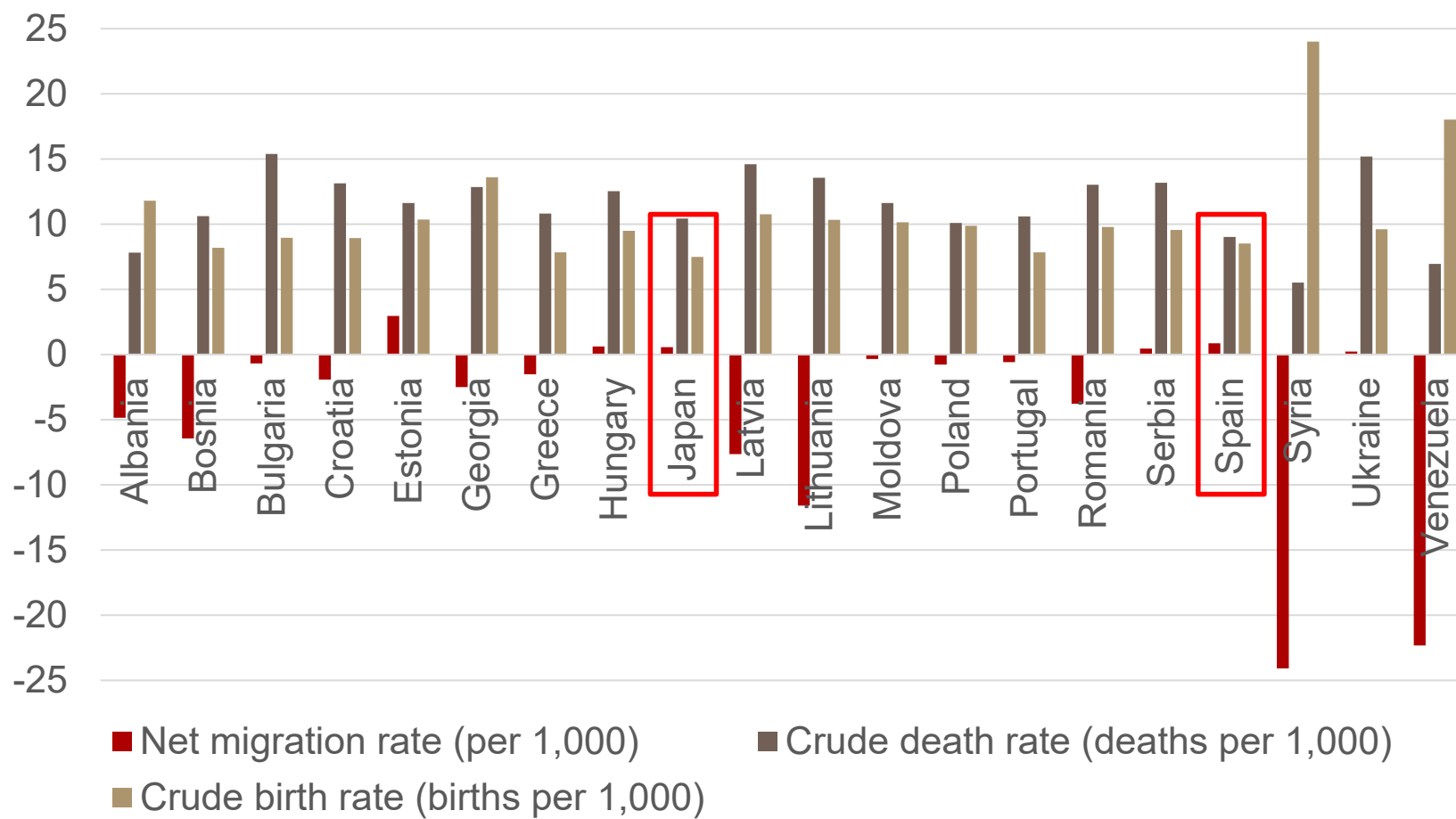
Source: UN Population Division, 2019 Revision

Migration, death, and birth rates in depopulating countries, 2015-2020



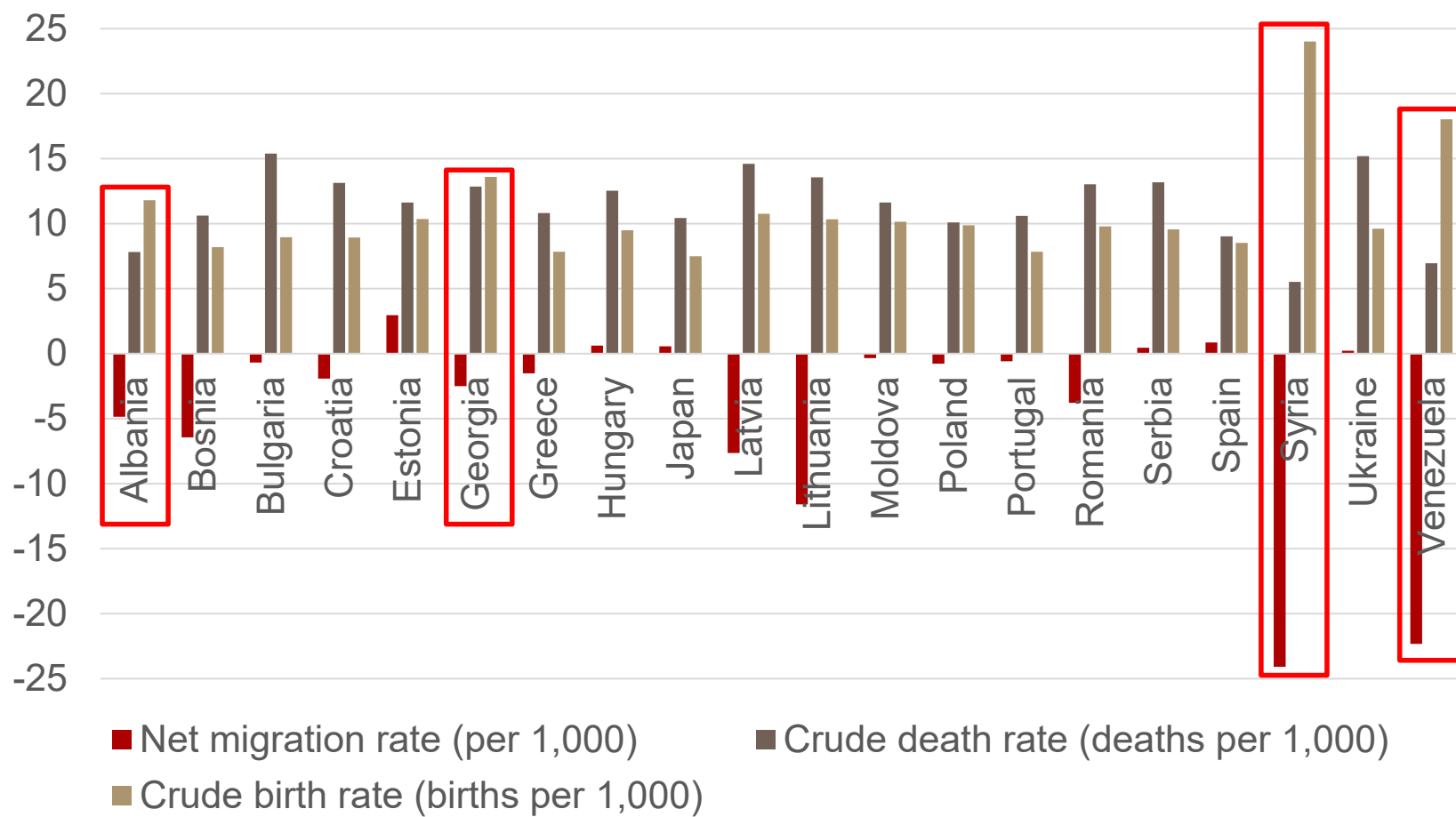
Source: UN Population Division, 2019 Revision

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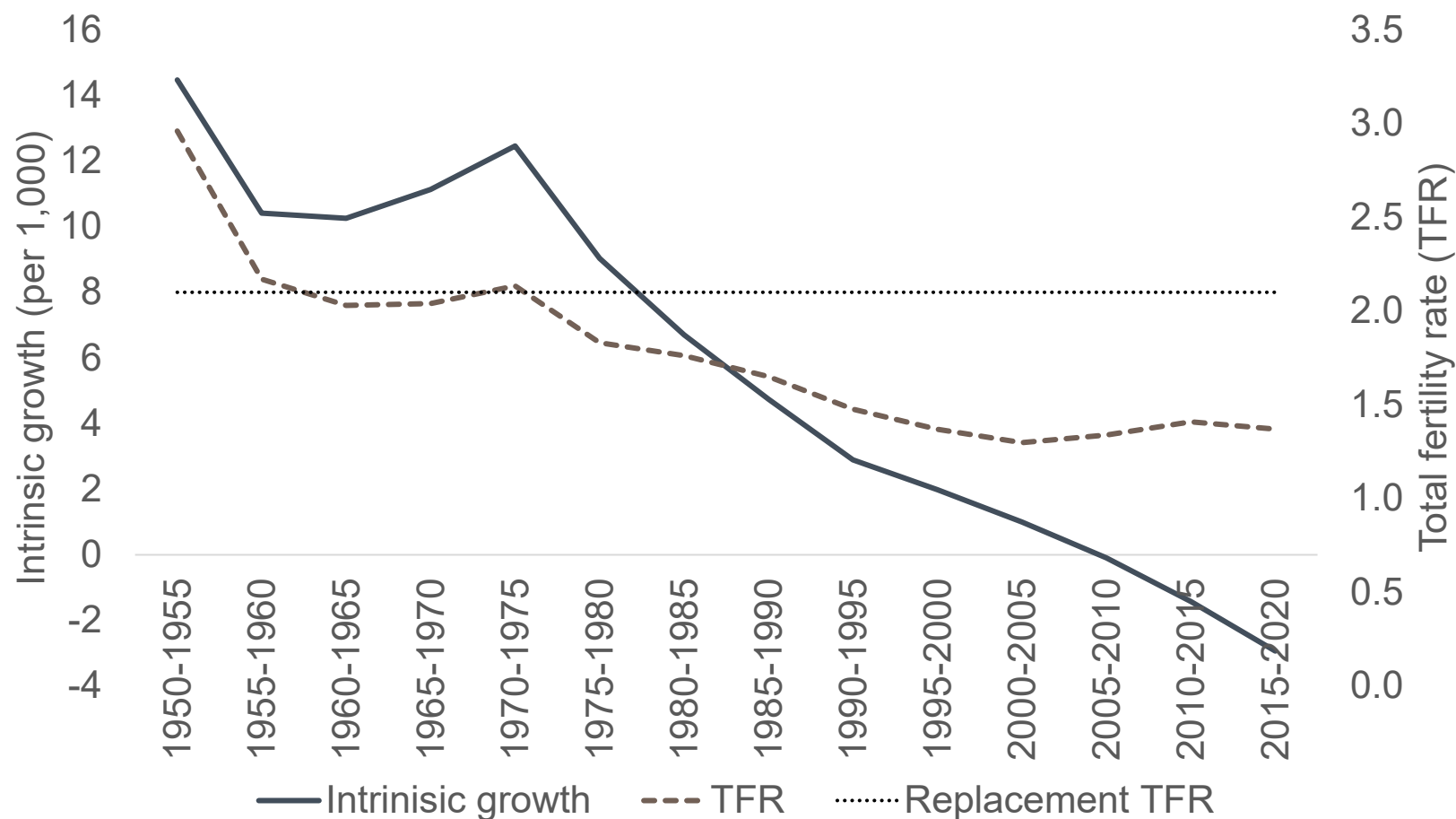
Source: UN Population Division, 2019 Revision

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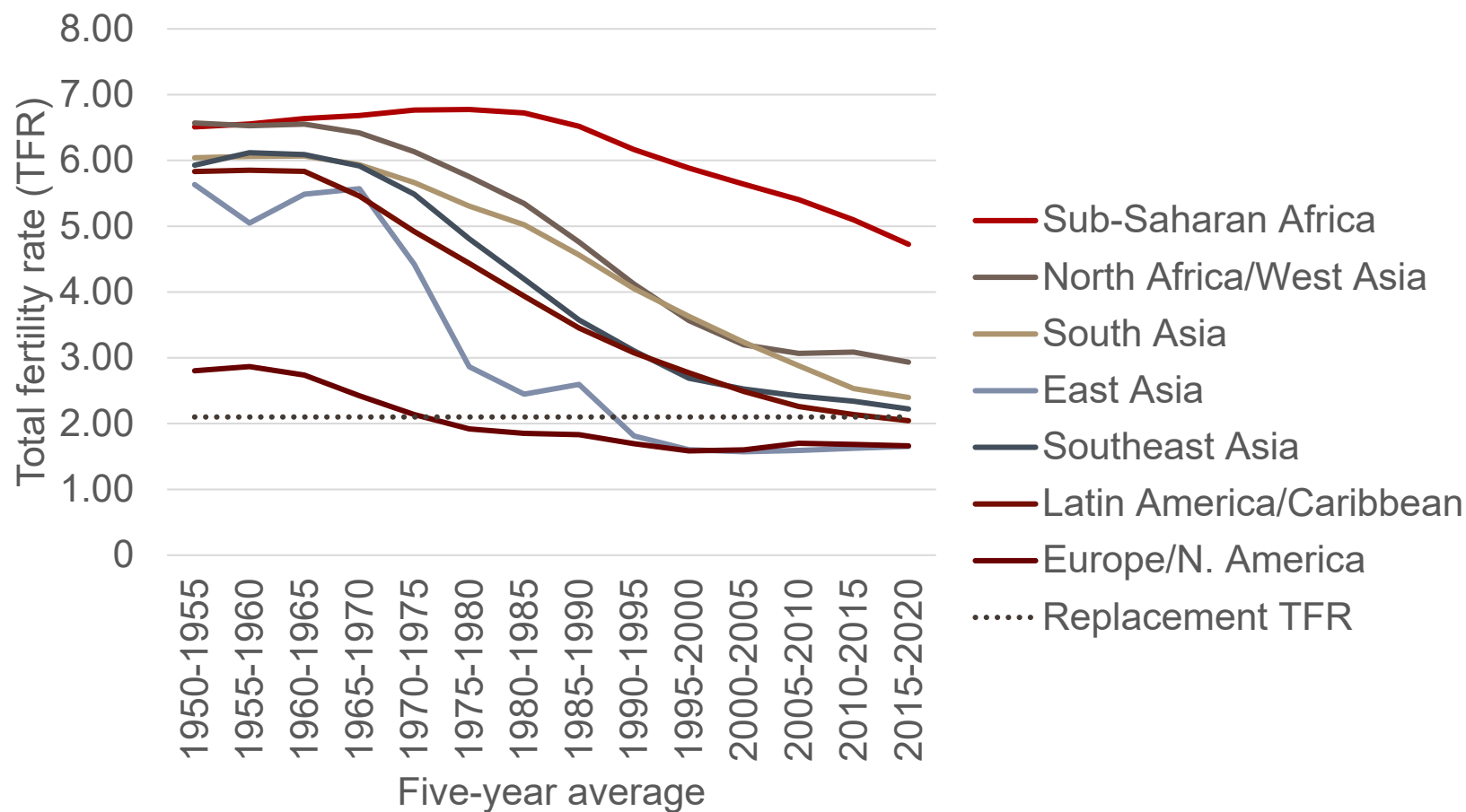
Source: UN Population Division, 2019 Revision

Japan's population momentum



Source: UN Population Division, 2019 Revision

Total fertility rates globally



Source: UN Population Division, 2019 Revision

Fading echoes

East Germany's population is shrinking

The rest of the country, and large swathes of Europe, will face similar problems in future

Free Exchange

The economics of falling populations

A shrinking global population could slow technological progress

Death Spiral Demographics: The Countries Shrinking The Fastest

U.S. Population Growth, an Economic Driver, Grinds to a Halt

Covid-19 pandemic compounds years of birth-rate decline, puts America's demographic health at risk

The incredible shrinking people

Russians are dying out, with dire consequences

Balking at Balkan babies

The Balkans are getting short of people

The demography of south-eastern Europe threatens its hopes of prosperity

China's Census Highlights Its Looming Population Problem

After weeks of delay, China issued census data showing a minuscule rise in its population in 2020

Old, shrivelling and broke

Rural areas bear the burden of Japan's ageing, shrinking population

Half the country's municipalities are expected to disappear by 2040

The Population Implosion

'Overpopulation' Turns Out to Be Overhyped

Long Slide Looms for World Population, With Sweeping Ramifications

Fewer babies' cries. More abandoned homes. Toward the middle of this century, as deaths start to exceed births, changes will come that are hard to fathom.

Vladimir Putin



“Russia’s fate and its historic prospects depend on how many of us there are... it depends on how many children are born in Russian families in one year, five, 10 years, on what they will grow up to be.”

Shinzo Abe

“I have absolutely no worries about Japan’s demography.

Japan may be aging. Japan may be losing its population. But these are incentives for us.

Why? Because we will continue to be motivated to grow our productivity.



So, Japan’s demography, paradoxically, is not an onus, but a bonus.”

Depopulation economics: key issues

- Capital-labor ratio
- Global allocation of investment
- Global distribution of income
- Economies of scale
- Technological progress

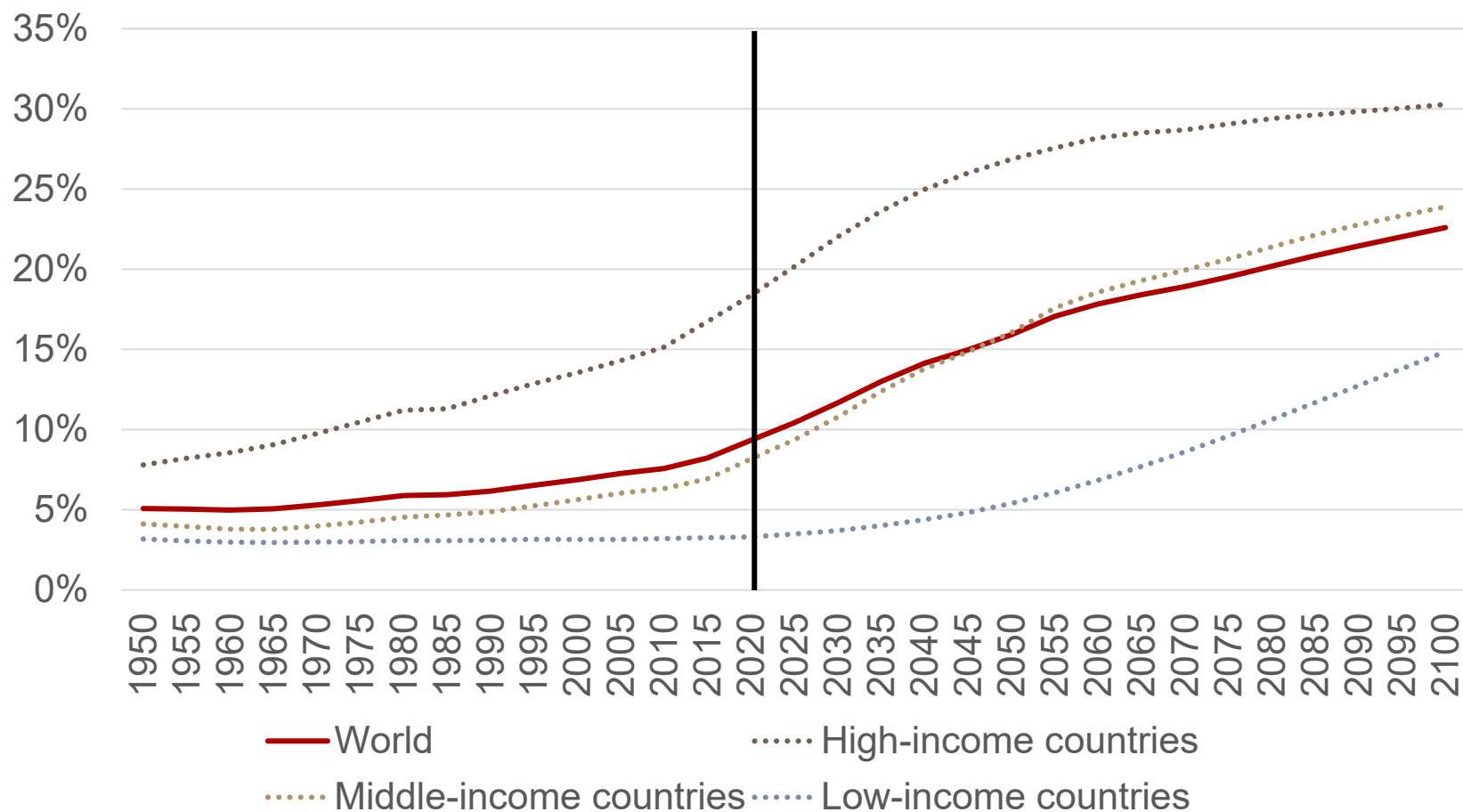
Depopulation economics: policy responses

- Pronatalist policies
- Labor force participation incentives
- Migration policies
- Investments in human capital
- Investments in technological progress

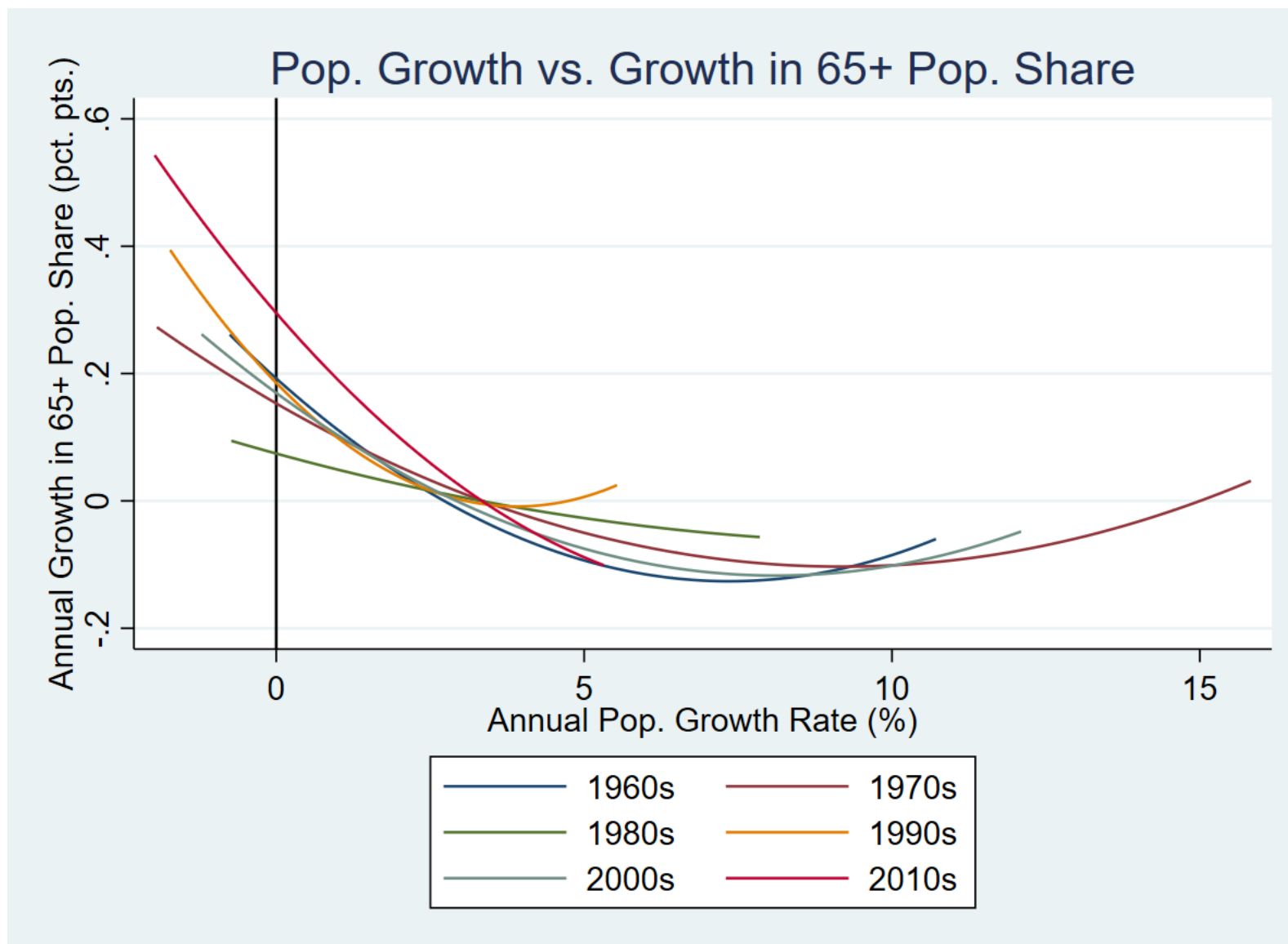
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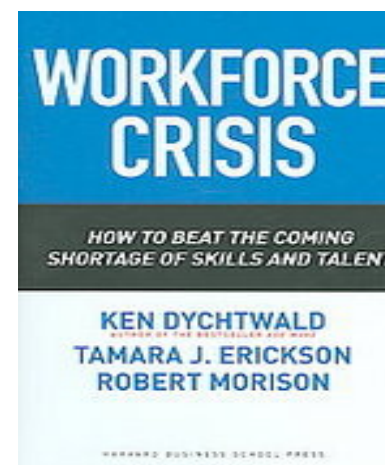
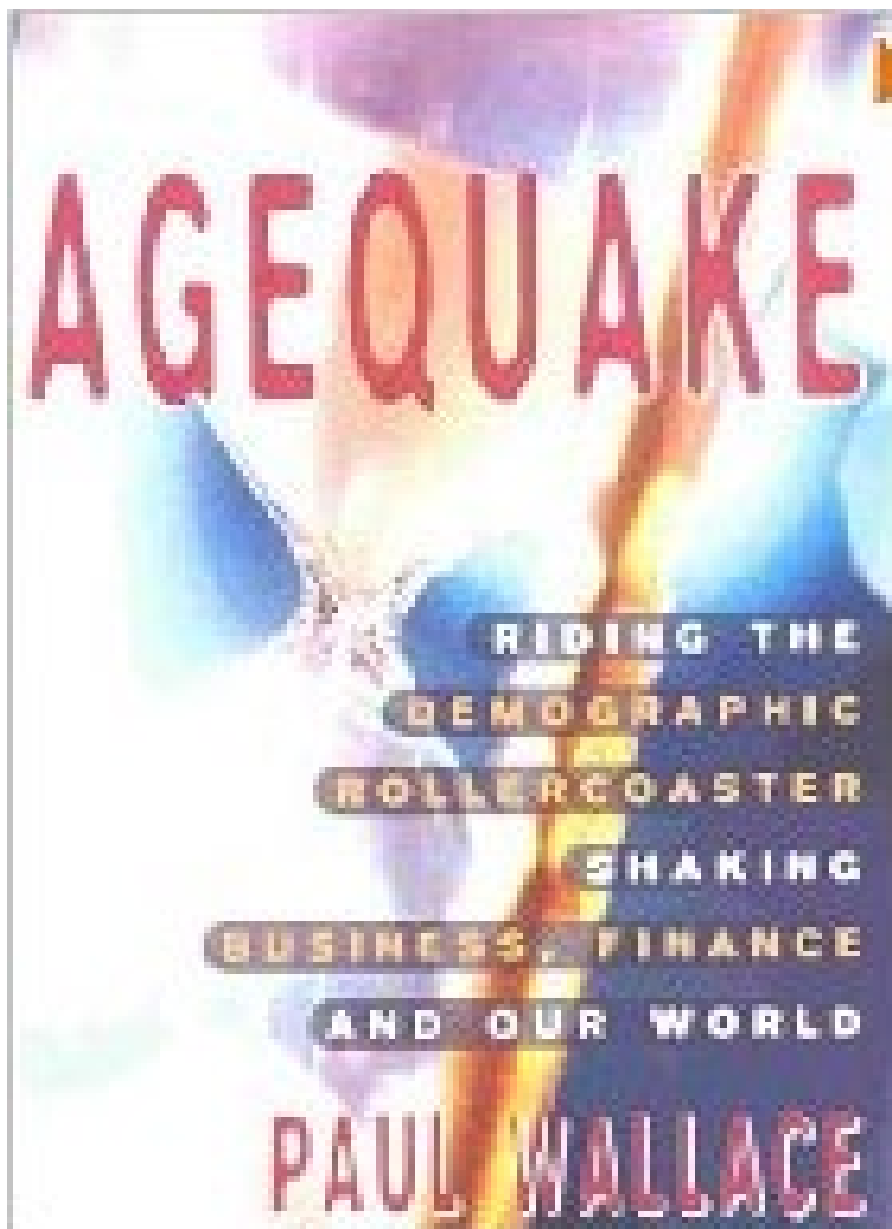
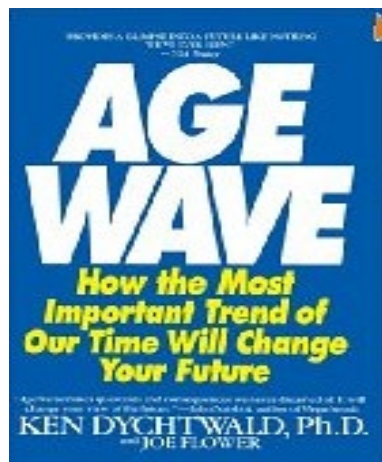
Share of population aged 65+



Source: UN Population Division, 2019 Revision



Source: UN Population Division, 2019 Revision



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Core building blocks

1. Prioritizing improved health technology assessments (HTAs)
2. Specific research on the scale and scope of ADRDs, and what is needed to address them

Health technology assessments

Blind spots regarding downstream value of health:

1. Hidden benefits of elevated levels of adult labor force participation
2. Hidden improvements in social equity, since benefits of population-based health interventions accrue disproportionately to vulnerable groups

Key takeaways for ADRDs

- The first step in effectively addressing ADRDs is understanding their scope and burden.
- ADRDs already impose sizable health, economic, and social burdens that will only continue to grow.
 - Health economists' standard cost-of-illness model
 - Health-augmented macroeconomic model
 - Value of statistical life model

Key takeaways for ADRDs

- The global economic burden of ADRDs will more than triple over the next 30 years.
- The most natural and economically defensible option to address ADRDs involves spending more on R&D for disease-modifying therapeutics.

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