



Wittgenstein Centre

FOR DEMOGRAPHY AND
GLOBAL HUMAN CAPITAL



universität
wien

Population, Education and Sustainable Development

Wolfgang Lutz

United Nations CPD, April 2023



Wittgenstein Centre

What are demographic trends ?

The classic definition of the discipline of demography is:

the **scientific study of changing population size and structures.**

“Structures” is stated in plural referring to multiple structures (not only age structure)

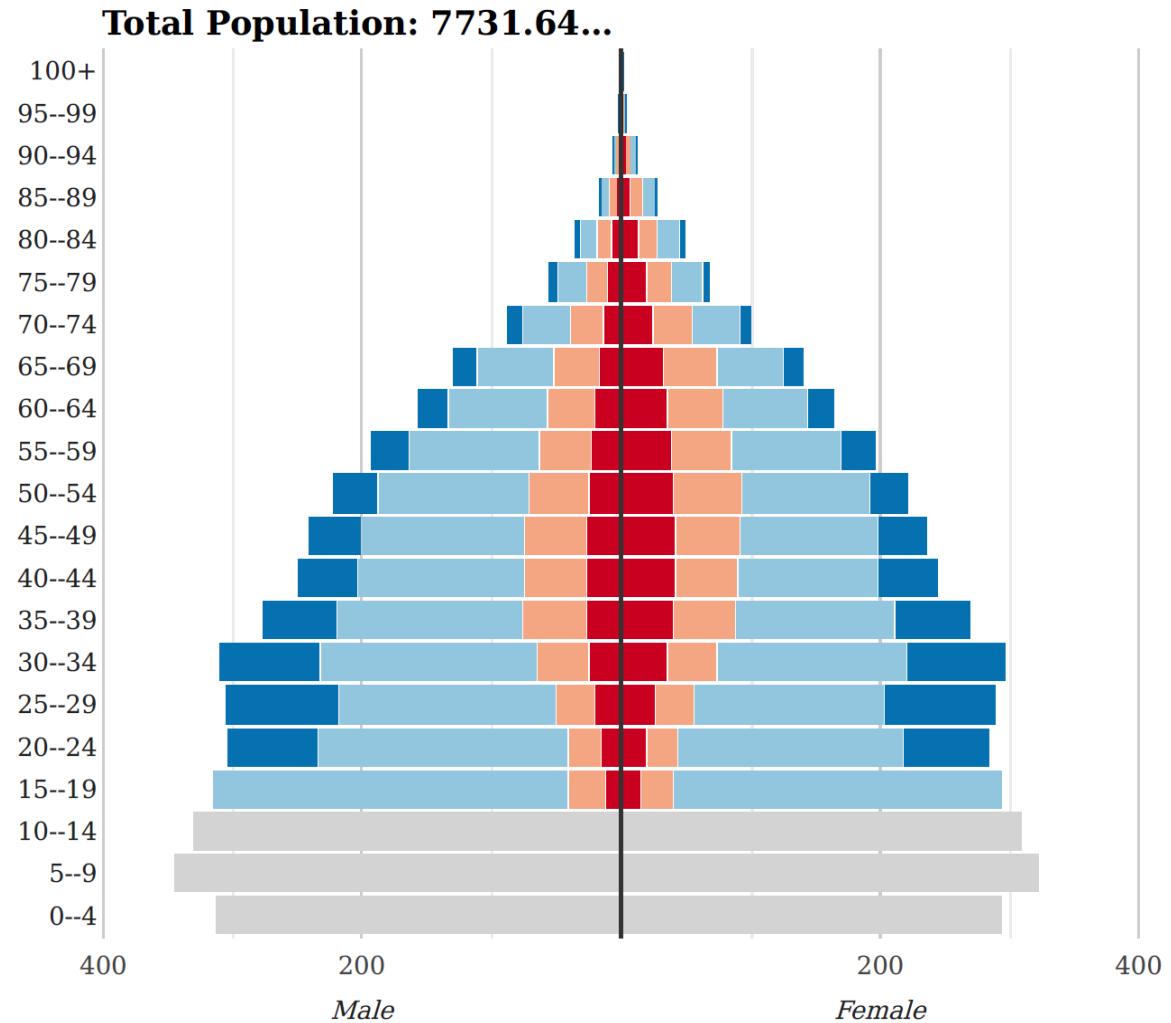
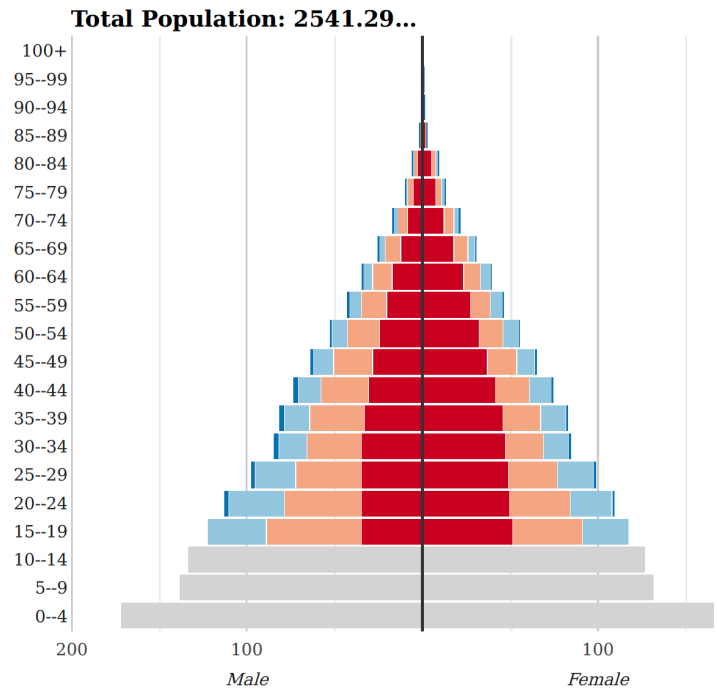
Multi-dimensional demography (study population structures by age, sex, place of residence, education, Labor Force-Participation, ethnicity ... as traditionally collected in censuses)

This multi-dimensional approach makes the study of changing population structures much more relevant for sustainable development than a limited focus on age structure alone.

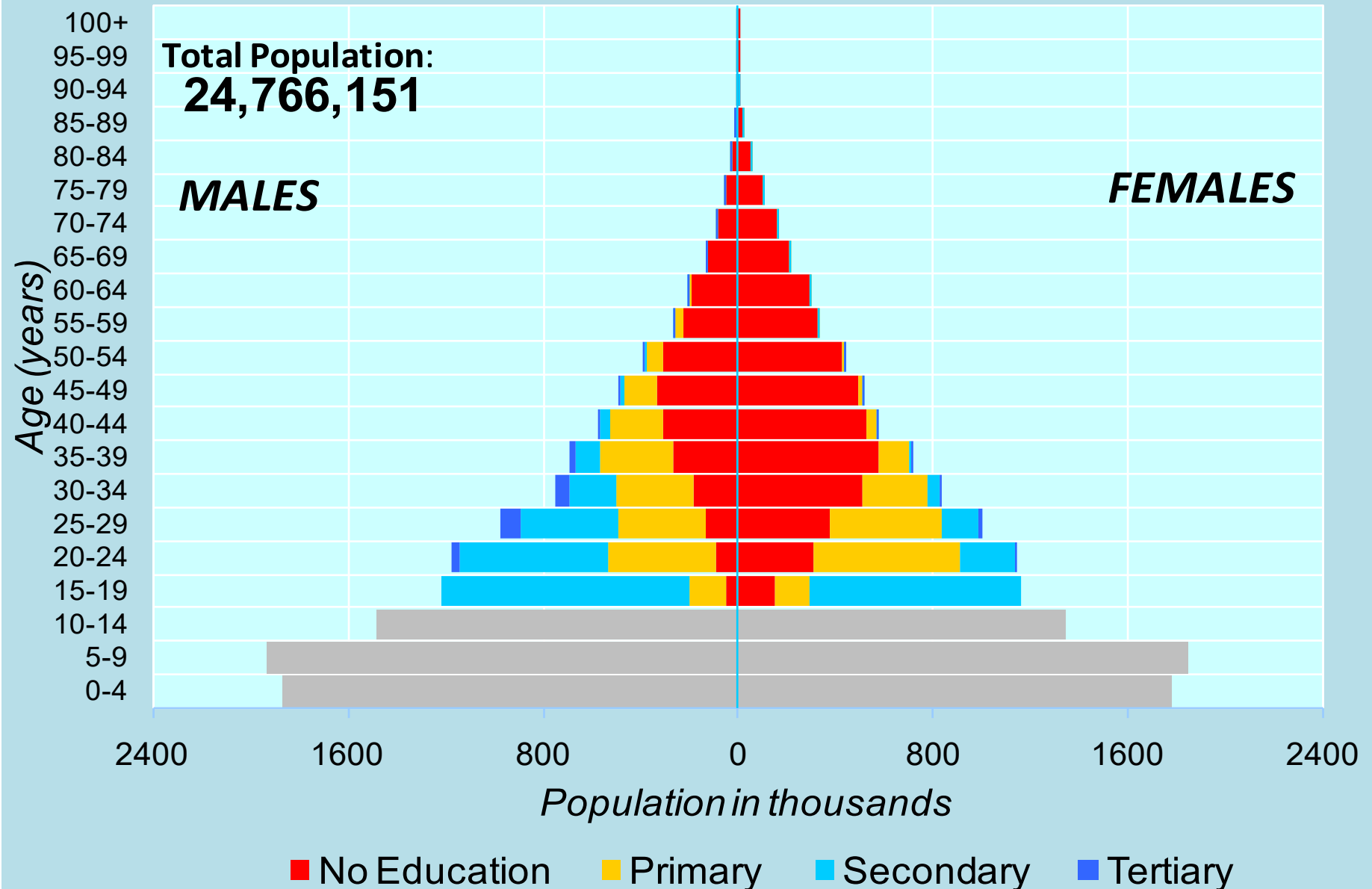
Age and education pyramids for the world population in 1950 (left) and 2020 (right).

Source: WIC Graphic Explorer

Under 15
 No Education
 Primary
 Secondary
 Post Secondary



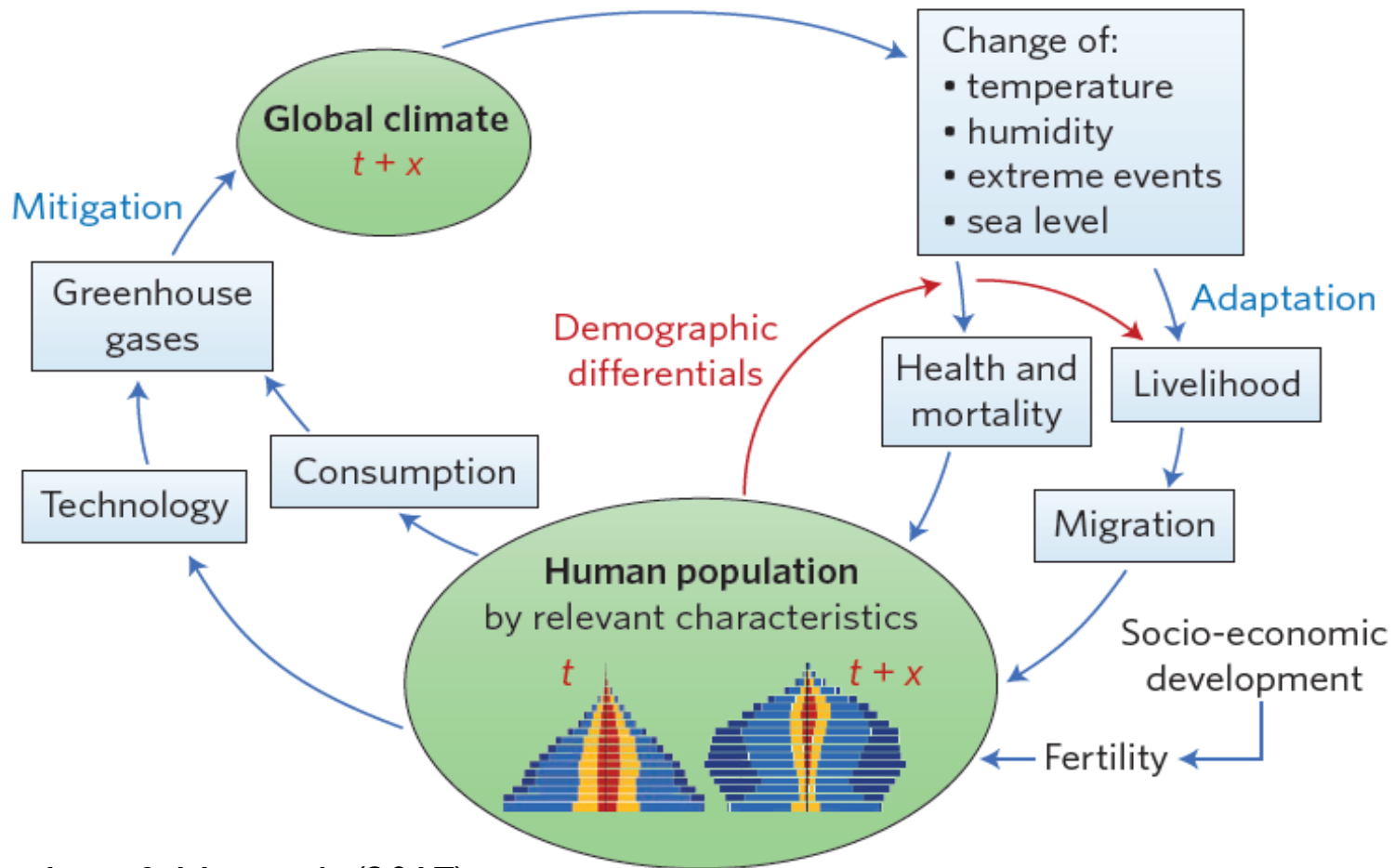
Republic of Korea-1960



Interactions between Population and Climate Change



Wittgenstein Centre



Source: Lutz & Mutarak (2017)
Nature Climate Change.

International | Survival of the bookish

Climate change is harder on less educated people

And covid learning loss has made them even more vulnerable



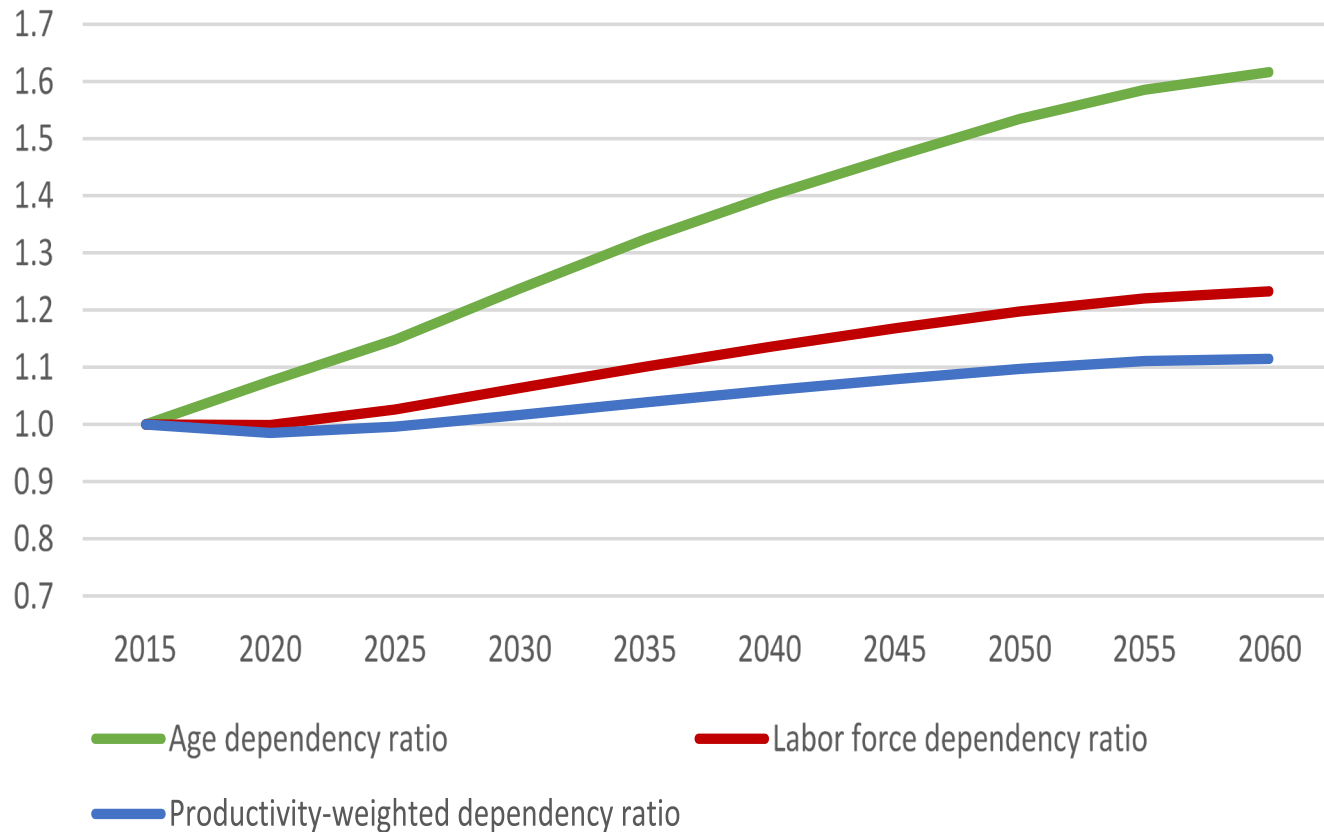
Under a multi-dimensional demographic perspective the future looks different



Wittgenstein Centre

The “burden” of demographic aging
(From: Marois, Belanger and Lutz; PNAS 2020)

Figure 2. Projections of the three different dependency ratios for the EU-28, baseline scenario, 2015-2060



An hourglass-shaped graphic on a dark blue background. The top bulb is filled with a bright blue sky, white clouds, a yellow sun, and green rolling hills with small human figures and birds. The narrow neck of the hourglass is a thin blue stream. The bottom bulb is filled with a greyish-blue sky, white clouds, and a yellow sun, but the landscape is a brown, arid desert with sparse, dead-looking trees and a single human figure sitting on a log.

THE FUTURE
IS NOW
SCIENCE FOR ACHIEVING
SUSTAINABLE DEVELOPMENT



GLOBAL SUSTAINABLE
DEVELOPMENT REPORT

2019