Ageing global and inevitable - no demographic solution

- "A substantial degree of population ageing is expected over the next few decades in all regions of the world
- [...] unlikely that policy interventions intended to encourage childbearing in low-fertility countries could substantially alter this expectation.
- [...] no plausible assumption about international migration levels would have more than a moderate impact on the expected degree of population ageing that will be experienced in future decades by countries all over the world."

(UN 2007)

Fertility is likely to stay low



- •Fertility decline is likely to spread to more nations i this will contribute to population ageing
- •My recent book (Decline and Prosper) provides an overview of global fertility in the past, present and future from multiple perspectives including biological, economic, socio-cultural and evolutionary

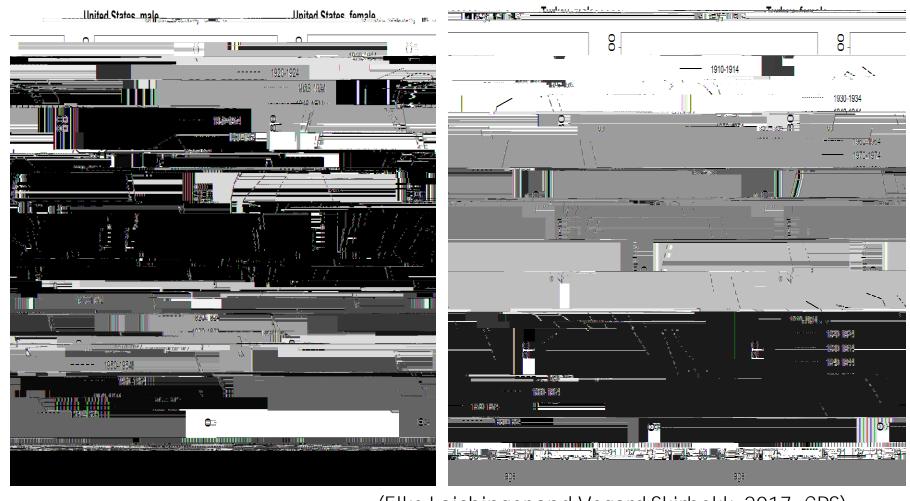
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Education central - proportion with at least secondary school



Education causally improves old age health and cognition (e.g., Schneeweiss et al. 2014, Davies 2018)

Cultural factors important – female labour force participation varies



(Elke Loichinger and Vegard Skirbekk, 2017, CPS)

Health adjusted dependency ratios – a new understanding of aging

- The OADR (65+/20-64) rigidly assumes "being old" occurs at age 65 and everyone older than this age being "dependent"
- Yet,
- A new metric, the assumes
- We find that the HADR
 - contrasting the OADR

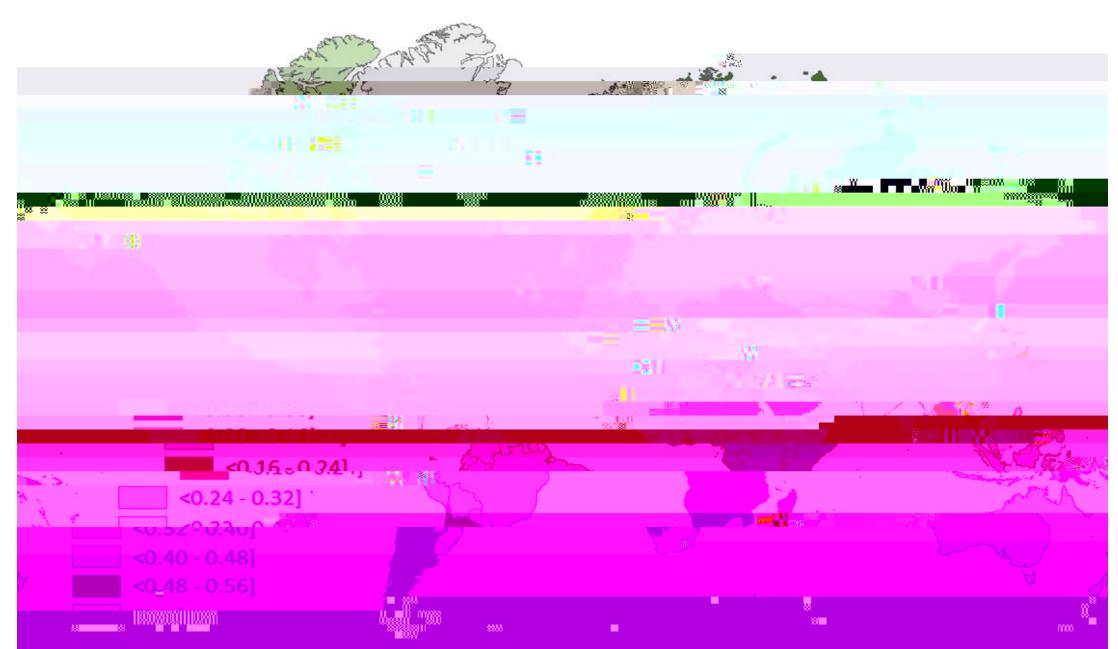
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- Rather than using some arbitrary age limit such we look at the age one reaches a certain disease level (which can occur at different ages)
- The Health-Adjusted Dependency Ratio (HADR) the numerator consists of those in relatively ill-health (with worse health than the average global 65 year old), while the denominator population includes those in better health.



Health and ageing – the average health differs by nation

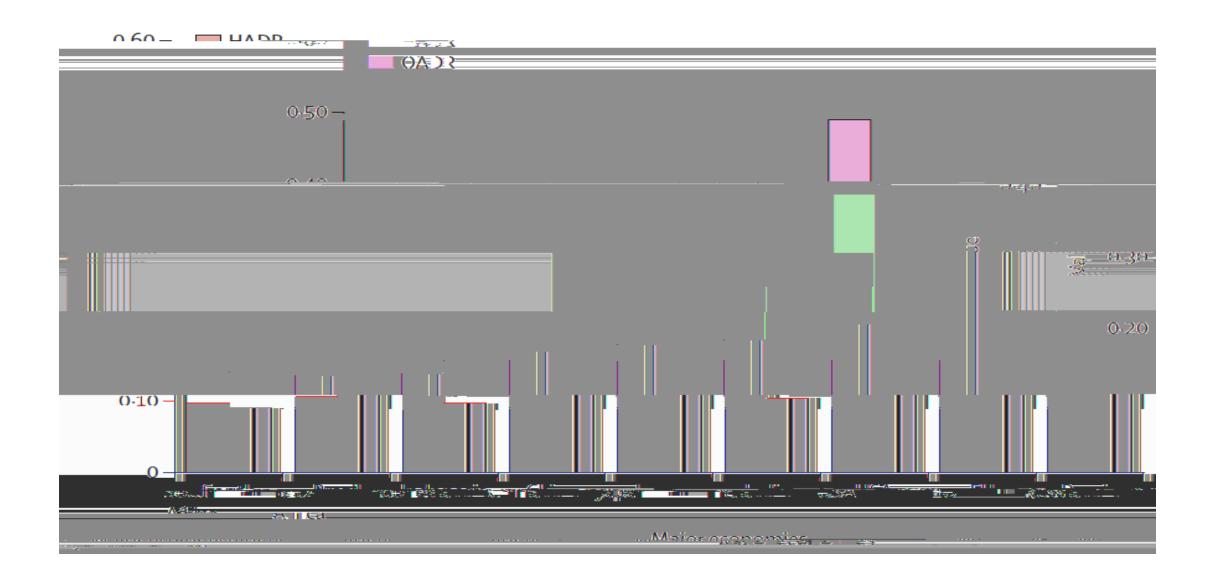
The Old Age Dependency Ratio



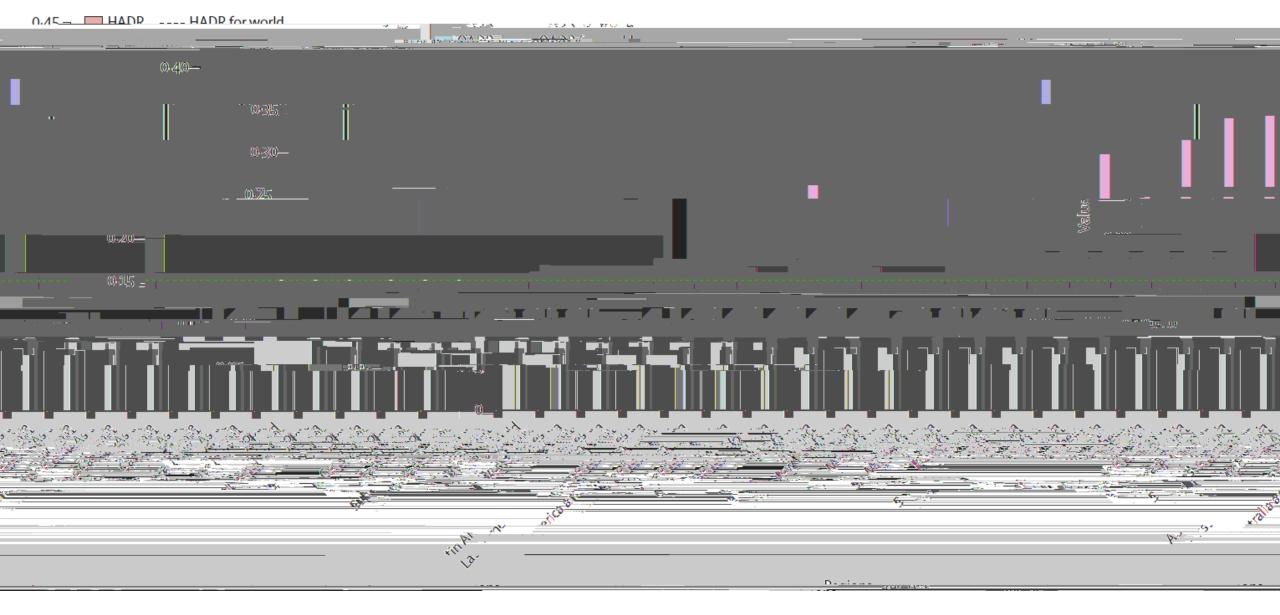
The Health Adjusted Dependency Ratio



Health-adjusted dependency ratio (HADR) and old-age dependency ratio (OADR) for selected major economies. Higher values indicate higher ageing burden.



Health-adjusted dependency ratio (HADR) and old-age dependency ratio (OADR) by world region. Higher values indicate higher ageing burden.



O.F. Danies

OADR VS HADR

Key points

- correspond to OADR the ageing burden are similar in most regions.
- However, the Middle East and North Africa somewhat lower burden based on HADR assessment, Eastern Europe greater HADR.
- Americas, Asia, Africa and Western Europe all have very similar HADR.
- Some demographically old nations age well due to low disease burden: Japan has a slightly lower burden than India, Spain a lower burden than Somalia
- Many demographically young (and several old) countries need to invest more in healthy ageing and healthier lifestyles education central