Ageing, health and work potential

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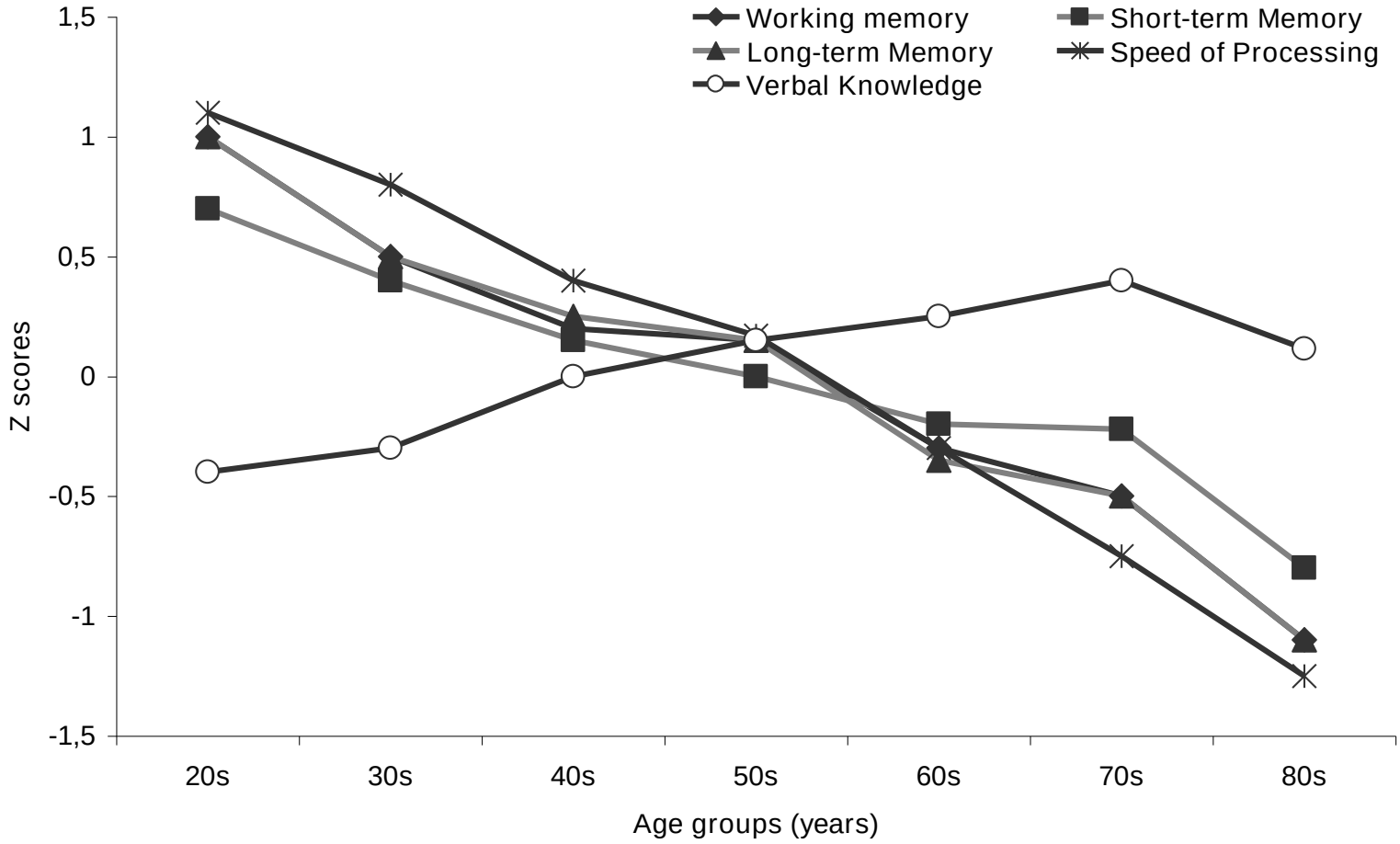
Causes of age-variation in productivity

scores predict job performance better
(Schmidt and Hunter 2004, Jenkins 2001).
(memory, learning, perceptual speed and reasoning abilities) ,
(vocabulary size and semantic meaning)
(Schaie 1994, Park et al. 2002).

Additional benefits productivity only up to a point: It possibly takes
to attain expert performance in analytic work and research (Ericsson and Lehmann 1996, Lesgold 1984). Only 0.6% of employers prefer workers with more than 10 years of experience (Econ 1998).

Age and cognition



(Park et al. 2002)

Have older workers adapted well to growing importance of cognition?

We analyze the consequences of a changing importance of skill by age from the 1980s to the 2000s in Germany

This period was characterized by rapid technological change (increase in service and ICT; decline in industrial/agricultural employment).

German Qualification and Career Survey (BIBB/IAB): employee survey
4 waves for the study: 1986, 1992, 1999 and 2006 (1979 excluded)

Age groups: 30-39, 40-49, 50-59

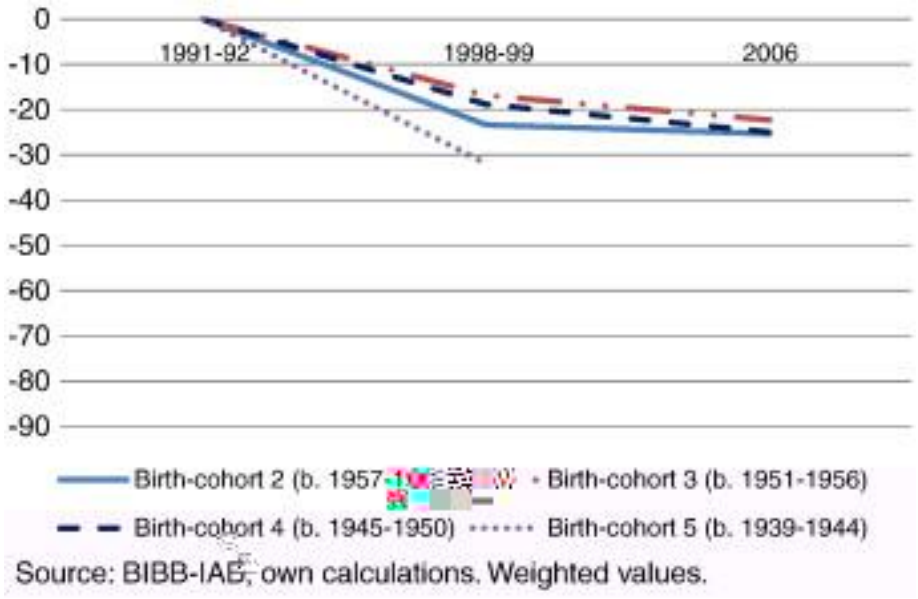
Number of observations (after selections):

N(1986)=11,737
N(1992)=10,500,
N(1999)=11,318
N(2006)=6,687

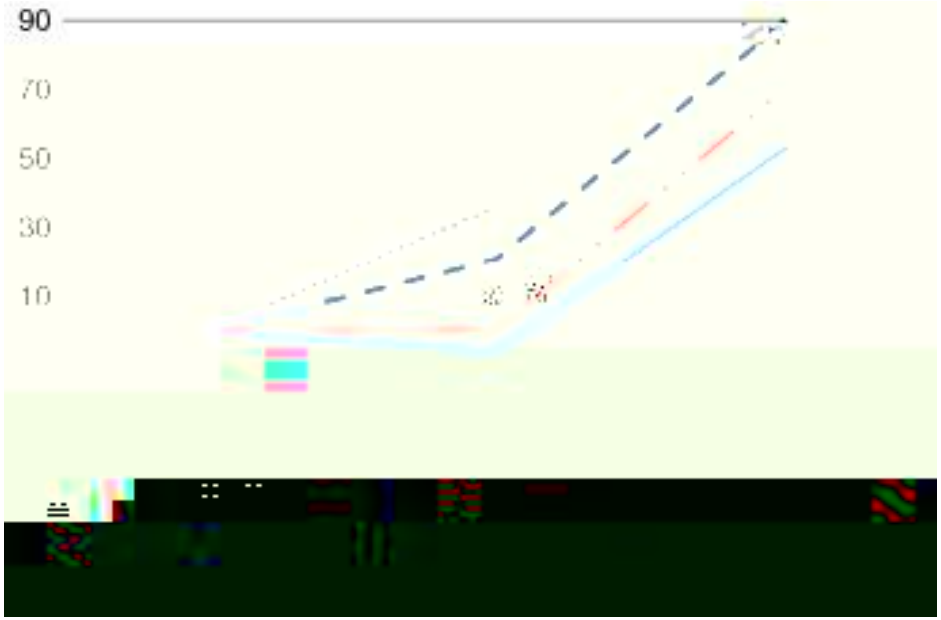
(Gordo and Skirbekk, Labour Economics 2013)

Cognition increasingly important for work

Physical strength demands

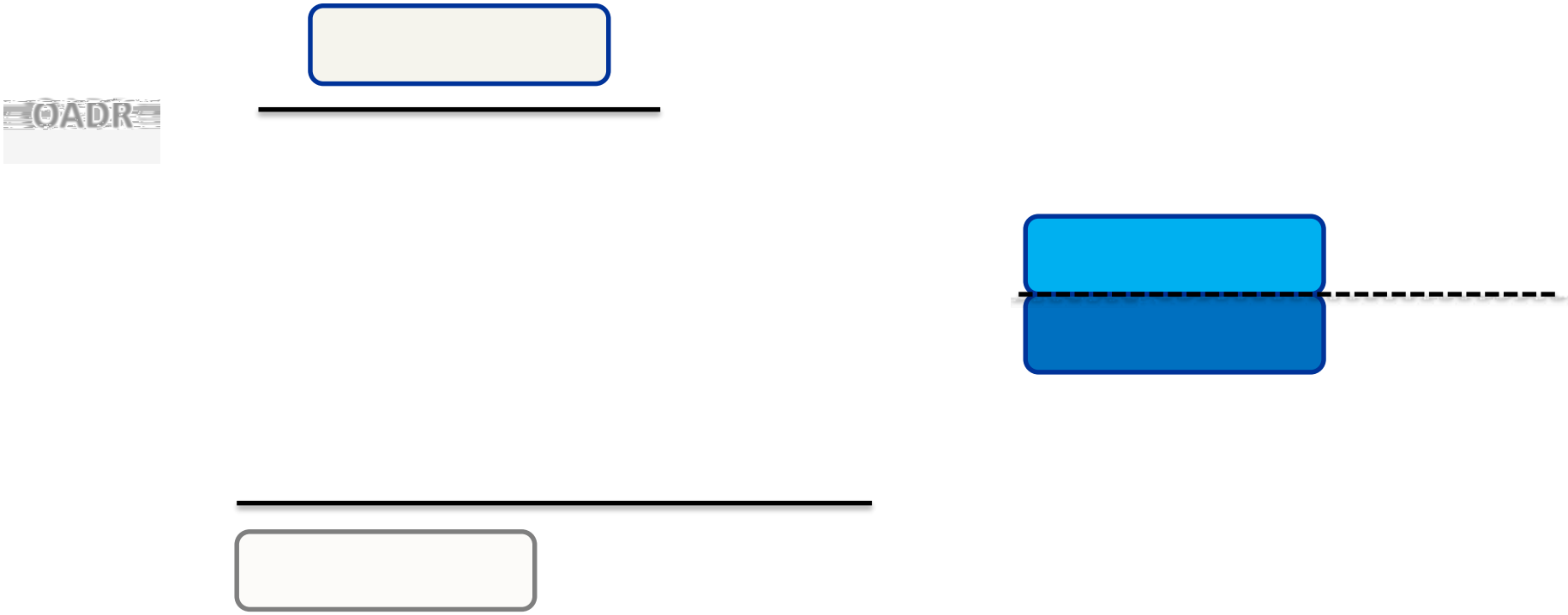


Importance of cognition



(Gordo and Skirbekk, Labour Economics 2013)

Cognitively Adjusted Dependency Ratio: CADR



Cognitive test - Immediate recall

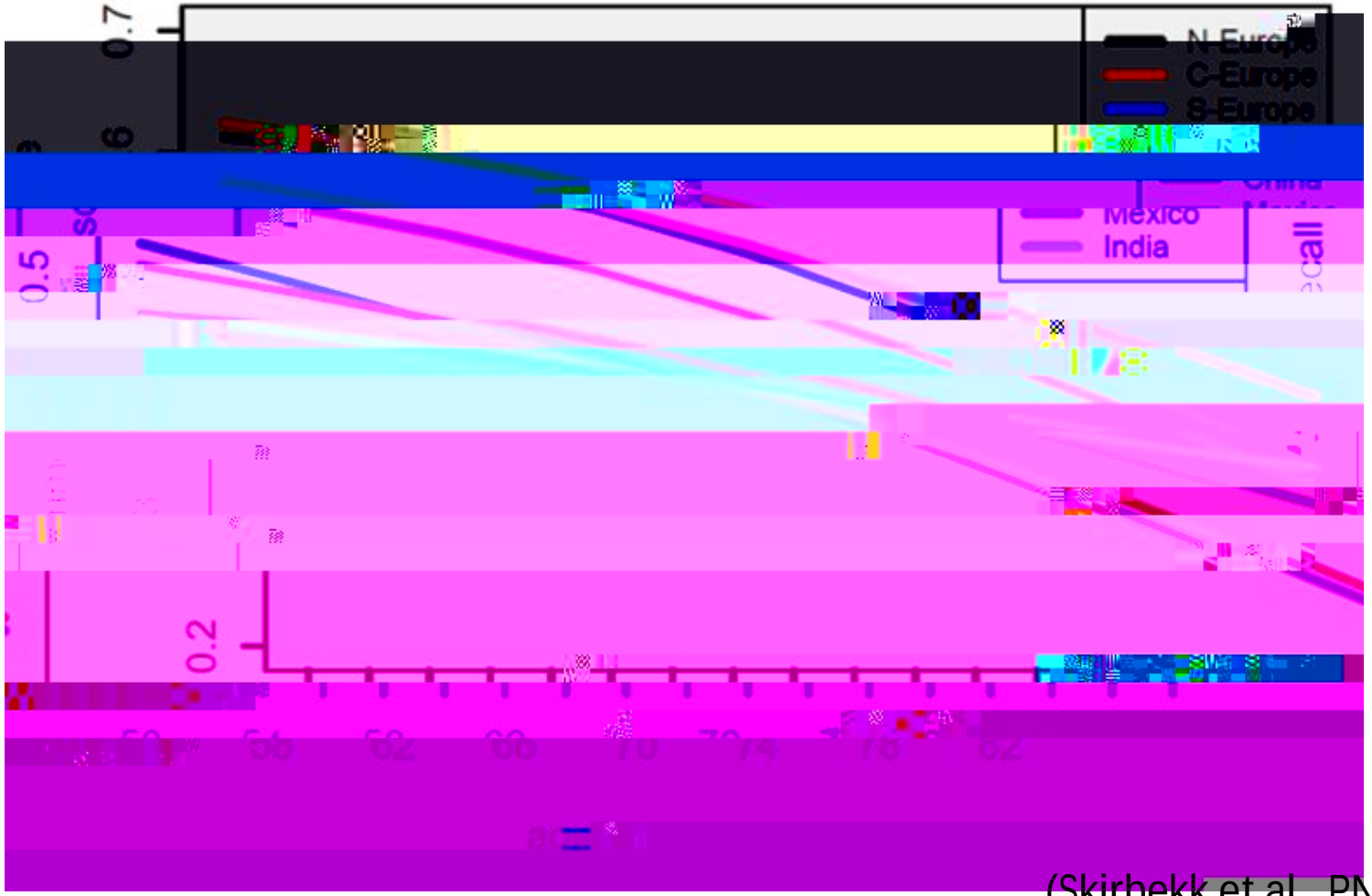
Standardized memory test, always given in local language

Respondents have 1 minute for recalling 10 basic words

Proportion correct determines cognitive performance

(Skirbekk et al., PNAS, 2012)

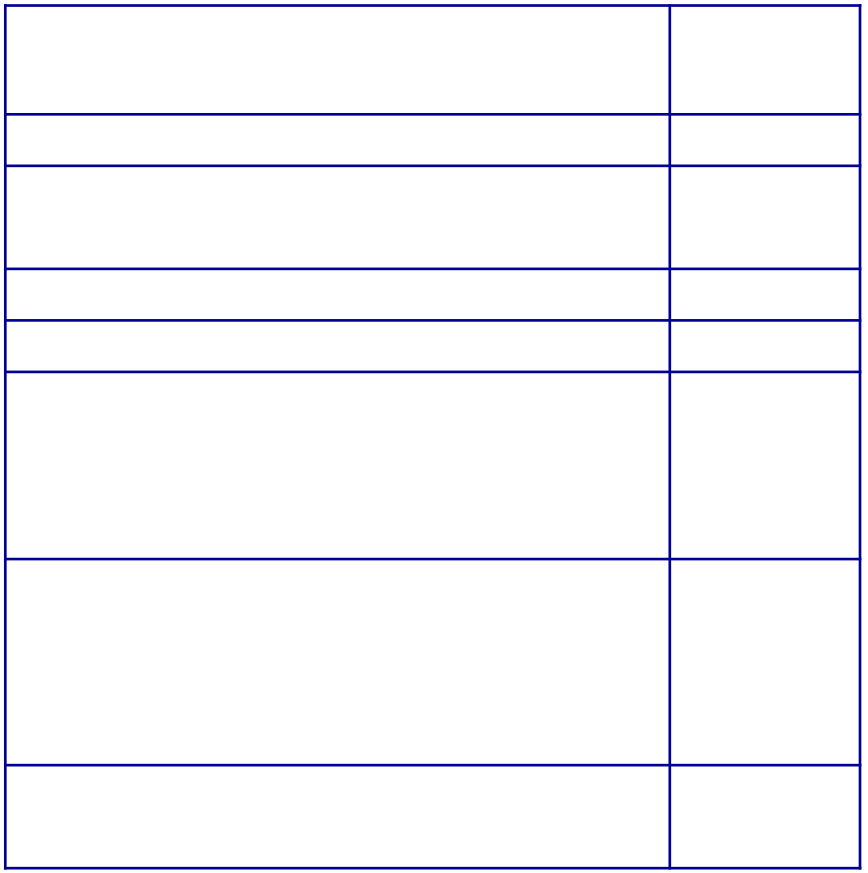
Immediate word recall



(Skirbekk et al., PNAS, 2012)

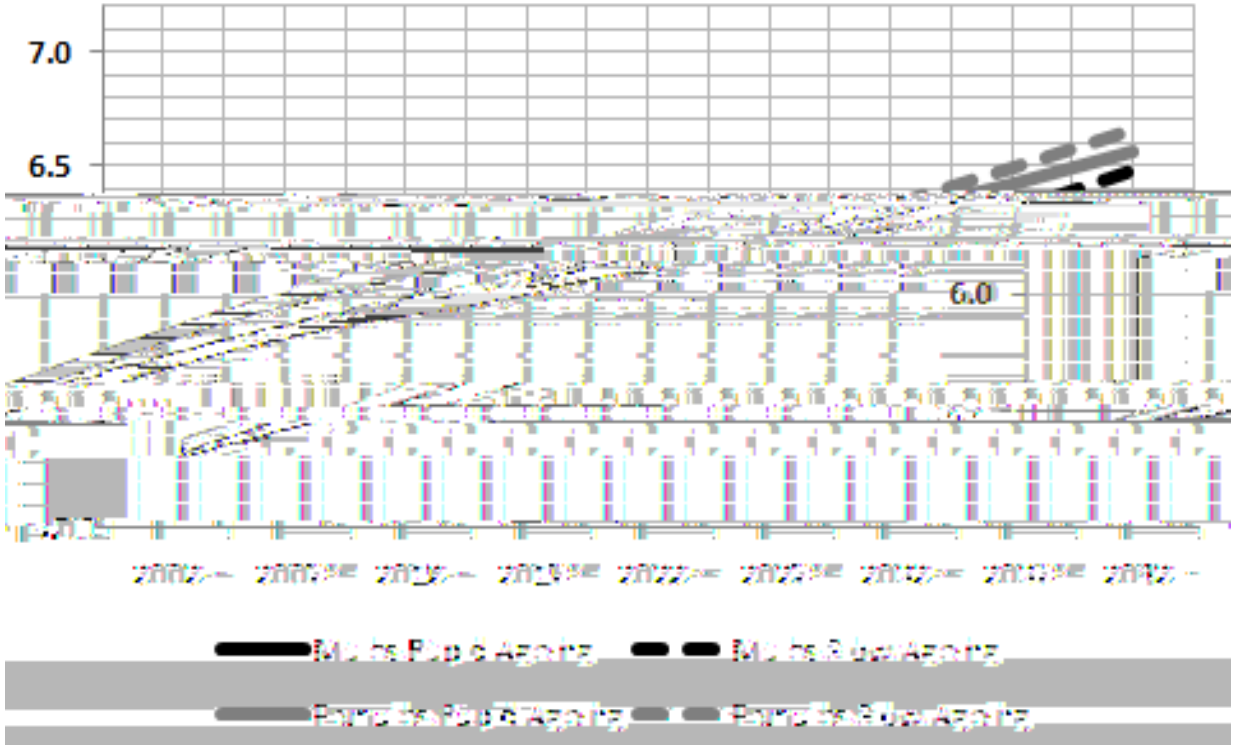
Comparison OADR and CADR

OADR = Old Age Dependency Ratio (2005)



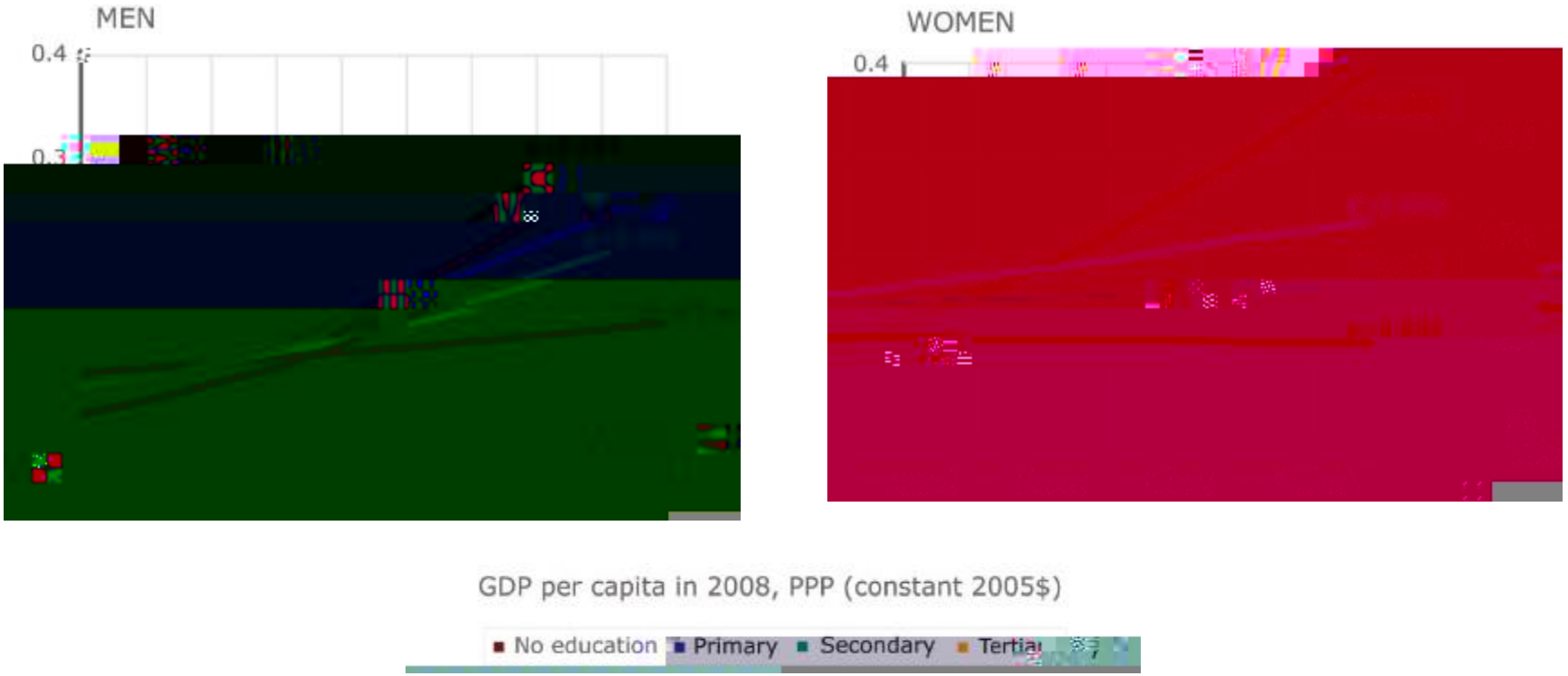
CADR = Cognitively Adjusted Dependency Ratio

If improvement continues: Better average cognition among 50 plus population ς in spite of demographic ageing



(Skirbekk, et al. , Intelligence, 2013)

Countries that invested in education experienced less BMI growth following income growth



(Kinge et al., 2015, JECH)

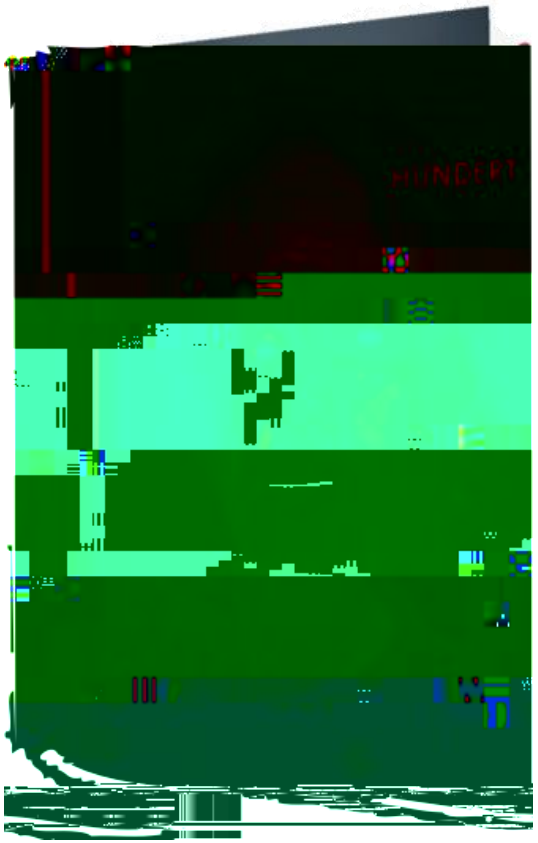
Life histories of health outcomes at older ages

Positive image of aging important

Positive attitudes central to how well one ages

Negative attitudes has been found to decrease performance and evaluations

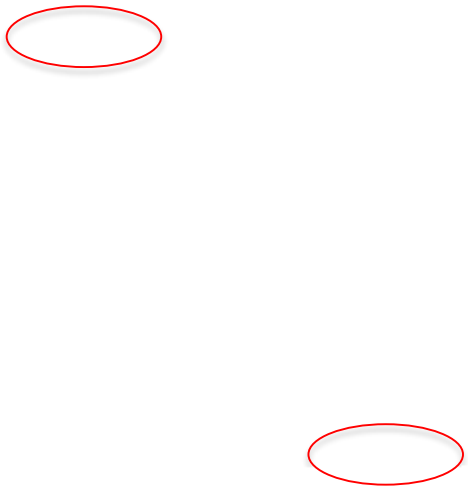
A new study found that greater economic activity related to more positive outcomes, controlling for national variation in cognition, education and GDP



(Bowen and Skirbekk, Journals of Gerontology: Social Sciences 2013)

Economic activity across nations: Economies diffacrEconomies

Economic dependency versus old age dependency ratio



(Loichinger and Skirbekk, 2016, Compar Pop Studies)

Conclusion

Nations that are age better have tended to invested more in education and health. These determinants of productivity variation are central for how well a nation ages (Skirbekk 2002)

Productive ageing also depends on socioeconomic dimensions

- Culture and beliefs
- Adjustments to economic fluctuations