



Wealth and health in Europe and the United States

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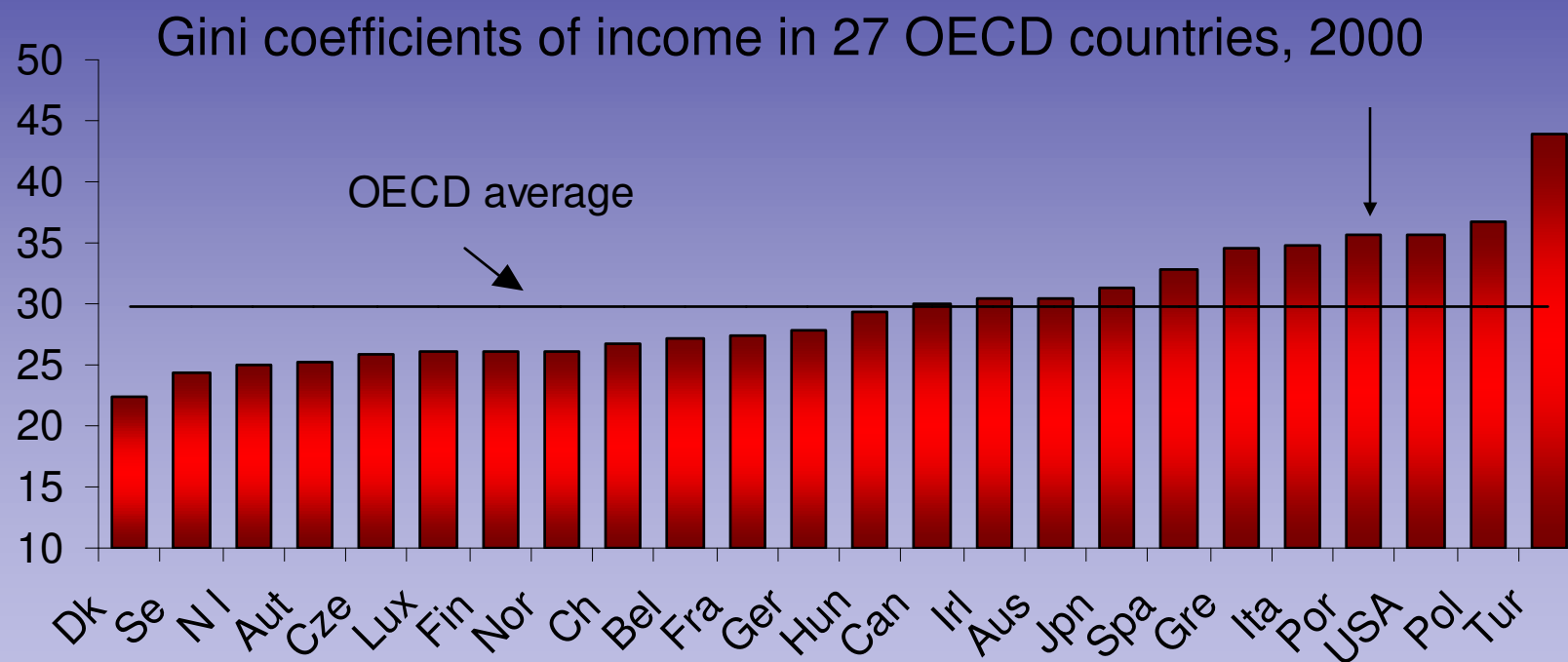
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RAND Corporation

Santa Monica, 10 July 2006

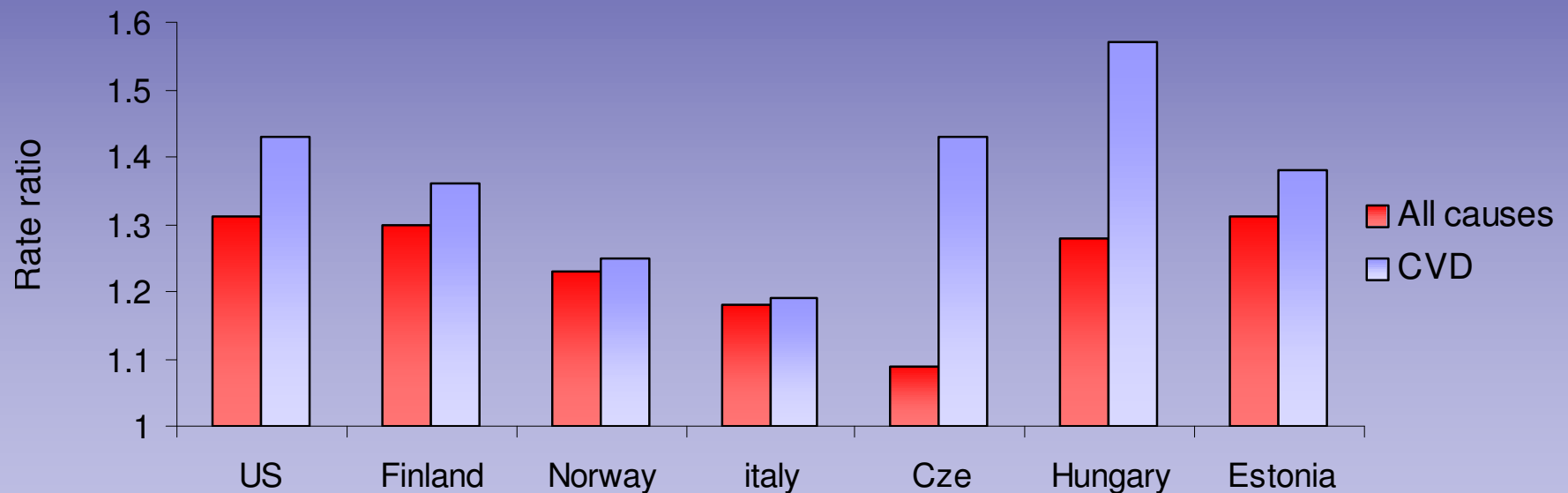
Inequality is larger in the US than in any other EU country...



OECD wealth and social statistics, 2005

But SES disparities in mortality were not clearly different between countries in the late 1980s...

Rate ratio of mortality by educational level, 1988



Mackenbach, J.P. Am J Public Health. 1999.

Background & Objectives

- Wealth reflects SES better: assets accumulation, predicts mortality at old age (Robert, 1996)
- Equalitarian policies: 'Social democratic' (northern Europe) vs. 'liberal' regimes (US) (Esping-Anderson, 1999)
- Research questions:
 1. Variations in (relative) wealth and physical health associations across Europe and the US
 2. Are Wealth and health associations independent of other SES indicators?
 3. Explaining wealth disparities in health: Lifestyle, depression, and healthcare utilization

Data and methods

- 50 years or older
- *Health and retirement survey:*
 - 7th Wave 2004 (similar results with weighted 2002 wave)
 - Non-Hispanic whites
 - n=14,303
- *Share study:*
 - 2004 wave for 10 countries
 - n=21,596
- Age & sex standardized rates – logistic regression:

$$\text{Logit}(\text{Health Outcome}_i) = \text{Log} \left(\frac{\text{Health}_i}{1 - \text{Health}_i} \right) = \alpha_0 + \alpha_1 \text{Age}_i + \alpha_2 \text{Sex}_i + \alpha_3 \text{Country}_i + \alpha_4 \text{Country}_i \times \text{Wealth quintile}_i + \varepsilon_i$$

Measures

- Relative wealth:

- Total net worth
- Financial assets
- Real assets



Country
quintiles

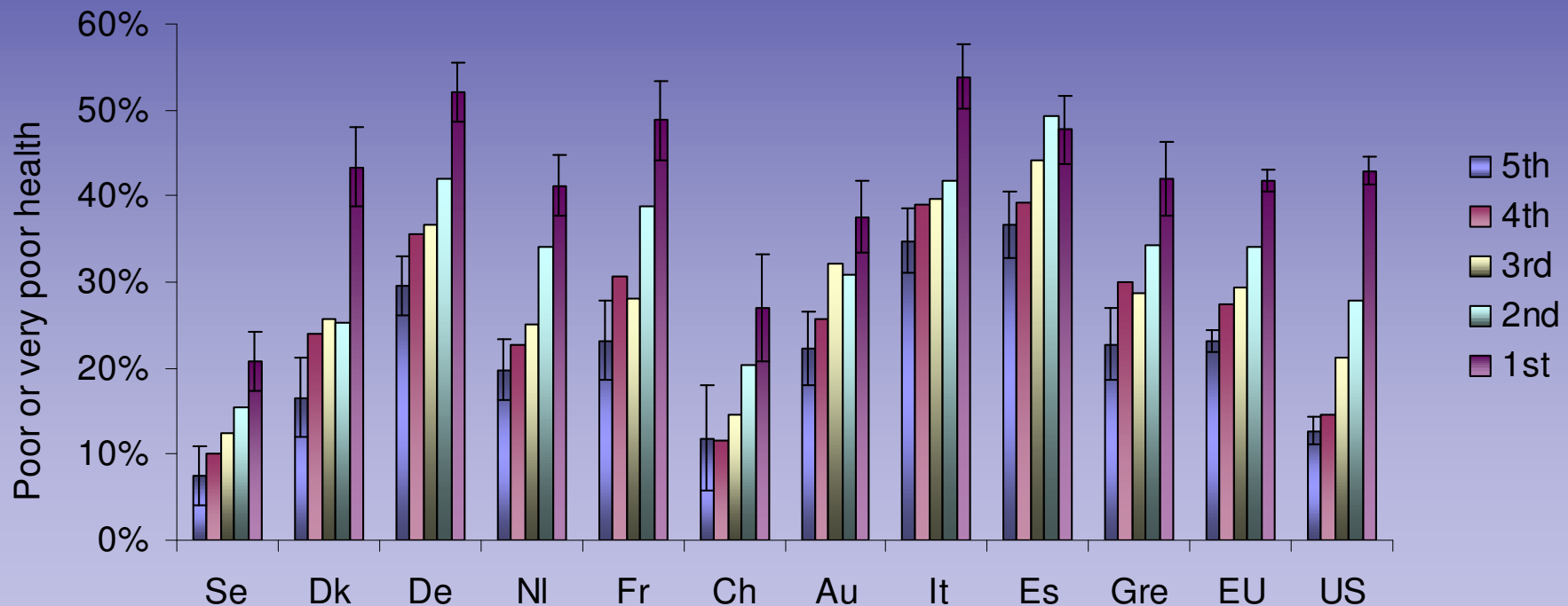
Physical health:

- Self-perceived health (US version, 'bad or very bad')
- Cardiovascular (stroke or heart) disease
- Cancer
- 1+ ADL limitations (e.g., dressing, bathing, eating)
- Grip strength (kg)
- Walking speed (m/s)

1. Wealth & Physical Health

Relative wealth gradient is clear in all countries, but slightly steeper in the US than EU

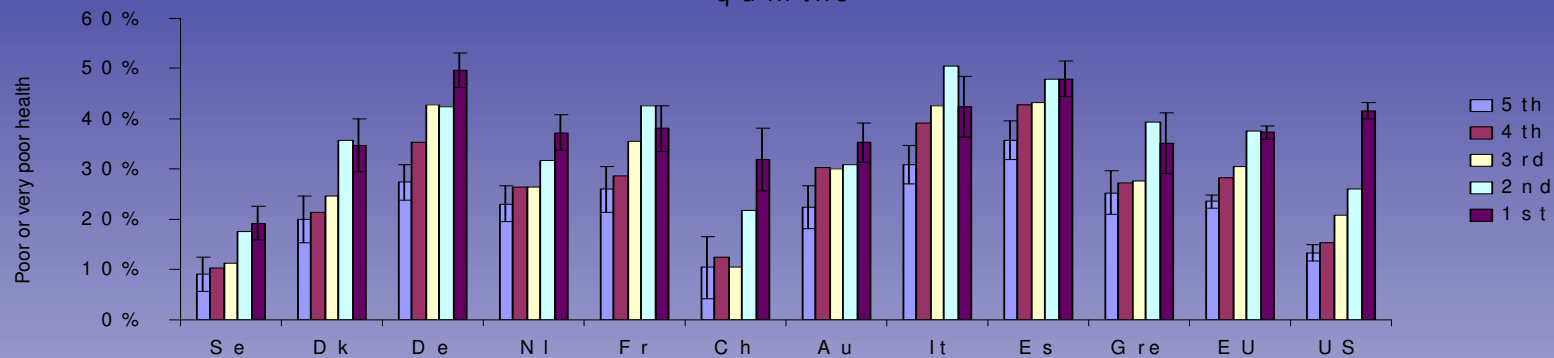
Adjusted prevalence of poor health by total net worth quintile



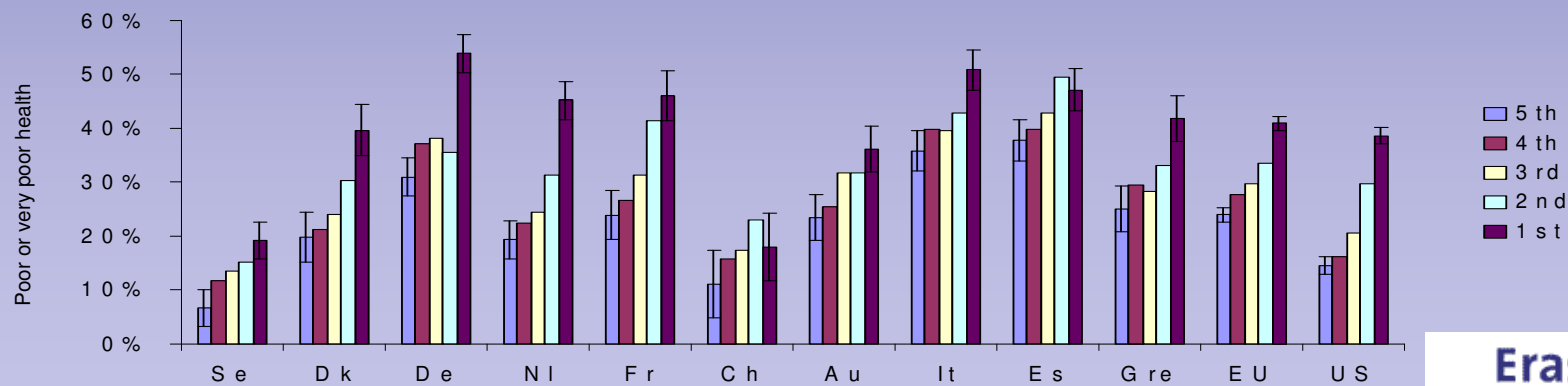
Adjusted for age & sex

Wealth gradient is similar for both financial and real assets

Adjusted prevalence of poor health by total financial assets quintile



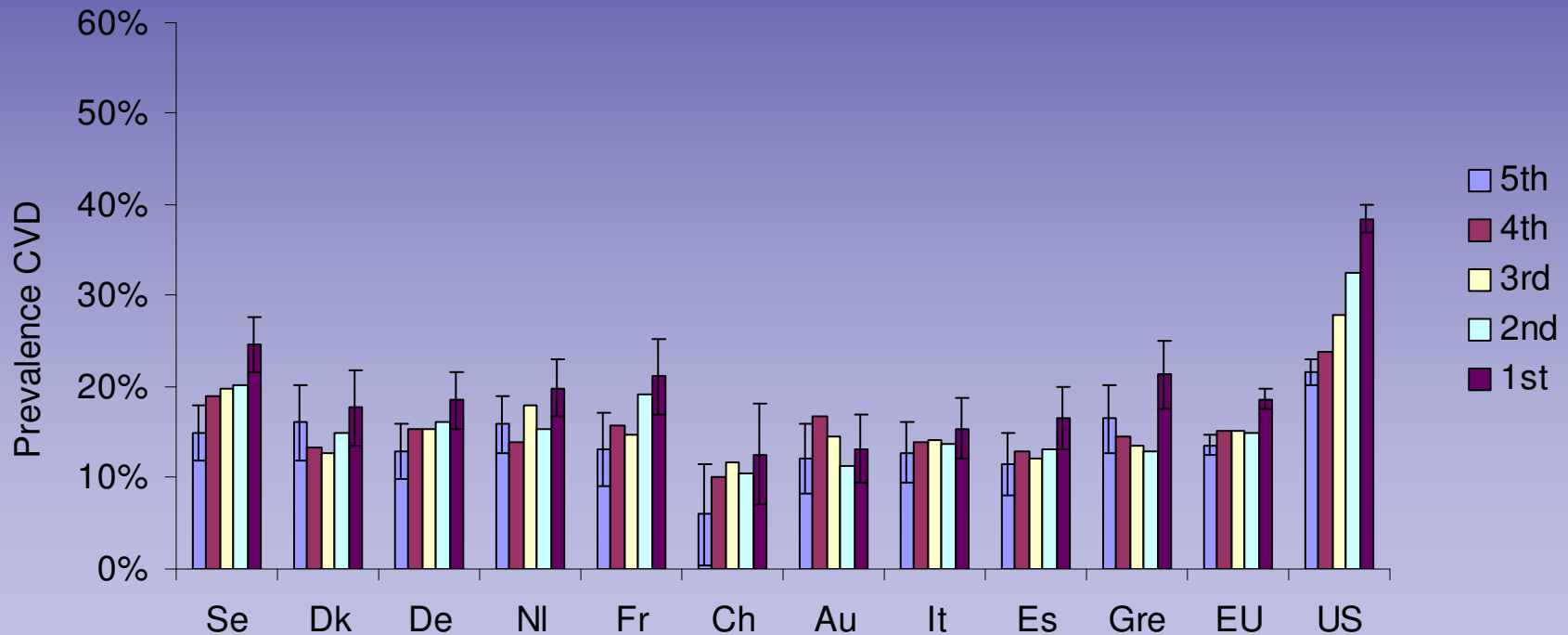
Adjusted prevalence of poor health by real assets quintile



Adjusted for age & sex

CVD prevalence is higher, and wealth gradients are steeper in the US than in Europe...

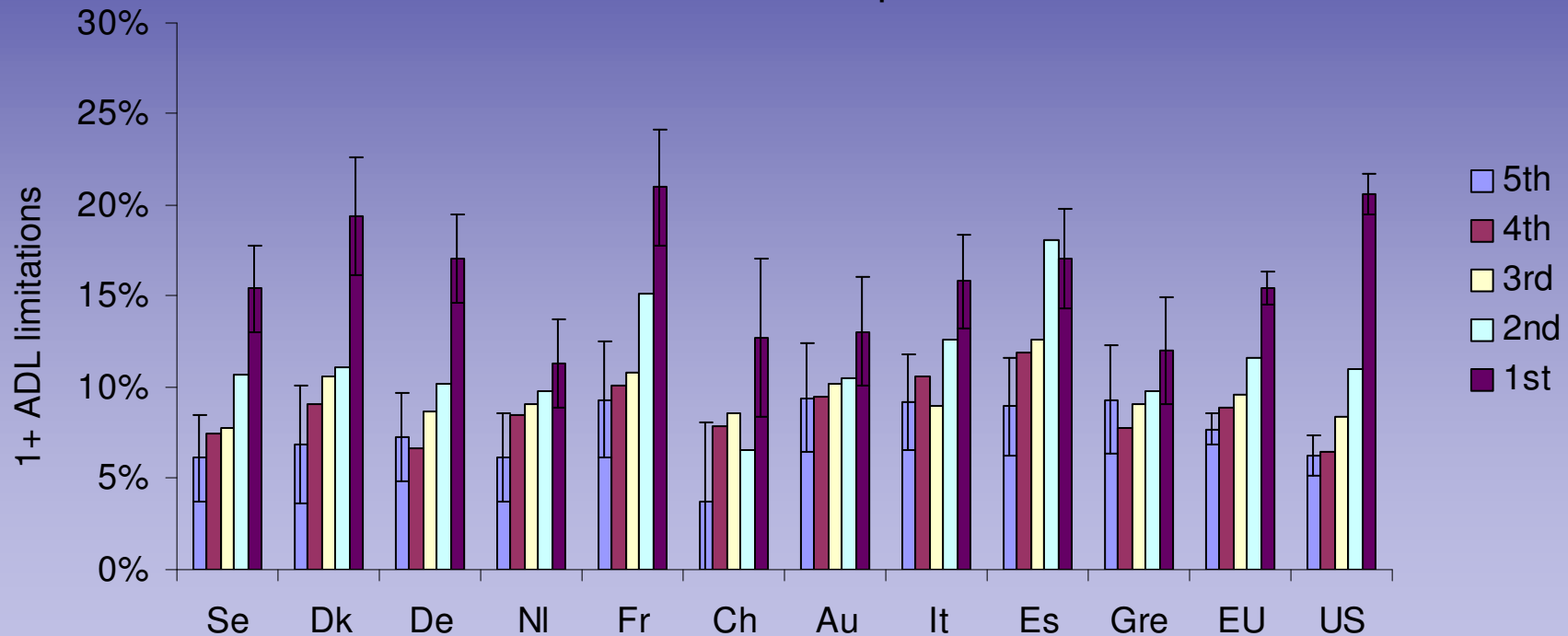
Adjusted prevalence of poor health by total net worth quintile



Adjusted for age & sex

And prevalence of limitations with adl1+ is highest in poorest quintile in the US , Danish and France...

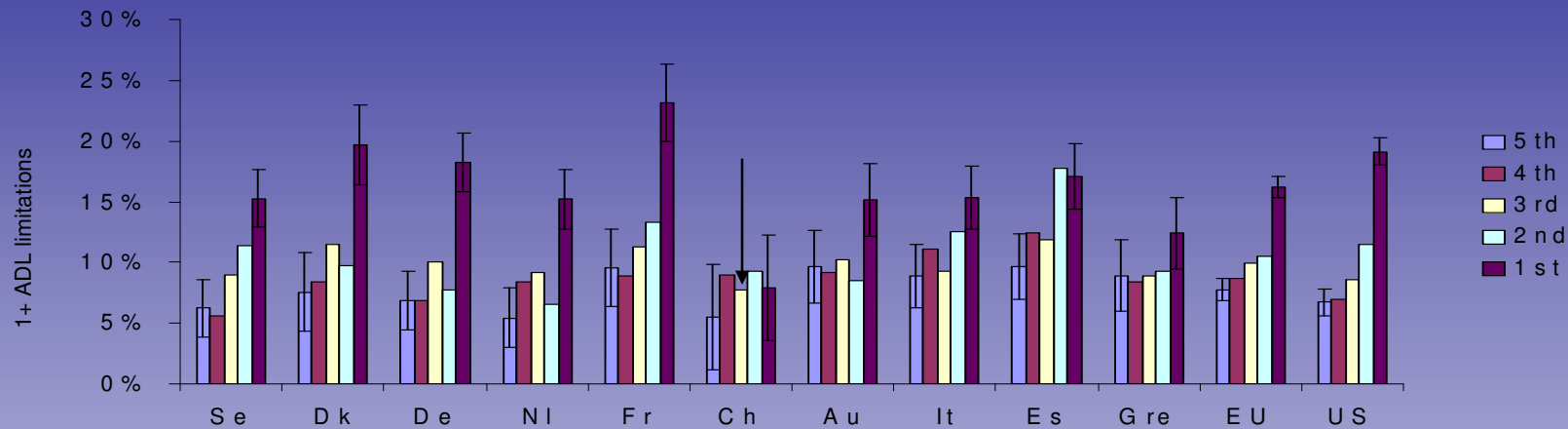
Adjusted prevalence of reporting 1 or more ADL limitations by total net worth quintile



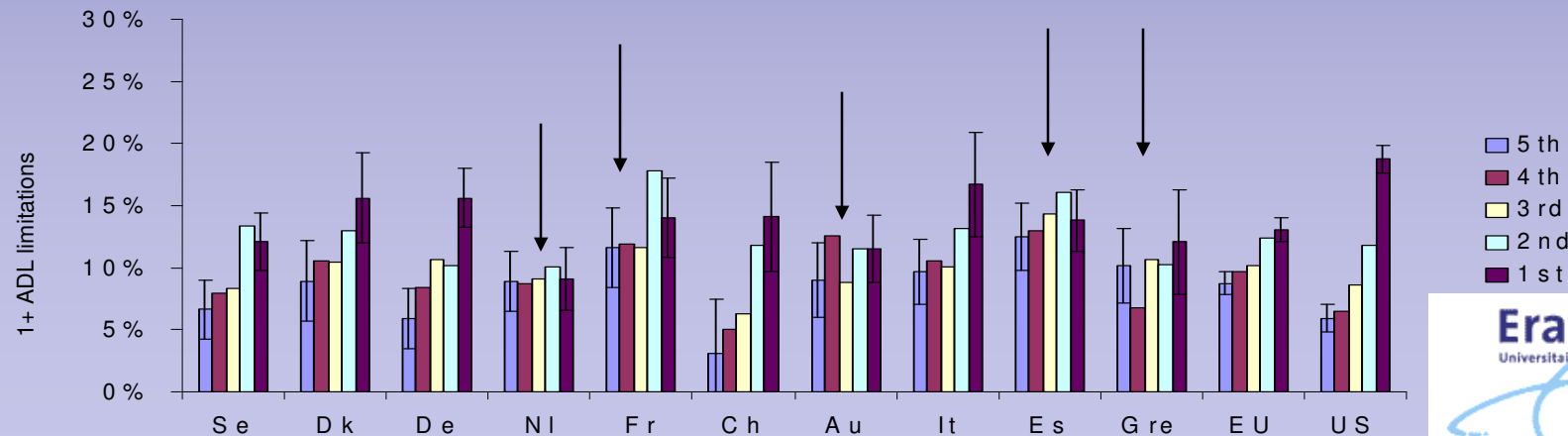
Adjusted for age & sex

...But mostly real assets drive associations of wealth with adl in several EU countries

Real assets quintile

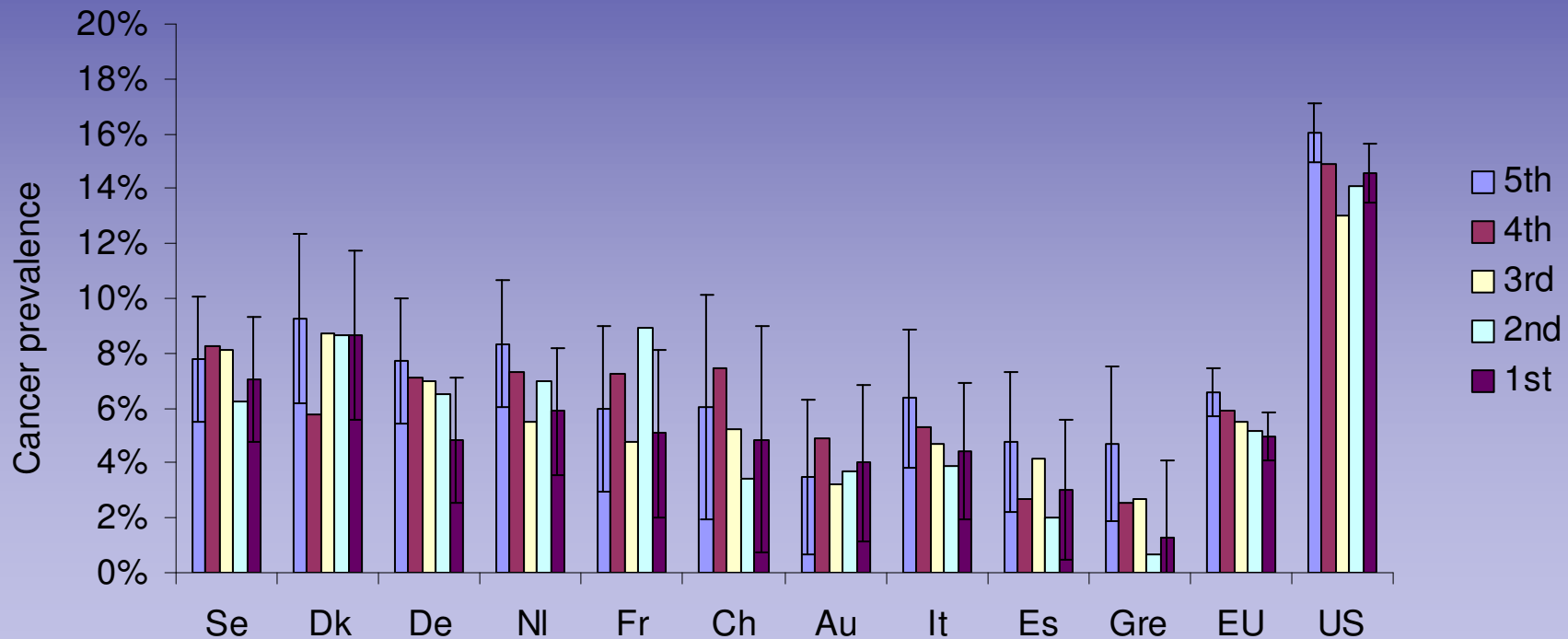


Financial assets quintile



Surprisingly, cancer is a lot more prevalent in the US, and appears to be more prevalent in the richest wealth quintile!

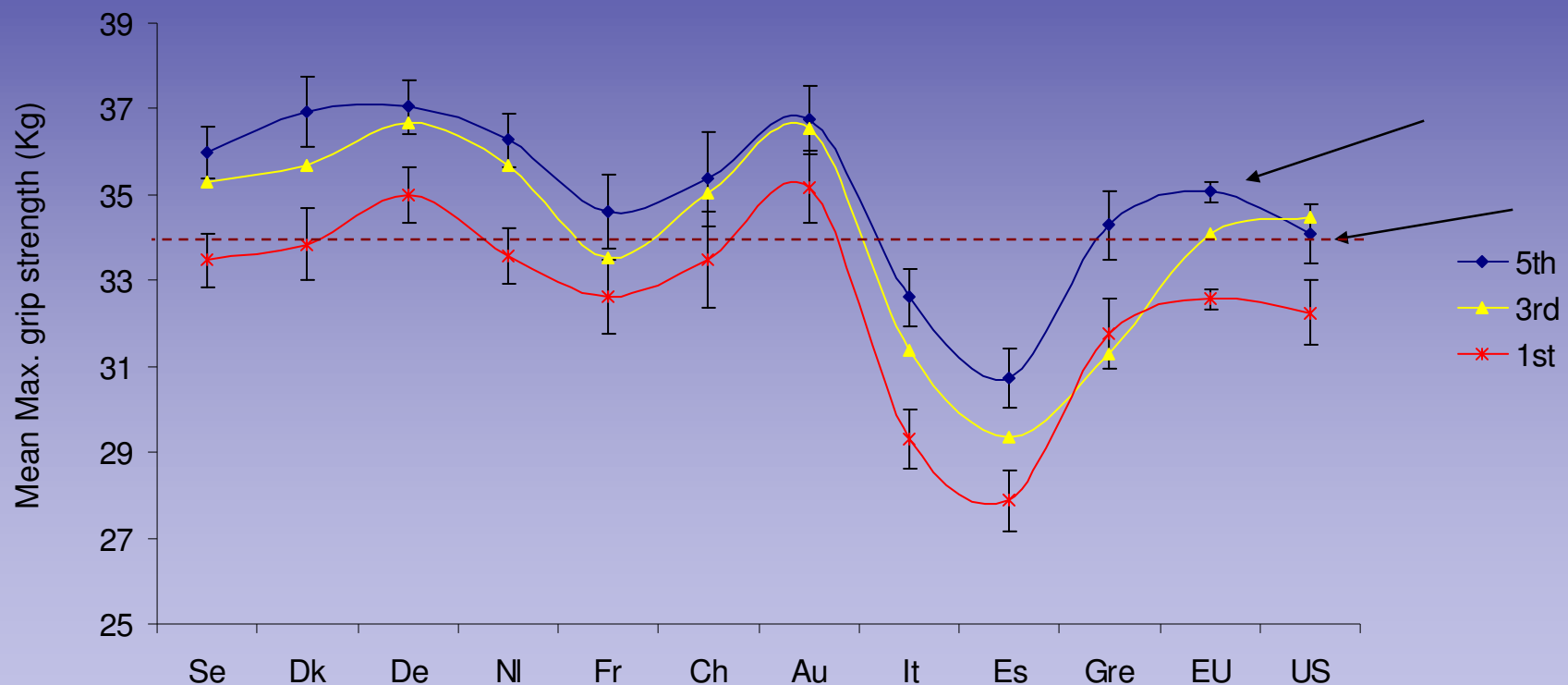
Adjusted prevalence of cancer by total net worth quintile



Adjusted for age & sex

US has relatively low grip strength, but differences between wealth quintiles are remarkably similar across countries....

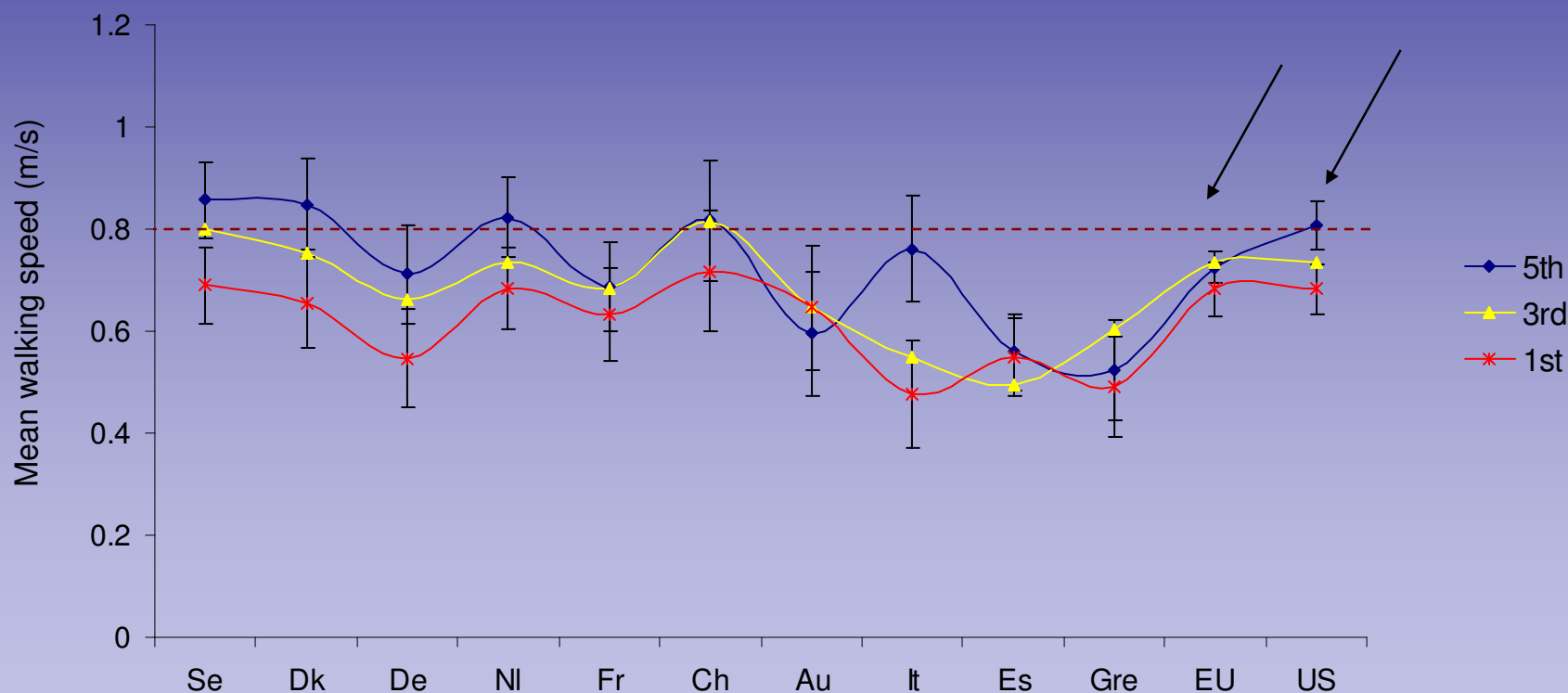
Mean max. grip strength by total net worth quintile



Adjusted for age & sex

Higher WS and larger disparities in north EU and US, lower WS and smaller disparities in Austria, Spain, Greece...

Walking speed by total net worth quintile

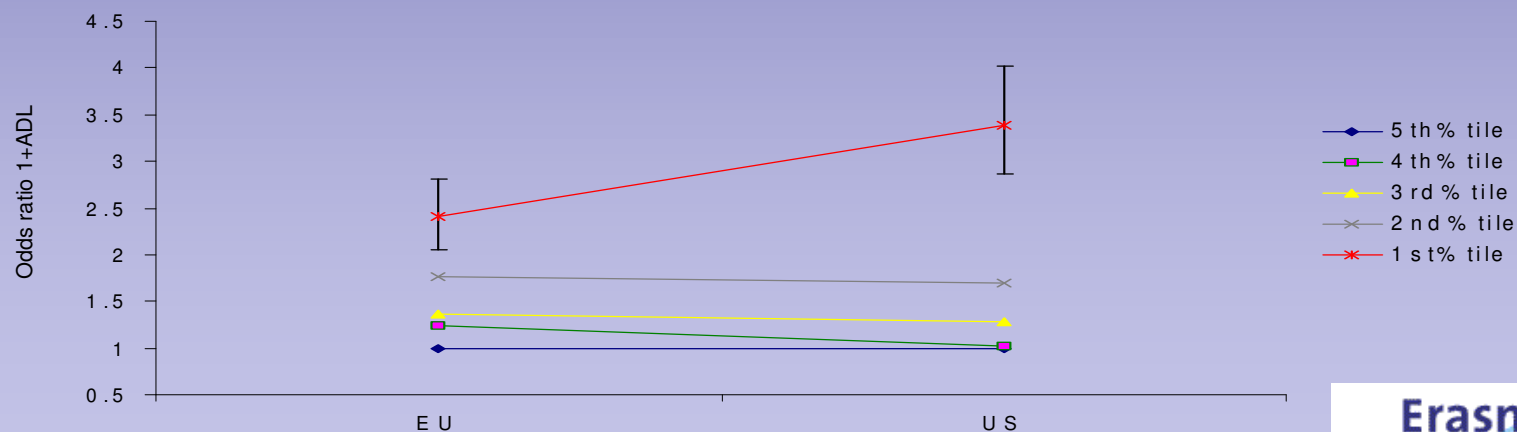
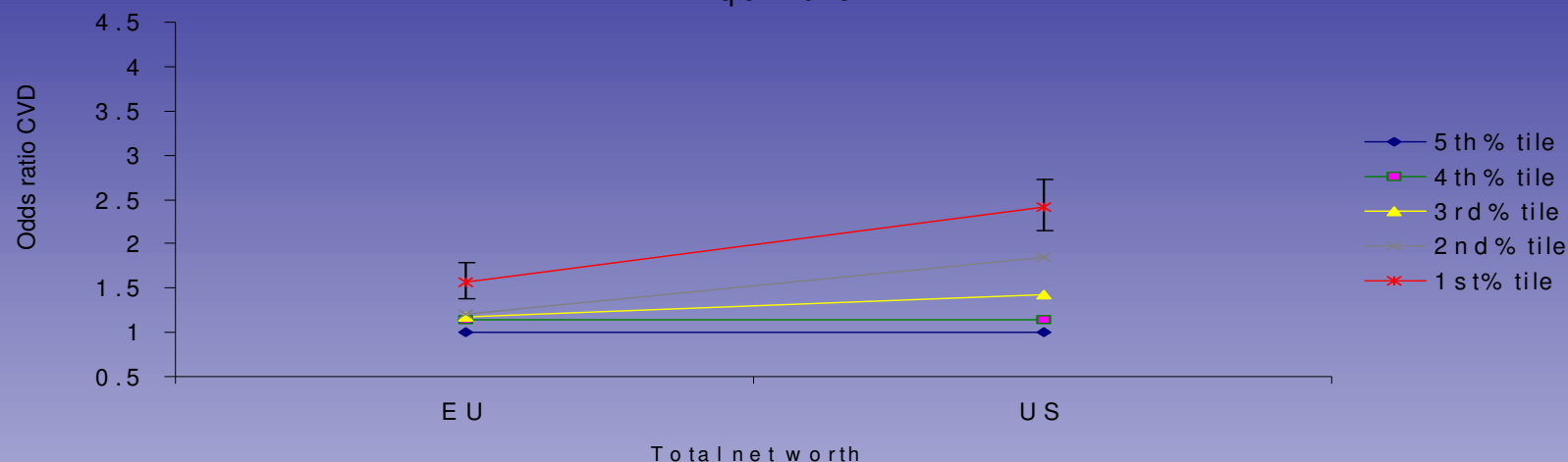


Adjusted for age & sex

2. Is the association between wealth and health independent of education and income?

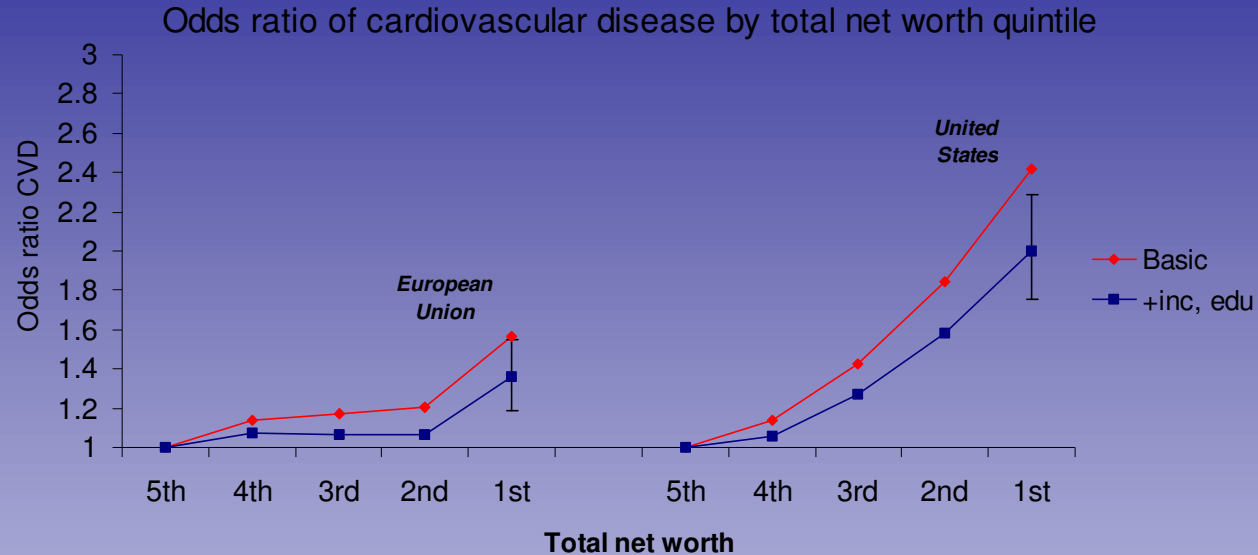
Wealth disparities in CVD are larger in the US than in EU....

Odds ratio of cardiovascular disease by total net worth quintile

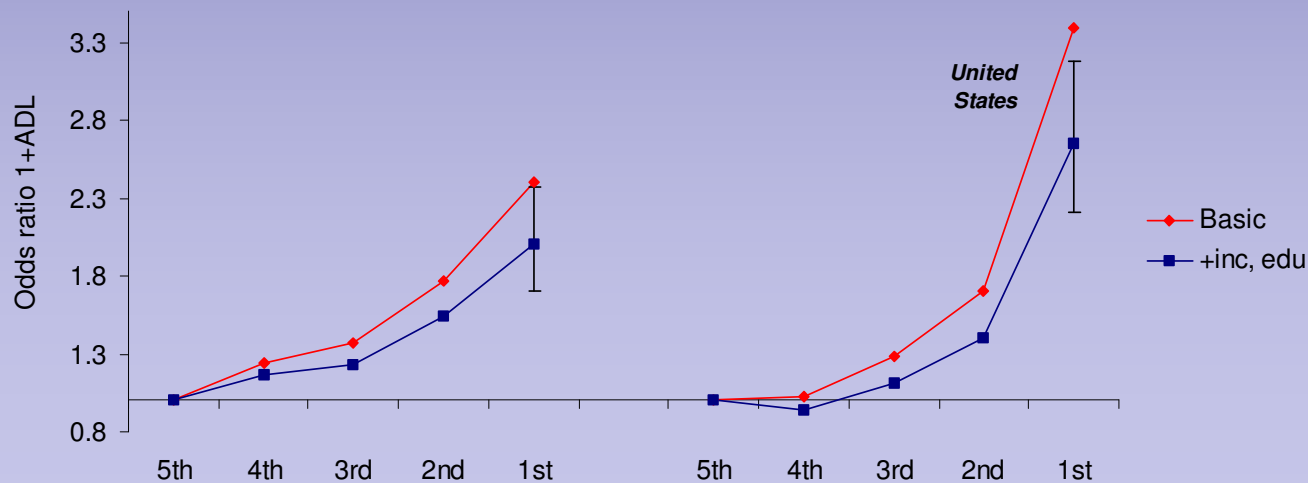


Adjusted for age & sex

And they are largely independent from education and income...

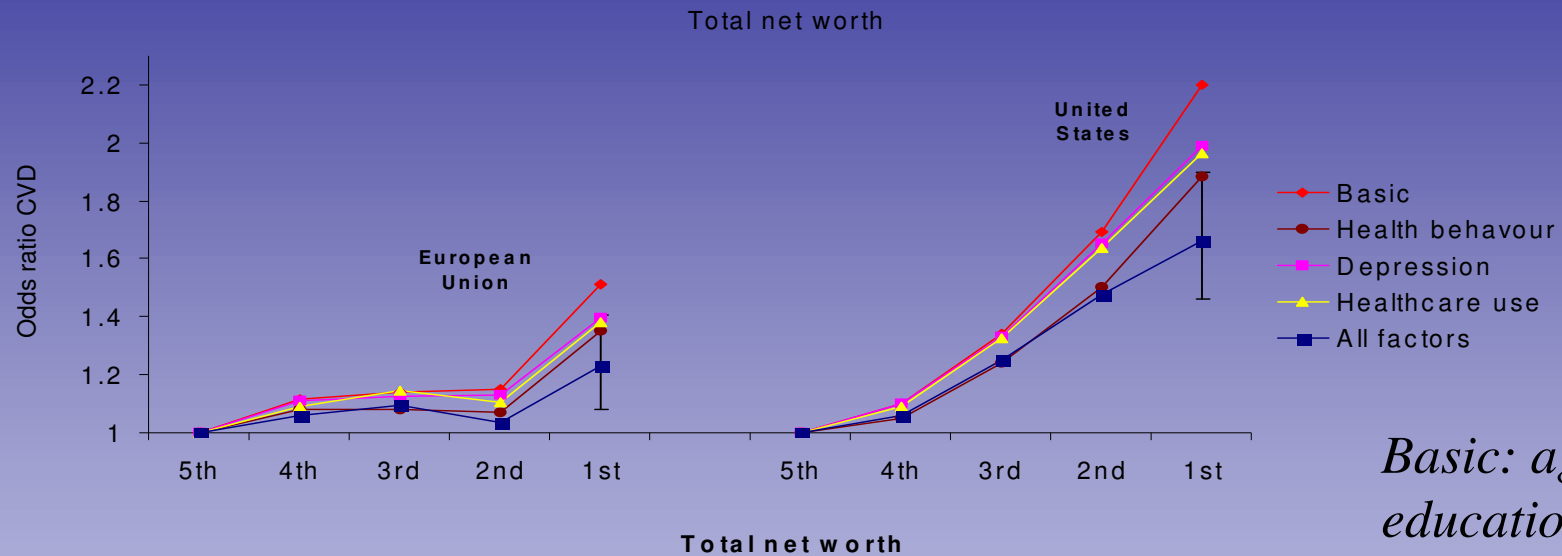


Basic: age & sex

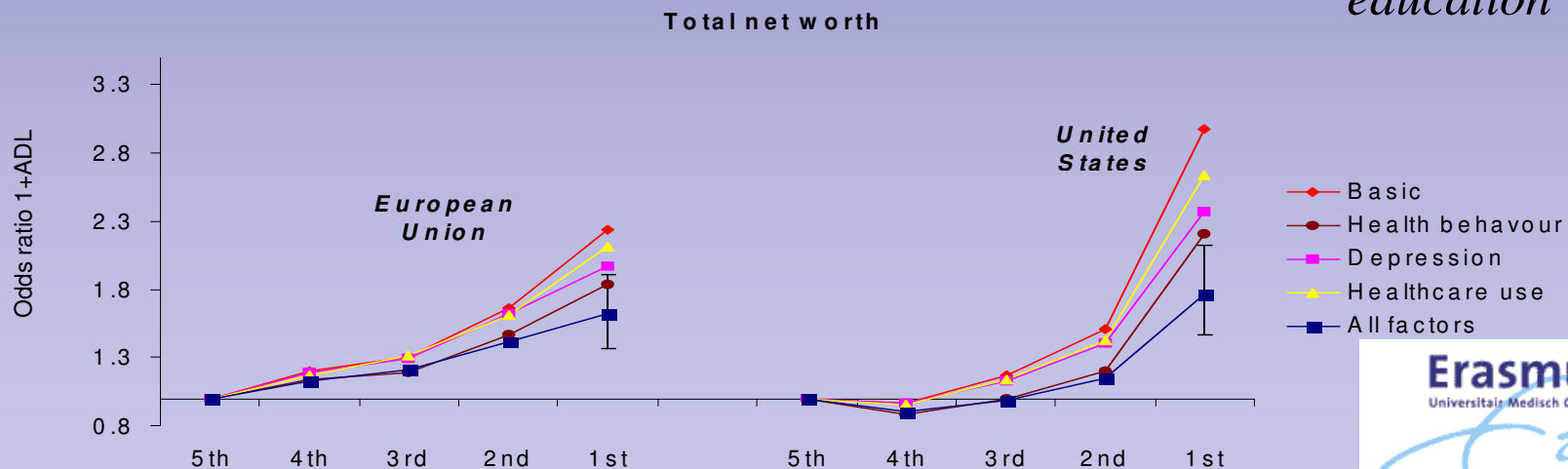


2. Is the association between wealth and health independent of risk factors, depression and healthcare utilization?

Health behavior, depression, and healthcare utilization partly attenuate wealth disparities in health...



Basic: age, sex & education



Conclusions

- Wealth is negatively associated with health in all countries
- Health gap between 20% richest and 20% poorest is generally larger in the US than in Europe for self-reported measures...
-But not clearly for objective health measures
- Real assets are more strongly related to disability than financial assets —→ housing conditions?
- Adjustment for health behavior, depression and health care use moderately attenuated wealth disparities, which remain substantial after full adjustment...

Interpretation & implications

- Relative vs. absolute –wealth absolute disparities larger in the US: Redistribution of wealth?
- ...But wealth inequality unrelated to health inequality in health within Europe
- Objective health indicators:
 - Self-report
 - Different dimensions of health
- Wealth – health - wealth (reverse causation)