



Equity in health and health care in Finland: a comparative perspective

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Outline of the talk

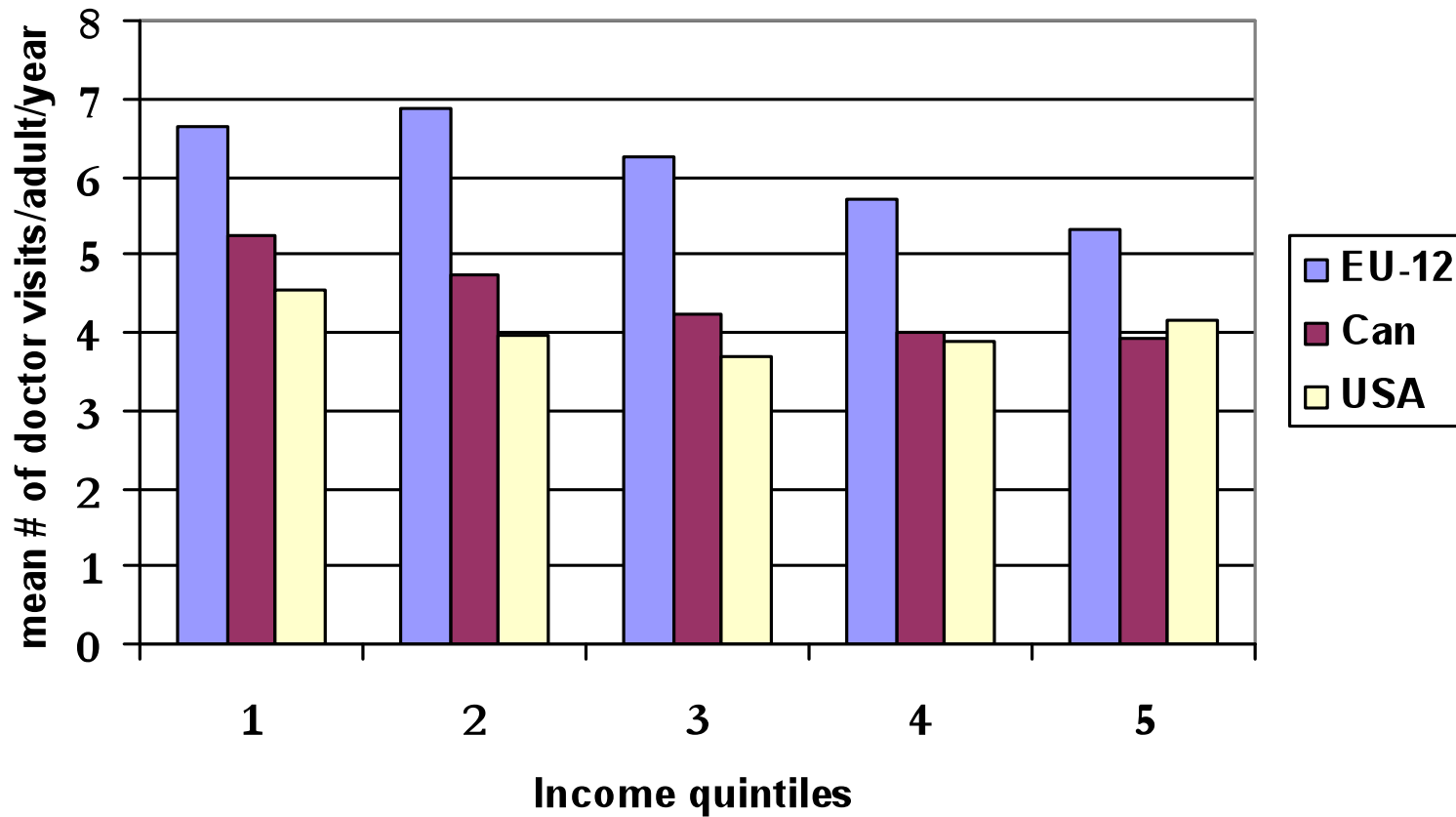
1. Introduction & background
2. What is equity and (how) could we measure it?
3. Equity in health care in Finland in OECD perspective
 - at the turn of the century
 - in a recent update
4. Effects of the economic crisis
5. Equity and its causal pathways
6. Conclusion and outlook

Defining and measuring inequity in health and health care

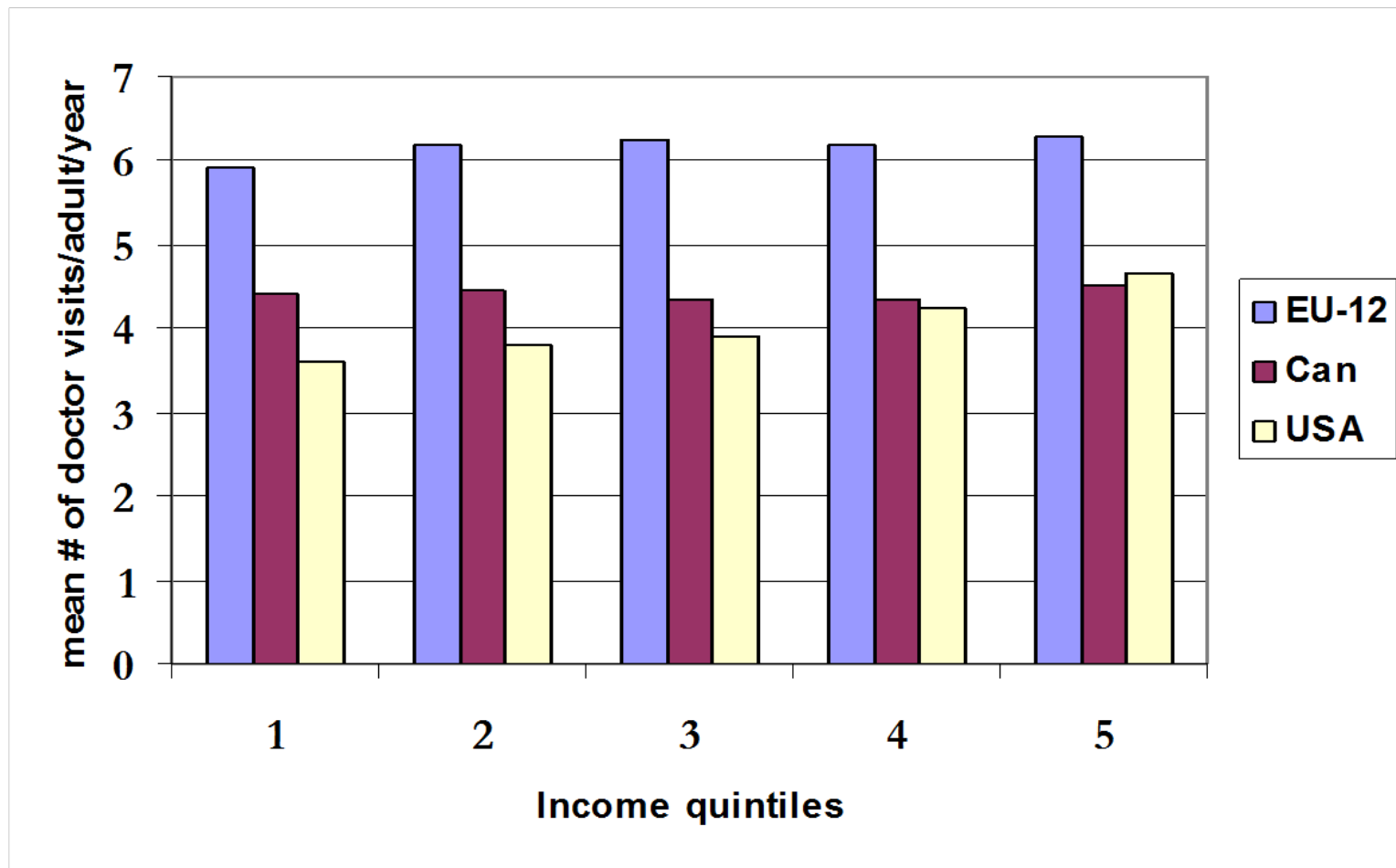
- Most countries display disparities in health by SES
- Association is well known, causal pathways less so
- Ideally, would like to know to what extent this is due to unequal access and utilization of medical care
- Very hard to do
- Instead, assess whether health care is distributed according to 'need for care'
- And whether this is systematically violated by SES (income)
- Piecemeal evidence on causal pathways and mechanisms

Inequality does not necessarily imply inequity

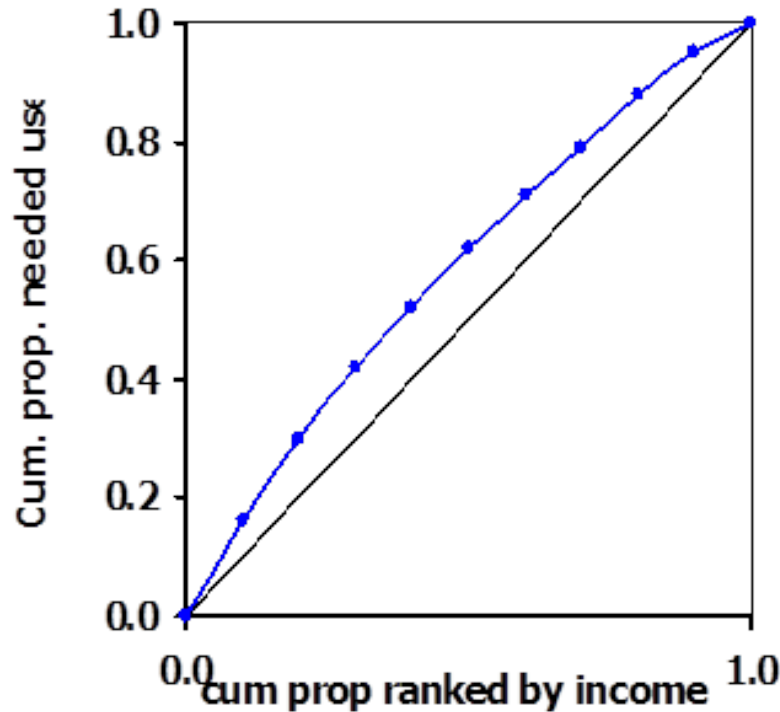
Example: doctor visits by income quintile



Inequality in use after need “equalization” is inequity
Are need-standardized distributions equal by income?



Use concentration curves and indices to measure inequity



- Convert relative (eg quintile) into cumulative distributions of need-standardized use
- Concentration curve $L^*(s)$ lies above diagonal when use is concentrated among the poor
- $HI=C^*$
- Concentration index C^* based on area between conc curve and diagonal
- $HI=C^*>0$ if inequity “favours” rich, $HI=C^*<0$ if it “favours” poor
- Equity only if $HI=C^*=0$

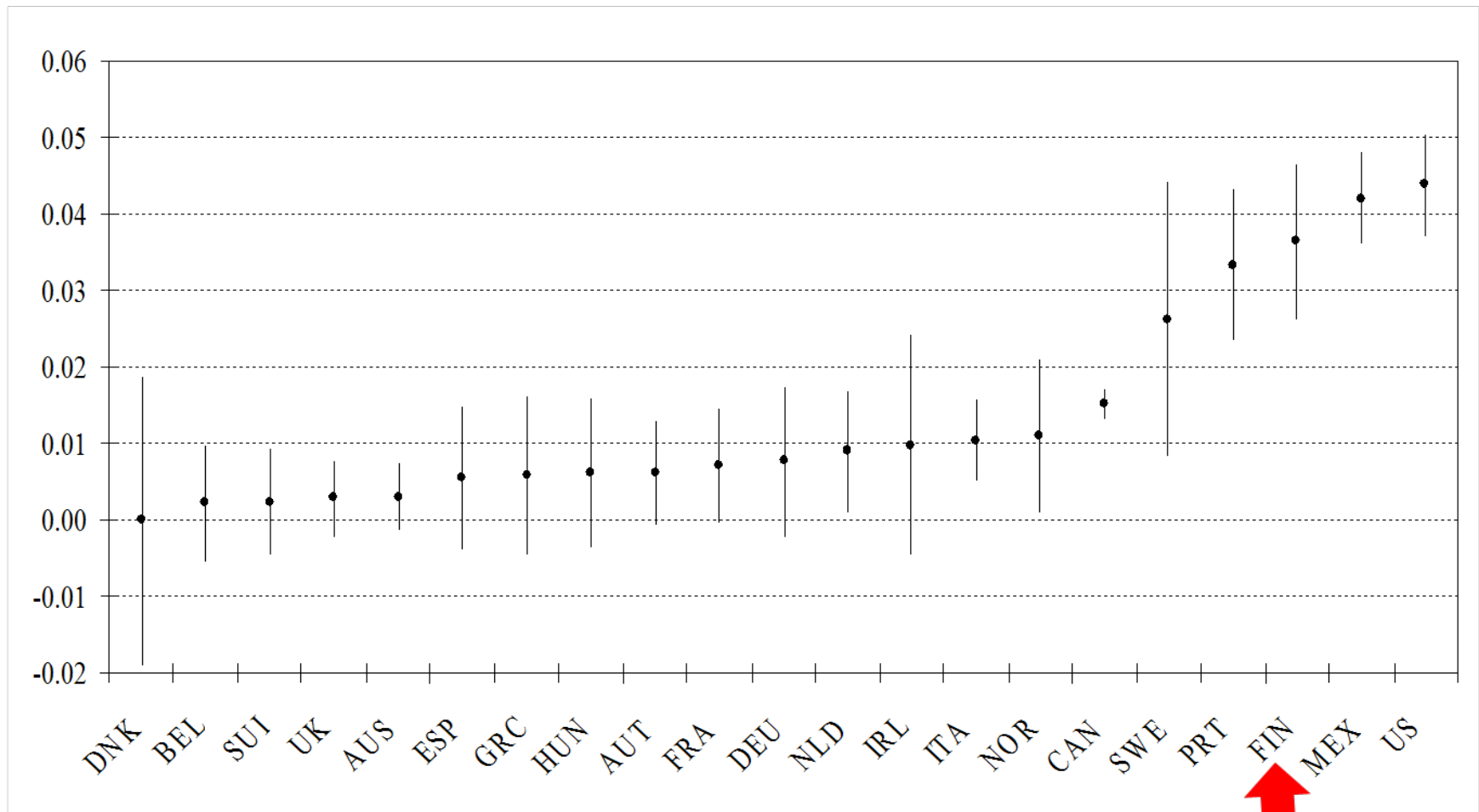
How does Finland do in comparison to other countries?



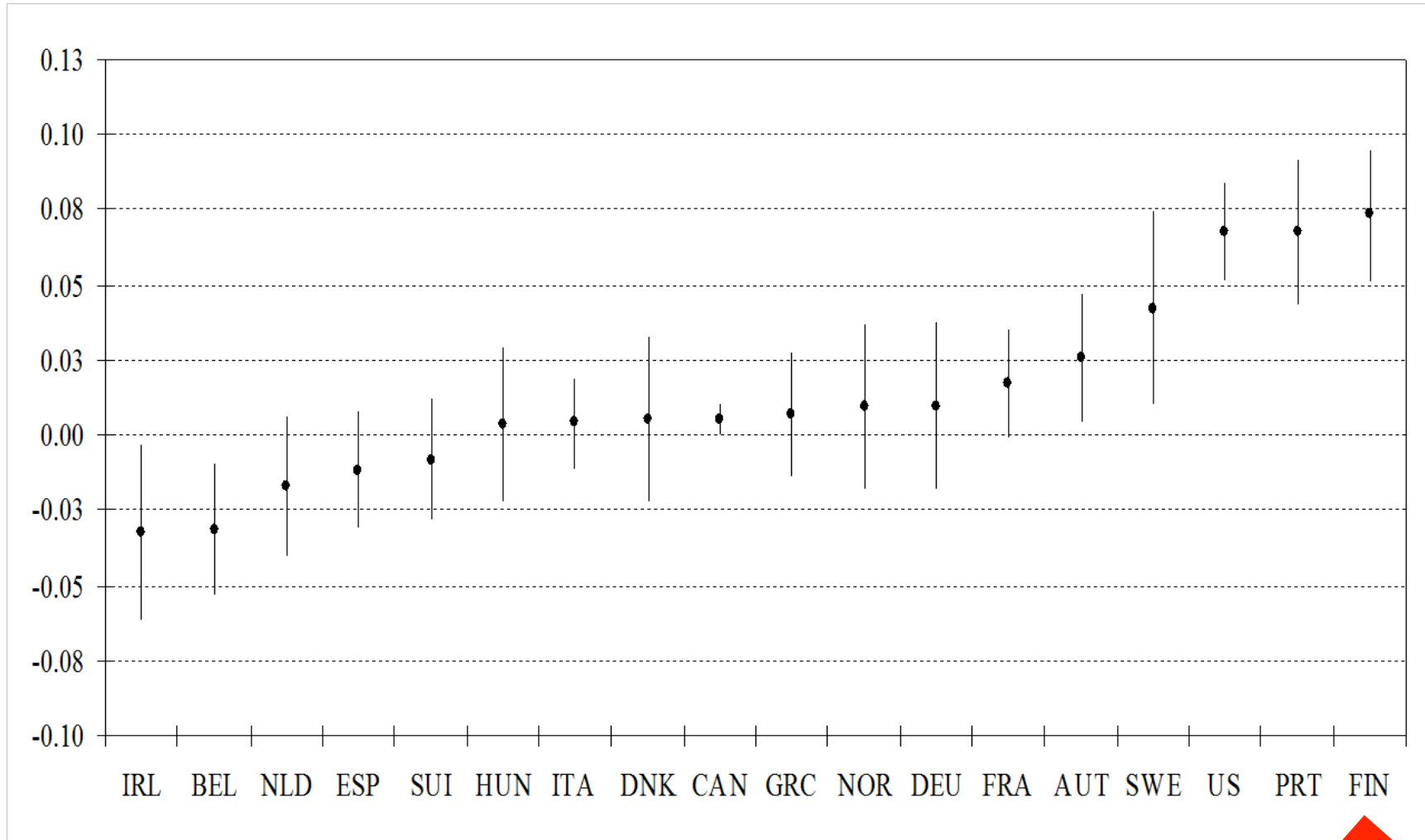
- Comparative study of 21 countries commissioned by OECD (Van Doorslaer *et al*, *Can Med Ass Jnl*, 2006)
- For Finland, used 2000 wave of ECHP data
- Public coverage not complete, with substantial copayments charged per visit
- Finland was found to have one of the most pro-rich distributions of doctor utilization in the OECD
- Confirmed by panel data analysis of Bago d'Uva *et al* (*JHE*, 2009) who used all waves of ECHP (1996-2001):
 - Finland most pro-rich for GP visits in Europe and
 - And second most pro-rich (after Portugal) for specialist visits



Comparatively large degree of pro-rich inequity in probability of a physician visit in Finland (HI indices with 95% confid intervals)

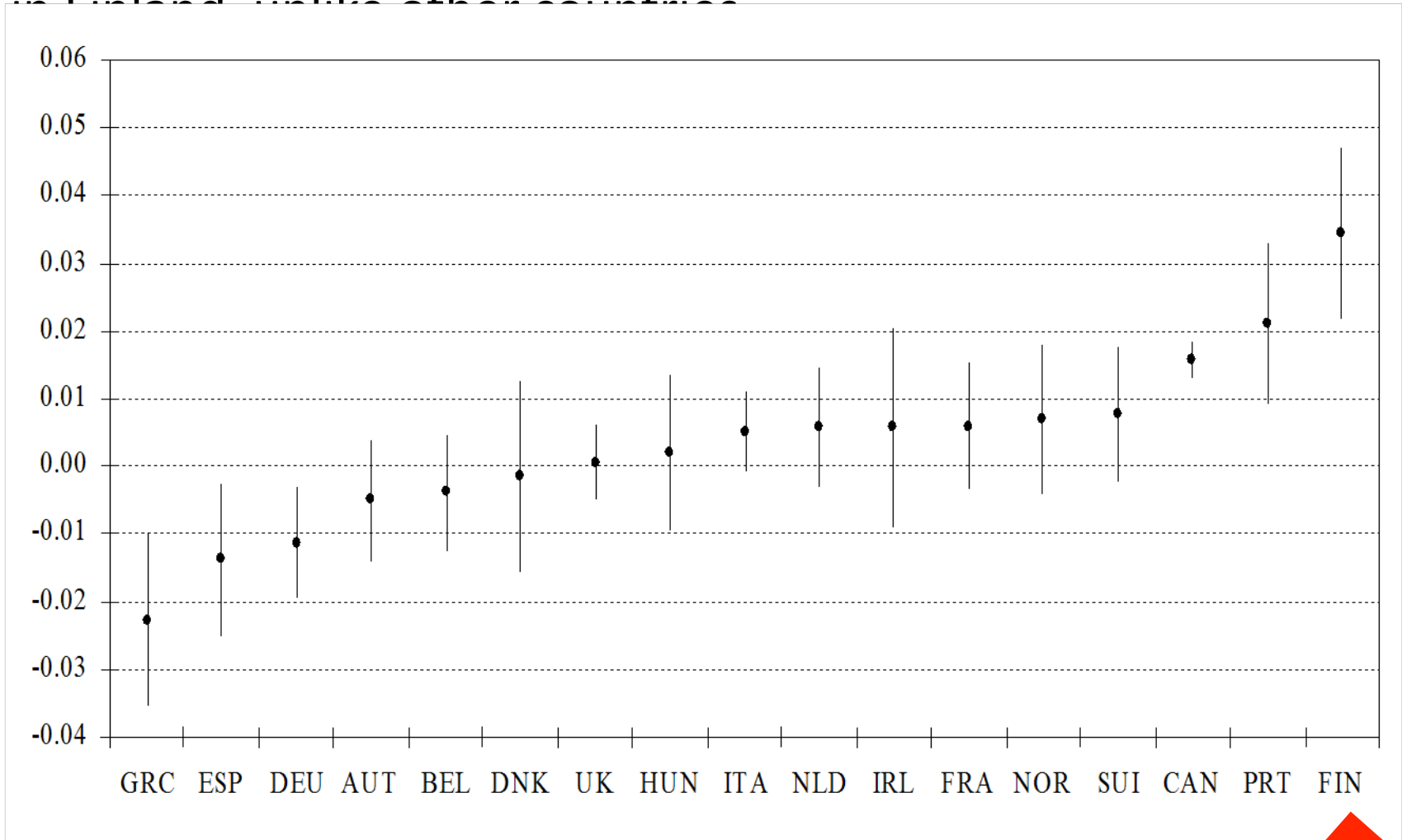


And even most pro-rich distribution of the number of doctor visits



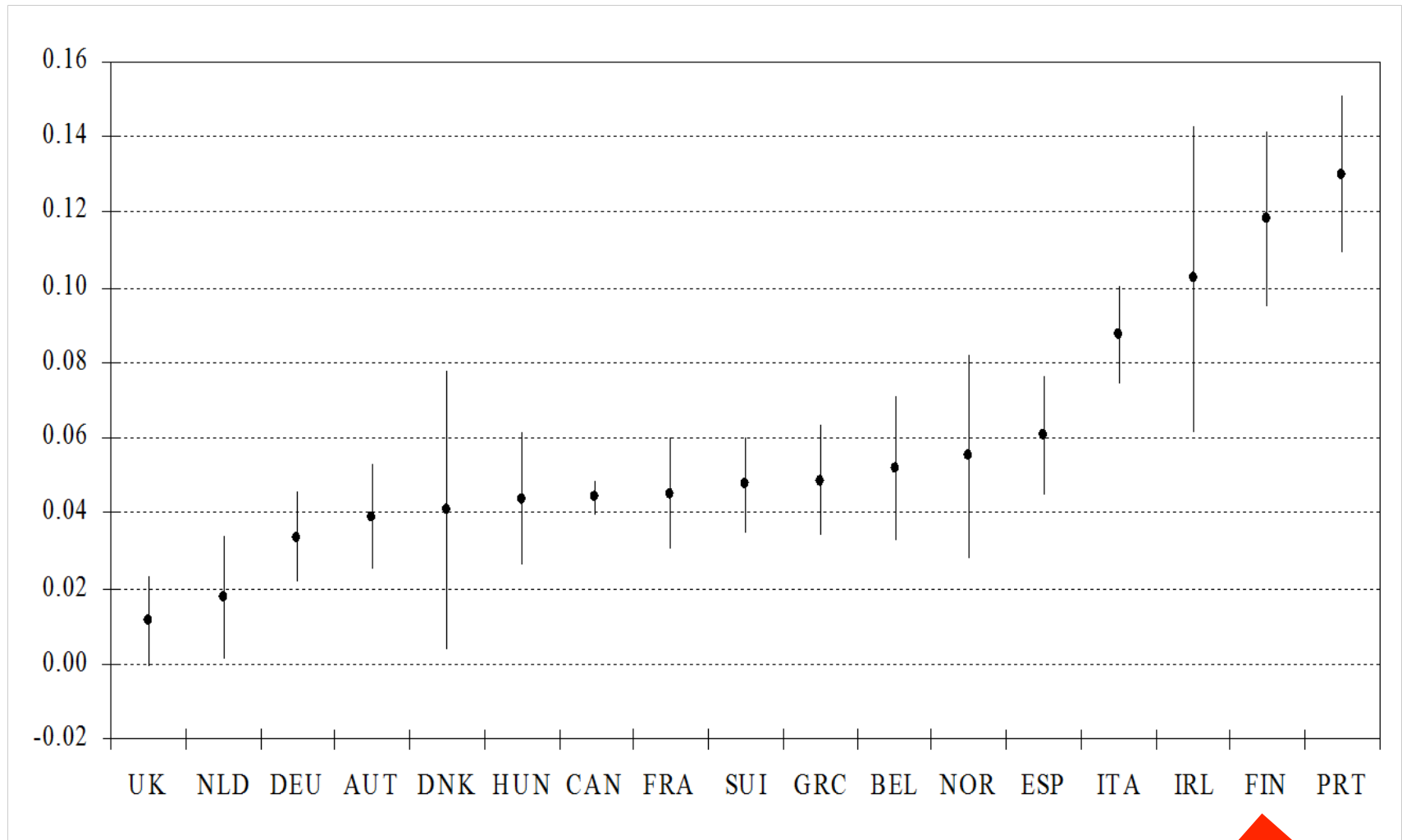


But why? Visits to general practitioner very pro-rich in Finland, unlike other countries



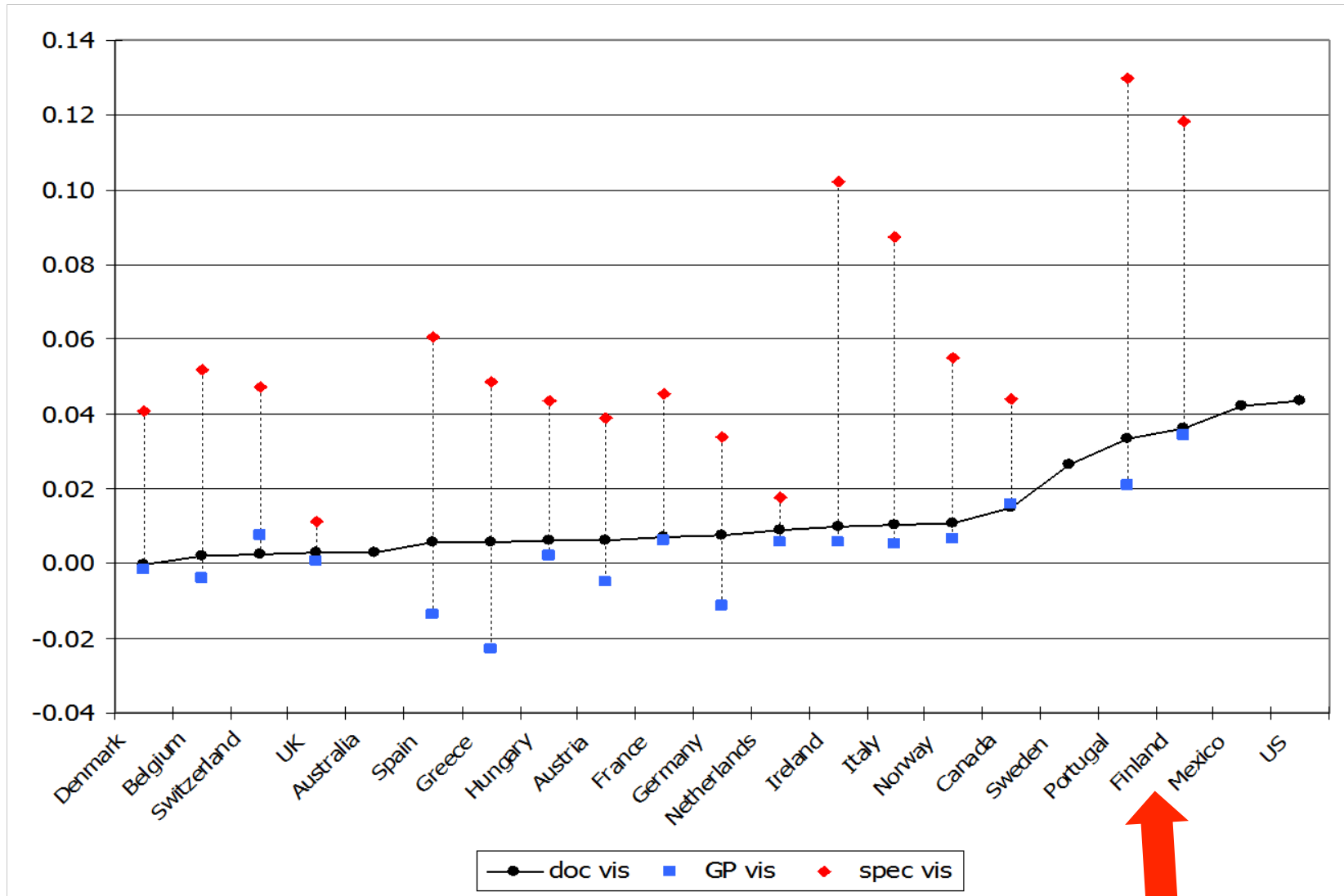


Visits to medical specialist also very pro-rich

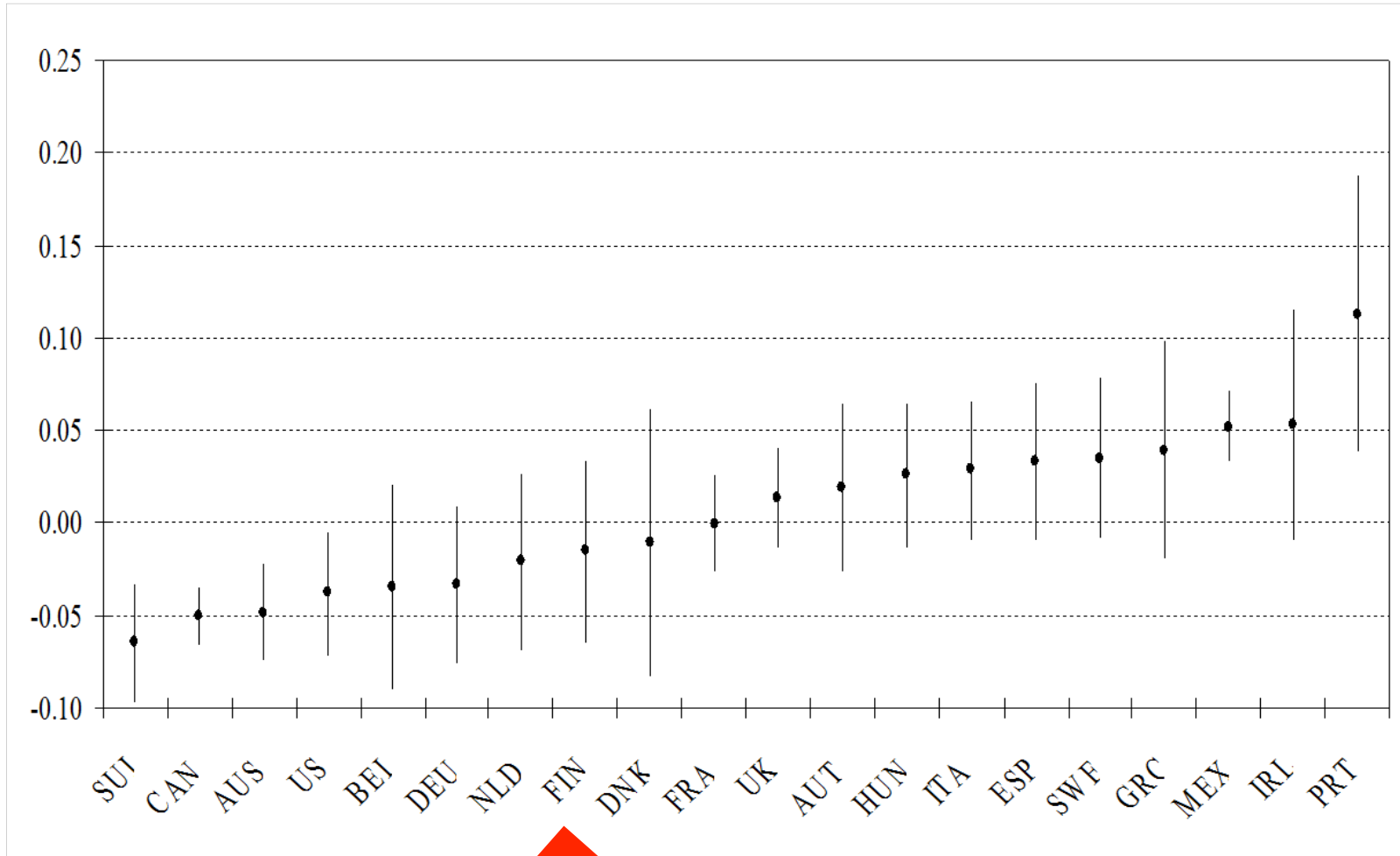




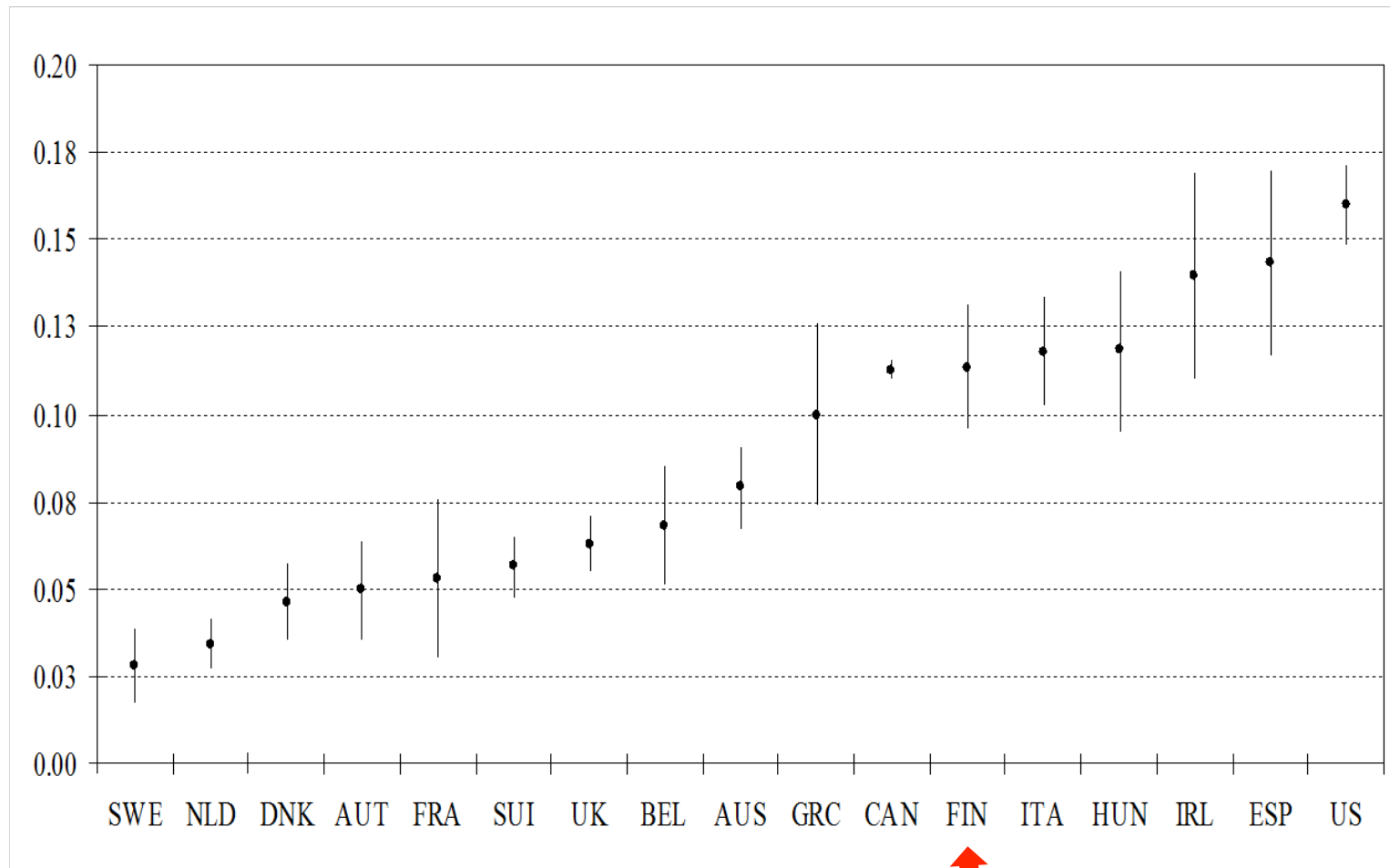
Inequity indices for the probability of a specialist visit much higher than for GP



However, *no* inequity in distribution of hospital admission probability



And pro-rich distribution of dental visits, as in all of the OECD



How does this square with the Finnish Constitutional Rights?



- *‘No one shall, without an acceptable reason, be treated differently from other persons on the ground of sex, age, origin, language, religion, conviction, opinion, health, disability or other reason that concerns his or her person’*

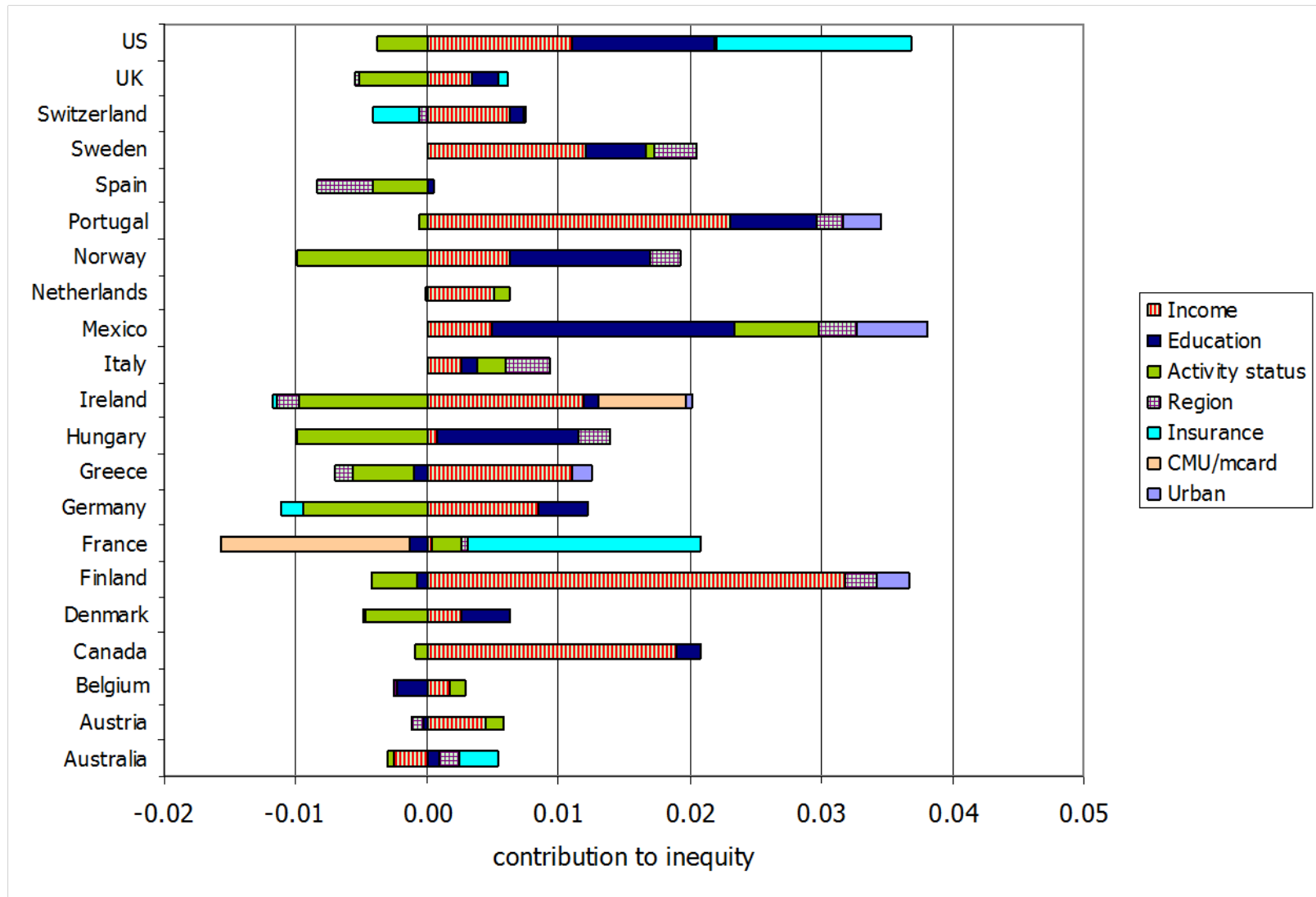
(The Constitution of Finland 1999)

- *‘The public authorities shall guarantee for everyone [...] adequate social, health and medical services’. The principle of need is spelled out in the Act on the Status and Rights of Patients, according to which patients have the right without discrimination to high quality health and medical care as required by their state of health.’*

(Act on the Status and Rights of Patients 1992)

What explains these pro-rich distributions?

A decomposition analysis shows income (and also region) to be important determinant of probability of seeing a doctor



What features of the Finnish system could explain these findings?



- Copayments?
- Private care options?
- Regional inequalities in supply?
- Manderbacka et al (ch 4.3 in Palosuo et al, 2009) re-investigated this using the 2000 *Health Examination Survey*
- Disaggregating medical care visits they find a HI index for
 - All visits: 0.04*** [pro-rich]
 - Health centres: -0.08*** [pro-poor]
 - Occupational health care: 0.25*** [very pro-rich]
 - Hospital outpatient: 0.01 [no inequity]
 - Private sector: 0.17*** [very pro-rich]

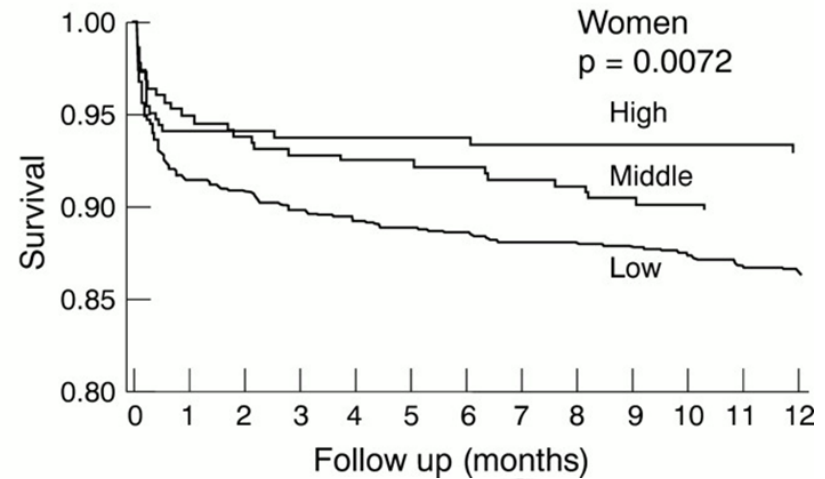
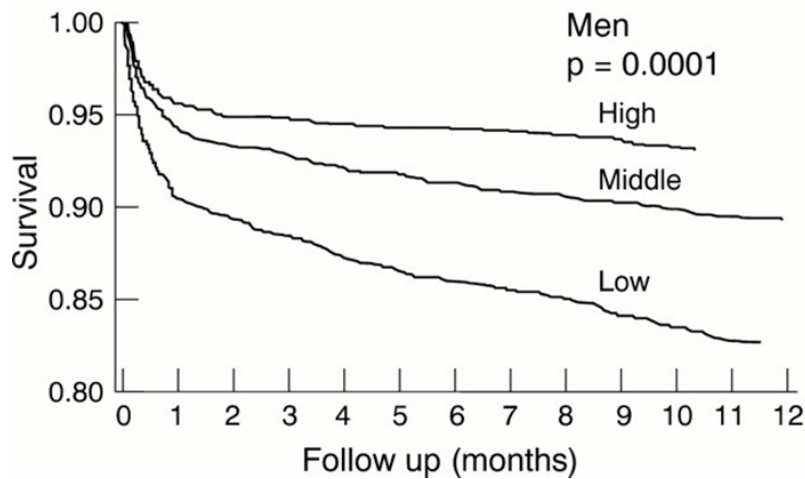
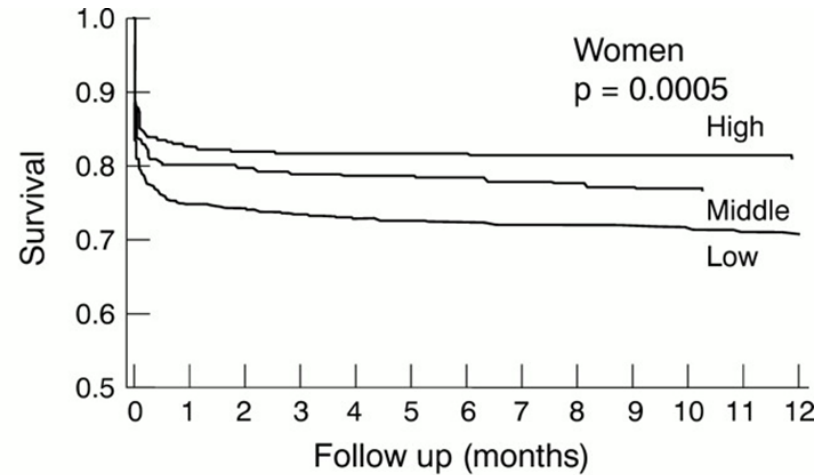
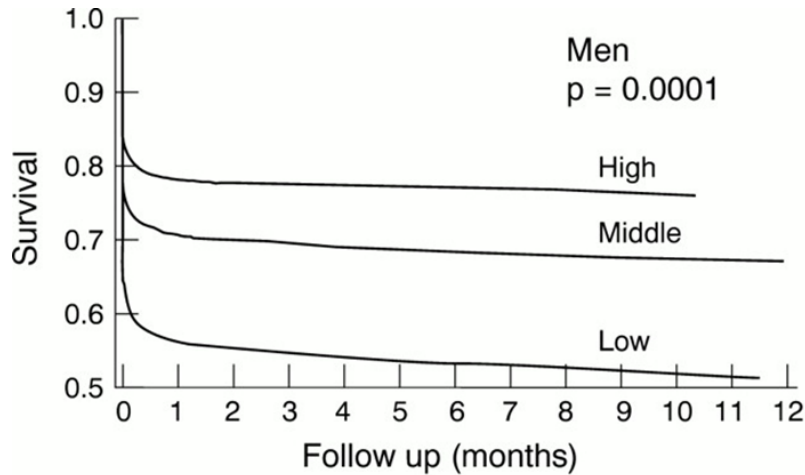


In conclusion:

- Most of the pro-rich pattern in GP visits due to occupational care visits
- Most of the pro-rich pattern in outpatient specialist use is due to private sector visits
- In their review, Manderbacka et al (2009) note that:
 - Pro-rich socioeconomic differences in specific surgical procedures seem to have levelled out since 2000
 - Outcome (mortality) differences by SES were also found, for example after AMI (Salomaa et al, 2001), suggesting differences in quality of care



One year survival curves by income group for all patients aged 35–64 years with their first MI event (upper panel) and for patients who have survived >1 day since the beginning of symptoms of their first MI (lower panel) in the FINMONICA MI Register Study.



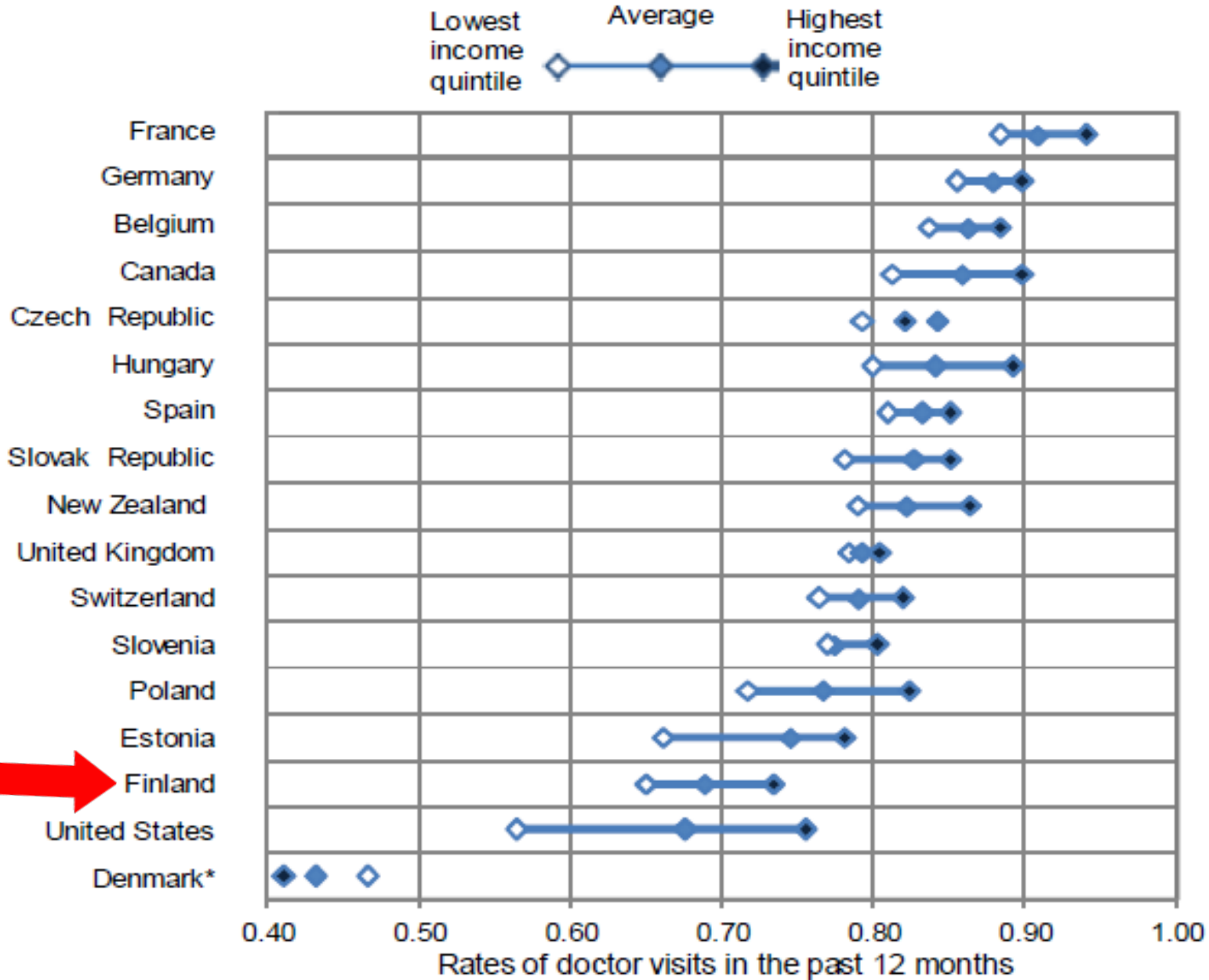
Salomaa V et al. J Epidemiol Community Health
2001;55:475-482

But most of these results are almost a decade old.
Has anything changed for the better?



- OECD did a recent OECD update for 19 countries, 2008-2009 (Devaux and De Looper, 2012)
- Adopted identical methods as Van Doorslaer et al (2004)
- Different selection of countries
- For Finland, they used *Welfare and Services Survey* (HYPA) 2009
- and find:
 - Little or no inequity in use of GPs (health center and occupational health clinic)
 - Still pro-rich inequity in specialist use (outpatient department or private practice)

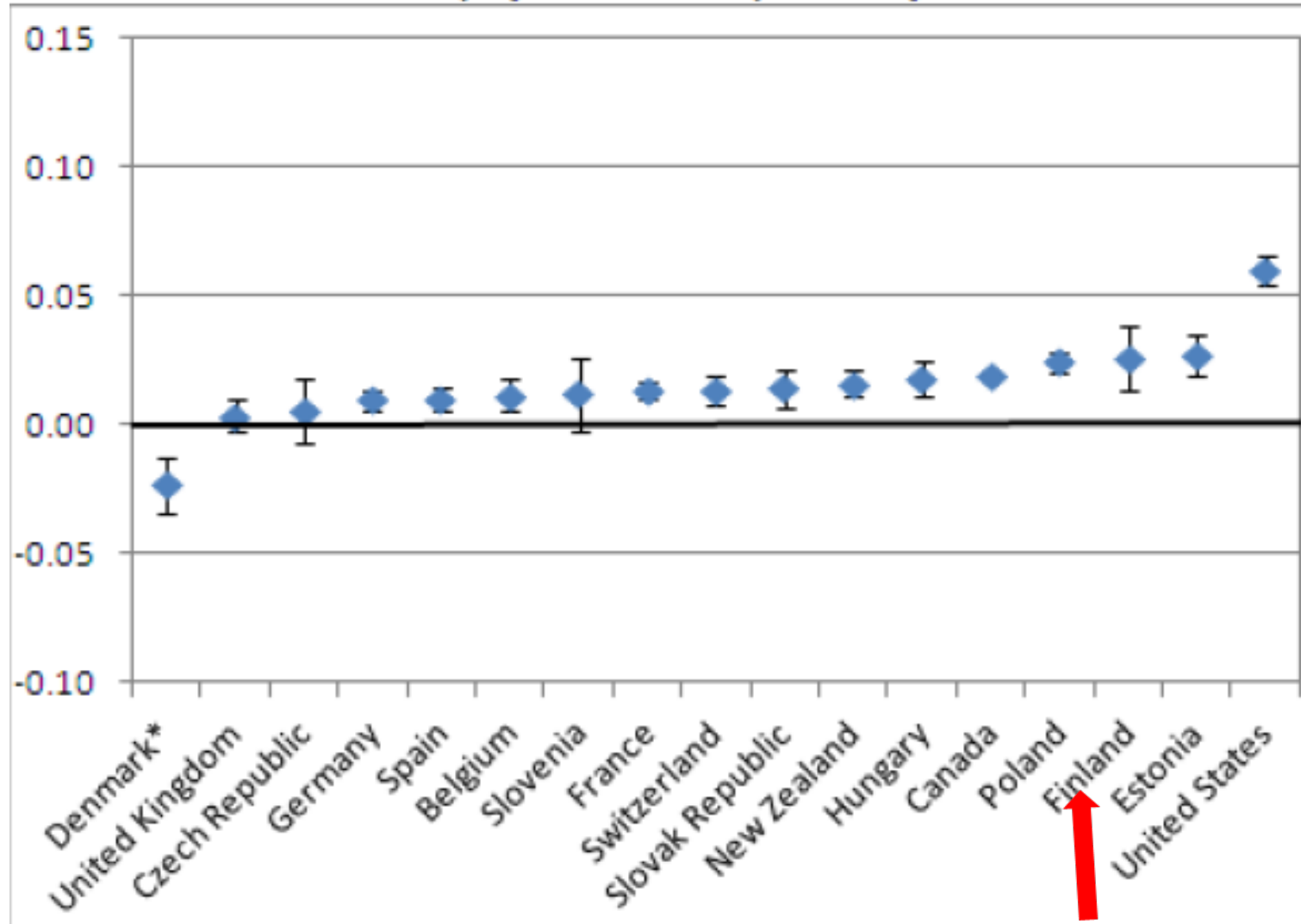
Needs-adjusted annual probability of a doctor visit, 2009





Inequity indices for doctor visit probability, 2009

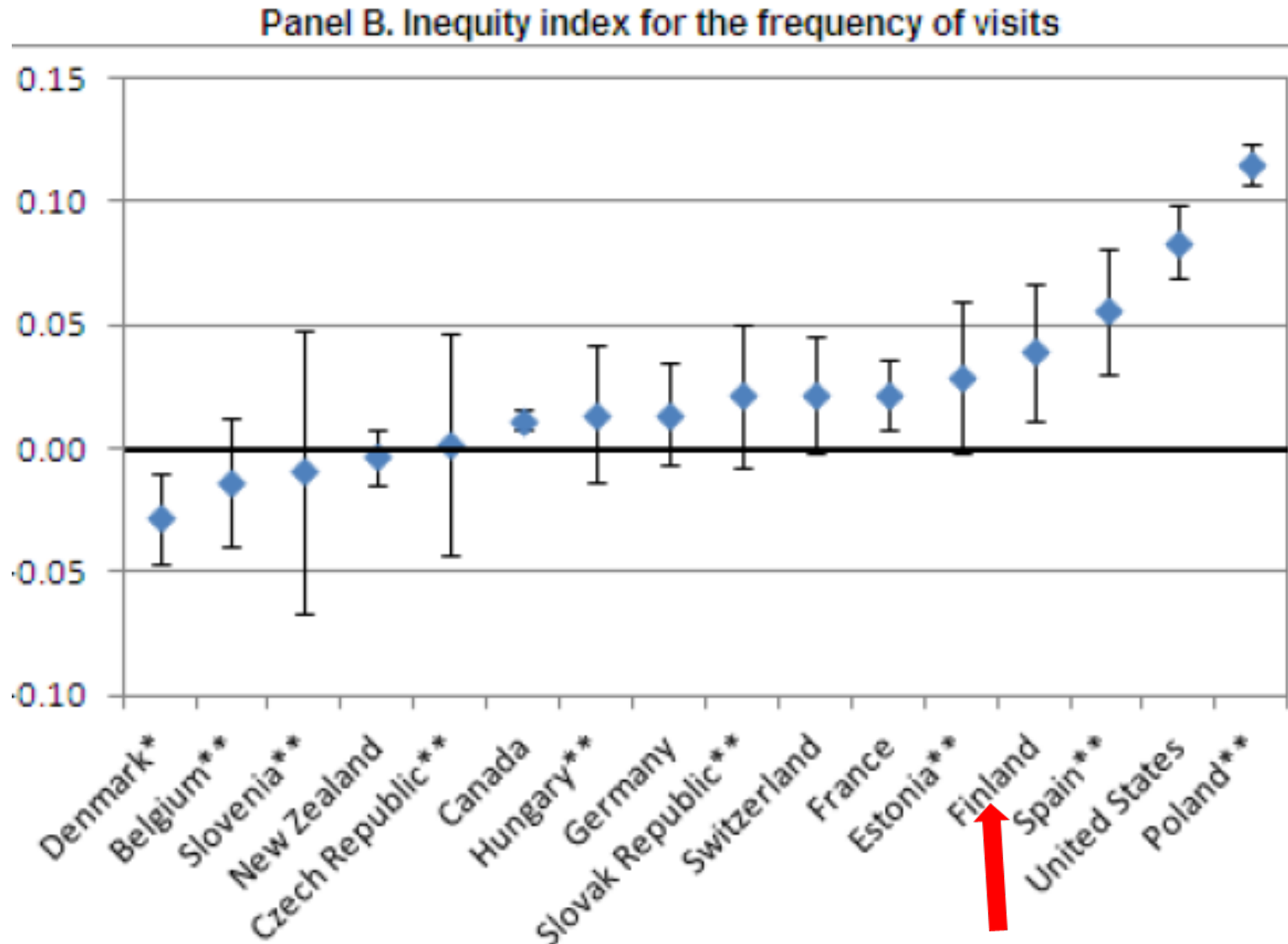
Panel A. Inequity index for the probability of a visit



(Devaux and De Looper, 2012)



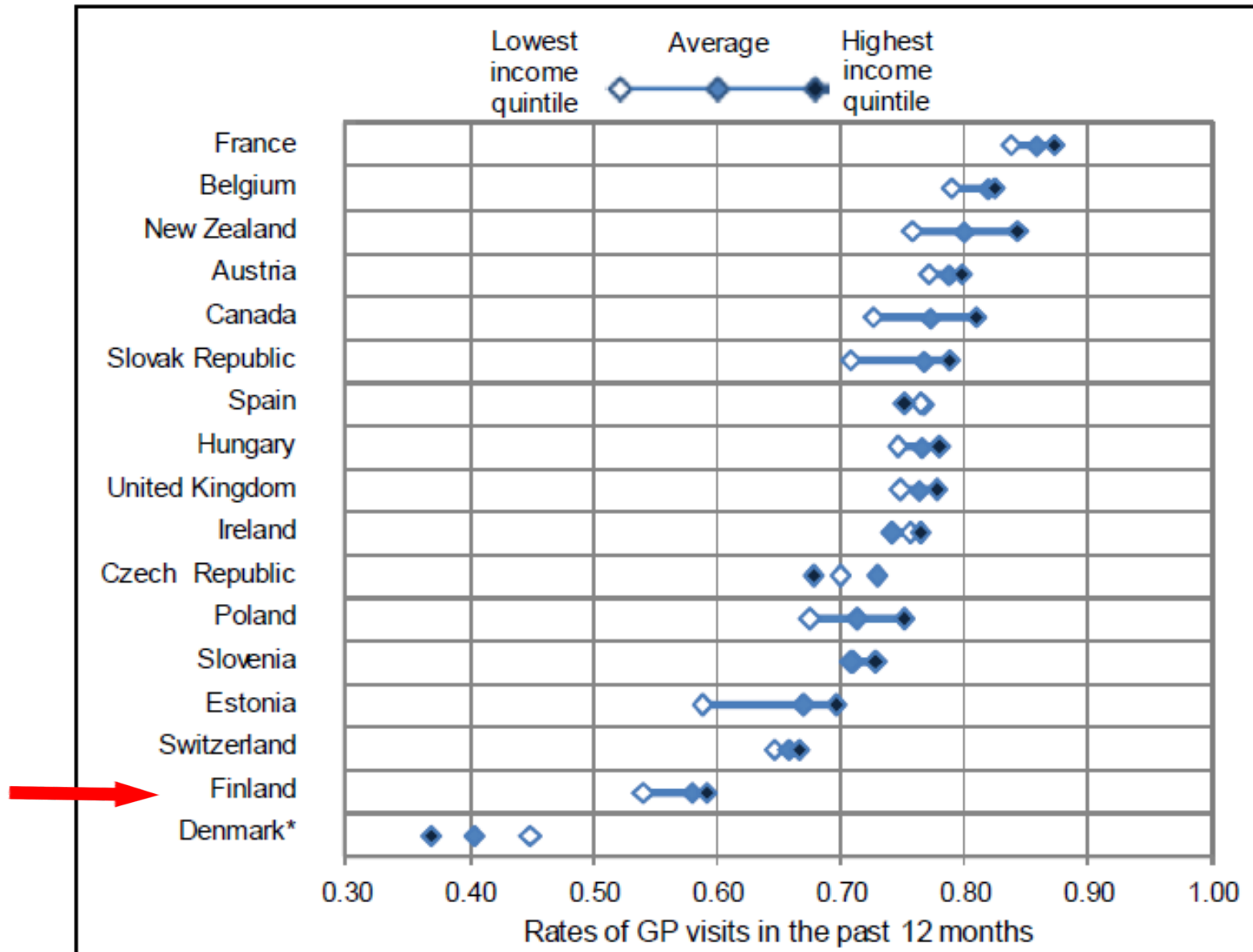
Inequity indices for number of visits per year



(Devaux and De Looper, 2012)

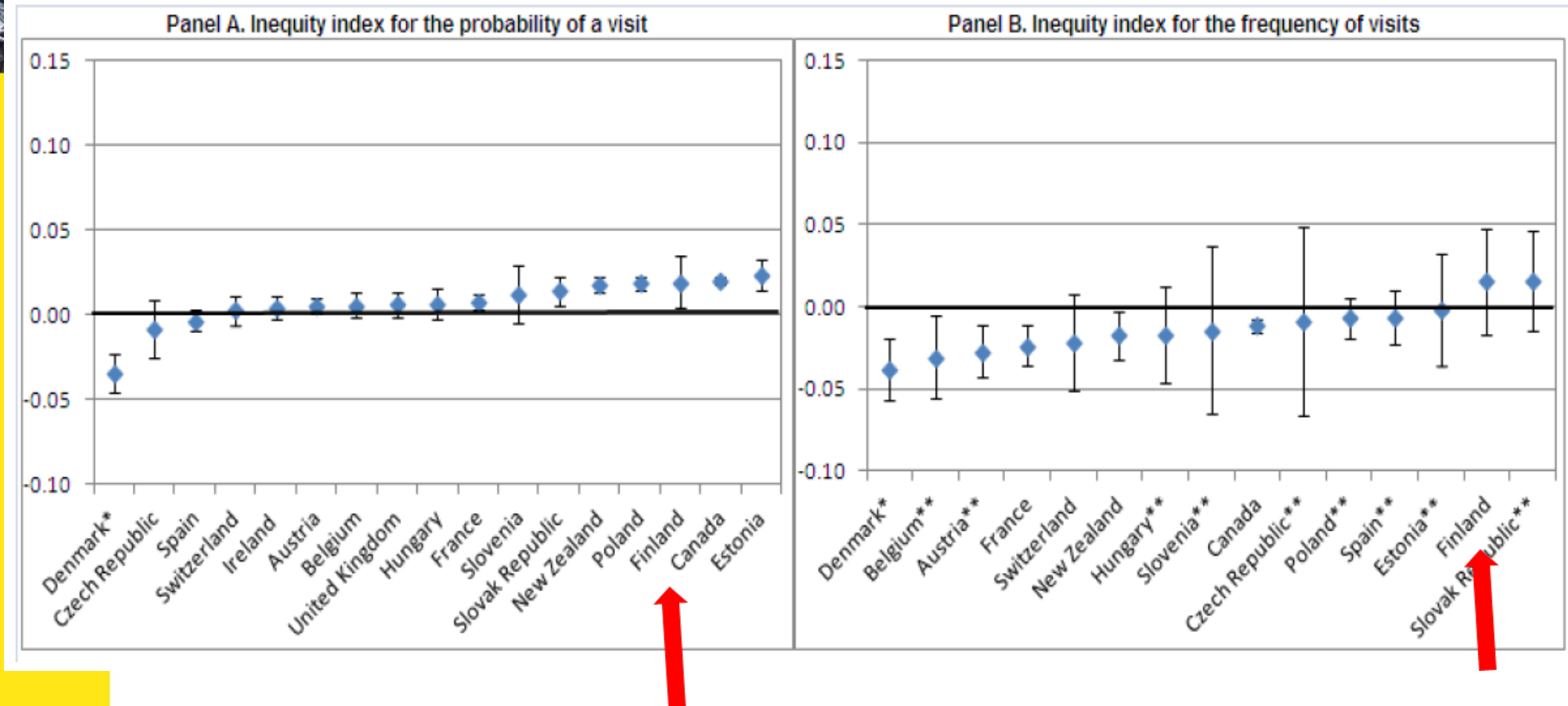


Probability of a doctor visit, by income quintile (public health center or occupational health clinic in Finland)



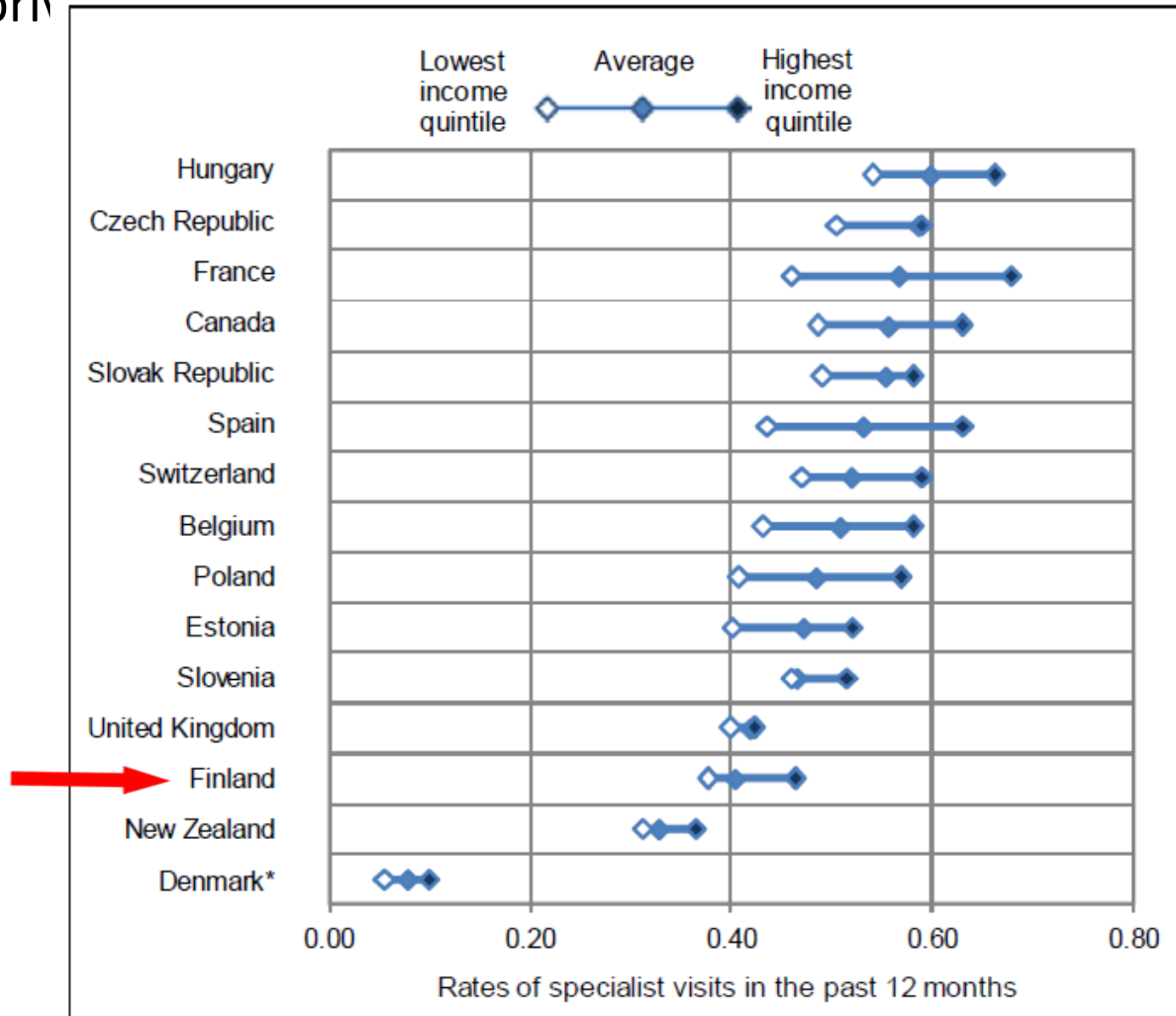
(Devaux and De Looper, 2012)

Little or no pro-rich inequity in GP visits in Finland, but not pro-poor as in some other countries



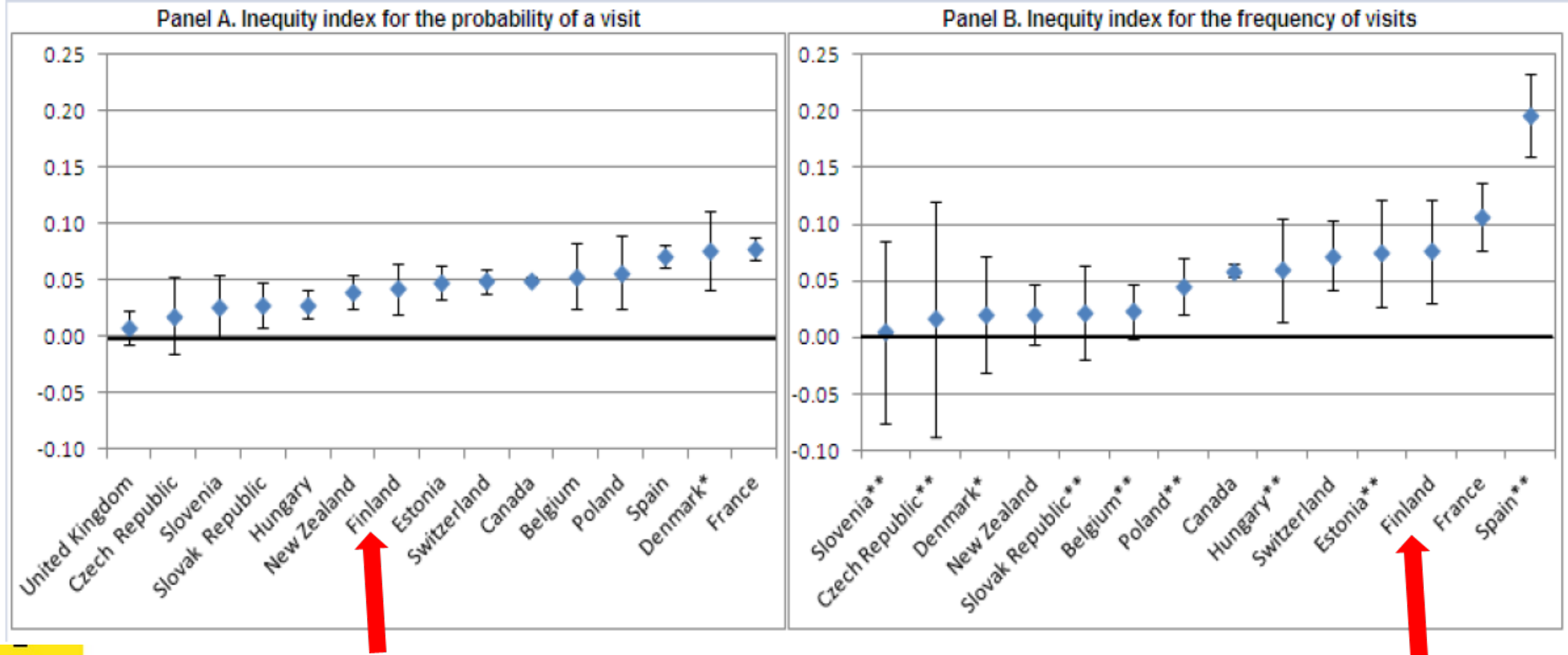


Relatively low rate of specialist visits (in outpatient department or private practice) in Finland



(Devaux and De Looper, 2012)

Still pro-rich inequity in specialist visits



Lessons learned



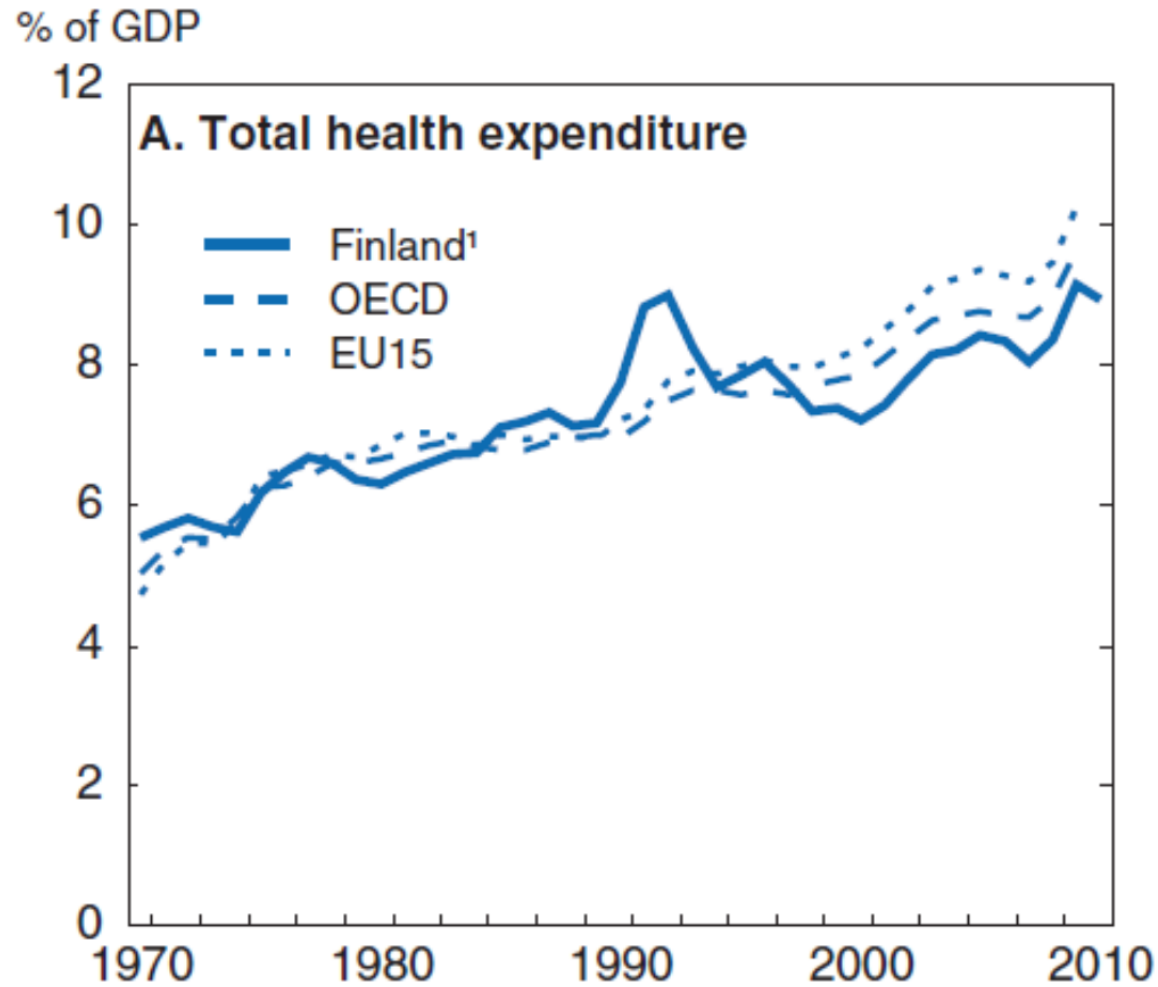
Is there anything Finland can learn from other countries?

- Yes, that it is feasible, with similar or even less resources, to achieve more equitable distribution of doctor services by income
- Private options, copayments, occupational-related coverage and relatively low use rates probably play some role here

Is there anything other countries can learn from Finland?

- Yes, what to expect from an economic crisis
- Finnish experience in early nineties may hold lessons for other European countries currently facing economic crisis

Economic crisis hit Finland long before other EU countries:
early 1990s recession implied a health spending shock

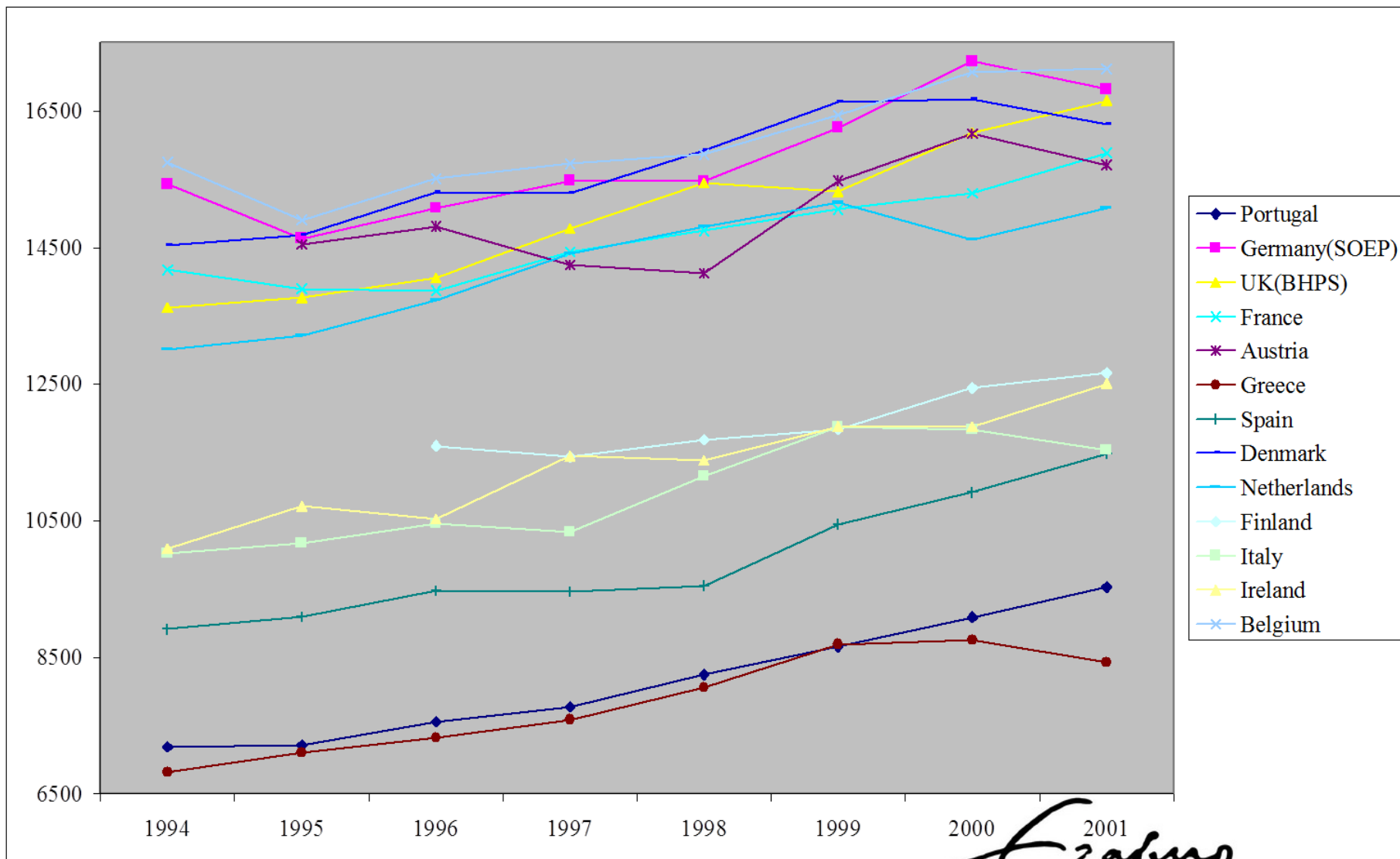


What were the implications of the crisis for health inequalities?

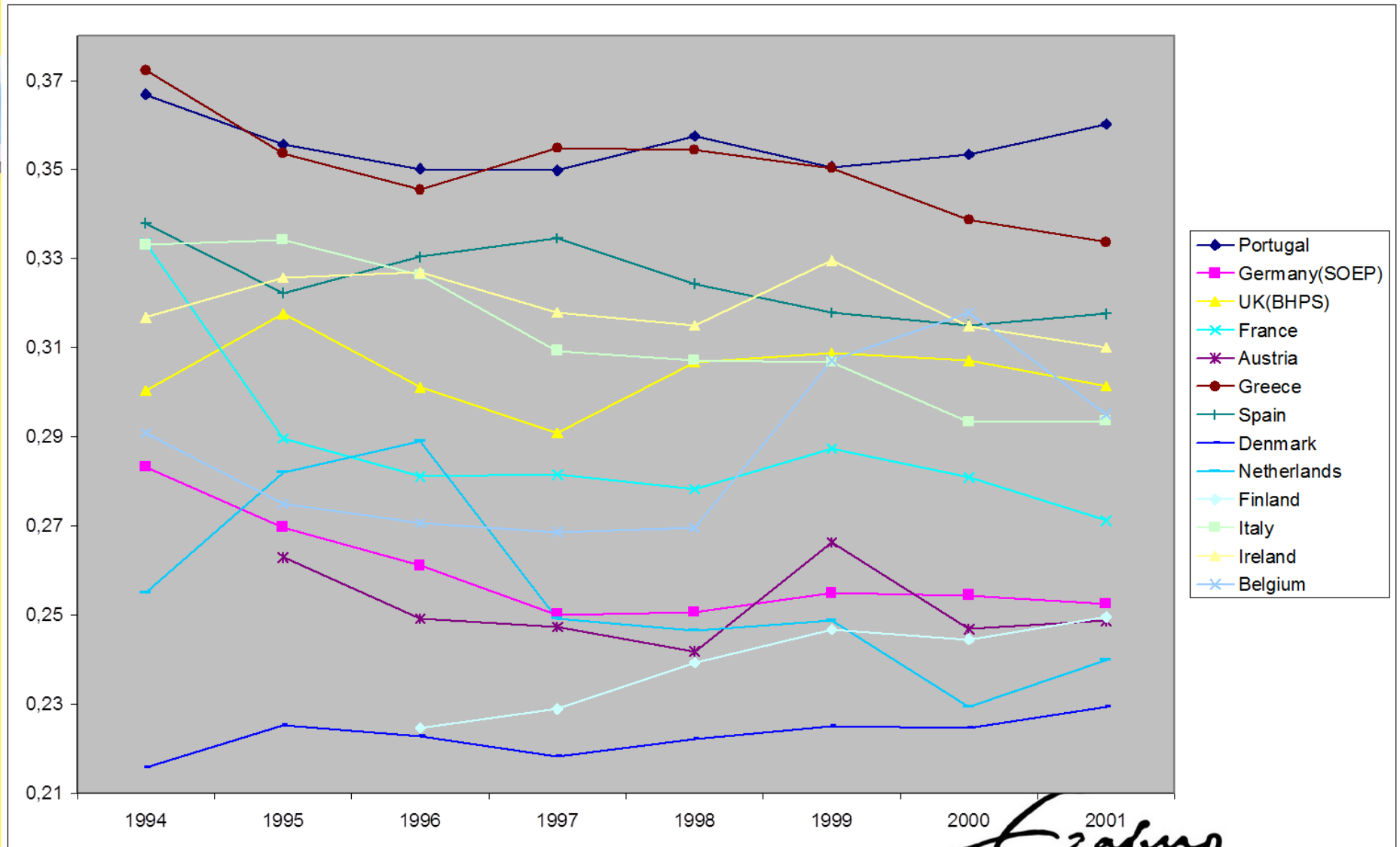


- In Van Ourti et al (JHE, 2009) we used European ECHP panel to examine the relationship between income, inequality and income-related health inequality.
- We showed under what conditions rising income inequality is associated with rising health inequality by income
- Crucial is the income elasticity of health, which was found to rise with income in all countries
- But only in Finland the other condition was met: steady rising income inequality with pro-rich growth
- As a result, Finland was the only country where health inequality by income (conc index) grew rapidly
- Difficult to reconcile economic growth with reduced health inequality by income? (Lisbon EU goals)

Evolution of average incomes

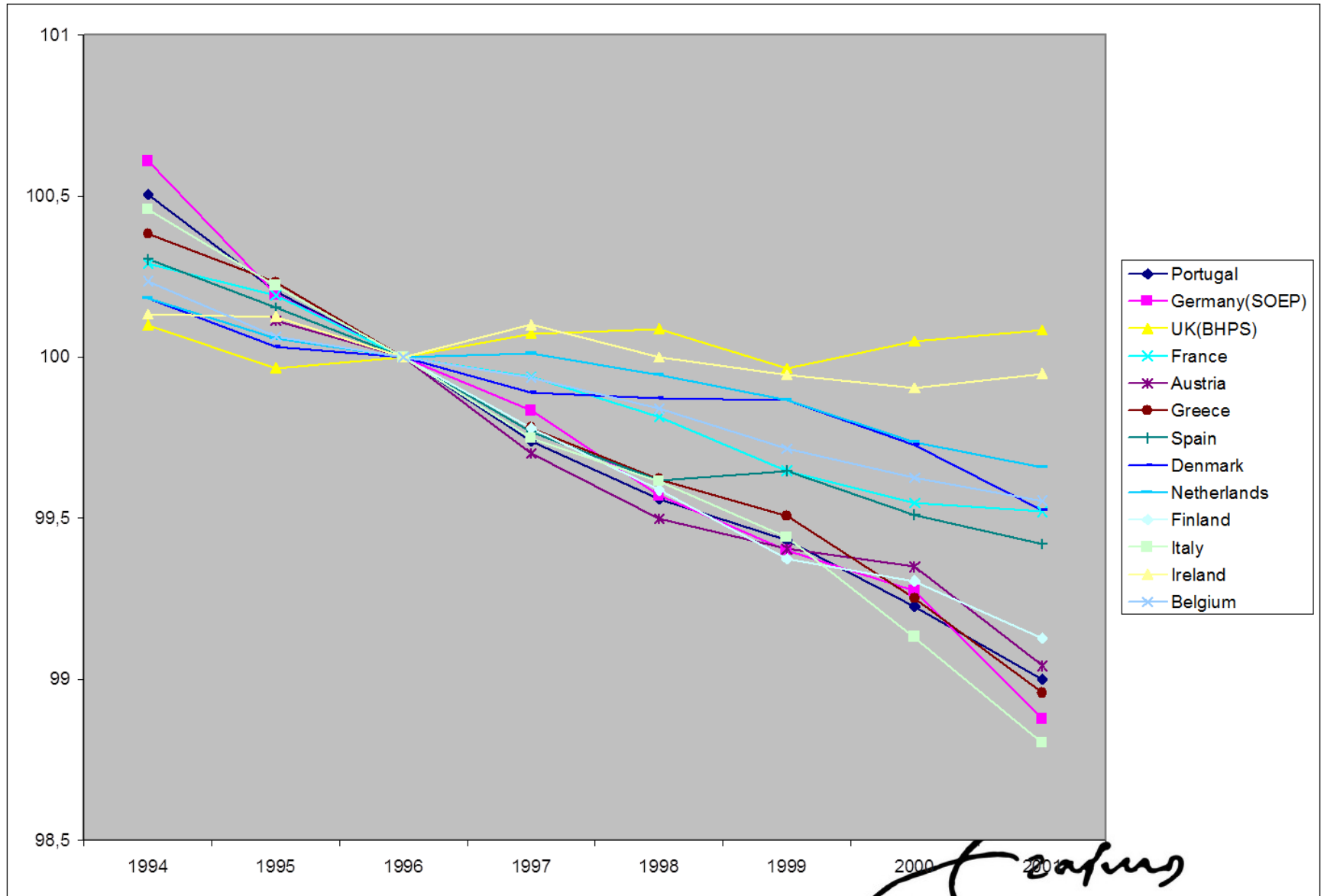


Evolution of income inequality (Gini index)



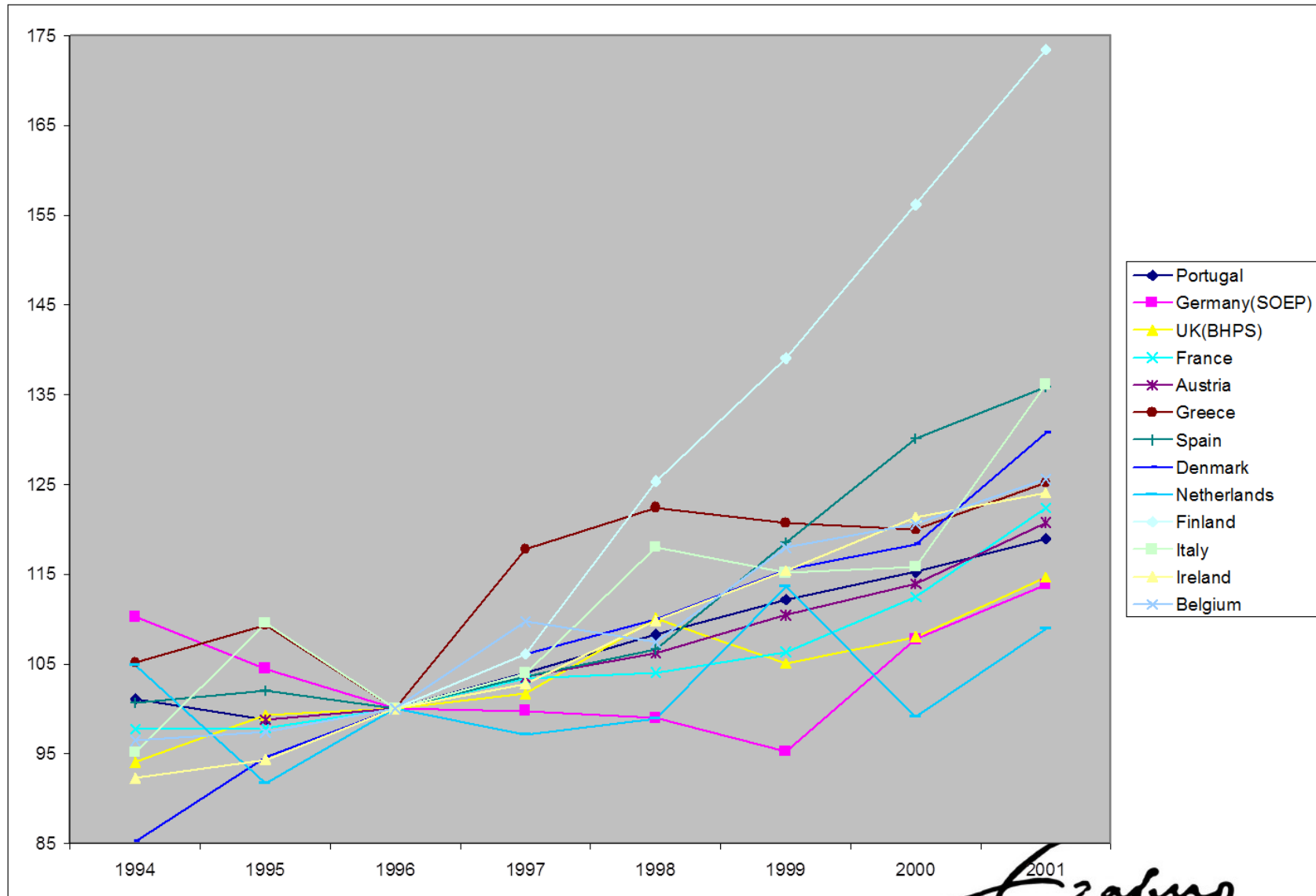


Evolution of average health





Evolution of income-related health inequalities



Health, income and inequality in EU panel 1994-2001



	Austria	Belgium	Denmark	Finland	France	Germany	Greece	Ireland	Italy	Netherlands	Portugal	Spain	UK
CI ₁₉₉₄	0,0092	0,0058	0,0067	0,0057	0,0081	0,0088	0,0140	0,0073	0,0053	0,0041	0,0201	0,0094	0,0091
h ₁₉₉₄	0,9042	0,9090	0,9205	0,8909	0,8745	0,8439	0,9092	0,9263	0,8791	0,9056	0,8370	0,8829	0,8860
y ₁₉₉₄	14546	15754	14539	11596	14177	15431	6817	10089	10020	13000	7183	8911	13625
G ₁₉₉₄	0,2630	0,2908	0,2158	0,2246	0,3335	0,2832	0,3723	0,3168	0,3331	0,2550	0,3669	0,3380	0,3004
CI ₂₀₀₁	0,0112	0,0076	0,0103	0,0099	0,0102	0,0091	0,0166	0,0099	0,0076	0,0043	0,0237	0,0127	0,0111
h ₂₀₀₁	0,8946	0,9028	0,9145	0,8831	0,8678	0,8294	0,8962	0,9246	0,8646	0,9008	0,8245	0,8752	0,8859
y ₂₀₀₁	15711	17118	16313	12660	15889	16819	8426	12509	11534	15081	9527	11483	16652
G ₂₀₀₁	0,2487	0,2951	0,2294	0,2495	0,2712	0,2525	0,3337	0,3101	0,2936	0,2399	0,3602	0,3176	0,3014
N	3967	3025	2544	3219	6836	7520	6134	2872	9036	4556	7097	7307	5925
CI ₂₀₀₁ -CI ₁₉₉₄	0,00205	0,00175	0,00358	0,00421	0,00206	0,00029	0,00266	0,00252	0,00228	0,00016	0,00355	0,00330	0,00199

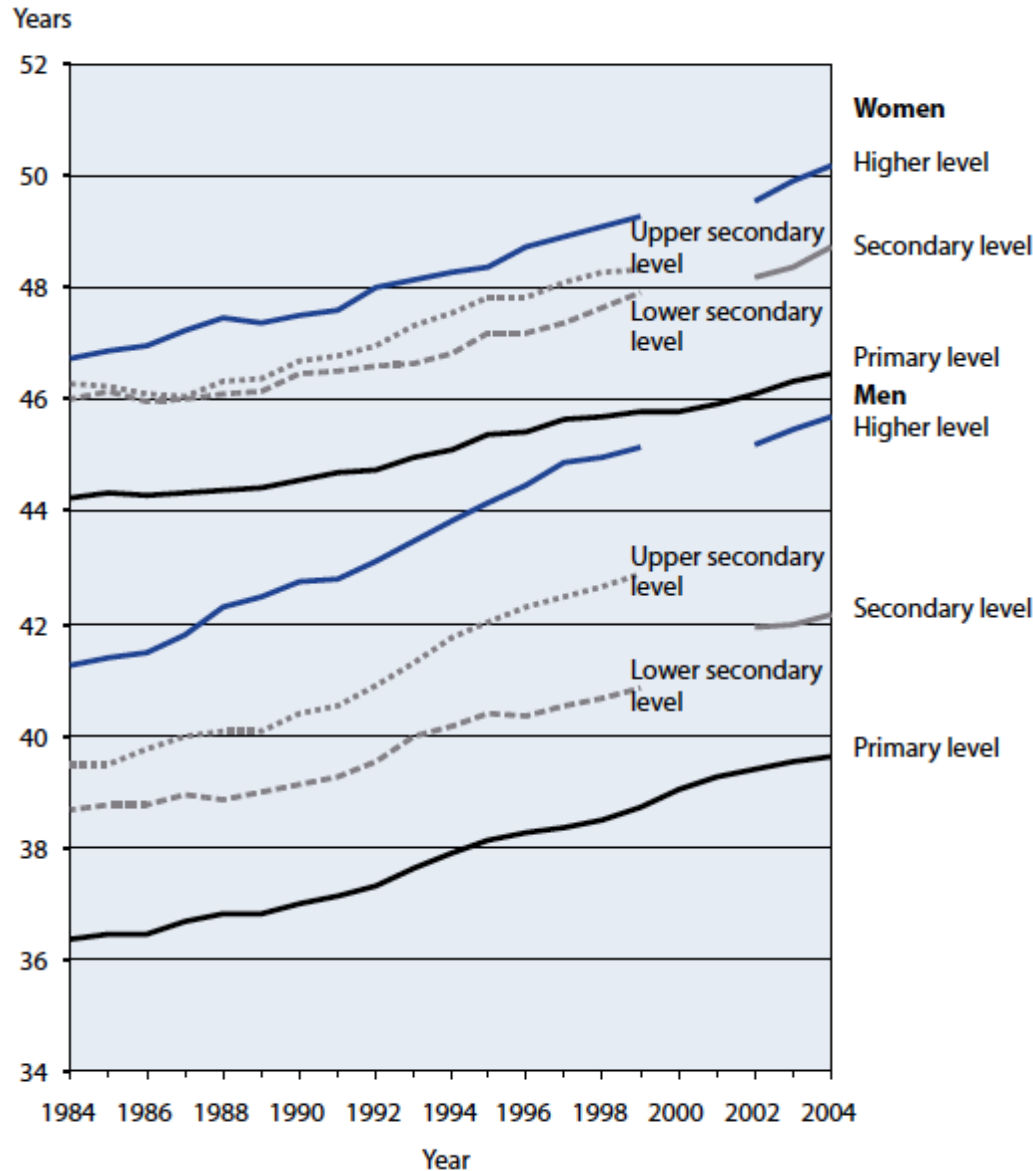
What causes socioeconomic inequalities in health?



- Many candidates, but one “usual suspect” is education.
- Problem: strong health-education association does not imply anything about causation
- Need natural or quasi-experiment, in absence of randomization options
- Finnish comprehensive schooling reform of 1972-1977 (tracking into vocational and academic tracks delayed from age 11 to 16)
- Used by economists to assess effect of education on
 - gender differences in educational attainment (Pekkarinen, Scan J Econ, 2008)
 - intergenerational income mobility (Pekkarinen et al, J Pub Econ, 2009)



Educational differences in life expectancy in Finland at age 35 by sex between 1984 and 2004 (Palosuo et al. 2009)



Preliminary results MSc thesis in HE Erasmus by Hannu Vessari: Are there any health (inequality) effects of the schooling reform?



- He uses three linked registry data bases (census, cause of death and hospital discharges) for 11% random sample of birth cohorts between 1960 and 1966 which were gradually exposed to the reform
- Using a difference-in-difference approach he seems to be finding that the reform
 - reduced the (premature) mortality risk of males between 1987 and 1999 (i.e. in relatively young cohort aged 21-49)
 - reduced the effect of father's education on mortality
 - has similar effects on morbidity (as proxied by likelihood and number of hospital admissions)

Conclusions

- Finland has had more pro-rich distribution of doctor utilization than most other EU and OECD countries for decades now
- This appears related to some system features like full coverage of doctor services in occupational clinics, private practice, copayments and lower average use rates (cf OECD Economic Survey Finland 2012)
- Income-related health inequality is not any larger than in other countries, but has grown as a result of pro-rich economic growth in late nineties
- More research needed on causal mechanisms of the gradient

