What have we learnt from equality of opportunities in health to shape public health policies?

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8th Canazei Winter School
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Acknowledgment

A lot of the material covered comes from (joint) work with Florence Jusot, Sandy Tubeuf and Damien Bricard

And many chats with Marc Fleurbaey, Arnaud Lefranc, Erik Schokkaert, Dirk Van de Gaer along these years

Very strong case for reducing health inequalities

- Health is a primary good and to some extent the most important one.
- When you are deprived of it, nothing is more important than recovering.
- Universal empathy for poor health (quite rare to hear people saying that they are happy to learn that someone is sick)
- All people may be happier if we level the health playing field (which may not be the case for income or education)
- People can be rival in education or in income in terms of status.
- People are much less rival in health (in terms of status).
- Your good health is not a threat for my health. Quite the contrary, your bad health may be a threat for me.

Solidarity in health is important for social cohesion

- Whereas reducing income inequality may be a contentious issue, reducing health inequality may gain support from a very wide political spectrum.

- True at the national level (example of the UK within the NHS – free care at the point of use - even if Britain is far from being the most egalitarian society in Europe on other matters, at least since Margaret Thatcher)

- True at the world level when there is an adverse shock on health somewhere

- Conversely, the Great Potato Famine in Ireland has left bitterness which has then renewed expressions of nationalism

Health inequalities : a case study for theories of justice

- More traceability for health than for income
- Genetic factor + age and sex = what can we do with biological inequality? Inescapable inequality?
- Inequalities due to social institutions are considered unfair
- What about health inequalities due to lifestyles?

Measuring health inequalities: some Intricacies

- Multidimensional
  - Longevity
  - Morbidity (objective)
  - Self-Assessed Health (subjective)

- Cardinal/ordinal (Allison and Foster)

- A case for an absolute measure

- Probability of being in good health in [0,1]
  - The mirror property : the inequality of attainment = the inequality of shortfall (Erreygers (2009)

  - Variance is the only subgroup decomposable measure that satisfies this property (Lambert et Zheng (2011)

Outline

1. How can justice theory shape our view on how to reduce health inequalities ?

2. Putting numbers into perspective

HOW CAN JUSTICE THEORY SHAPE POLICIES REDUCING HEALTH INEQUALITIES ?

Theories of Justice

- John Rawls (*A Theory of Justice,* 1971) a turning point in the anglo-saxon world
- From consequentialism (*egalitarianism*, *utilitarianism*) to a process-dependent perspective
- At the beginning: a set of means which should be as equal as possible
- The outcome is related to ex ante by the exercise of freedom

Equalities of opportunities

- Different formulations for the same broad idea
- To be equalized
  - Primary goods (John Ralws)
  - Capability set (Armatya Sen, Martha Nussbaum)
  - Circumstances (Ronald Dworkin, Gerald Cohen, Richard Arneson, John Roemer, Marc Fleurbaey) (*Principle of compensation*)
- *Outcome Inequalities* may persist because people will not exercice their freedom (responsibility) in the same way (*Principle of natural reward*)

How to use for thinking health inequalities ?

- A normative view : For the design of public policy with scarcity of resources ?
- The Georges Best Example in UK and the 6 months rule
- Illegitimate inequalities vs legitimate inequalities
- All freedom/effort/responsibility correlated to circumstances should be considered illegitimate (*the debate Brian Barry-John Roemer*)
- Does this normative view correspond to the view of a large fraction of the population?

An instrumental view

- 1. Useful to understand how health inequalities are generated

- A decomposition of the generating/building process which is meaningful at least from a positive viewpoint
  - Disentangling the role of inherited (genetically and socially) factors, lifestyles, and luck.

- 2. Clarifying how to reduce health inequalities
  - Because efficient policies will not be the same.

Our view (a mix of normative and positive arguments)

- Even if you stick to a pure egalitarian view (*which may be more prevalent for health than for income, because health is more important*), the perspective of equality of opportunity is interesting because it may offer some keys for reducing health inequalities

- In the case where you have to give priority in reducing health inequalities (because of scarcity of resources)
  - The share of inequalities coming from circumstances should given priority because they are even more unjust than the others.

Two types of analysis

- *Causality analysis* : Finding the best ways to reduce health inequalities, tool by tool
  - Econometrics, quasi-experiment, field natural experiment

- *Correlation* is sufficient for decomposition analysis
  - How much of the health inequality is coming from exogenous sources? (*Omnibus measure*)
  - How much of the health inequality is coming from lifestyles?
  - How much can we gain at most if we are targeting public health policy?

Correlation may not be that bad for the global impact of circumstances

- The lead poisoning example
- Lead in childhood-home walls has both consequences on parents and children health
- Correlation between parents' health and children's health which is not causal.
- Lead in childhood-home is still a circumstance. Lead and parents' health are exogenous
- Presumption that even if there are differences between decompositions according to correlation/causality for each determinant, in aggregate for the whole set circumstances, the deviations are compensated.

For lifestyles, correlation more problematic

- Because lifestyles may be endogenous to health status
- If healthy lifestyle because good health, the contribution of healthy lifestyle is upward biased.
  - Example: exercise
- If healthy lifestyle because bad health, the contribution of healthy lifestyle is downward biased
  - Example: to quit smoking if lung cancer
- Conceivable to identify the sign of the bias for each lifestyle
- Difficult to guess the sign of the bias for the total impact of lifestyles

Same old wine in a brand new bottle ?

- Change of the focus. Switching from:
- How are health inequalities related to social inequalities (occupation, education, income) ?
- To : How are health inequalities related to exogenous determinants (genes, parents' health, family and social background) ?
- Occupation, education are endogenous (product of circumstances, effort and luck)
- New for the correlation, mainly a reinterpretation for the causality

2. Putting numbers into perspective

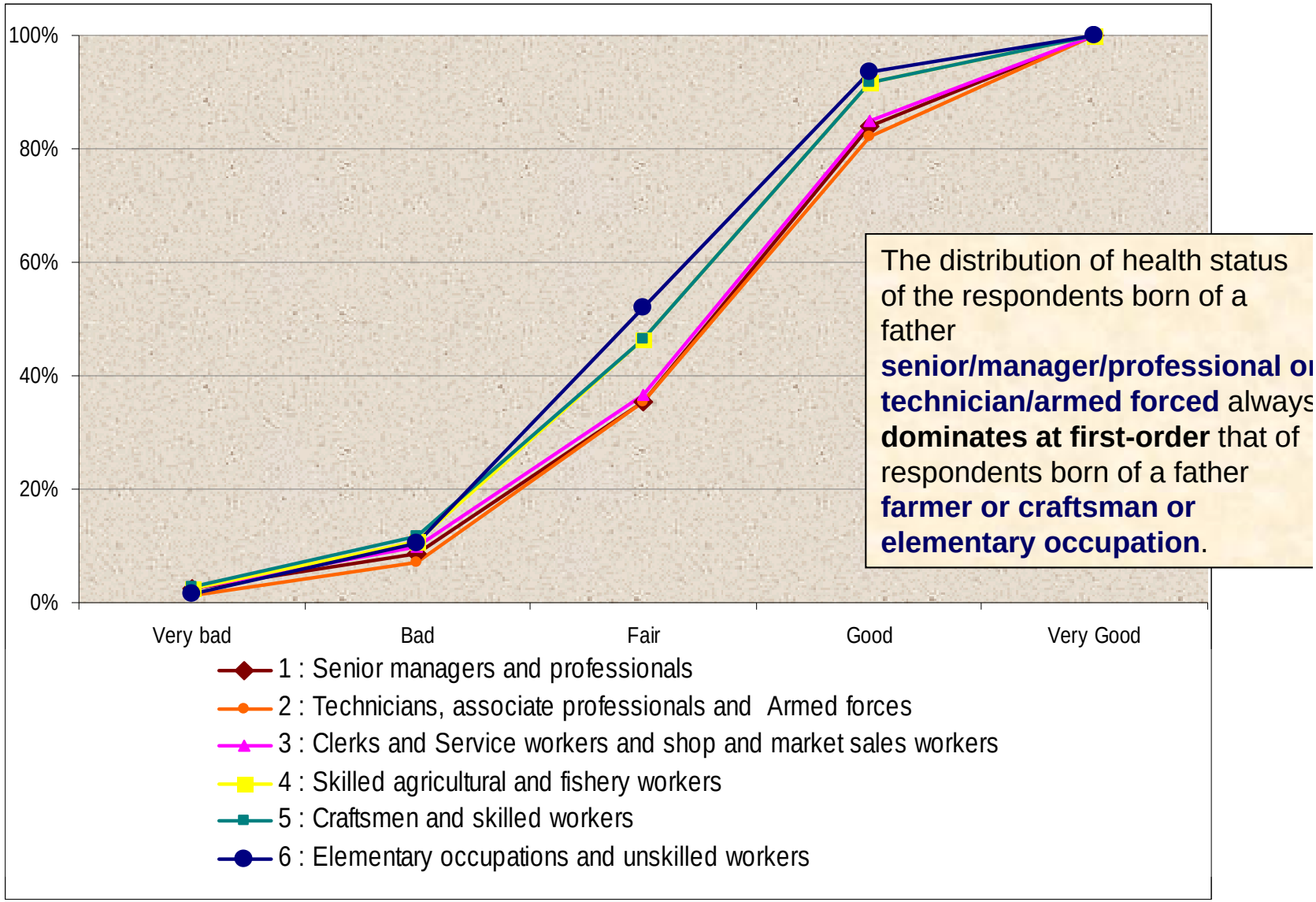
4 sets of determinants of health when adult

- Circumstances : all the determinants before being an adult
- Effort = Lifestyles as an adult
- Luck: Health shocks as an adult
- Demographics: Age and Sex

Messages from correlation studies

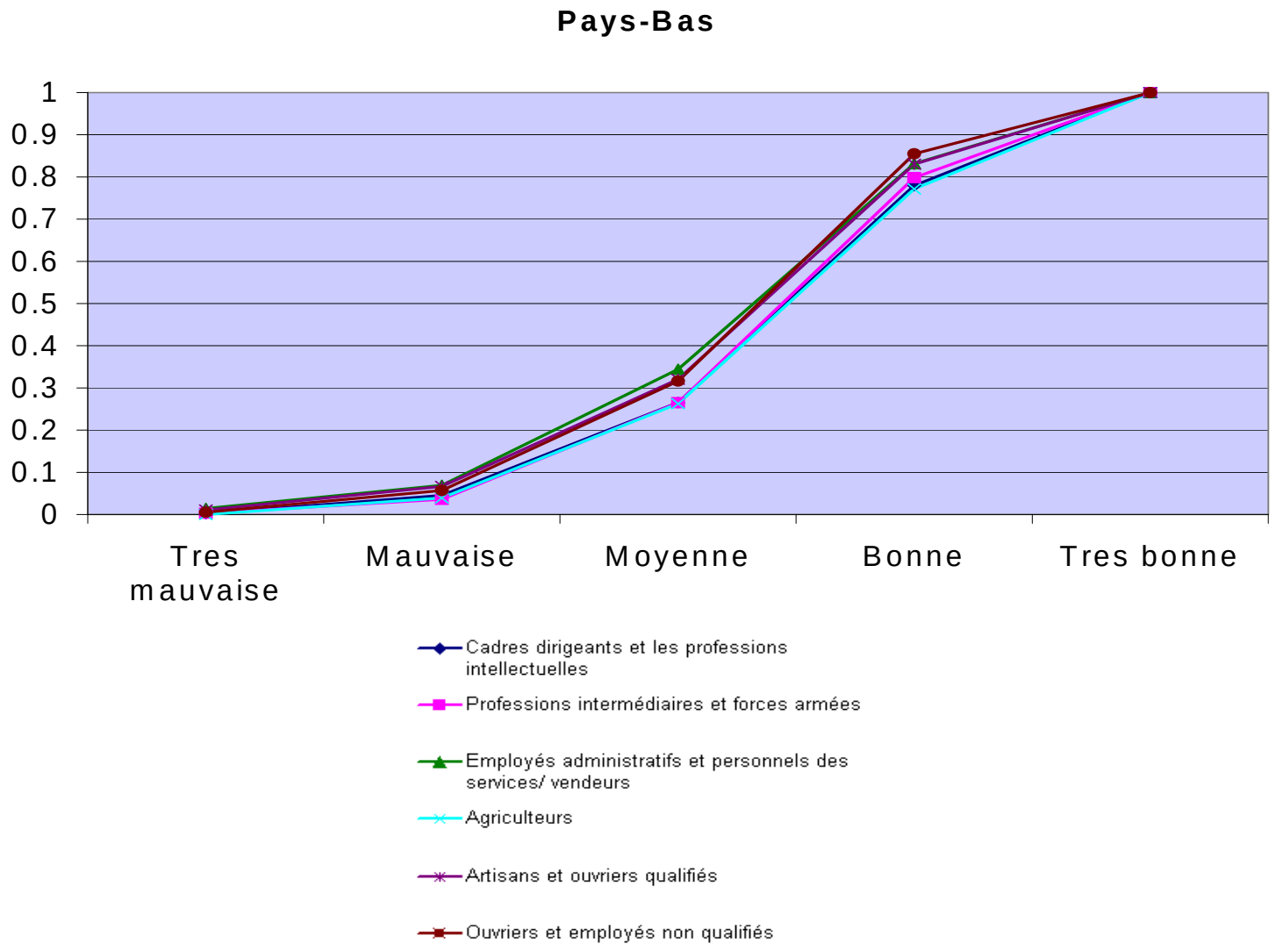
- 1. Long-lasting effect of circumstances on health as a senior
- 2. Examples of countries where it is reduced (not a natural law)
- 3. What are the relative shares of circumstances and lifestyles?
- 4. The difference between Roemer and Barry not so important
- 5. Age profile of share of lifestyle: an inverted U-shaped curve?

Distribution of opportunity of SAH according to father's SES (France, 1st wave of *Share*)



The distribution of health status of the respondents born of a father **senior/manager/professional or technician/armed forced** always **dominates at first-order** that of respondents born of a father **farmer or craftsman or elementary occupation**.

Distribution of opportunity in SAH according to the father's SES (Nederland, 1st wave of *Share*)



The relative contributions of circumstances and lifestyles to explained inequality (SAH) : British (NCDS)-French (ESPS) comparisons

	Circumstances	Effort	Demographics	Variance
Barry's scenario				
In the UK	49.44% *(52.46%)*	44.8% *(47.54%)*	5.76%	0.09 *(0.089)*
In France	51.81% *(57.57%)*	38.19% *(42.43%)*	10.0%	0.157 *(0.142)*
Roemer's scenario				
In the UK	55.94% (0.052) *(59.00%)*	38.88% (0.037) *(41.00%)*	5.18%	0.094 *(0.089)*
In France	61.42% (0.095) *(67.26%)*	29.90% (0.047) *(32.74%)*	8.68%	0.157 *(0.144)*

Source (Jusot-Tubeuf: (ENSAI 2010) Age group: around 46 yo

In the UK: Corr (circumstances, effort)=0,11***

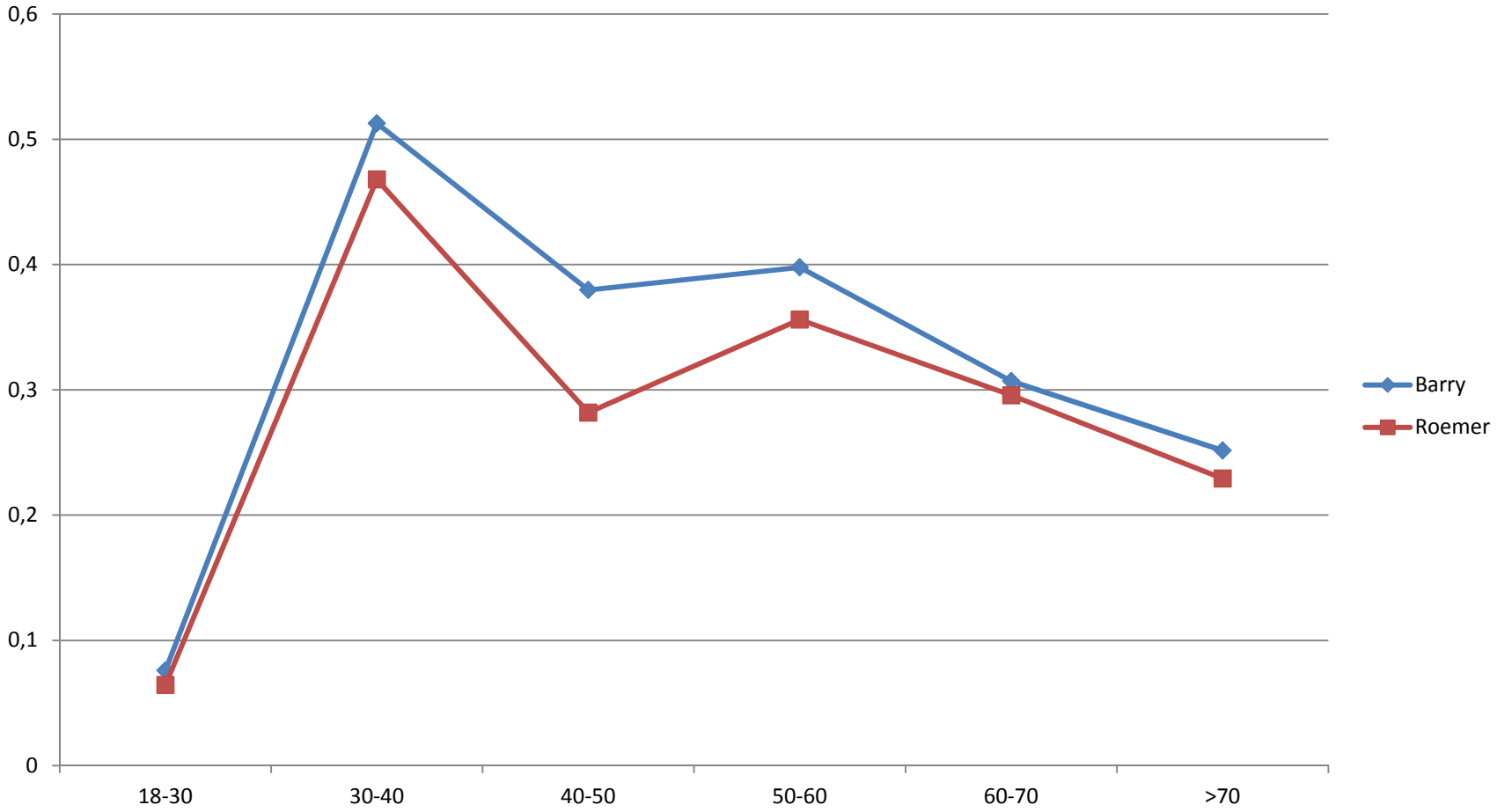
In France: Corr (circumstances, effort)=0,18***

Lessons from the British-French comparison for the French health public policy

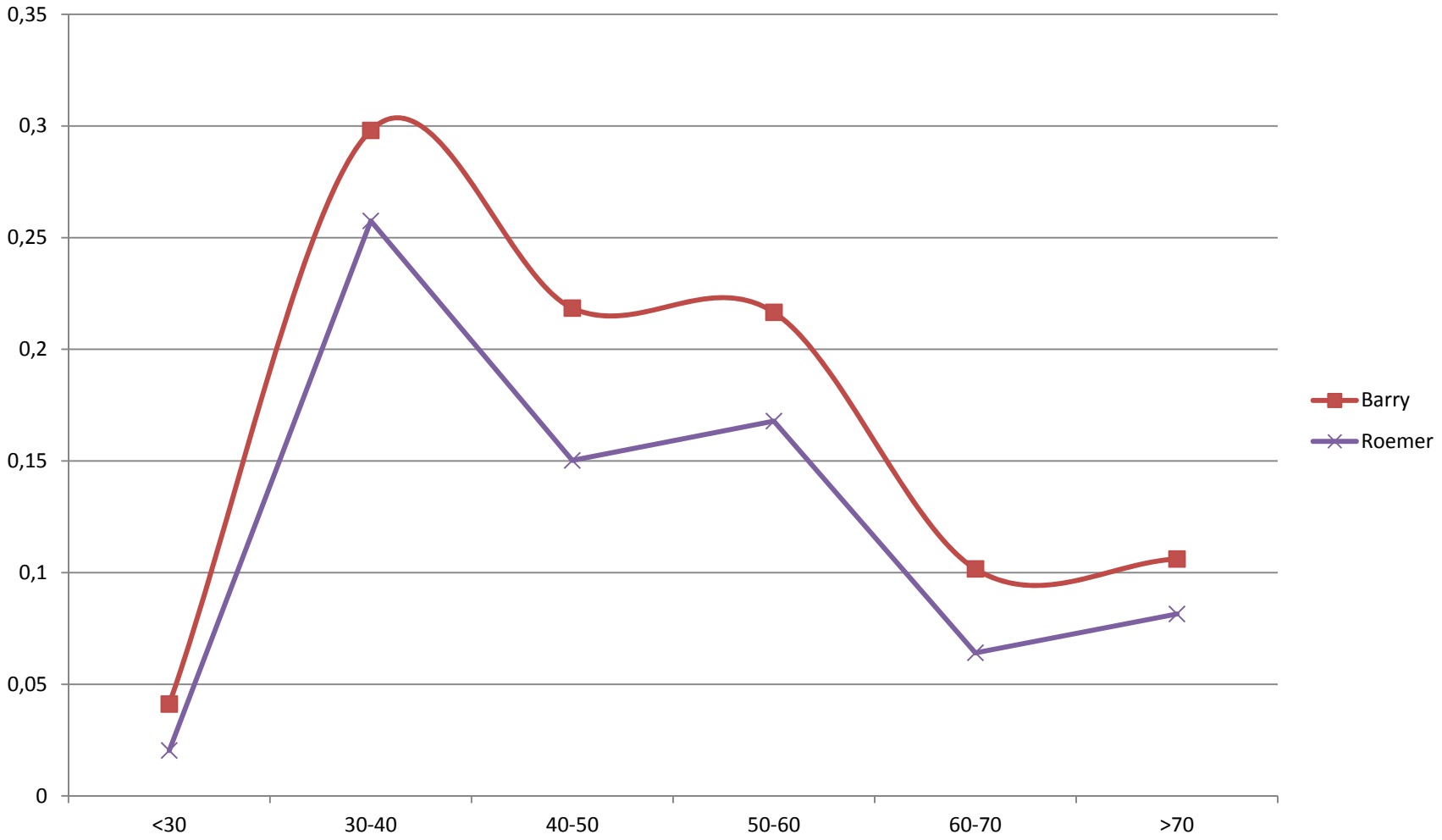
- The lower level of health inequalities in Britain is a well established fact
- Where does it come from?
- Not so much from the impact of inequalities in lifestyles
- The bulk is coming from the impact of circumstances.
  - Income (disposable) inequality is not higher in France than in the UK
  - The transmission of income inequality is higher in the UK than in France
  - A presumption that it is the way the health system is organized that makes the difference.

Age profile: An inverted U-shaped curve for the share of current lifestyle in France ?

However different generations



For a larger set of circumstances

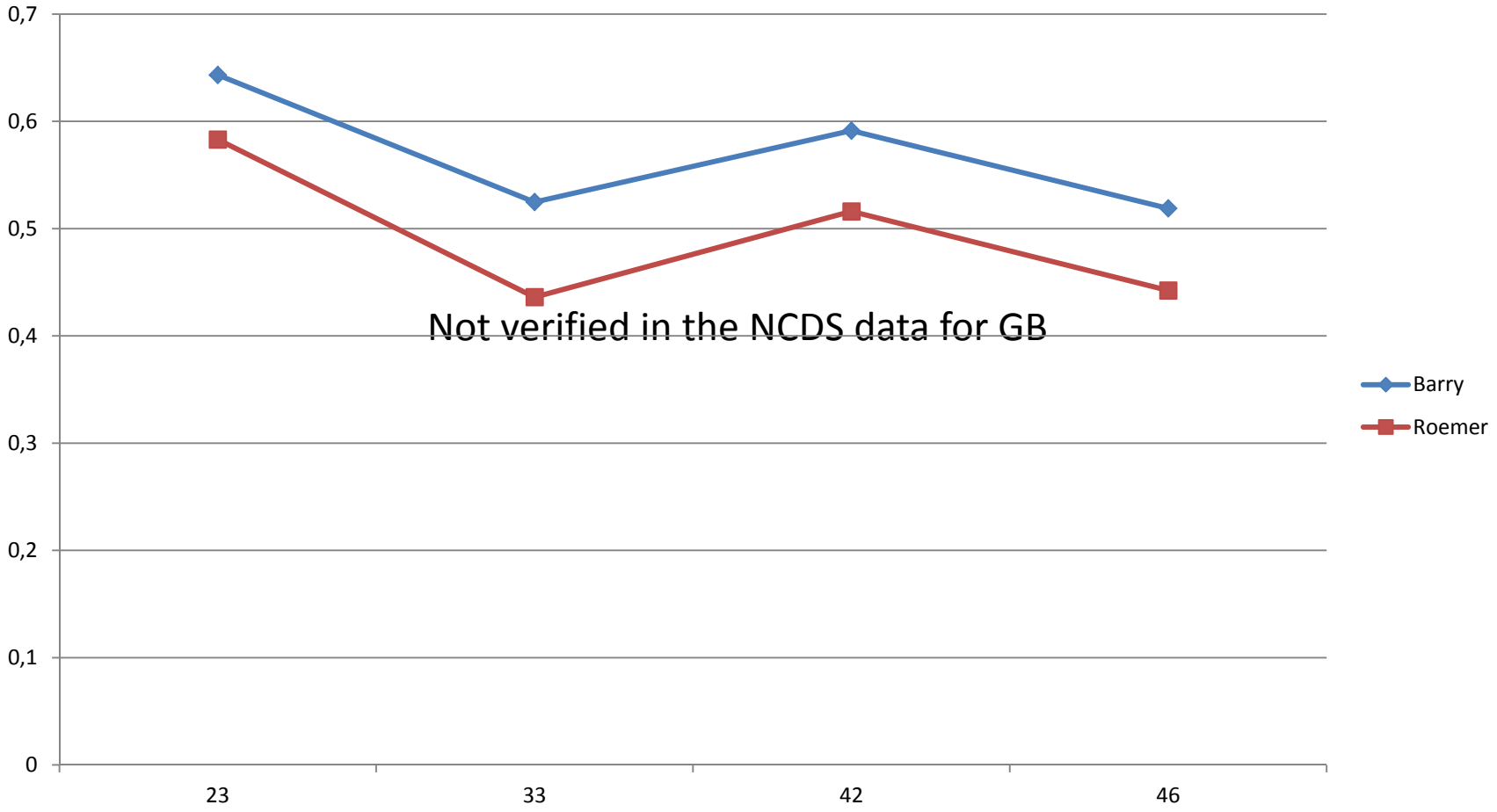


Rationale for an inverted U-Shaped curve

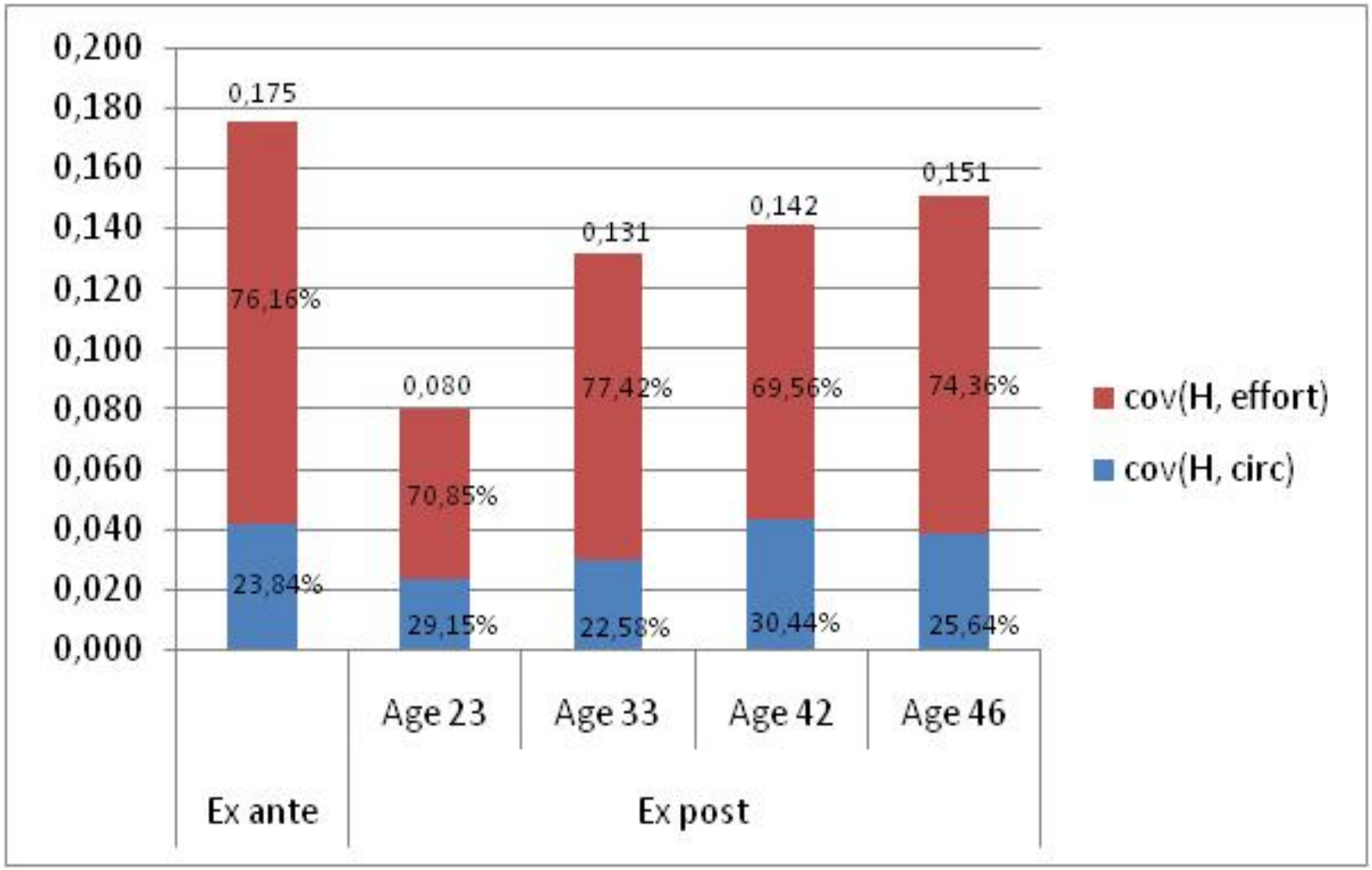
- Risky lifestyles aren’t problematic when young because health is a capital
- The frequency of risky lifestyles decreases when ageing because of selection and health problems help people to adopt safer behaviours
- Before ageing starts, the peak because
  - too young to die
  - Sufficiently old for a marked impact of repeated risky lifestyles

Neither verified in the NCDS data for GB!

(current lifestyle, same generation)



Nor for cumulated effect of lifestyles up to the current age ! (Barry)



To sum up

- For Britain, the huge importance of lifestyles in explaining health inequalities is also found by *Balia* & *Jones (JHE, 2008)* and *Contoyannis & Jones (JHE, 2009)*

- The share of lifestyle in health inequality varies across countries (see *Stringhini* et *alii*, *Plos Medicine*, 2011 for a British-French comparison using Whitehall II and Gazel) and ages.

- Important to know how much we can expect to gain by targeting on circumstances or lifestyles in cumulated terms

- Much research to come!

Messages from causal studies
The impact of circumstances

- Not so many
- *Lindeboom et al. (JHE 2009) ,* NCDS

- Investigation of the impact of parental education on child health outcomes.

- Exogenous variation in parental education induced by a schooling reform in 1947, which raised the minimum school leaving age in the UK.

- Increasing the school leaving age by 1 year had little effect on the health of their offspring.

Messages from causal studies
(2) Ctd

- *Lindo (JHE, 2011) PSID*

- The health effects of job displacement extends to the children of displaced workers.

- They reduce birth weights by approximately 4.5 pc.

- The effect is concentrated on the lower half of the birth weight distribution.

Messages from causal studies (3. cdt)

- *Lindeboom and Van der Berg (JHE 2012)*

  Exposure to the Potato famine in the Netherlands in 1846-1847

- Regional and temporal variation in market prices of potato and rye.

- Lifetimes of a random sample of Dutch individuals born between 1812 and 1902

- Boys (and resp girls) lose on average 4, (resp 2.5) years of life after age 50 after exposure at birth to the Potato famine.

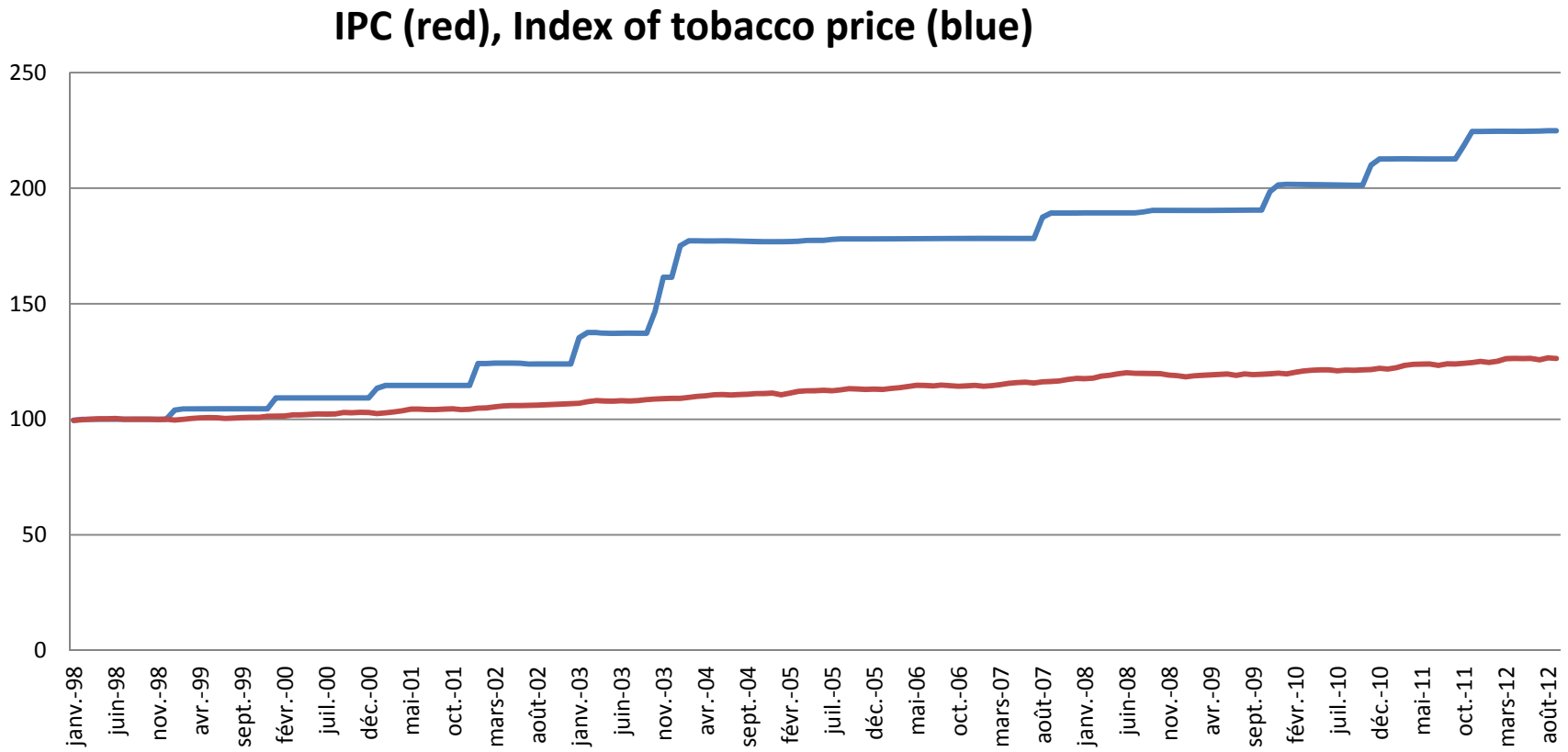
What have we learnt for circumstances ?

- Too early to know what to do in a cost-effective way
- We know what not to do!
- Reducing the safety net during the economic bust as it has been done in Greece and Spain since 2007!
- It might increase health inequalities for this and the next generation.

How to promote healthy lifestyle among poor households ?

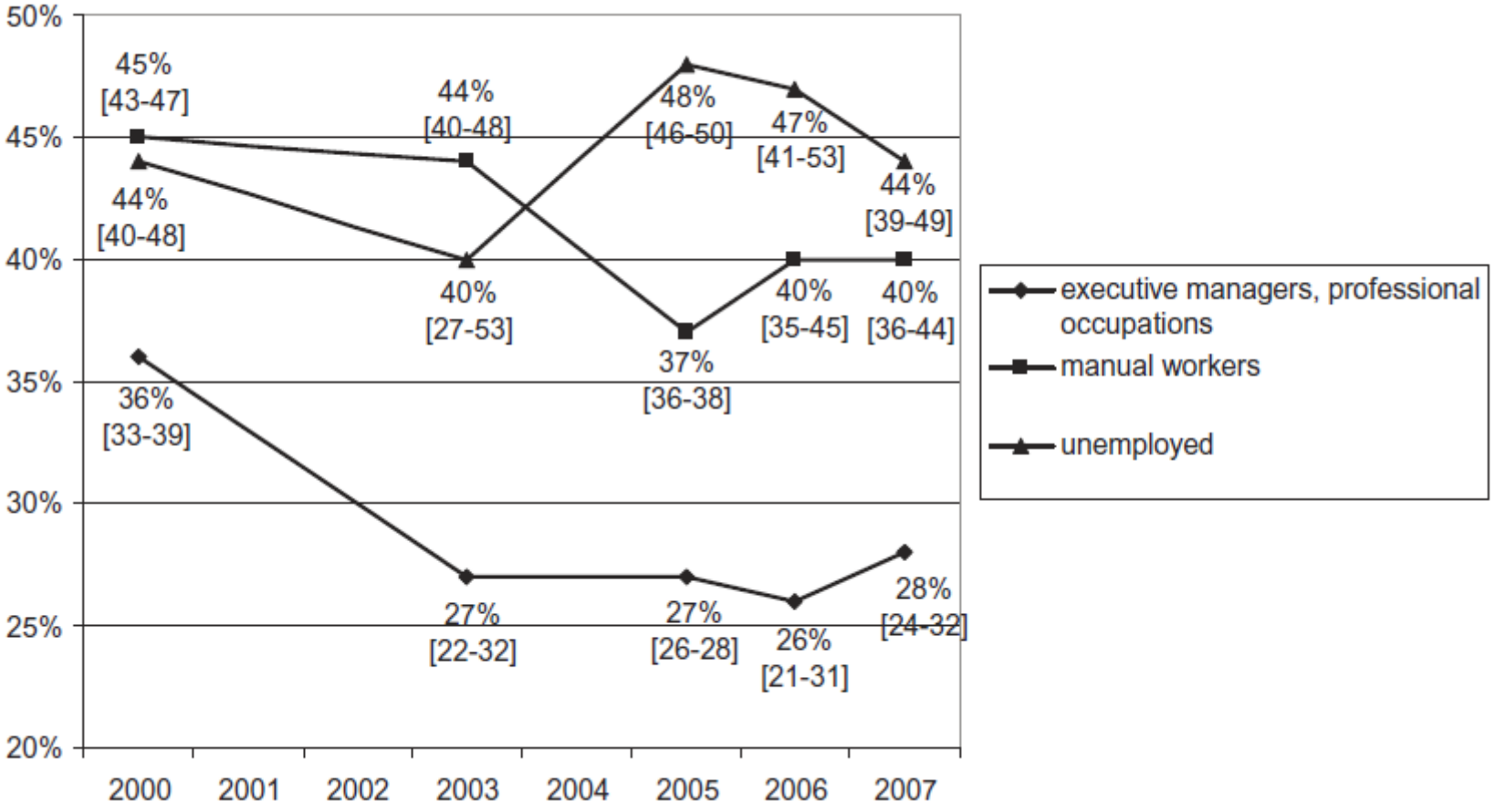
- The social gradient: risky lifestyles are concentrated in poor households
- The price policy : taxing bad habits, subsidizing good ones
- Shaping preferences through information, public health campaign
- Not so much effective. Why?
- Because of an endogeneity problem: Poor people adopt risky lifestyles to support their (absolute or relative) poor conditions of life

Price policies (Tobacco) in France



Smoking prevalence (INPES)

Perreti-Watel & al., Addiction 2010



Price policies are harmful

- Increase inequalities in health
- Make both the current generation and their descendants poorer
- Poor households pay 3% of their budget in taxes on tobacco and alcohol in France
- If they saved this 3% for 50 years at 3%, they would bequeath € 60,000 to their descendants.
- In France, 50% of bequests are less than € 110,000

Concluding comment

- Provocative idea ? : The share of lifestyles in the “Roemerian” perspective is an indicator of success of a public policy aiming at reducing health inequalities.

- The higher, the better (because it means that the share of circumstances is low)

- Not because they are legitimate, but because we do not know how to tackle them: very difficult to reduce the social gradient

- The main contribution of this vein of literature up to now: providing a macro indicator, a thermometer, to gauge the success of public health policy aiming at reducing health inequalities.