Measuring inequality of opportunity in health over the lifecycle: age-specific or lifecycle perspective?

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Résumé

Since the pioneer article of Michael Grossman (1972), health is viewed as a capital that evolves over time along the lifecycle.
This paper deals with the challenge of measuring health inequality over the lifecycle.

We propose a methodology, which captures two alternative perspectives: the lifecycle and the aged-specific perspectives. One can measure inequality over the lifecycle by firstly aggregating health over ages at the individual level and then measuring inequality over individuals; this is the lifecycle perspective. Alternatively, one can measure health inequality over individuals at each age and then aggregate the inequality measure over ages; this is the age-specific perspective.

We undertake comparisons of lifetime health distributions respecting the ordinal and qualitative nature of health outcomes. We use first order stochastic dominance, Hammond dominance criteria completed with a lexicographic criterion to rank social states according to an inequality viewpoint.

We propose an empirical application using data from a British cohort study following individuals since their birth in 1958. We consider the distribution of health status as measured with a combination of self-assessed health and death according to the father's occupation at birth and then, the region at birth.
Our results show that the two perspectives differ in terms of inequality outcome and magnitude. The lifecycle perspective provides a global view of inequality of opportunity in health while the age-specific highlights any shocks on the health status over the lifecycle. We observe a strong aversion to the worst states of health: experiencing a health state rated as "fair" or lower than "fair" is never compensated by a better health at other ages in the age-specific perspective. The criterion of first order stochastic dominance is more restrictive than the Hammond criteria and allow ranking a smaller number of health distributions. The

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inclusion of mortality as the worst health state item leads to a reinforcement of inequalities of opportunity in health and exhibits dominance between health distributions which could not be ordered previously. We found inequalities of opportunity in health favouring people born from a professional father. The age-specific approach also highlights inequality in favour of people born in the South East of England in the second part of their lifecycle, and an increasing health gap between other regions over the lifetime. This is particularly striking in the context of the NHS.

Mots-Clés: Inequality of opportunity, Lifecycle, Ordinal Heath variable, First, order stochastic dominance, Hammond dominance