

Valuing gains in life expectancy. Theoretical and empirical issues

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Summary

The present thesis considers some economic valuation perspectives of risk changes related to air pollution and in particular explores the valuation of changes in life expectancy and hence provides a different perspective than the traditional 'Value of a Statistical Life' (VSL) literature.

Part 1 (Chapter 1) comprises an introduction to the valuation of mortality risk and review of the literature. Part 2 of the thesis comprises four chapters and contains empirical econometric data analyses from two surveys.

Chapter 2-4 present results from a CVM survey on gains in life expectancy caused by a change in air pollution. These chapters present results from three survey splits: a web-based 'top-down' split, a web-based 'bottom-up' split and 'top-down' face-to-face interviews. Chapter 2 presents the results from the web-based CVM survey on the value of a gain in life expectancy in the context of air pollution. The corresponding values for a life-year lost (VOLY) have been calculated by aggregating individuals' valuation of life expectancy gains. In Chapter 3 the results of a comparison of application of two survey modes are presented. The chapter evaluates the WTP from two survey splits: a web-based survey split and face-to-face interviews. The overall result is that there is no difference in mean and median WTP estimates across the survey modes, and the samples are identical with respect to income, age and gender thus validating the results. Chapter 4 discusses and investigates some methodological issues in relation to CVM. The relationship between question order and sensitivity to scope is explored and results are presented by comparing the value of two independent gains in life expectancy.

Chapter 5 empirically investigates preferences for ways of generating a particular gain in life expectancy. It investigates whether individuals have marked preferences for programmes generating a one-period change in risk (the VSL framework) or prefers programmes delivering an ongoing and sustained reduction in risk over the remainder of their life. Use of a novel experimental methodology improves the reliability of the (necessarily) hypothetical responses by first allowing respondents to gain experience of making similar choices in an incentivized setting.