Is There a Role for Stated Preference Values of Statistical Life?

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This lucid article by Jones-Lee and Aven provides both a compelling defense of the use of a stated preference approach to derive estimates of the value of statistical life (VSL) as well as an examination of the pertinent application of these values.

Instead of relying on economists to establish benefit amounts for the VSL, one could delegate this task to policymakers. However, as the authors note, doing so creates a mismatch since the objective of government policies should be to reflect the preferences of the citizenry affected by the policy, not the
preferences of government officials. There is also no single set of policymaker preferences, as there are multiple political institutions that have an impact on government policies. Moreover, these political preferences are often inconsistent with the broader public interest. In part because the unconstrained actions of regulatory agencies could not be relied upon to maximize the public interest, the USA established an elaborate regulatory oversight effort, which in the Obama administration was headed by Behavioural Public Policy Editor, Cass Sunstein.

Jones-Lee and Aven make a convincing case concerning survey-related matters, such as the treatment of outliers and the limited applicability of some of the stronger scope tests that have been suggested. Requiring that valuations be a linear function of the risk change is both a very strong requirement and also not necessarily consistent with economic theory, as they demonstrate. As Jones-Lee and Aven conclude, a more reasonable requirement is that valuation responses not display complete insensitivity to the magnitude of the risk change. The article also deftly examines issues regarding the applicability of the stated preference values depending on matters such as the magnitude of the risk reduction and distributional concerns. There are many other outstanding behavioural issues as well, such as whether and how to incorporate valuations that are inconsistent with rational economic theory but are nevertheless consistent with other prominent models (Viscusi and Gayer, 2016 [https://doi.org/10.1017/bca.2016.2]).

Despite the many strengths of the stated preference approach, an important puzzle remains. The current US labor market estimates of the VSL indicate VLS levels of $9.6 million based on the best available fatality rate data and correcting for possible publication selection effects (Viscusi, 2015 [http://dx.doi.org/10.1162/AJHE_a_00002]). In contrast, the stated preference values used by the UK to value Dept. of Transport regulations is $2.3 million in 2015 US dollars (HM Treasury, 2011 [https://www.gov.uk/government/publications/the-green-book-appraisal-and-evaluation-in-central-government]). This fourfold difference in the level of the VSL is too great to be explained by income differences. However, labor market estimates of the VSL in the UK are too unstable to resolve the apparent inconsistency in the UK stated preference estimates and the US revealed preference labor market results. The disparity may have arisen at least in part because UK policymakers have selected conservative, lower bound estimates of the VSL implied by stated preference studies rather than the higher mean estimates implied by these studies (Jones-Lee and Spackman, 2013 [https://doi.org/10.1016/j.retrec.2012.12.010]). A research challenge that in my view looms larger than other refinements in VSL estimates is to reconcile the substantial differences in the VSL levels in the UK and the US.

Much of the Jones-Lee and Aven article is devoted to examining the potential applicability of the stated preference results based on chaining of different valuations. Components of such a chaining effort could include utilization of risk-risk tradeoffs, which is a stated preference approach that my colleagues and I pioneered (Viscusi et al., 1991 [https://doi.org/10.1016/0095-0696(91)90003-2]). Instead of eliciting dollar valuations for reductions in fatality risk, the survey might establish risks of death from cancer that are equivalent to risks of death from traffic accidents, or might establish the level of risks of death from terrorist attacks that the respondent believes are equivalent to some specified traffic accident risk (Viscusi et al., 2014 [http://dx.doi.org/10.1002/hec.2919] and Viscusi, 2009 [http://dx.doi.org/10.1007/s11166-009-9068-y]). One can then use the VSL for traffic accidents obtained either from stated preference studies or revealed preference studies to monetize cancer risks or terrorism risks. The labor market VSL estimates for transportation-related fatalities are not significantly different than for non-transportation risks of death, providing one such approach to establishing the valuation bridge needed to monetize the chained valuations (Viscusi and Gentry, 2015 [http://dx.doi.org/10.1007/s11166-015-9219-2]).
Notwithstanding the merits of evidence based on actual risk-taking decisions, such as those in the labor market, stated preference approaches will continue to have a critical role to play. Labor market studies are best suited to monetizing acute accident risks. There are many classes of illnesses and risks of death that may entail quite different morbidity effects or occur after a latency period. Use of stated preference approaches is often the most feasible way to obtain valuations of such risks. This article by Jones-Lee and Aven provides sound guidance for such efforts.


References


