National Institute of Environmental Health Sciences

Valuation of mortality risk attributable to climate change: Investigating the effect of survey administration modes on a VSL

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Abstract:

The health impact attributable to climate change has been identified as one of the priority areas for impact assessment. The main goal of this paper is to estimate the monetary value of one key health effect, which is premature mortality. Specifically, our goal is to derive the value of a statistical life from people's willingness to pay for avoiding the risk of dying in one post-transition country in Europe, i.e., the Czech Republic. We carried out a series of conjoint choice experiments in order to value mortality risk reductions. We found the responses to the conjoint choice questions to be reasonable and consistent with the economic paradigm. The VSL is about EUR 2.4 million, and our estimate is comparable with the value of preventing a fatality as used in one of the integrated assessment models. To investigate whether carrying out the survey through the internet may violate the welfare estimate, we administered our questionnaire to two independent samples of respondents using two different modes of survey administration. The results show that the VSLs for the two groups of respondents are euro2.25 and euro2.55 million, and these figures are statistically indistinguishable. However, the key parameters of indirect utility between the two modes of survey administration are statistically different when specific subgroups of population, such as older respondents, are concerned. Based on this evidence, we conclude that properly designed and administered on-line surveys are a reliable method for administering questionnaires, even when the latter are cognitively challenging. However, attention should be paid to sampling and choice regarding the mode of survey administration if the preference of specific segments of the population is elicited.

Source: http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3546789

Resource Description

Exposure :

weather or climate related pathway by which climate change affects health

Air Pollution, Extreme Weather Event, Food/Water Security, Temperature

Air Pollution: Interaction with Temperature

Extreme Weather Event: Flooding

Food/Water Security: Nutritional Quality

Temperature: Extreme Cold, Extreme Heat

Geographic Feature: ☒

resource focuses on specific type of geography

None or Unspecified

Geographic Location: ☒

resource focuses on specific location

Non-United States

Non-United States: Europe

European Region/Country: European Country

Other European Country : Czech Republic

Health Impact: ☒

specification of health effect or disease related to climate change exposure

Infectious Disease, Injury, Morbidity/Mortality

Infectious Disease: Foodborne/Waterborne Disease, Vectorborne Disease

Foodborne/Waterborne Disease: Cholera, Salmonellosis, Other Diarrheal Disease

Vectorborne Disease: Mosquito-borne Disease, Tick-borne Disease

Mosquito-borne Disease: Dengue, Malaria

Tick-borne Disease: Lyme Disease

Model/Methodology: ☒

type of model used or methodology development is a focus of resource

Cost/Economic, Methodology

Resource Type: ☒

format or standard characteristic of resource

Research Article

Timescale: ☒

time period studied

Time Scale Unspecified