

Investigating embedding effects in valuation of forest environmental goods 'Linking qualitative evidence to quantitative analysis of embedding effect'.

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Abstract:

Embedding effects play a crucial role on the validity of choice experiment method (CE) outcomes. Therefore, identifying these issues and their relation with attribute and level selection is crucial in choice experiment studies. In this study, two aspects of embedding i.e. contextual embedding issue and scope sensitivity in forest valuation among different forest users such as active, passive and potential active visitors are addressed.

Regarding contextual embedding, a preliminary qualitative study showed that a minor group of respondents expresses their value specifically about 'biodiversity' as a good itself in ecosystem while a majority of them expressed their preference jointly and inseparable about 'biodiversity' as a regulator of ecosystem process such as resilience of ecosystem in addition to its values as a good itself. In order to test this result qualitatively to know what is the value that public put on biodiversity and how we need to present biodiversity as an attribute in CE to get a valid WTP, a split sample of CE study was undertaken in which WTP for 'Biodiversity' was evaluate in two different embedding contexts. Using two identical questionnaires and applying reminder of insurance and resilience services of biodiversity in only one of questionnaire, we tested for the separability of these two values in people's minds. As the second step, scope sensitivity was integrated as an internal test among different levels of environmental improvement policies relevant with attributes. The results suggested that respondents are insensitive to the reminder and these two concepts are inseparable in their mental model, so their WTPs reflect the value of biodiversity as a regulator of ecosystem together with its value as a good itself such as aesthetic value or cultural value. In addition, based on the results public were sensitive to the scope (level) of each attributes when using draws and numbers to present levels tested in preliminary qualitative study which shows that applying qualitative evidences in attribute and levels identification would decrease the bias of scope sensitivity or inconsistency with the level of environmental improvement in total. In the scale of sub groups, it shows that forest active users have higher WTP and less evidence of having scope sensitivity bias in compare with forest passive visitors witch highlights the relation among having experience and familiarity with the goods and WTP.