Solid waste pollution concern in economic value assessment: is it uni-dimensional or multi-dimensional?

ABSTRACT

Pollution concern has been established as an important predictor of economic value ascription related to solid waste service improvement, such as recycling. However, the variable is not directly observable and as such, its influence is captured by existing applied economics papers via "yes" or "no" discrete-nominal measure. Such measure assumes the variable has one dimension. This leads to loss of information, considering its multi-dimensional structure in theory. It thus implies that, if a respondent in an economic valuation study indicates a support for an improvement signified by a "yes" response to valuation question, a uni-dimensional dummy variable cannot tell what dimension of concern the respondent subscribes to. Despite this importance of understanding the variable's dimension, it has rarely been explored. This study investigates such dimensions and our findings support the existence of both the theoretically espoused dual and tripartite factor models. This implies a possible misspecification in existing solid waste related studies that have most often captured the variables via uni-dimensional nominal-discrete measure.