

CONSTRAINED CONTINGENT VALUATION OF A HISTORIC LANDMARK

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ABSTRACT

Several researchers have applied the stated-preference method to the problem of valuing historic structures and other elements of the built environment. Our own contribution, in an earlier paper, was to use the dichotomous-choice contingent valuation technique to estimate residents' willingness to pay for the preservation of a historic hotel in a medium-sized city. We fit a standard logit model to survey responses and calculated mean willingness to pay from the fitted relationship.

Our purpose here is to compare the results of this standard approach with alternative models that take account of the constraints imposed by consumer choice theory. The alternatives, suggested by Hanemann and Kanninen, are models based on random utility maximization (RUM) that incorporate two choice-theoretic restrictions: that willingness to pay cannot exceed the level of income, and that it can be zero but not negative. This comparison not only provides an indication of how much difference the alternative approaches make in the results, but also offers an exploration of practical aspects of the analysis of these more complicated models.

The alternative RUM models are based on linear, logarithmic, and Box-Cox indirect utility functions, with a probability distribution for the change in the random component of utility that is either normal or logistic. They incorporate the choice-theory restrictions by the use of either censoring or truncation of this probability distribution. For this particular data set, the logarithmic logistic model fit the data best, but the difference in estimated willingness to pay between this model and the unconstrained model was relatively small, and the differences were also small among most of the constrained models.

Key Words: contingent valuation; random utility maximization; discrete choice; historic preservation; cultural heritage.