



Whitaker Institute Policy Brief Series

Policy Brief No.: 44

November 2018

Cluster: SEMRU

Theme: Sustainable and Inclusive Societies

Further Reading:

Deely, J., Hynes, S., & Curtis, J. (2018). Are objective data an appropriate replacement for subjective data in site choice analysis? *Journal of Environmental Economics and Policy*, 1-20.

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Read More About: The Socio-Economic Marine Research Unit Cluster (SEMRU) within the Whitaker Institute for Innovation and Societal Change. [here](#)

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Is objective data an appropriate replacement for subjective data: a fisheries management case study

Data used to model decision-making behaviour commonly comes from one of two sources, subjective data or objective data. Subjective data is generally based on users experience of a good, whereas objective data may come from a range of source including scientific measures and management/expert opinion. The use of either source of data requires a trade-off; subjective data is theoretically grounded as it is the user's perception used to model the user's behaviour, whereas, objective data is often easier to collect, less costly and time-consuming. In practise, the relative ease of collecting objective data often means that it is favoured in both the economic literature and policy implementation.

In the case of fisheries management, the implementation of policy is routinely based on management opinion. Angler behaviour, on the other hand, is based on individuals' preferences and perceptions. When one of the goals of management is to improve coarse angling sites for the users, divergent views on site attributes may result in less than optimal policy decisions.

Research Findings

Data was collected from two sources; the first was anglers who fished in at least one of five key sites in the Cavan and Leitrim area, the second was the managers of these sites. Respondents, both users and managers, were asked to rate each of the angling sites on a set of attributes. Site choice models were applied to both data sets, with anglers revealed trip frequencies, to each of the five sites, being the dependent variable in both cases. The models were compared in terms of; model fit, parameter estimates and policy scenarios, which were estimated based on model results.

The results reveal that models based on the subjective data outperform those of the objective data models. The derived welfare estimates indicated a divergence between the two sources of data in terms of the magnitude of the estimates but not the direction. However, policy scenario analysis suggests that the same policies would be implemented regardless of the data source. Further analysis reveals that the manger-based data results are closely aligned to the avid angler data results.

Policy Implications

Based on the estimated models, similar policy implementation would be enacted using either users' subjective data or on managers' objective data. This would seem to indicate that, in terms of policy implementation, objective data is an appropriate replacement for subjective data. However, the managers tended to rate site attributes higher than the users. The resulting welfare estimates suggest that models based on objective data alone may result in higher values when compared to the subjective data which could have repercussions in a cost benefit analysis context.

