An Empirical Comparison of CBC and AHP for Measuring Consumer Preferences

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ABSTRACT

Conjoint Analysis (CA) is a very popular class of methods for measuring consumer preferences, both in research and practice. However, since a couple of years, the Analytic Hierarchy Process (AHP) is being discussed in this field as well. Several empirical studies have shown the general potential of AHP, particularly in complex product evaluation tasks consisting of many attributes. But, in spite of its promising results, marketing practice seems to ignore AHP so far. This is somewhat astonishing if one considers the closeness of both approaches. Already almost thirty years ago Wind and Saaty (1980, p. 657) stated: "In some cases both the AHP and Conjoint Analysis can be used, and it is desirable to compare the results of the two approaches …". This paper contributes to fill this gap.

In order to increase the practical relevance of such a comparison for marketing practitioners, we run AHP against the commercially successful Choice-Based Conjoint Analysis (CBC) in an online survey. We outline how both the hierarchy and the scale used in AHP can be adapted to preference measurement and how Harker's (1987) technique for incomplete pairwise comparison matrices can be applied in a beneficial way. Our results indicate that, indeed, both methods are equivalent with regard to convergent validity and the individual prediction of holdout tasks, but AHP significantly outperforms CBC in market share predictions.

Keywords: AHP, CBC, preference measurement, incomplete pairwise comparison matrices, market share prediction