

# FACTORS INFLUENCING THE VALIDITY OF MEASURING WILLINGNESS-TO-PAY WITH CHOICE-BASED CONJOINT ANALYSIS

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## ABSTRACT

To maximize their profits, firms must know the demand function, which can be derived only when the firm knows consumers' willingness to pay (WTP). Thus, firms must first measure WTP to arrive at an optimal pricing decision (Kohli and Mahajan 1991). Although more and more studies deal with WTP measurement, existing literature disagrees regarding the method that best captures consumers' true WTP by measuring a reservation price that is nonbiased (Wertenbroch and Skiera 2002). Further empirical research is needed to clarify this question.

Against this background, this study has two objectives. First, we analyze the extent to which choice based conjoint analysis (CBCA) reveals "true" WTP values. We use the theoretical appropriateness of bidding experiments and apply a bidding experiment as an external validation criterion for CBCA with respect to WTP measurement. Because auctions, in particular Vickrey auction as a kind of bidding experiment, tend toward overbidding (Kagel, Harstad and Levin 1987; Kagel and Levin 1993), we rely on Becker, DeGroot, and Marschak's (1964) (BDM) lottery approach, first used in a market research context by Wertenbroch and Skiera (2002). This procedure is applicable at the point of purchase, which makes it even more realistic than an auction. Second, we analyze factors that may influence CBCA validity. We choose prominent factors directly linked to the preference formation process, namely, the effects of consumers' involvement with the product category, brand knowledge, preference for product attributes, and CA design effects. With this second contribution, we attempt to explain the magnitude of the possibly biased WTP values elicited by CBCA.

An empirical study was conducted with chocolate as survey object. 186 respondents participated in face-to-face interviews. The questionnaire included the CBCA with brand, flavour and price as attributes, questions to measure factors that may influence CBCA validity, demographic items, and the BDM procedure.

In a first step, the face validity, the criterion validity and the incentive compatibility of the WTP values elicited by BDM was confirmed. To estimate WTP values from the utility values of CBCA, a latent class approach was used. Comparing the WTP values generated via CBCA and via BDM, the results indicate that the CBCA generates 72.4% higher WTP values than the BDM lottery approach with mean values of 1.69 Euro for CBCA and 0.98 Euro for BDM.

Because CBCA suffers from heavily biased WTP estimates, we determine whether the hypothesized reasons for this bias actually apply. First, a test shows that a respondent's affective but not cognitive product involvement influences the validity of CBCA. Second, the analysis shows that the validity of CBCA improves when a respondent's preferences are more distinct with regard to the attribute levels integrated into the conjoint design. Finally, the level of price attributes in the conjoint design should affect the WTP values estimated with CBCA proved to affect the validity of the CBCA results. No significant impact on the validity of CBCA could be shown for the brand knowledge.

References Available Upon Request.