

Chapter 7

Price Estimation Scene (PE Scene)

In this chapter a novel approach to estimate willingness-to-pay (WTP) is presented. In previous chapters it has been established that it is important to have a surveying instrument that can estimate willingness-to-pay at the individual level based on each respondent's provided information only. The method is as an additional interview scene which is an extension to conjoint analysis. We call this new interview scene "Price Estimation Scene" (PE scene).

However, in the preceding conjoint analysis price is not incorporate as an attribute. For the configured products of the study the conjoint interview is only used to estimate each respondent's preference structure based on the non-price attributes. In Chapter 5 it was demonstrated that conjoint analysis is a well suited instrument to provide such a preference structure for different product configurations. The outcome of conjoint analysis are cardinaly scaled utility scores for all product configurations that can be formed by the configured attributes and levels.

By not having to incorporate price as another attribute in the conjoint analysis, the problems that arise from the inclusion of price are avoided as discussed in detail in Chapter 6.

In the PE scene a function is estimated that maps the utility scores from the conjoint analysis on a price scale. With this function the willingness-to-pay for any product that can be formed by the attributes of the conjoint study can be calculated. This is done by inserting the product's associated utility value in the function.

With the PE scene the problem is overcome that conjoint analysis does not incorporate a decision rule: The new scene is realized as a choice scene, similar to discrete choice analysis.

7.1 Presentation to the Respondent

In the PE scene every respondent is presented a series of screens. A single screen consists of a full product stimulus with an assigned price. The product stimulus is presented with full textual and graphical information about the product offered to mimic a real purchase



Figure 7.1: Example: Screenshot of a PE Scene.

situation as close as possible. The respondent is asked to indicate if he or she would actually purchase the product at the given price.

By allowing the respondent to indicate whether a product stimulus at an assigned price is acceptable, the problem of a missing decision rule in pricing studies with conjoint analysis is overcome as was also discussed in the previous chapter.

The respondent is presented a number of screens with different product profiles at dynamically set prices. Every time, the respondent has the option to take the offer or leave it. An example of a screen in the PE scene, similar to the ones used in the empirical study discussed in Chapter 8, is shown in Figure 7.1. In this figure the respondent is presented a product bundle consisting of a telephone NOKIA 6220, an extra rechargeable battery, and an additional battery charger station. The price for the bundle is dynamically set to 110,49 € based on the utility estimations from the preceding conjoint analysis. The respondent indicates whether the offer is acceptable or not by clicking on one of the buttons below the stimulus.

In every PE scene the respondent provides information whether he or she accepts a product at a given price or refuses to accept it. If the respondent refuses the product, an upper bound for price at the current utility level of the product range is found. If the respondent accepts the product in a PE scene, a lower bound for price at the given utility level is found.

For example, if the respondent did not accept a product stimulus at a certain price he or she would also refuse to accept any other product that only yields the same utility or an even lower utility at the same price. Obviously, the respondent would also refuse to accept any product configuration with the same or a lower utility offered at a higher price. Therefore, the price which was marked as not acceptable is an upper bound for the current utility level.