4 Measurement of the Valuation of Cultural Landscapes

This part of the doctoral thesis is about the method chosen for the valuation of the cultural landscapes in the selected regions. The first section describes some approaches that are used in the literature to determine a value in the case of monetary value. Additionally, the choice of the method is described. Properties and limitations are shown in the second part of this chapter. Following these, critics that can be found in the literature about using the approach of the WTP are presented. These critics were considered in the creation of the questionnaire and the aim was to avoid the mistakes that could be followed by the critics. The chapter ends with a short discussion of its suitability in practice.

4.1 Approaches, Methods and Techniques of the Valuation of Cultural Landscapes

Because of the public character of the landscape, it is tough for the participants to convert their landscape valuation into a concrete number (Hackl & Pruckner, 1999; Ryan & Spash, 2011,) without having an idea of a concrete value as comparison. There are different options to determine the value of a public good like a cultural landscape: indirect and direct approaches to measure the valuation. While indirect approaches assume that the consumption of the public good needs a purchase of another private good, the price of this private good is assumed to be the value of the public one. The direct approach asks the individuals directly about a value for a public good (Job & Knies, 2001; Karkow & Gronemann, 2005). For each approach a short explanation of two methods is presented: hedonic pricing and choice experiments for indirect measurements and travel costs and CVM as direct approaches.

Hedonic pricing is a method that deals with market outcomes because the sold good (e.g., a house) has qualities that are special to the market. The individual values the good by using different components of it (Pruckner, 1995). As example for this, Haab and Connell (2002) named the effects of air pollution (non-market value) on house prices (at least market-induced). The respondents are asked for different prices for an identical house with only a difference in air pollution, for instance. The price variation between the house with less or higher air pollution is interpreted as the value of this difference in the prices (Haab & Connell, 2002; Pruckner, 1995).
Choice experiments trace back to conjoin analyses used mathematical psychologies. By using choice experiments, the utility is confronted with the costs of a specific good. In this method the valuation is a derivative of different decisions of the participants regarding different scenarios of qualities of the analyzed good. For instance, when a study analyzes a landscape, there are different scenarios for this landscape regarding a higher degree of buildings in the landscape, a high degree of maintenance and care, a low degree of maintenance and care, with new roads crossing the landscape and the landscape if nothing would happen. The participant does not need to give a concrete value for the good; he or she just stated the preferences between two scenarios that are changing. Afterwards the researcher is able to determine a ranking of the different scenarios. One big advantage of this method is the possibility to consider the multidimensionality of environmental goods (Schmitz, Schmitz & Wronka, 2003).

Travel costs method is based on a specific good and the question to the sample is how far the sample would drive for a visit of this good. The value of this good is displayed by the distance and the driving costs to reach it (Burt & Brewer, 1977; Mitchell & Carson, 1989; Pruckner, 1995). This method could be seen as critical for the valuation of residents because the values get higher if the person lives far away, implying that the values for the residents is lower than for tourists (Bishop & Heberlein, 1979; Haab & Connell, 2002). This method also does not include changes in quality of the good over time (Bishop & Heberlein, 1979).

CVM\textsuperscript{12} was especially developed to compare costs and benefits of environmental goods (Throsby, 2007; Venkatachalam, 2004) and to determine the value of protecting cultural landscapes (Job, 2003). This method traces back to the theory of economic value of a good (Hicks, 1939) and the utility model described by Mäler (1974). The utility model describes individual’s preferences for consumption of private goods with a given budget and has the aim to determine welfare for the population\textsuperscript{13}. The risk of a failure through the price mechanism is still given as in all utility models (Marangon & Visintin, 2007). The determination of a consumer surplus (calculated by using the hypothetical value of the sample and the actual costs of the government for the public good) usually is the objective of a CVM analysis (Heyne, Meannig & Süßmuth, 2009; Job & Knies, 2001). Using this method, there are hypothetical markets created where the public good is tradable like a private good because a public good is not tradable in an actual market (Heyne et al., 2009; Job, 2003; Karkow & Gronemann, 2005; Mitchell & Carson, 1989; Pruckner, 1995). This supports

\textsuperscript{12} The history of the development of the method is described in detail by Mitchell and Carson (1989).

\textsuperscript{13} The formal derivation of this method is described by Hanemann (2001).