Willingness to pay for a green event – evidence from the Wacky Wine Festival

by

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Abstract:

Environmentally and socially responsible leisure activity has become a key issue in tourism development. Service providers are keen to promote their sustainability credentials and people are starting to pay for carbon offsets and "green" certified facilities. Studies of the mitigation of climate change, specifically of tourists' willingness to pay for mitigation, have focussed on air travellers' willingness to pay for carbon offsets, or tourists' willingness to contribute to funds for the management and conservation of a particular natural resource. This paper takes the questions of tourism and the environment to a festival. In a survey at the Wacky Wine Festival 2013 we asked visitors whether they are willing to pay more for their wine passports to support a community project planting trees in Robertson. One of the challenges of the contingent valuation method is that the payments are hypothetical and cheap talk is easy. To identify their willingness to pay we offered random respondents a voucher which they could use to buy wine, or which they could contribute to the project. The data collected in this way will be used to estimate a model of the predictors of willingness to pay for a green event. The question is, who will put our money where their mouths are?

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1. Introduction

Today more than ever, tourism development has to be environmentally sustainable. Tourists are starting to demand "green" facilities and experiences and are often willing to pay for it. In response, service providers are keen to promote their sustainability credentials.

A large international academic literature examines different aspects of the environment and tourism. The greatest challenge is climate change and four categories of studies looking at the links between tourism and climate change (Fisher, 2007) have been identified, namely i) the impact of tourism on climate change, ii) the impact of climate change on tourism, iii) adaptation to climate change, and iv) mitigation of climate change. Willingness to pay for actions that mitigate climate change falls in this last category. Here the range is from global climate change, e.g. studies that focus on air travellers' willingness to pay for carbon offsets (see Brouwer *et al*., 2008), to different sustainability or green efforts e.g. tourists' willingness to contribute to funds for the management and conservation of a particular natural resource (see Casey *et al*., 2010).

In earlier research in South Africa, Krugell and Saayman (2013) examined the characteristics of athletes participating in the Two Oceans Marathon who were willing to pay for carbon off-sets. These authors found that a greater proportion of women than men were willing to pay, more athletes with a degree or diploma or with a post-grad qualification were willing to pay, and those that were self-employed were more likely to be willing to pay. In follow-up work Kruger and Saayman (2013) surveyed visitors at a wine estate known for its sustainable approach to doing business and asked about the visitors' green behaviour at home and their willingness to pay for green accommodation and organic food and wine. They identified different types of green tourists classified by their reported behavior at home and found a positive relationship between environmental engagement and reported willingness to pay for a sustainable tourism experience.

The aim of this paper is to make a contribution to the literature by trying to deal with the cheap talk problem in contingent valuation methods. To identify willingness to pay we offered random respondents to a survey at the Wacky Wine Festival a voucher which they could use to buy wine, or which they could contribute to a community project planting trees in Robertson. The data collected in this way will be used to estimate a model of the predictors of willingness to pay for a green event. The question is, who will put our money where their mouths are?

The paper is structured as follows: Section 2 provides a review of willingness-to-pay studies linked to the mitigation of climate change. Section 3 provides a description of the data collected in the survey. Section 4 presents the analysis of the predictors of willingness to pay. The final section presents the conclusions and recommendations.

2. Willingness to pay

This brief review of the literature consists of three parts: the first part explains why it is difficult to get people to pay for the environmental impact of their activities; the second part explains the different elements of the Contingent Valuation method that is often used to gauge willingness to pay; and the third part reviews earlier analysis of who would be willing to pay.

2.1 Why would they pay?

The earth's atmosphere and the climate that sustains life as we know it, is characterised as a common good. It is not owned by anyone and it is used by everyone. In a mixed economy our production and consumption activities are undertaken via the market and the scarcity of land, labour and capital are accounted for by their prices. The goods and services that are produced and consumed are sold and bought at different prices via the market. However, these activities are often accompanied by pollution. The cost of this pollution is not paid for by private companies or individuals, but is a social cost borne by society. In the long run our production, consumption and pollution endangers natural habitats and changes the climate, which in turn has an impact on food production and human settlements and has costs in terms of droughts, floods and other climate disasters. If these social costs could be included in the prices of our private production and consumption activities we would have an incentive to produce and consumer less, or to do so in a cleaner way, but this does not happen. The market fails to account for the social costs since no-one owns their share of a sustainable environment to sell to polluters and as such no market or price exists. The result is the "tragedy of the commons", whereby the common pool resource is depleted (Black *et al*., 2010). Since they are not paying for it, people are all deriving utility from the environment at a rate that is unsustainable.

So why don't we all just work together and make some payment to help offset our impact on the environment? Such a user-pays approach will be limited to voluntary contributions for a number of reasons. Since no-one owns the environment, it is not clear to whom payments should be made when you pollute. In the case of voluntary purchases of carbon credits, the payments may go towards private or not-for-profit forestry programmes that capture carbon. For payment to occur at a larger scale, governments need to create carbon markets. They may sell pollution rights if they are able to set carbon caps, measure pollution levels, link it to the polluters and fine those that do not cooperate. Pollution rights or carbon credits can then be bought and sold to approximate a market price for the external cost of the pollution. Along with the creation of a carbon market, government may also levy carbon taxes on polluters and in that way "price" the cost of pollution (Black *et al*., 2010).

Fundamentally though, cooperation will be undermined by the dynamics of the so-called "prisoners' dilemma". At an individual level everyone will suspect that everyone else will continue consuming and polluting and not paying, and they will do so themselves. At a national level all governments believe that all the others will allow pollution, thus they will not create carbon markets or set carbon taxes. Practically speaking, the effects of human

activity on the environment, also our tourism activities, will have to be mitigated by a combination of voluntary contributions and compulsory taxes (Krugell & Saayman, 2013). Tourism research into the mitigation of climate change has consequently focused on tourists' willingness to pay for carbon offsets, or tourists' willingness to contribute to a fund for the management and conservation of a particular natural resource.

2.2 How can we determine willingness to pay?

Since no formal market exists for carbon pollution, a sustainable tourism experience or a green event, researchers have to use indirect ways to determine willingness to pay. Three methods are used: the Travel Cost Method (TCM), the Hedonic Pricing Method (HPM) and the contingent valuation method (CVM). In this study the focus is on the contingent valuation method.

To determine willingness to pay, people are presented with a specific scenario about, for example climate change, and asked whether they would be willing to pay for mitigation efforts. This value that they attach to sustainability is contingent on the scenario presented and the payment is entirely hypothetical. Guidelines for this approach are outlined in the Report to the National Oceanic and Atmospheric Administration (NOAA) Panel on Contingent Valuation (see Arrow *et al*., 1993). The CV method has different elements that should be considered.

The first element is the scenario that is presented to the respondents to the survey. This can range from national to local level, to the level of a specific site or attraction. For example, Johnson and Nemet (2010) provide a review of studies examining willingness to pay for different policies aimed at the mitigation of climate change. In these studies the scenarios presented focussed on global warming and its consequences. The focus is the national level and actions to be undertaken by governments. Carlson *et al*. (2010) also present a multi-country study with a global warming scenario and ordinary citizens' willingness to pay to reduce CO_2 emissions. In contrast, Berk and Fovell's (1998) scenarios focus on climate change as it may be experienced locally. They argue that people can more realistically consider changes in familiar micro-climates. Brouwer *et al.* (2007) outlines the global climate change scenario, but then narrows down the willingness to pay aspect to offsets for CO_2 emissions caused by short- and long-haul flights. In Casey *et al*. (2010), the focus is very specific and the scenario outlines the impact of too many visitors on a coral reef on the Mexican coast and tourists' willingness to pay additional fees to protect the reef. The framing of the scenario is important for a number of reasons:

- The scope of the problem presented in the scenario can challenge respondents' knowledge of the topic. If it is global warming people will have heard about it, but have little knowledge of the possible impact of a two or four degrees rise in temperature. If the scenario concerns a very specific or local natural resource people may not have heard of the issue or consider it insignificant. Consequently the description of the scenario is important.
- The scenario may also influence people's views on the coordination problem mentioned above – if the problem is too big or complicated some might think that it

is someone else's problem and since no-one will probably contribute, neither will I. Again, the required global or local action explained during the survey, may influence the result.

- The scenario is also linked to the proposed intervention, funded by the hypothetical payment. People may be more or less likely to be willing to pay, depending on whether they think their whether they think that their hypothetical dollars, euros or rands will be well managed and spent. How this is explained during the survey, matters for the willingness to pay result.

The second element to be considered is the way in which the willingness to pay question is asked. CV methods can employ open-ended questions, dichotomous choices, payment cards or bidding games (Anderson, 2004). Open-ended questions specifically ask respondents how much they are willing to pay for common non-market resources. Dichotomous choice methods include a single value of payment that can either be accepted or rejected by respondents (Anderson, 2004). Where payment cards are used, values of hypothetical payments are printed and respondents are asked how close the values are to the maximum amount that they are willing to pay for non-market resources. In bidding games, hypothetical payments for common resources can be stacked in ascending or descending order until the respondent rejects or accepts a value (Anderson, 2004). The way in which the willingness to pay question is framed determines the statistical analysis that is possible and whether the economic value of the environmental good in question can be inferred.

The third element is related to the framing of the willingness to pay question. Casey *et al*. (2010) refers to it as hypothetical bias and the "cheap talk" problem. Since the payment is hypothetical, the stated preference may be distorted by a "warm glow" effect – people enjoy saying that they would contribute to a good cause. The difference between the willingness to pay and actual behaviour becomes the cheap talk. In such a case the willingness to pay measure reflects moral satisfaction and it becomes less useful as a tool for assigning monetary value to a natural resource. Researchers try to limit this by adding a direct explanation of this problem to their survey document.

We want to extend this final part a bit. Come and listen to the paper at the conference for more about different ways to limit cheap talk.

2.3 Who are willing to pay?

Johnson and Nemet's (2010) review state that "many studies seek to associate attitudinal and behavioural variables with WTP measures" (p.5). Demographic variables are used to distinguish the character of the survey samples and the common explanatory variables used in the studies surveyed include measures of:

- Environmental engagement,
- Environmental attitudes / beliefs,
- Education level,
- Perceived efficacy of policy / strategy,

- Political views,
- Level of certainty of climate change and policy outcomes,
- Expected future temperature / precipitation levels, and
- Perceptions of others' efforts.

In the South African context we have only just begun to examine the different predictors of willingness to pay for climate change mitigation, or more specifically, green and sustainable destinations and events. As was mentioned in the introduction, Krugell and Saayman (2013) examined the characteristics of athletes participating in the Two Oceans Marathon who were willing to pay for carbon off-sets. We found that a greater proportion of women than men were willing to pay, more athletes with a degree or diploma or with a post-grad qualification were willing to pay, and those that were self-employed were more willing to pay. Kruger and Saayman (2013) surveyed visitors at a wine estate known for its sustainable approach to doing business and found that visitors who reported green behaviour at home were also the ones who are willing to pay for a sustainable tourism experience.

The rest of the work still needs to be done. Come and listen to the presentation at the conference if you want to learn more!

In the meantime, here is a picture of my dog to keep you happy.