Tourists' characteristics and willingness to pay to see the Big Five

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Abstract

Tourism is an engine of growth and development in natural areas, but resources need to be protected and that often involves high costs. The opportunity to view Big Five game in their natural habitat is a common good and it is difficult to determine tourists' valuation of the Big Five species and their willingness to pay for their conservation. This exploratory study surveyed tourists visiting the Kruger National Park and asked them about their willingness to pay. The objective is to identify the characteristics of those visitors who will pay to view Big Five game in their natural habitat. The study found that visitors to the Kruger National Park assigned a significant amount (34.64%) of total average spending to the opportunity to view the Big Five in the Kruger National Park. The correlates of willingness to pay for conservation include age, marital status and the importance of the Big Five in the decision to visit the Park.

Keywords

Big five, willingness to pay, national parks, game reserves

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1. INTRODUCTION

A number of studies have outlined the increasing importance of tourism as an engine of growth and development of countries (Vanegas & Croes, 2003; Dubarry, 2004). Kuenzi and McNeely (2008:156) argue that nature-based tourism is the fastest-growing tourism segment, with an annual growth rate of between 10 and 30%. Earlier, Luzar et al. (1995:544) stated that nature-based tourism is becoming an increasingly popular sector and a rapidly expanding area within tourism. Nature-based tourism contributes to economic growth and development, foreign exchange earnings, and the development of infrastructure, and also creates employment and generates income (Blamford et al., 1995:1; Dieke, 2001:9; Păudre & Turtureanu, 2005:1).

Parks, and specifically national parks, are closely associated with nature-based tourism because that they are prestige tourism destinations that specifically focus on the conservation and preservation of the diversity of life on earth (Page & Connell, 2009:645; Tomczyk, 2010:1). Legally protected areas have tripled over the past 40 years and this has increased competition among biodiversity destinations. There are currently more than 100 000 legally protected areas in the world, covering approximately 12% of the earth's land surface (Kuenzi & McNeely, 2008:156). Blamford et al. (2009:1) found that nature-based tourism generates approximately the same revenue as farming, forestry and fisheries combined in southern Africa, with protected areas as one of the fastest-growing sectors of tourism. Saayman and Saayman (2009:53) found that national parks are an important attraction for visitors to South Africa.

However, nature-based tourism involves the use of the natural environment for non-consumptive uses (Luzar et al., 1995:545). Luzar et al. (1995:545) also argue that nature-based tourists, in general, are passive, non-consumptive observers. Consequently, nature-based tourism consists of consumptive use and non-consumptive use values. Consumptive use can be defined as the use of a resource that will ultimately lead to the depletion of the resource utilised. In wildlife terms, consumptive use may be reflected in the auction value or the hunting price of wildlife. Non-consumptive use, however, encompasses activities where individuals may use, yet not consume, certain aspects of wildlife, such as wildlife watching (Chardonnet et al., 2002:16).

As South Africa's most renowned national park, the Kruger National Park (KNP) attracts more than one million visitors per annum and supports between 300 000 and 600 000 people living in and near the Park (Shackleton et al., 2007). The KNP promotes the non-consumptive use of wildlife and therefore no hunting is allowed. One of the KNP's major tourist attractions is the so-called Big Five, which consists of the lion, African elephant, Cape buffalo, leopard and the rhinoceros. The Big Five are often promoted as an attraction. However, within the context of nature-based tourism, the problem often arises that although the consumptive use values of wildlife can be determined, it is nearly impossible to calculate the non-consumptive use value of wildlife. The opportunity to view endangered species in their natural habitat has value, but what Rand value do tourists place on the Big Five? This exploratory study sets out to identify the characteristics of the tourists who are willing to pay to view and conserve the Big Five at the Kruger National Park.

2. LITERATURE REVIEW

There is substantial literature on the willingness to pay for nature-based tourism (see for example Aziz et al., 2010 and Kosz, 1996). The aim of this brief review is two-pronged: the first is to explain why it is difficult to determine the value that tourists place on viewing wildlife; and the second is to review the methods that are typically used to determine tourists' willingness to pay for nature-based tourism resources and a number of studies that have applied these methods.

2.1   The tragedy of the "commons"

In 1968, a professor of biology at the University of California, Garret Hardin, popularised the dilemma of common goods. His paper on "The Tragedy of the Commons" has become popular in environmental studies, economics, ecology and political science (Berkes et al., 1989:91; Feeny et al., 1990:2). The basic characteristics of common resources — non-excludability and subtractability — are the main reasons for the degradation and exploitation of resources. Hardin (1968) emphasised that, given these characteristics, overexploitation will eventually lead to the tragic loss of resources for the community as a whole (Feeny et al., 1990:2).

Gifford and Wells (1991:437) divided common resources into three separate categories according to the likelihood of their depletion. Common goods that regenerate at a slower rate than people can harvest them (e.g. endangered species) are more likely to be exhausted. Berkes et al. (1989:91) argued that the tragedy of the commons has its roots in the absence of property rights and often requires government intervention to correct this market failure. Harding (1968) suggested that the only way to avoid market failure and prevent the depletion of common resources is through privatising common property and implementing government regulation systems where rights to entry are allocated. Burger and Gochfeld (1998:8) and Feeny et al. (1990:5) outlined the importance of distinguishing between the nature of the resource and the property-rights regime under which it is held. For example, National Parks fall under the State Property regime. Therefore, the Kruger National Park relies on the State Property regime to protect its common resources and to prevent resource degradation. However, according to Sibanda (1995:81), wildlife often suffers a double tragedy: not only is wildlife a common resource, but the environment, or habitat of the wildlife, is also a common resource. The conservation of species such as the Big Five presents an interesting challenge. Any specific animal can be privately owned, or be the property of the state. However, the fact that these animals are protected and can be viewed in their natural habitat is a "good" that everyone owns together and that cannot be allocated through the market. Due to this dilemma, the question therefore arises: how do parks, such as the Kruger National Park, value and protect the existence of the Big Five in the Park?

It is difficult to determine the value of viewing a rhino or elephant in the wild using price-based models. Determining the economic value of the Big Five also involves emotional issues such as the Kruger National Park's culling of the elephants, lion hunting elsewhere and the recent increase in rhino poaching across South Africa. Six hundred and sixty eight (668) rhinos were illegally killed across South Africa in 2012. This is the highest annual total of poached rhinos ever experienced in South Africa. However, this number is not declining: South Africa has already lost 201 rhinos to poaching in the first two months of 2013. The poaching of rhinos in the Kruger National Park accounted for a large share of this total (www.stoprhinopoaching.com). This is alarming, since the Kruger Park is home to the largest population of white and black rhinos in

South Africa. The poaching of rhinos is a clear violation of the property rights of private game owners and of the property of the state in the case of the Kruger National Park. The trade in illegal rhino horn also takes place via a market, even if it is an illegal black market. The poaching of rhinos can be viewed as a consumptive use of the species (and the resource is being depleted), but, in addition to the private cost and benefits involved, there is also a cost to society. The social cost is the loss to the species of its natural habitat. Determining the value of this common good — the value that people attach to knowing that rhinos still exist, are out there and that you can go and view them — is problematic. Determining this broader, non-consumptive value of the Big Five will assist authorities in developing relevant strategies to prevent the extinction of the Big Five. The key is to fund the conservation of the Big Five and for that one needs to determine tourists' willingness to pay for the non-consumptive value of these species. The promotion of sustainable tourism will assist not only the Kruger National Park in achieving economic growth and development, but also South Africa as a whole.

The following sub-section provides an overview of methods that are typically used to determine individuals' willingness to pay for common goods and a review of studies that have applied these methods.

2.2   Willingness to pay for common goods

Different approaches are typically used to determine the amount people are willing to pay for common goods, such as, in this study, viewing wildlife.

The first approach is the so-called travel-cost method. King and Mazzotta (2000) define the travel-cost method as a method used to estimate the value of certain aspects of the environment. The principle is that the value of a conservation service is reflected in how much individuals are willing to pay to get to a particular tourist destination, for example, different parks or beaches. Surveys are used to determine individuals' place of residence, the distance to the destination, the frequency of visits and their demographic characteristics. Differences in the number of visits and travel costs are used to determine the willingness to pay for conservation at different sites (King & Mazzotta, 2000). Hakim (2010) provides an example of the use of this method to determine the economic value of parks in Indonesia. In the South African context, Du Preez et al. (2011) apply the travel-cost method to estimate the recreational value of different beaches in the Nelson Mandela Bay area. The method is, however, not appropriate for this study, since only visitors to the Kruger National Park were surveyed and therefore there is no way to distinguish between travel costs to parks with and without the Big Five.

The alternative approach is the contingent valuation method (CV method). The CV method can be used to estimate the economic value of non-market environmental attributes or services. These can include viewing endangered species in their natural habitat or just experiencing scenic beauty (King & Mazzotta, 2000; Frykblom, 1997). In this approach, individuals are surveyed and presented with a scenario about, for example, climate change or an endangered species and asked about their willingness to pay for conservation efforts. The payment is hypothetical and the valuation is contingent on the scenario that is presented. Guidelines for this approach are outlined in the Report to the NOAA Panel on Contingent Valuation (see Arrow et al., 1993). CV methods can employ open-ended questions, dichotomous choices, payment cards or bidding games (Drucker & Anderson, 2004). Examples of studies include those that take a more general approach to willingness to pay for climate change mitigation, those that consider the carbon footprint of tourism and tourists' willingness to pay for carbon offsets, studies that focus

specifically on air travel passengers and their CO_2 emissions and studies that examine tourists' willingness to pay for specific environmental goods.

Studies that have incorporated the CV method in estimating people's willingness to pay for wildlife include Aziz et al. (2010), Kosz (1996), Tisdell and Wilson (2001) and Hadkler et al. (1997). The main factors influencing visitors' willingness to pay identified in these studies include income, education, age, nationality, marital status, children, professional standing, future plans to visit (loyalty) and donations. An explanation of each variable follows.

Income has been found to be positively related to WTP, indicating that respondents with higher income are more likely to contribute to conservation funds (Aziz et al., 2010; Hadkler et al., 1997; Kosz, 1996; Tisdell & Wilson, 2001). Aziz et al. (2010: 215) found that monthly income is positively related to WTP. In that study, a 1% increase in monthly gross income would increase a visitor's WTP by 0.1063%. This relationship seems to be particularly important over the short term, since respondents are typically asked also to consider other expenses such as accommodation, transport and food costs.

Education and WTP have been found to be positively related. Respondents with higher levels of education are more likely to be willing to pay (Aziz et al., 2010; Hadkler et al., 1997; Kosz, 1996; Tisdell & Wilson, 2001). Aziz et al. (2010: 215) found that a 1% increase in years of education will increase visitors' WTP by 0.3313%. Aziz et al. (2010: 215) explain that education has a long-term effect on WTP, since the increase in knowledge may shape the perceptions and attitude of the person towards the contribution that individuals can make to conservation. Tisdell and Wilson (2001) found that education was the most important predictor of WTP, followed by income.

Aziz et al. (2010), Kosz (1996) and Tisdell and Wilson (2001) found that age is negatively related to WTP and older respondents are often less willing to contribute. In contrast, Hadkler et al. (1997:112-114) found that age contributes positively to WTP and suggest that the older generation has greater wealth and can spare more money. Consequently, they are more willing than the younger generation to pay.

Aziz et al. (2010), Hadkler et al. (1997) and Tisdell and Wilson (2001) found that certain occupation categories are strongly correlated with WTP, specifically the professional occupations. However, Hadkler et al. (1997:105) found that businessmen were more willing to contribute than professionals, *ceteris paribus*.

Nationality and WTP have been found to be negatively related, indicating that international visitors are more likely than national visitors to contribute positively to WTP (Aziz et al., 2010:215; Hadkler et al., 1997:105).

Only Aziz et al. (2010) and Kosz (1996) incorporated marital status and children in their studies. Being married was positively related to a person's WTP (Aziz et al., 2010:215). They argued that the reason behind this may be that married respondents are willing to pay more because they want to preserve the environment for future generations. However, Kosz (1996:122) explained that one should not assume that people who have children are more willing to pay for conservation than others. One may expect the WTP to decrease, because people with children have greater expenses than those who do not have children. However, he found that this was in fact not the case in this study and confirms the findings of Aziz et al. (2010:215).

Kosz (1996:122) found that future plans to visit had a positive relationship with willingness to pay and return visitors were willing to pay extra for the conservation of a park/area/natural environment.

Hadkler et al. (1997), Kosz (1996) and Tisdell and Wilson (2001) all found that visitors who are members of conservation organisation or give donations towards conservation were less likely to contribute additional amounts.

3. METHOD OF RESEARCH

To determine tourists' willingness to pay to view the Big Five in the Kruger National Park (and by extension to contribute towards their conservation), this study surveyed visitors to the Park, and the questionnaire included a willingness-to-pay question. This was exploratory research done at the Olifants, Letaba, Mopani and Punda Maria rest camps. Respondents were randomly approached and the questionnaire was completed by one person in the travelling group or family. A total of 289 completed questionnaires were available for analysis. Considering the average group size of four persons, the survey reached approximately 1156 visitors. Though this is not a large number, the descriptive statistics show that the sample has similar characteristics to those of other recent surveys of the KNP and the willingness-to-pay results may be seen as indicative of the views of the typical visitor. The margin of error is calculated as 3%.

The survey was conducted by means of a structured questionnaire based on the research conducted by Aziz et al. (2010), Kosz (1996), Tisdell and Wilson (2001) and Hadkler et al. (1997). The questionnaire covered aspects such as the socio-demographic profile of visitors to the KNP, spending data and aspects regarding the Big Five. Respondents were asked what role the Big Five played in their decision to visit the Park. They could answer on a Likert scale from *not important at all* to *extremely important*. They were also asked to rank the Big Five species according to what they would like to see. The survey did not include a typical contingent valuation willingness-to-pay question, but rather asked the respondents what amount of their total spending per visit they would allocate to the opportunity to view the Big Five in the Park. This amount was also broken down by species. Finally, respondents were asked whether they were already making contributions to conservation causes.

The aim of the analysis is to model the predictors of willingness to pay, or in this case, predictors of that amount of total spending these visitors allocate to the opportunity to view the Big Five in the Park. The independent variables include some measured as scale variables and some categorical variables. The coefficients of the categorical or dummy variables are interpreted relative to the comparator category. For example, if the coefficient on the country-of-residence variable is positive, it means that compared to foreign visitors, local tourists allocate a greater amount of their spending to the opportunity to view the Big Five in the Park.

The model uses the Ordinary Least Squares (OLS) estimator with log-level specification. Wooldrige (2009:45) explains that the main reason for incorporating natural logarithms into a model is to impose a constant percentage effect of independent variables on the dependent variable. The OLS estimates are reliable under a number of assumptions: linearity in parameters, random sampling, no perfect collinearity, zero conditional mean, homoskedasticity and normality (Wooldrige, 2009:84-118).

4. RESULTS

The first step in the analysis was to determine how important the Big Five are to visitors. TABLE 1 shows the role, rank and average amount of spending allocated to viewing the Big Five in the Kruger National Park.

TABLE 1:   Role, ranking and amount allocated to the Big Five

Role of the Big 5 in the decision to visit the Park		SPECIES	RANK					Average amount allocated
			1	2	3	4	5	
Extremely important role	26%							
Very important role	28%	Lion	30%	49%	13%	4%	4%	R1 007.17
Neutral	34%	Leopard	59%	28%	8%	3%	2%	R1 136.43
Less important role	7%	Rhino	6%	13%	53%	20%	8%	R753.12
Not important at all	–	Elephant	6%	8%	18%	46%	23%	R658.91
		Buffalo	3%	3%	7%	25%	63%	R498.50
		Big 5						R3 569.02

Source: *Authors' analysis*

TABLE 1 shows that 34% of respondents felt neutral about the role that the Big Five play in their decision to visit the KNP. For the majority, the opportunity to view the Big Five in the Park plays a very important role and extremely important role in their decision to visit the Park. The ranking of species according to what they would like to see shows that the predators — lion and leopard — are favourites. Among the rhino, elephant and buffalo, the scarcer rhino is ranked higher than the more numerous elephants and buffalo. The amounts of their total spending per visit they would allocate to the opportunity to view the Big Five in the Park correspond with this ranking. The highest amount allocated to an individual species is the leopard (R1 136.43), followed by the lion (R1 007.17), the rhino (R753.12) and the elephant (R658.91). The lowest average amount allocated to an individual species is for the buffalo (R498.50).

The amount of their total spending that visitors would allocate to the opportunity to view the Big Five is shown as an average total of R3 569. Given that the average spending per group was R10 302.21, this means that visitors allocated 34.64% of this to the Big Five experience.

The question then becomes, what explains this significant premium attached to the Big Five? A number of models of the predictors of this willingness to pay were estimated. TABLE 2 presents the best fit. Compared to Afrikaans speakers, speaking English or another language is positively associated with the amount of spending allocated to the Big Five. Age has a positive coefficient, which indicates that the older generation has a greater willingness to pay than the younger generation. Compared to married people, those who are divorced and widows or widowers allocate a smaller share of their spending to the Big Five. This may signal the importance of disposable income rather than a particular preference. However, the variable living together is statistically significant and the coefficient is also negative. This indicates that visitors who live together are less willing than married couples to pay. Compared to people who have little

schooling, all of the education categories are positively associated with willingness to pay for the Big Five. The same conclusion holds for the higher income categories. Unfortunately, even though the direction of the relationship is as expected, the coefficients are not statistically significant. The constraint of available income is also clear in the fact that those respondents who pay for a greater number of people in their group have a negative relationship with willingness to pay for the Big Five.

TABLE 2: **Results of the OLS regression model with the dependent variable log (WTP) (total amount willing to pay to see the Big5) with standard errors in brackets.**

Variable	Coefficient	Standard error
Constant	5.142	(1.719)
Language (comparator Afrikaans)		
English	0.212	(0.229)
Other	0.648	(0.719)
Age	*0.019*	*(0.011)***
Accompanying children	*0.225*	*(0.251)*
Marital status (comparator married)		
Not married	0.386	(0.470)
Divorced	-0.367	(0.619)
Widow/er	-0.437	(0.573)
Living together	-1.388	(0.780)**
Country of residence	*0.215*	*(0.603)*
Education (comparator no schooling)		
Matric	0.971	(0.624)
Degree/grad	0.815	(0.595)
Post-grad	0.825	(0.518)
Professional	0.750	(0.589)
Income (comparator <R20 000)		
R20 001 – R140 000	0.283	(0.495)
R140 001 – R221 000	0.520	(0.500)
R221 001 – R305 000	0.414	(0.518)
R305 001 – R431 000	0.402	(0.505)
R431 001 – R552 000	0.447	(0.523)
>R552 000	0.751	(0.469)
Number of people paying for	*–0.034*	*(0.067)*

Variable	Coefficient	Standard error
Number of visits	*-0.021*	*(0.035)*
Number of nights stayed at the Park	*0.086*	*(0.025)**
"Wildcard holder"	*0.252*	*(0.277)*
Recommend the Park	*1.052*	*(0.951)*
Reason for visit: loyalty to the Park	*-0.109*	*(0.069)*
Role of Big Five (comparator extremely important)		
Very important	-0.452	(0.236)**
Neutral	-0.946	(0.231)*
Less important	-1.684	(0.430)*
Not at all important	-0.502	(0.557)
What age did you get to know National Parks	*0.000*	*(0.008)*
Member of a conservation organisation	*-0.098*	*(0.209)*
R-squared	*0.519*	
Adjusted R^2	*0.269*	
Significance	*0.010*	

Source: *Authors' analysis*

*$p < .05$, **$p < .1$

The number of nights stayed at the KNP had a positive and significant relationship with willingness to pay. Compared to people who indicated that the Big Five plays an *extremely important* role in their decision to visit the Park, those who view the Big Five as *very important* have a negative coefficient and allocate a smaller amount of their spending to the Big Five experience. This also holds for those who have a neutral view of the Big Five and those who indicated that they are *less important*. It is interesting to note that there is a positive relationship between being a KNP wildcard holder and the amount of spending allocated to the Big Five, but a negative relationship between belonging to a conservation organisation and the amount of spending allocated to the Big Five. In neither case are the coefficients significant.

The R-squared (0.519) indicates that the independent variables explain 51.9% of the sample variation in the dependent variable, WTP. The adjusted R-squared (0.269) is 26.9%, reflecting some measure of multicollinearity between the independent variables. The above results are heteroskedasticity-robust results.

5. FINDINGS AND IMPLICATIONS

The first and foremost finding is that there is indeed a non-consumptive use value for the Big Five: Visitors allocate, on average, 34% of their spending to the opportunity to view the Big Five in the Park. Therefore, from a marketing point of view, it seems that the introduction of the Big Five can serve as a significant draw card in national parks and private game reserves (given that

all criteria for these species are met). The next step would be to analyse the Big Five market. Who are these visitors and what are their preferences?

The second finding is that the non-consumptive use values differ between the species of Big Five, as indicated in TABLE 1. The scarce species have greater value, which shows that the scarcity theory even applies in game viewing and therefore nature-based products. This shows that tourists have their own value attached to the different species, which might differ from that of Park management. The same argument could be valid for other species, and more research on this topic is required.

The third finding is that some of the determinants of willingness to pay from the literature are confirmed, while other results contradict previous research. This will be discussed below.

Socio-demographic variables

Age has a positive coefficient, which indicates that the older generation has a greater willingness to pay than the younger generation. This finding corresponds with that of Hadkler et al. (1997:112), but contradicts studies done by Aziz et al. (2010), Kosz (1996) and Tisdell and Wilson (2001), who found that age is negatively associated with WTP. Language also has an influence, where both English and 'other' languages have positive coefficients, indicating that English-speaking visitors and visitors who speak other languages are more likely to contribute positively to WTP than Afrikaans-speaking visitors. People who were accompanied by their children are more likely to contribute to WTP than people who were not. This corresponds with findings by Aziz et al. (2010:216) and Kosz (1996:121). Both these studies argue that people with children are more likely to contribute positively to WTP, because they want to preserve natural resources for future generations.

The "living together" category of marital status showed a negative and statistically significant coefficient. This indicates that visitors who live together are less willing to pay than married couples. The variables divorced and widow/er also have negative coefficients. Aziz et al. (2010:216) argued that people who are married are more likely to have children and hence are more willing to contribute positively to WTP. However, the argument can also be made that people who are divorced or widowed may have less money to spare than double-income married couples. The variable *not married* has a positive coefficient, indicating that visitors who are not married/single are more likely to contribute positively to WTP than those who are married. No literature exists on this finding, but it may be that visitors who are not married have fewer financial responsibilities and more disposable income.

The variable *country of residence* has a positive coefficient, indicating that South Africans are more likely to contribute positively to WTP than international visitors. This finding contrasts with the findings by Aziz et al. (2010:216) that international tourists are more willing to pay than local residents; however, this sample contains very few international visitors, which might be a reason for this contradiction. Although all of the variables in the education category were statistically insignificant, the coefficients are all positive. This indicates that people with higher levels of education are more likely to contribute positively to WTP than those who had no schooling. This finding concurs with research done by Aziz et al. (2010), Hadkler et al. (1997), Kosz (1996) and Tisdell and Wilson (2001). All of these studies argue that this variable contributes positively to WTP, because people with a high level of education most likely earn higher incomes and can afford to pay more.

Although all of the variables in the income category were insignificant, they all have positive coefficients. Keeping in mind that the comparator variable for this category is <R20 000, the

results can be interpreted as follows: visitors who have a higher income tend to be more willing to pay than those with lower income levels. This finding is supported by the literature: see, among others, Aziz et al. (2010), Hadkler et al. (1997), Kosz (1996) and Tisdell and Wilson (2001), who also found that people with higher income are more likely to contribute positively to WTP.

Travel behaviour variables

The results showed that visitors who were paying for a greater number of people in their group were less willing to pay. The size of the travel group will have an impact on expenditure, which might be a reason for this finding. Frequency of visits to national parks in the last year had a negative coefficient, indicating that people who have indeed visited national parks regularly during the last year are less likely to contribute positively to WTP. This is an unexpected finding, and a possible reason for this is that these respondents might view their frequency of visitation and subsequent expenditure as contributing to conservation. No literature on this variable is available.

Visitors who are wildcard holders are more likely to contribute positively to WTP than those who are not wildcard (loyalty card) holders. No literature is available on this variable. Satisfaction with their visit has a positive coefficient, indicating that people who would recommend the KNP to friends and family are more likely to contribute positively to WTP than those who would not.

In summary, it is clear that there is a considerable difference between some of the international literature and the results of this paper. However, other South African studies conducted by Kruger and Saayman (2012) found that, generally, socio-demographic variables do not explain willingness to pay, indicating that the South African environment is considerably different from that of the international environment. This implies that future research on this topic should also look at adding more travel behaviour variables.

6. CONCLUSION

The purpose of this article was to examine for the first time the value that tourists place on the Big Five and the predictors of their willingness to pay to view the Big Five at the Kruger National Park (KNP).

The article contributes to the discourse on the value of different species as well as the consumptive versus non-consumptive debate. It seems that over the long run the non-consumptive value of species can outperform the consumptive value. This has far-reaching implications for conservation organisations as well as privately owned game reserves. Another contribution made by the paper was identifying major gaps between international research and South African research on nature-based products. However, this research also recognises the fact that much more research of this nature should be conducted. Future work can aim for larger samples and wider coverage within parks. It would be possible to distinguish between local and foreign tourists. Closer examination of the predictors of WTP is possible with a focus on travel behaviour. It would also be possible to ask questions about the value of other species and how they compare with the Big Five. Another aspect touched on by this research is the question of whether the Big Five can be considered a brand in itself and what the brand value of the Big Five is. Therefore this paper should be seen as a point of departure rather than a final analysis.

What remains clear is that the Kruger National Park needs to continue focusing its efforts on the preservation of the natural environment and the marketing of the Big Five, since the Big Five are one of the main reasons for visiting the KNP. Marketing strategies should focus on the older, high-income groups that are married and have children, since these categories are likely to contribute positively to the conservation of the Big Five. Focusing on these marketing strategies, as well as the preservation of the natural environment and the conservation of the Big Five, will ensure the optimal use of scarce resources at the KNP. This will also allow the KNP to promote sustainable tourism activities.

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