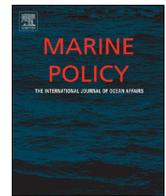




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PACT or no PACT are tourists willing to contribute to the Protected Areas Conservation Trust in order to enhance marine resource conservation in Belize?

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ABSTRACT

The primary objective of this paper is to determine whether tourists are willing to pay (WTP) fees to support conservation in Belize and, if so, to determine their maximum willingness to pay. This is an important issue for Belize and for all countries that heavily rely on the quality of their environmental resources to attract tourists. From 1996 to 2017, the Protected Areas Conservation Trust (PACT) has charged a \$3.75US conservation fee to all tourists upon their departure from Belize. In April of 2017, this fee was raised to \$20.00US, but not without controversy. In May 2012, February 2013, and again in May 2014 almost 400 tourists were surveyed to determine if raising the fee was possible and by how much. Results suggest a significant percentage of tourists are willing to pay for conservation in Belize; many in excess of the current fee of \$20.00US. So far, the increased fee does appear to have had any impact on tourism arrivals. This empirical observation, combined with the results of this paper, are important pieces of information as it relates to conservation finance in Belize and has potential implications for conservation finance in other tropical destinations.

1. Introduction

Like most Caribbean countries, Belize is heavily dependent on the tourism industry and the tourism industry in Belize is heavily dependent on the quality of the environment: particularly marine ecosystems [17,4,41]. Tourism is the nation's principle source of foreign exchange, and the main use of the Belize Barrier Reef (<http://belizetourismboard.org/wp-content/uploads/2018/07/TravelTourismDigest2017v2.pdf>). The Belize Barrier Reef is the largest in the western hemisphere, second in size only to the Great Barrier Reef in Australia. Established as a World Heritage Site in 1996, this diverse system of reefs, cays and atolls is responsible for approximately 30% of national GDP via fisheries production and tourism and contains one of the highest levels of marine biodiversity in the Atlantic [14,30]. It is the quality of the mangroves, sea-grass, coral reefs, and sea life that attract tourists to Belize [43]. Therefore, protecting and improving the quality of these environmental resources is important for economic development [26,39]. Failing to protect marine resources jeopardizes future economic prosperity by deterring tourists and compromising the flow of ecological services [4]. Unfortunately, the agencies that manage and

protect these resources are often underfunded [21,25,38]. Ideally, those who derive benefits from using the environment, including tourists, should bear the cost of preservation and conservation [47]. One mechanism for accomplishing this is the use of entrance or exit fees. These entrance/exit fee systems can be viewed as payment for environmental services (PES) received by the tourists [28,3].

From 1996 to 2017, every international visitor to Belize has been charged \$3.75US/\$7.50BZ upon their departure. This fee is part of Belize's conservation strategy and the revenue goes directly into the Protected Areas Conservation Trust, better known as PACT. From 2012 to 2014 (the time period covered by this study), Belize received an annual average of more than 300,000 overnight visitors (not including cruise ship passengers).

In April of 2017, the Government of Belize decided to raise the conservation fee to \$20.00US/\$40.00BZ. This created an outcry from tourist industry providers, arguing the fee would “cripple” tourism in Belize.¹ This research is aimed at better understanding the effect this increase might have on visitation and whether the fee could be even higher than \$20.00US. The primary research question addressed is whether tourists visiting Ambergris Caye and Caye Caulker, Belize, are

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¹ <https://www.sanpedrosun.com/government/2017/04/14/governor-general-approves-pact-amendment-bill-departure-taxes-increase/>.

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willing to pay higher fees in order to enhance marine conservation programs. Another question explored is whether or not informing people about the current \$3.75 fee would result in respondents anchoring their stated willingness to pay at the existing fee level.²

Hopefully, this information can be used to help establish appropriate conservation fees that support improved marine and coastal management without significantly reducing tourist arrivals. This examination of tourists' willingness to pay for conservation programming in Belize provides a unique addition to the current marine conservation literature and may provide valuable information to policy makers in determining whether and how much to increase the current exit fee for the PACT in the future. This research also contributes to the non-market valuation literature by examining the potential anchoring effect associated with the provision of information about existing fees in contingent valuation surveys.

The rest of the paper is structured as follows: [Section 2](#) briefly provides some background on ecosystem services and their importance to Belize, a summary of the history, current context, and future plans for PACT, and reviews similar studies on willingness to pay to protect marine resources. [Section 3](#) details the design of the survey, its implementation, and the results of the analysis. [Section 4](#) discusses the results and concludes the paper.

2. Marine ecosystems, PACT, and financing conservation

The importance of healthy coastal and marine ecosystems is paramount to Belize's economic wellbeing. These ecosystems provide a variety of goods and services to humans [26,7]. Near shore corals act as natural buffers preventing coastal erosion and mitigating the effects of storm surges by absorbing wave energy, potentially saving Belize millions of dollars annually in avoided damages to manmade coastal infrastructure [17,40]. Fish stocks provide coastal communities with food security, employment, income and a valuable source of protein [37]. Rich biodiversity and recreational opportunities attract tourists [20,27,5], driving Belize's economy [17,40]. Marine ecosystems also provide less tangible services, including carbon sequestration, nutrient cycling, and waste regulation [40]. Unfortunately, marine ecosystems are often undervalued and as a result are under protected in policy decisions. This stems, in large part, from the lack of clear market signals related to their contributions to human well-being [40]. Despite this obstacle, Belize has, what is considered to be (by international standards), one of the best Marine Protected Area (MPA) systems in the world [17], with 18 MPAs covering over 250,000 ha [51]. MPAs are increasingly seen as one of the most effective management tools for protecting and increasing marine biodiversity [21,34]. To support this system and other conservation efforts, Belize created the Protected Areas Conservation Trust in 1996.

2.1. The Protected Areas Conservation Trust

PACT has historically been financed by a US \$3.75 exit fee (raised to \$20.00 in April 2017) collected from tourists upon their departure from Belize. This fee is allocated towards ecosystem conservation and the promotion of responsible resource management (www.pactbelize.org). Even with this level of legal protection and financial support - tourism overuse, habitat alteration, inadequate waste management, global climate change, and the replacement of mangroves with manmade capital all threaten the quality of Belize's marine ecosystems [8]. Because lack of sufficient funding has been noted as the key reason for poor management and enforcement of MPAs worldwide [21,25,29], this research seeks to explore the feasibility of garnering additional financial support in order to properly manage MPAs in Belize through marginal increases in the tourist exit fee. Although more than 50 conservation trust funds

have been created since 1991, a review of the literature shows that PACT is a relatively unique mechanism for funding conservation in the Caribbean [16]. Conservation trust funds are private, legally independent grant-making institutions that provide sustainable financing for biodiversity conservation. PACT is Belize's national conservation trust.

2.2. Previous financing studies

Of the various methods for estimating willingness to pay for conservation efforts, the contingent valuation method (CVM) has been one of the most widely used in the Caribbean and elsewhere [40]. CVM is well-established in the literature as one of several potential methods to determine the willingness to pay (WTP) of individuals for the provision of non-market environmental goods or services, or for public policies that have not yet been implemented [48]. Individuals can be asked about their willingness to pay for a specified marginal change in the environment, or they can be asked about their willingness to pay a conservation fee or their maximum willingness to pay to preserve or maintain the current level of environmental quality. This fee can take the form of a visitor's pass to a national park/protected area or an entrance/exit fee to the country, as is the case in Belize.

In recent decades, numerous studies have investigated the WTP for marine ecosystems for different purposes [49]. One of the earliest examples of using the CVM to elicit WTP for entrance fees in the marine environment is Dixon et al. [18]. They found 92% of divers at the Bonaire Marine Park would be willing to pay an annual fee of up to \$10US and almost half of the survey respondents would be willing to pay up to \$30US per year. Arin and Kramer [1] used a payment card CVM, again with divers, this time in the Philippines, and estimated a mean WTP between \$3US and \$5US per dive. Their conclusion was that using entrance fees to cover the costs of operating a marine protected area was a plausible option. Roberts et al. [35] interviewed 420 tourists in Peru and found sixty-six percent of tourists would be willing to pay \$10US to enter Tambopata National Reserve. In Fiji, Murphy et al. [33] examined tourists' willingness to pay a fee to snorkel with Manta Rays. Their results indicate that 82.4% of people surveyed would be willing to pay a mean value of \$9.2US more than the current cost, which is a 28% increase in the price. Using a payment card approach, Cazabon-Mannette et al. [10] found mean willingness to pay for turtle conservation in Tobago was \$31US with actions targeted at keeping sea turtles from going extinct. Grafeld et al. [22] found divers in Guam would be willing to voluntarily contribute over \$900,000US toward programs to improve reef conditions. In Brazil, Lopes and Villasante [31] found that approximately 70% of tourists were willing to contribute to a fund to compensate fishers for not disturbing sharks during certain specific periods of the year. Vianna et al. [48] used a willingness-to-pay survey to estimate the potential of the shark diving industry as a financing mechanism for enforcement and management of a hypothetical MPA. Their analysis indicated that implementation of a fee paid by divers could generate over USD 2 million for management and enforcement of the MPA each year. Tonin [46] explored opinions regarding the creation of MPAs in Italy and found most people would be willing to pay an entrance fee between 5 and 21 Euros. Another study looking at divers' WTP was conducted in Columbia by Trujillo et al. [44]. They utilized single and double-bound dichotomous choice models to estimate that divers are willing to pay an average of \$89.56US per person to enter Rosario and San Bernardo National Natural Park. Thur [45] utilized a payment card CVM to determine if divers at the Bonaire National Marine Park would be willing to pay more than the annual \$10US fee. All of their modelling specifications indicated that doubling the fee would have no impact of visitation rates. Subade and Francisco [42] utilized the CVM to determine the willingness to pay for conservation efforts by non-users in the Philippines. They found significant non-use values, which could be used to justify regular government budget allocation for conservation at the Tubbataha Reef. Edwards [19]

² Green et al. [23] provide details and examples of the anchoring effect.

found tourists visiting Jamaica would be willing to pay a \$2US environmental tax and would actually prefer this to a general tourism development tax. Roberts, Hanley and Cresswell [36] use a choice experiment to determine the willingness of divers to pay for terrestrial conservation. This addition to the literature shows how fees can be used to promote conservation efforts across ecosystem boundaries especially if users are aware of the linkages. Casey et al. [9] used a discrete choice CVM experiment with over 400 visitors to the Riviera Maya and estimated tourists would be willing to contribute almost \$50US to a conservation trust aimed at protecting coral reef ecosystems. Chen et al. [13] found approximately 90% of tourists surveyed would be willing to donate funding for MPAs, and the mean WTP per respondent was \$19.60US.

Specific examples from Belize include Hargreaves-Allen [24] and Cesar and van Beukering [11]. Hargreaves-Allen [24] used a combination of the market price method and CVM to estimate the total economic value associated with the Gladden Spit Marine Reserve. Total economic value was estimated to be over US\$4 million per year and mean WTP for entry into the reserve was US\$24 for non-whale shark visits and US\$38.60 for entry plus a whale shark trip. These values were higher than the actual fees, suggesting they could be increased to enhance conservation efforts. Cesar and van Beukering [11] surveyed visitors to Hol Chan Marine Reserve to ascertain willingness-to-pay for the use of the reserve “over and above what they already paid.” They concluded that higher park fees could be charged and greater conservation expenditures would be justified in order to preserve the quality of the environment and tourist revenues in the future. Whether or not it might be possible to increase the exit fee associated with PACT has not been explored.

3. Tourist WTP study

There are several approaches to choose from when attempting to determine an individual's willingness to pay for environmental changes and/or changes to public policy.³ The specific method chosen depends on several considerations including, but not limited to – what is being valued, intended policy use, ease of implementation, cost of survey, and cognitive burden [40]. Commonly, a willingness to pay (WTP) survey is used to evaluate the motivations and acceptable price points for tourists and a relatively large body of literature supports the use of these techniques [33]. If the change has multiple attributes or characteristics, it may be appropriate to use the choice modelling method, but when the change is one dimensional, like an additional fee, the most appropriate method is the CVM.

CVM is a survey-based technique for eliciting preferences regarding a wide range of non-market environmental changes. In surveys, people are asked to state their minimum willingness to accept or maximum WTP for a hypothetical change in the level of provision of the good or service of interest. In addition to measuring the non-market value, CVM has been used widely to investigate the associations between socio-economic factors and ecosystem services [49].

In this study, CVM is employed to measure the WTP an exit fee for marine conservation and to identify the key factors that affect tourists' preferences. Following Casey et al. [9] the framework represents the survey respondent's decision as a comparison of personal utility in two separate states: the status quo, represented as u_0 and with the new higher fee at cost c_1 represented as u_1 . Assuming utility is a function of income (y), characteristics of the respondent (z), trip characteristics (h), establishment of the higher fee (F), and elements of the respondent's decision that are unobservable to researcher (ϵ). The assumption is that respondent j will choose a higher fee to pay if:

$$u_1j(yj - c_1j, zj, hj, F_1, \epsilon_1j) > u_0j(yj, zj, hj, F_0, \epsilon_0j). \quad (1)$$

Rewriting the expression in terms of a probabilistic statement of whether a respondent will choose a new fee, the probability that respondent j will choose to pay more can then be shown as follows:

$$\Pr(\text{choosing } C) = \Pr[u_1j(yj - c_1j, zj, hj, F_1, \epsilon_1j) > u_0j(yj, zj, hj, F_0, \epsilon_0j)]. \quad (2)$$

3.1. Survey design

The survey was divided into four sections, following Casey et al. [9]. The first section asked respondents about their trip to Belize. The second section collected information specific to snorkeling and scuba diving. The third section contained the valuation scenario, where respondents were first asked if they would be willing to pay a fee that was higher than the current exit fee. Respondents were then asked to choose the maximum fee amount that they would be willing to pay from a series of presented alternative values. The “payment card” approach developed by Mitchell and Carson [32] was used to solicit responses to the valuation question based on the advantages of easing the cognitive burden associated with open-ended solicitations of WTP and avoiding starting point bias [10]. To examine the potential anchoring effect of providing respondents with information about the current fee amount, approximately one half of all survey respondents were provided with a reminder of the US \$3.75 exit fee that is used to finance conservation efforts by PACT. To mitigate potential hypothetical bias, taking the same approach as Casey et al. [9], a short statement telling the respondent about hypothetical bias and reminding him/her of income limitations and the availability of substitutes preceded the WTP question. The exact wording of the valuation scenario was as follows:

The fourth and final section of the survey solicited information about demographic variables, including the respondent's age, gender, income, marital status, membership in any environmental organizations and number of children.(Fig. 1).

3.2. Survey implementation

The survey was administered via convenience sample of tourists visiting Ambergris Caye, and Caye Caulker, Belize, over the course of seven days in May 2012. It was then replicated during the month of February in Caye Caulker, and a third round was collected, again, in Ambergris Caye in May of 2014. As recommended by the NOAA guidelines [2] all surveys were conducted in-person. The sample population was broadly defined as any tourist to Ambergris Caye, Belize. Interviewers approached tourists in bars, restaurants, dive shops, airports and beach-side resorts. Tourists approached by one of the interviewers had the option of taking the survey with the interviewer or self-administering (with supervision). Tourists interviewed in-person had the option of filling out the demographic sections confidentially, although many preferred that the interviewer continue asking the questions.

To control for social desirability bias, following the NOAA Panel [2] each interviewer identified the surveys he or she conducted. Each interviewer also recorded the location where each survey was conducted in order to control for survey context (e.g., respondents sitting on the beach may be willing to pay more for conservation than a respondent approached in town).

3.3. The econometric model

As noted above, survey respondents selected their maximum willingness to pay from twenty-one presented values varying from \$1.00 to > \$201.00. Responses to payment card WTP questions can be empirically analyzed in numerous ways [32]. This paper makes use of the simplest, most straight-forward approach - analyzing the actual value circled on the payment card. In order to examine the influence of demographic and experience variables on WTP, the following equations

³ For a complete review of these techniques see Champ et al. [12].

I would like to read you a short statement concerning the current state of the Marine Conservation in Belize.

The Protected Areas Conservation Trust (PACT) is Belize’s National Trust. PACT provides funds for supporting conservation and promoting environmentally sound management of Belize’s natural and cultural resources to foster sustainable development. PACT is primarily financed from the collection of a conservation fee of US \$3.75 paid by visitors to Belize upon their departure. Belize currently has 18 Marine Protected Areas (MPAs), covering approximately 250,000 hectares. According to the World Resources Institute, Belize’s MPA system is among the best in the world. Unfortunately, many of Belize’s MPAs lack sufficient funding and staff to effectively enforce fishing regulations and monitor reef use.

Recognizing that conservation programs cost money and need agencies to implement and manage them– would you be willing to pay a higher exit fee for your visit to Belize to help implement conservation programs?

YES NO

If NO: Why?

If YES–

Now I am going to ask you a question about how much you would pay. Because you are not actually going to pay right now, the fee is hypothetical. Some researchers are concerned that when a payment is hypothetical, people will overstate the amount they are willing to pay. This is called hypothetical bias. We want to get people to think about their willingness to pay as if they were in a real situation, where if they agree to pay, they will have to actually pay money.

Keeping in mind that there are other marine environments to visit and that you have a limited income to spend, what is the maximum fee you would be willing to pay?

\$1.00 \$2.00 \$2.50 \$3.00 \$3.50 \$4.00 \$5.00 \$10.00 \$15.00 \$20.00 \$25.00
\$30.00
\$40.00 \$50.00 \$60.00 \$75.00 \$100.00 \$125.00 \$150.00 \$200.00 >\$201.00

Fig. 1. Valuation Scenario and Elicitation Mechanism.

are estimated:

$$HFEE = \alpha + \beta_1 gender + \beta_2 income + \beta_3 children + \beta_4 college + \beta_5 PACT + \beta_6 snorkel + \beta_7 FirstVB + \beta_8 EnvOrg + \beta_9 UK + \beta_{10} Bird + \beta_{11} Age + \beta_{12} MPA + \epsilon \quad (3)$$

If yes:

$$WTP = \alpha + \beta_1 gender + \beta_2 age + \beta_3 child + \beta_4 College + \beta_5 MPA + \beta_6 Income + \beta_7 UK + \beta_8 Bird + \beta_9 Ruins + \beta_{10} PACT + \beta_{11} EnvOrg + \beta_{12} FirstVB + \epsilon \quad (4)$$

where,

HFEE is a binary response, yes or no to paying a higher fee and WTP is the circled amount indicating the highest fee you are willing to pay. All other variables are as defined in Tables 1–3.

3.4. Results

A total of 349 surveys were completed during the three time periods mentioned above. Respondents were well-educated and affluent; 82% had a college degree or higher and the average annual income before taxes was \$99,000 USD. A majority (60%) were married. The geographic origins of our sample group differ slightly from the typical tourist to Belize. Our sample group was comprised of slightly more Americans (69%) and Canadians (19%) than the average Belizean tourist population, which is 62% American and 9% Canadian, (Belize Tourism Board 2017). Our respondents also spent more nights on average in Belize (11.19) than the average tourist (8 nights), (Belize Tourism Board 2017).

More than half of the respondents (59.02%) were first-time visitors to Belize, but many had visited the Caribbean before; less than one-fifth (17.49%) of respondents were first-time Caribbean visitors. Many

Table 1
Tourist characteristics.

Variable	N	Mean
HFEE	349	78%
PACT	349	65%
WTP*	275	\$34.60
Age	339	44
Gender (1 = male, 0 = female)	334	0.46
Income (USD) ^a	305	98,977
Children (1 = Have, 0 = Do Not)	337	49%
College Degree or higher	335	83%
EnvOrg (1 = belong to an organization, 0 = do not)	330	25%
US resident (1 = yes, 0 = no)	343	69%
Canada resident (1 = yes, 0 = no)	343	19%
UK resident (1 = yes, 0 = no)	343	4%
MPAV (1 = very knowledgeable)	253	14%
MPAN (1 = no knowledge)	253	18%

Table 2
Trip characteristics.

Nights in Belize	188	11
# vacations past 12 months	188	3
Definite return to Belize	188	60%
Probably return to Belize	188	30%
Visited Hol Chan	188	56%
First visit Belize (1 = yes, 0 = no)	188	59%
Times to island	188	2
First Caribbean visit (1 = yes, 0 = no)	188	17.5%
Times to Caribbean	188	7.5

respondents vacation regularly, with approximately 3 vacations on average per respondent over the past 12 months, excluding their trip to Belize. Over 90% of respondents indicated that they would “definitely” or “probably” return to Belize.

Table 3
Recreation activities.

Recreation Activities		% Participating
Use beaches / sun bathe	342	85
Boating general power boat	343	22
Boating sail boat / catamaran	343	14
Snorkeling from shore	343	34
Kayaking	188	28
Swimming	188	66
Swimming with turtles	188	17
Snorkeling from boat	188	72
Bird watching	188	9
Scuba diving	188	37
Fishing	188	24
Visiting Mayan ruins	188	10

A majority of tourists had already or still intended to use beaches, snorkel from a boat, and swim during their stay in Belize (85.33%, 71.74%, and 66.30%, respectively). This last figure is slightly higher than the 59% average of tourists who snorkel at least once in Belize, reported by Cooper et al. [17]. However, this can be explained by the sampling location on Caye Caulker and Ambergris Caye, where tourists primarily engage in beach and aquatic recreation activities [6]. Slightly more than one-third (36.96%) of respondents intended to go scuba diving, also slightly higher than the average of 27% but again explained by survey location, in the cayes and not on the mainland.

Of the 349 tourists surveyed, 272 (79%) were willing to pay a conservation fee or a higher fee. Of those willing to pay a higher fee, the mean maximum willingness to pay was \$31.08. The distribution of responses to the payment card revealed that the most common maximum willingness to pay was \$10.00 with 23% of the responses, followed by \$25.00 with slightly over 13%. More than half of the WTP responses are clustered between \$10.00 and \$25.00.

One of the hypotheses was that the inclusion of the exit fee of \$3.75, in the valuation scenario, would influence the willingness of tourists to pay additional fees and that it would also influence the amount they were willing to pay. Of the 229 respondents who were told about the current fee, 81.6% were willing to pay a higher fee as opposed to 73.3% of those who were not told about the current fee. This difference is not statistically significant. However, there is a significant difference in maximum willingness to pay between these two groups. Those respondents who were made aware of the current fee have a maximum willingness to pay of \$20.03 compared to the other group's MWTP of \$35.19. This difference is statistically significant and may be the result of anchoring on behalf of the first group.

Each of the Probit estimations has similar explanatory power and each predicts that 82% of the responses would be positive. Residents from the UK are less likely to respond in the affirmative relative to Canadian and American travelers (only significant in model 2). Not surprisingly, individuals who belong to environmental groups are more likely to respond in the affirmative, as are those with higher incomes. Additionally, those who are visiting Belize for the first time are less likely to be willing to pay conservation fees than those who have visited before.

As for the OLS estimations, models 3 and 4 perform equally well with slightly more explanatory power coming from the first estimation with more observations and fewer explanatory variables ($r^2: .22 > .175$). The explanatory variables estimated with the most precision and having the largest impact on WTP are UK, RUINS, MPAV, and PACT. However, respondents from the UK are less likely to say yes in the first stage, but then have significantly higher WTP. Both of these results could be due to the small sample of UK residents, but it would be worth exploring more in the future. Those individuals who express being very knowledgeable about the role of marine protected areas (MPAV) have a significantly higher WTP. Those who have college degrees or higher also exhibit higher WTP. Another result is that

Table 4
Distribution of payment card responses.

Payment			
Card Amount	Count (n)	Percent	Cum.
0	74	21.2	21.2
1	1	0.29	21.49
2	1	0.29	21.78
2.5	1	0.29	22.06
3	3	0.86	22.92
4	6	1.72	24.64
5	49	14.04	38.68
7.5	1	0.29	38.97
10	60	17.19	56.16
15	21	6.02	62.18
20	41	11.75	73.93
25	29	8.31	82.23
30	13	3.72	85.96
40	9	2.58	88.54
50	19	5.44	93.98
75	2	0.57	94.56
100	14	4.01	98.57
125	1	0.29	98.85
150	1	0.29	99.14
200	1	0.29	99.43
201	2	0.57	100.00
Total	349	100.00	

individuals who had visited Mayan ruins (RUINS) are willing to pay significantly more than those who did not visit any ruins, despite the survey's emphasis on marine conservation. Lastly, one of the testable hypotheses came from the provision of the information about the current exit fee of \$3.75. The results suggest that even after controlling for other covariates, those individuals who were told about the fee have significantly lower WTP. It is possible that those individuals anchored their responses to this dollar amount. (Tables 4–6).

4. Discussion and conclusion

The primary objective of this paper was to determine if Belize tourists were willing to pay a higher exit fee to help fund conservation, considering that the former \$3.75 fee charged by the Protected Areas Conservation Trust has been inadequate to sustainably finance the conservation of Belize's marine ecosystems. For those tourists willing to pay a higher fee, the secondary objective was to determine the maximum fee they were willing to pay. Results indicate that approximately 80% of tourists are willing to pay higher exit fees if the revenue is dedicated to conservation efforts. This result is similar to other findings in the literature from around the globe, including but not limited to Murphy et al. [33] results from Fiji, Lopes and Villasante [31] from Brazil, Thur [45] from Bonaire, Chen et al. [13] from Taiwan, Roberts et al. [35] from Peru, and Casey et al. [9] from Mexico.

The lower bound estimate of tourists' WTP higher fees is just over \$30.00 with a mean of \$34.60. This suggests that Belize could raise the PACT fee again, increasing revenue for conservation efforts by an additional 50%. These results are also consistent with others that have shown the price elasticity of demand for high-end tourism to be highly inelastic [34]. In fact, tourism arrivals do not seem to have suffered at all. Since the fee was raised in April 2017, monthly arrivals have increased, compared to the previous year, by an average of over 10%

Table 5
Differences in WTP with additional information.

N	229	120
Information about PACT	Yes (\$3.75)	NO
Prob. Yes to higher	81.6	73.3
Max WTP	\$20.03	\$35.19

Table 6
Regression results.

Variable	Probit (HIGHFEE)		Variable	OLS (WTP)	
	Model 1 Coefficient (standard error)	Model 2		Model 3 Coefficient (standard error)	Model 4
Intercept	1.38** (0.61)	1.47***(0.59)	Intercept	25.81***(4.96)	39.56***(12.24)
UK	– 1.05 (0.75)	– 1.14*(0.71)	UK	55.56***(16.47)	55.03***(19.33)
Bird	0.027 (0.55)	0.067 (0.52)	Bird	– 19.97** (10.01)	– 15.82 (11.42)
PACT	– 0.05 (0.27)	0.08 (0.26)	Ruins	18.63***(7.37)	14.74*(8.39)
MPAV	–	– 0.389 (0.42)	MPAV	33.19***(8.46)	33.6***(9.43)
MPAnot	0.16 (0.32)	–	AGE	–	– 0.28 (0.24)
Age	– 0.017 (0.014)	– 0.27*** (0.01)	PACT	– 11.62*** (4.89)	– 13.5*** (5.37)
Gender	– 0.49* (0.28)	– 0.38 (0.27)	College	8.92* (5.06)	9.41* (5.79)
Envorg	1.06** (0.46)	1.08*** (0.45)	Gender	–	– 3.55 (5.61)
Income	0.000006** (0.000002)	0.000006*** (0.000002)	EnvOrg	–	1.74 (6.99)
College	0.45 (0.34)	0.39 (0.34)	Income	–	0.00004 (0.00005)
firstVB	– 0.48* (0.28)	– 0.52* (0.27)	FirstVB	–	– 6.34 (5.63)
Children	– 0.42 (0.38)	–	Insigma	–	–
Snorkel	0.29 (0.29)	–	Sigma	–	–
N	156	156	N	139	127
Log L	– 61.67	– 62.59	Prob > F	0.000	0.000
–	–	–	LRchi2	–	–
–	–	–	Prob > chi2	–	–
Pseudo r2	0.177	0.164	Adj. r2	0.22	0.175
Prob (YES)	0.82	0.82	WTP	\$30.81	\$31.01

[50]. In March of 2018, Belize received a record number of overnight arrivals of 55,488. This represents a 25% increase over March of 2017 (BTB 2018).

Another objective of this paper was to determine the role of information provision regarding the current exit fee and whether including a reminder of that fee amount would result in respondents anchoring their stated willingness to pay. Results suggest that the subsample that was presented with a reminder of the current US \$3.75 fee amount did indeed anchor to the current exit fee. This result suggest that the current exit fee amount may not be well-known to tourists, but also tells a cautionary tale about potential starting point bias when estimating WTP with the contingent valuation survey method.

Future research, in Belize, should look beyond the PACT fee. The potential for targeted fees for specific activities where tourists interact with particular aspects of all types of ecosystems could be used for conservation financing. For example, a clearer understanding of the consumer surplus generated from SCUBA and snorkeling in MPAs in Belize would go a long way toward determining the appropriate level of park entrance fees. Expanding survey work to incorporate tourists to Belize's inland attractions could also yield interesting results, as the Protected Areas Conservation Trust is used to finance more than just marine conservation. Entrance fees associated with inland tourism and conservation of mountain ecosystems can also contribute to marine conservation [36]. Employing a different methodology, such as a choice experiment similar to Christie et al. [15] in St. Vincent and the Grenadines, in a future survey in Belize would also allow for cross-methodological comparisons to affirm reliability of these WTP estimates. Hopefully, the results presented in this paper, in conjunction with the increase in tourist arrivals over the last year in Belize, will help policy makers in other countries recognize the potential for increasing conservation fees on a national scale to provide for more sustainable flows of financial resources for marine conservation in the future.

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