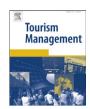
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Research Note

Willingness to pay as an economic instrument for coastal tourism management: Cases from Mersin, Turkey

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HIGHLIGHTS

- ▶ Data was gathered from 402 beach users in three Mediterranean beaches in Turkey.
- ▶ Ninety two per cent of respondents were willing to pay to see the beaches improved.
- ▶ By three beaches WTP of €2.33, €2.22, €1.77 per adult beach visit were found.
- ▶ Fixed price per visit was found the highly rated mode of payment.
- ► Results have 'worthy of attention' tourism policy implications for local governments.

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ABSTRACT

This paper reports results from a Willingness to Pay study using data from 402 respondents at the Turkish beaches of Kizkalesi, Yemiskumu and Susanoglu near Mersin. Of the respondents 92% expressed a WTP to see the beaches improved through tackling issues of washed up litter and man-made debris, provision of more social activities and to maintain the quality of the beach. The mean values to pay a reasonable charge were €2.33 for Kizkalesi, €2.22 for Yemiskumu and €1.77 for Susanoglu beach per adult beach visit. Fixed price per visit followed by voluntary box and through local taxes were the preferred mode of payment. It is suggested these findings have value for local governments for efficient beach management.

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1. Introduction

Beaches are not only fundamental assets for the natural balance of coastal ecosystems but also important resources for tourism. Those two particular characteristics of beaches have always created contrasts especially along the Mediterranean coast where beaches are the main reasons for visiting the various destinations.

For Turkey, coastal tourism is an important source of revenue and beaches are one of the most important assets. However, coastal tourism is threatened mainly by excessive coastal developments, erosion and pollution. In Turkey, beaches are classed as public domains by the Constitution. The Greater Municipality Law (no: 5216; Official Gazette of Turkey, 2004) and Municipality Law (no: 5393; Official Gazette of Turkey, 2005) allows local governments to operate and rent beaches within their borders as well as provide their maintenance.

Since beaches are not only considered as public domain, but also as income sources, there are economic benefits to be derived from their recreational use. Through a WTP approach, it is possible to place an economic value, which in turn can be used as an economic policy. Studies by Pearce and Barbier (2000, p. 273), Bateman, Lovett, and Brainard (2003), Hoyos, Mariel, and Fernàndez-Macho (2009) and Togridou, Hovardas, and Pantis (2006) also support the relevance of the WTP approach.

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Problems faced and possible solutions for sustainable use of beaches are one of the main concerns of beach management, this being part of wider integrated coastal zone management approach (Williams & Micallef, 2009). As stated by Williams and Davies (1999,p. 3), "effective beach management is a considered response to a specific interaction of cultural influences with the physical environment with the objective of developing a sustainable landscape resource". Therefore beach managers must be able to identify the range and causes of problems leading to poor resort quality, understand the strengths and opportunities of the resort under question, devise comprehensive, practical and fundable action programs, encourage third parties to cooperate and guarantee a high quality result to locals, visitors, local government bodies and private investors.

2. Contingent valuation method and willingness to pay concept

Contingent Valuation Method (CVM) is a stated preference approach developed for estimating the economic value that individuals place on non-market goods. CVM has been an important development, as many goods and services arising from public projects, programs and policies are of an intangible nature and not traded in actual markets (Pearce, Atkinson, & Mourato, 2006).

Although originally proposed by Ciriacy-Wantrup (1947), CVM for environmental valuation was first used by Davis (1963).

However, the method's development dates to the mid-1970s. Since then it has become the most widely used environmental valuation technique. Especially since the 1990s, CVM has been extensively applied to valuation of environmental issues (Table 1). Although still controversial, the method has been and is still used by academics and policy makers for benefit estimation (Pearce et al., 2006). Carson (1999) noted nearly 900 CVM studies carried out over 50 countries. In the developing world, its use is more recent.

3. Case studies: Kizkalesi, Yemiskumu and Susanoglu beaches, Mersin

3.1. The study area

Examined Maltese beach visitors' WTP (sample size: 80: WTP: £0.50-2.50)

Examined WTP of South Wales beach visitors (sample size: 146; mean WTP: £1.25)

Mersin is located at the eastern Mediterranean coast of Turkey. With a population of 1,667,939 (2011 census) and a surface area of 15,853 square kilometers, it is the tenth most populous city and important port of Turkey. During the 1980s and 1990s, the Mersin coastline experienced rapid development, major land reclamations along city shores and erosion (Ünal & Birdir, 2007). However, one of the most distinctive features of the city as a whole is its bathing possibilities and beaches. Three beaches were selected for the study, namely Kizkalesi, Yemiskumu and Susanoglu all located along the southern coast of Mersin.

 Table 1

 Selected WTP studies carried out along European coastal destinations.

Micallef (1996)

Blakemore and Williams (1998) Georgiou, Langford, Bateman, and Turner (1998) Langford, Kontogianni, Skourtos, Georgiou, and Bateman (1998) Machado and Mourato (1998) Ünal and Williams (1999) Blakemore, Williams, and Ozhan (2000) Blakemore, Williams, Micallef, Coman, and Unal (2002) Taylor, Fredotoic, Povh, and Markandya (2002) Nunes, Rossetto, and de Blaeii (2004) Togridou, Hovardas, and Pantis (2006) Blakemore and Williams (2008) Fan (2008) Preißler (2009) Logar and van den Bergh (2012) Riera, McConnell, Giergiczny, and Mahieu (2011) Sayan, Williams, Johnson, and Unal (2011) Halkos and Matsiori (2012) Stithou and Scarpa (2012)

Ariza, Ballester, Rigall-I-Torrent, Salo, Roca, and Villares

(2012)

Undertook CV study to investigate individuals' stated willingness to pay (WTP) to reduce perceived risks of illness from the quality of bathing water at two beaches in East Anglia, United Kingdom Open-ended CV survey to estimate the WTP of the public for the conservation of the Mediterranean monk seal (mean WTP: €11.7) Estimated the WTP for marine water quality improvement in Portugal Surveyed the domestic visitors at Cesme Peninsula, Turkey to evaluate the WTP to maintain and improve the beaches (sample size: 120: mean WTP: £0.89) Examined WTP of Oludeniz beach visitors in Turkey to maintain and improve the beaches (sample size: 76; mean WTP: £1.00) Examined WTP of S. Georges Bay beach visitors in Malta to maintain and improve the beaches (sample size: 102; mean WTP: £0.64) Attempted to assess the willingness-to-pay for environmental quality in the Croatian island of Hvar Utilized CV technique to estimate the WTP of the fishermen for alternative clam fishing management practices in Venice Lagoon: Examined the WTP of the visitors for the National Marine Park of Zakynthos in Greece beaches (sample size: 484; mean WTP: €6.15); Examined the WTP of British tourists in Oludeniz, Turkey to maintain and improve the prime tourist beach beaches (sample size: 246; mean WTP: €0.90) Examined the WTP of the foreign visitors in Crete for marine turtle conservation (sample size: 91; mean WTP: €28.77); examined the quality of European coastal water by German tourists at Westerland on Sylt in Germany and utilized WTP approach for the improvement of the water quality: Examined WTP in Croatia (Crikvenica) to preserve the beaches (sample size: 745*; mean WTP: €2.51 for paid beach, €1.65 for free beach) Assessed the WTP to avoid loss of the sites (avoiding oil spills) at three Spanish beaches (mean WTP: €0.24, €0.46 and €1.73) Assessed the WTP of the British tourists placed for the conservation of the marine turtles in Belek, Antalya, Turkey (sample size: 76; mean WTP: £0.89) Carried out a CV survey along a coastal line of an area in Central Greece (Volos) to examine visitors' attributes and desired site specific characteristics in order to determine the factors affecting willingness to pay (WTP) for an improvement quality program. Investigated the determinants of foreign visitors' participation in a conservation scheme for marine diversity using collective and voluntary payment modes in the context of CVM Tested the relationships between Travel Cost Method and Hedonic Prices in the Northwestern Mediterranean coast to value beach integral quality and its attributes:

^{*} In the study, travel cost model and standard CVM model were used. Figures in the table refer to the latter. For the former model, mean WTP values are €2.16 for the paid beach and €1.62 Euro for the free beach (total of 644 samples).

Table 2 Ways that beach visitors would prefer beaches to be improved.

	Kızk	alesi	Yemiskumu		Susanoglu	
	N	%	N	%	N	%
To meet the necessity of beach facilities	8	5.70	7	9.60	6	5.60
Cleanness	64	45.70	44	60.30	60	56.10
Availibility of beach sports	5	3.60	4	5.50	2	1.90
Security	11	7.90	0	_	5	4.70
Provision of more social services	15	10.70	7	9.60	16	15.00
Prevention of noise pollution	3	2.10	0	_	1	0.90
Provision of planned developments	20	14.30	7	9.60	7	6.50
Preventing renting out beaches	4	2.90	0	_	0 -	
Provision of facilities for the disabled	1	0.70	1	1.40	0	_
Provision of WC and showers free for the public	9	6.40	3	4.10	10	9.30
Total	140	100.00	73	100.00	107	100.00

3.2. Method

A valuation survey was conducted in order to determine the non-market value placed upon three beaches along the Mersin coast. Data was gained from a randomly selected cohort of visitors at Kizkalesi, Yemiskumu and Susanoglu beaches. Questionnaires were carried out during August and September 2011. Out of 432 participants, 402 provided usable survey results. A non-parametric one way analysis of variance test (Kruskal–Wallis) was used to test whether samples originated from the same distribution or not. The parametric equivalent of this test is ANOVA, the one-way analysis of variance (Ott, Larson, & Mendenhall, 1983).

4. Results and discussion

4.1. Demographic profile of the visitors

Gender balance was 58% males and 42% females. In terms of occupation, the highest percentage belongs to the self-employed, in all three cases (46%, 27% and 36% accordingly), followed by students and employees. Average monthly earnings was found as €498.41 (at Kizkalesi: €503.97; Yemiskumu: €446.43; Susanoglu: €463.49) and 13.4% of the respondents refused to state their income.

4.2. Beach use, beach perceptions and WTP

Results showed that 48% of the respondents visit the beach every day and 53% of beach users spent between 1 and 4 h on the beaches followed by between 4 and 8 h. The main reason for visiting the beaches was 'swimming'. Children's play, scenery and fresh air were stated as other main purposes for choosing the

Table 3Preferred mode of payment for maintenance of the beaches visited.

Preferred mode of payment	Kızkalesi		Yemiskumu		Susanoglu		Total	
	N	%	N	%	N	%	N	%
Local tax	24	28.90	6	15.80	18	35.30	48	35.83
Volunteer box	20	24.10	10	26.30	12	23.50	42	24.42
Fixed price per visit	29	34.90	15	39.50	11	21.60	55	32.98
Car parking charge	6	7.20	4	10.50	1	1.96	11	6.40
Voluntary works	3	3.60	3	7.90	8	15.70	14	8.14
Other means	1	1.20	0	_	1	1.96	2	1.16
Total	83	100.00	38	100.00	51	100.00	172	100.00

Table 4Willingness to pay by respondents at the beaches.

WTP (in Euros)	Kızkalesi		Yemiskumu		Susanoglu		Total	
	N	%	N	%	N	%	N	%
0.40	14	12.2	10	18.50	21	29.60	45	18.75
0.80	10	8.70	11	20.40	9	12.70	30	12,50
1.19	7	6.10	3	5.60	13	18.30	23	9.58
1.59	1	0.90	_	_	_	_	1	0.42
1.98	62	53.90	23	42.60	21	29.60	106	44.16
3.17	1	0.90	_	_	_	_	1	0.42
3.97	17	14.80	4	7.40	6	8.50	27	11.25
5.95	1	0.90	2	3.70	_		3	1.25
7.94	2	1.70	1	1.90	1	1.40	4	1.67
Total	115	100.00	54	100.00	71	100.00	240	100.00

 $1 \in -2.52$ YTL (www.tcmb.gov.tr "Indicative exchange rates announced by the Central Bank of Turkish Republic, August 2011).

beaches. Swimming and viewing, as the purpose of visits are in line with previous Turkish studies (Ünal & Morgan, 2000; Ünal & Williams, 1999).

Washed up litter and man-made debris were stated as the prime dislike at all three beaches. This is in accord with beach surveys undertaken by Blakemore and Williams (1998) at Wales, Ünal and Williams (1999) and Sayan, Williams, Johnson, and Ünal (2011) at Turkish beaches. 91.79% of respondents would like to see the beaches improved and cleanness, more social activities and landscape improvements were stated as the preferred ways to improve the beaches (Table 2). Ninety-two percent of respondents of the total sample agreed with the payment for the better maintenance or improvement of the beaches visited. Only 5% of the respondents replied as 'do not know' and another 3% were not willing to pay for it.

Despite the fact that 369 respondents agreed to see the beaches maintained, only 172 of them (47%) replied to the preferred mode of payment (Table 3). 'Payment per visit' was the preferred method of payment for Kizkalesi (34.90%) and Yemiskumu beaches (39.50%). However, the highest number of respondents of Susanoglu beach (35.30%) preferred payment through a 'local tax' followed by 'volunteer box' and payment per visit.

Respondents' preference for paying a fee per visit is in line with findings of previous beach surveys (Blakemore & Williams, 1998; Blakemore, Williams, Micallef, Coman, & Ünal, 2002; Sayan et al., 2011; Ünal & Williams, 1999). Two hundred and forty beach users stated their willingness to pay (65% of the respondents who are willing to pay) and WTP amounts ranged from €0.40 to €7.94 (Table 4). Mean values found were €2.33 for Kizkalesi, €2.22 for Yemiskumu and €1.77 for Susanoglu beaches. Mean values were found higher (almost double in some cases) than other studies reported in previous surveys for Mediterranean beaches (Williams & Micallef, 2009). There is a statistically significant difference between age and WTP; no correlation was found between monthly income and occupation and WTP. The reason of this could be that an individual although ready to pay for a certain amount from their income, in reality this is not always the case.

5. Conclusions and policy implications

Results revealed that the value placed on beach improvement could be substantial and those values could be used for efficient beach management. Furthermore, such studies are believed to have an influence on societies on the WTP to conserve and protect natural resources. With this study it was seen that approximately €1.70−2.30 can be applied to the beaches as a fixed price per visit for maintenance and improvement.

The study findings have policy implications for local governments. Coastal management policies and programs aiming to conserve natural resources are believed to consider the results of such studies and direct ways for implementation. A better understanding of the fragility of natural resources could ultimately help focus on environmental conservation policies and programs and their implementation.

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Appendix A. Supplementary data

Supplementary data related to this article can be found at http:// dx.doi.org/10.1016/j.tourman.2012.10.020.

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