

Consumers' willingness to pay premium for green hotels:

Fad or a future Trend?

Introduction

In the early 2000' the focal question regarding green lodging was whether it had a chance in aligning green value with corporate performance (Kirstges, 2002). Nowadays the lodging industry still produces considerable carbon dioxide emissions and consumes large quantities of water, energy and non-renewable resources, while academic insights support that an environmentally friendly corporate strategy positively affects hotels' performance (Leonidou, Leonidou, Fotiadis, and Zeriti, 2013; Zhang, Joglekar, and Verma, 2012). Although reduced consumption of tourism services would benefit environmental preservation, the road to a greener world requires responsible consumption (Kotler, 2011).

Nowadays, academic research focuses in *when*, *why*, and *how* environmentally friendly practices can engage all shareholders active involvement towards green growth in tourism. Hotels rather slowly though progressively show their commitment in adopting environmentally friendly practices. Water conservation, towel and linen reuse programs, the use of energy-efficient light bulbs and wastewater treatments are among the most popular green practices adopted in the lodging industry (Chan, Wong, and Lo, 2009). Although hotels' commitment is required in order to initiate green integration (Teng, Horng, Hu, Chien, and Shen, 2012), customers' engagement is vital in achieving green integration. Consumers are the ultimate power brokers (Kotler, 2011), as they literally co-produce green value not only by selecting green hotels but mainly by actively participating in green hotel initiatives (e.g.; towel and linen reuse programs; recycling of material; e.t.c.) (Lusch and Vargo, 2006). Thus, consumers' stated preference toward green hotel practices (Lee, Hsu, Han, and Kim,

2010; Han, Hsu, and Lee, 2009), can act as a starting point for lodging companies in order to design and communicate green practices effectively and ultimately engage consumers' active participation in the co-production of green value.

Research Motivation

The daily cost for the provision of fresh towels can run to \$1.50 a room (Goldstein, 2008). Although the environmental cost is not accordingly estimated, we should consider the water, energy and detergent consumed, to make an assumption regarding the potential savings of environmental resources through linen and towel reuse incentives. Hotel managers claim that cost reduction is the most influential driving force for adopting green practices (Bohdanowicz, 2005). Thus, towel and linen reuse policies are both environmentally and financially driven. From consumers' perspective, recent findings support that well designed communication of these incentives can influence customer participation rates (Hu, 2012; Goldstein, Griskevicius, and Cialdini, 2007). Thus, designing a communication policy regarding consumers' co-production options of green service can be a challenging and critical task for managers, as the greening of the service value chain is a central issue associated with significant financial and environmental benefits (Ostrom, Bitner, Brown, Burkhard, Goul, Smith-Daniels, Demirkan, and Rabinovich 2010; Wunderlich, Kranz, Totzek, Veit, and Picot 2013). The focus of the present paper lies in the investigation of consumers' willingness to participate in towel reuse hotel practices while it goes one step further by examining consumers' willingness to support also financially towel reuse practices. Recently, Sánchez-Ollero, García-Pozo, and Marchante-Mera (2014) supported that room prices are 5.15-percent higher for each environmental measure implemented by the hotel management, while extant literature on consumers' willingness to pay premium for green hotels remains ambivalent (Chan, 2013).

Therefore the questions below are both managerially relevant and theoretically interesting: Are consumers' willing to participate in towel reuse programs and if not which is the most important

barrier? Are consumers willing to financially support towel reuse practices and how much extra money they would pay daily?

Consumers' Willingness to pay premium for green hotel services

Prior research regarding environmentally friendly practices in regard to pricing issues in the lodging industry is presented in a structured and solid way through a summary table (Table 1). A structured, iterative search strategy in academic databases (i.e.; ABI Inform; Business Source Complete; Emerald; JSTOR; EBSCOhost and Science Direct) resulted in a significant pool of empirical papers. Papers were then screened based on publication date, publication title, language, relevance, applied methodology and contribution. The Table reports on the geographical region, methodology, sample and the key contribution or research findings of 13 key studies published between 2003 and 2014 (Table 1). We have further classified research findings into the following nine key subject areas:

- specific green measures (i.e.; perceived importance, popularity or effectiveness of specific green initiatives)
- pricing in green lodging (i.e.; consumers' intention to pay premium or not for green lodging)
- communication (i.e.; communication techniques for engaging consumer participation)
- consumer segmentation (i.e. results in regard to consumers' characteristics), and
- visit intention.

Extant literature reports ambivalent or even contradicting findings regarding consumers' willingness to support environmental practices through premium pricing (Chan, 2013). There is evidence that consumers are willing to pay premium for green hotel practices (Masau and Prideaux, 2003; Kelly et al., 2007; Han et al., 2009) and at the same time consumers seem reluctant to pay more (Manaktola and Jauhari, 2007, Han and Chan, 2013) or even state that green hotels should charge less money (Millar and Baloglu, 2011). Interestingly, Baker, Davis, Weaver, (2014)

identified perceived inconvenience, perceptions of corporate cost cutting and decreased luxury as the most significant barriers for consumers' intention to book or pay premium for a green hotel.

Table 1: Summary Table of publications in green lodging and pricing in 2003-2014

Citation	Region	Design and Sample	Results / contribution	Specific Green Measures	Pricing	Communication	Consumer Segmentation	Visit Intention
Masau and Prideaux (2003)	Kenya	Design: survey Sample: 237 respondents	The majority of hotel guests are willing to pay premium for hotels that adopt environmentally friendly practices.		x			
Kelly, Haider, Williams, Englund (2007)	U.S.A.	Design: choice experiment Sample: 876 tourists	Tourists were willing to pay for an additional – but not excessive- fee in order to support environmentally friendly practices.		x		x	
Manaktola and Jauhari (2007)	India	Design: questionnaire Sample: 66 respondents	Tangible evidence of green practices (e.g.; certification program; linen re-use, e.t.c.) shapes consumers' positive attitude, but not willingness to pay premium. The majority of consumers were not willing to pay premium for green practices.	x	x			
Han, Hsu and Lee (2009)	U.S.A.	Design: online survey Sample: 371 customers	Consumers' attitude toward green behaviour has a positive influence on hotel's image, which in turn influences consumers' intention to visit the hotel, produce positive WOM and pay premium. Female customers and older customers are more willing to pay for a green hotel compared to male and younger customers accordingly.		x		x	x
Kim and Han (2010)	U.S.A.	Design: online survey Sample: 389 respondents	An extended TPB model is proposed for the prediction of consumers' intention to visit a green hotel.		x			
Lee, Hsu, Hanand Kim (2010)	U.S.A.	Design: online survey Sample: 416 respondents	Green hotel guests are more inclined to spread positive WOM and revisit the hotel than to pay premium for a green hotel.		x			
Han, Hsu, Lee, and Sheu (2011)	U.S.A.	Design: online survey Sample: 422 hotel customers	The perceived severity of environmental degradation failed to stimulate positive attitudes toward green hotels. The link between green consumers' attitude and intentions to visit a green hotel, engage in positive WOM and pay more for it, is confirmed. Female respondent exhibited more willingness to visit a green hotel, to recommend it, and to pay premium, compared to male respondents. No age or education differences were found.		x	x	x	x
Kang, Stein, Heo and Lee (2011)	USA	Design: online survey Sample: 455 respondents	Customers with higher environmentalism exhibited greater willingness to pay premium for green hotel practices, compared to customers with lower environmentalism.		x		x	
Millar and Baloglu (2011)	U.S.A.	Design: conjoint choice experiment Sample: 571 travellers	The most influential attribute of hotel room preference was green hotel certification followed by towel and linen reuse policy. The majority of respondents claimed that there should be no price difference between green and traditional hotels, whereas some stated that they should pay less for a green hotel.	x	x		x	

Citation	Region	Design and Sample	Results / contribution	Specific Green Measures	Pricing	Communication	Consumer Segmentation	Visit Intention
Chan 2013	Hong Kong	Design: survey Sample: 55 managers and 1035 hotel customers	Consumers focus on the credibility of a hotel's green promotions, while hotel managers are excessively optimistic about consumers' willingness to pay premium for green services.		x	x	x	
Han and Chan 2013	Hong-Kong	Design: interviews Sample: quota sample of 15 mainland Chinese and 15 English-speaking overseas tourists visiting Hong Kong.	Consumers consider premium pricing, lower comfort level and inconvenience the most important negative green hotel attributes.	x	x			
Baker, Davis, Weaver, 2014	U.S.A.	Design: online survey Sample: 208 hotel patrons	Perceived inconvenience, perceptions of corporate cost cutting and perceived decreased luxury constituted significant consumer barriers in their intention to book or pay premium for a green hotel.	x	x			x
Sánchez-Ollero, García-Pozo, and Marchante-Mera (2014)	Spain	Design: survey Sample: 232 hotel managers	Hotel room prices are 5.15-percent higher for each environmental measure implemented by the hotel management.		x			

In an attempt to segment consumers in regard to green hotel premium pricing, Kang, Stein, Heo, and Lee (2011) state that consumers' with greater environmentalism, male consumers and customers of luxury or mid-priced hotels are the three groups that are more inclined to pay premium for green hotels. Contrary, other studies showed that female (Han et al., 2009; Han et al., 2011) and older hotel customers (Han et al., 2009) expressed higher levels of willingness to pay premium for green practices. Interestingly, recent findings report that age and education are not significant predictors of consumers' willingness to actively support green initiatives (Han et al., 2011), with the exception of young consumers' participation in a towel reuse program (Shang, Stein, Heo, and Lee, 2010). Elaborating on prior research regarding consumers' heterogeneity in regard to ethical behaviour (Luchs, Naylor, Irwin, and Raghunathan, 2010; White MacDonnell, and Ellard, 2012), the current review further demonstrates that further research is needed in order to shape consumers' profile in regard to their attitudes and behaviour toward green pricing in the lodging industry. In line with these ambiguous findings, current figures in diverse business contexts also demonstrate contradictory results in regard to consumers' willingness to pay premium for green products and services (Neff, 2012; Miremadi et al. 2012). Another important issue in green pricing is consumers' attitude-behaviour gap (Olson, 2013). Although consumers' state their willingness to pay for green

products, they frequently purchase non-green ones. This may be attributed to the tradeoffs that often accompany green services (e.g.; lower quality; reduced performance; less indulgence or convenience) or to the provision of socially desirable responses by consumers (Luchs et al., 2010).

Methodology

Greece is a well-known summer tourism destination combining “sun and sea” activities with historical and cultural, especially ancient, places of interest. The use of water resources is one of the major environmental and resource issues related to Greek tourism. Despite the fact that Greece has adequate water resources, these are not evenly distributed among the seasons and the geographical areas. Thus, during the summer season, water resources are scarce in places which do not accept adequate quantities of rainfall and are not equipped with water storage facilities. Furthermore, during summer, the demand for irrigation water from agriculture put further pressure on the scarce resources. During dry seasons and especially in islands, the tourism industry is one of the most important water consumers with demand well in excess of supply capacities. In addition, water used for cleaning linen and towels puts further pressure on constrained waste watertreatment plans and, frequently, contributes to increased pollution. Thus, the issue of towel reuse is very significant for the Greek tourism industry as it contributes to a more rational use of water resources and protects the water environment from unnecessary pollution.

A survey was conducted in Greece (i.e. Athens and Patras) in order to collect primary data and examine the aforementioned hypotheses. The survey was administered among Greek and foreign citizens via a structured questionnaire completed via a face-to-face interview. The questionnaire was pre-tested on a sample of 30 consumers and certain modifications were carried out especially as concerns wording of questions and the introductory-informative material. The survey was conducted in May-July 2014 and a total of 973 questionnaires were collected. The sample consists of Greek citizens (678 respondents) and foreign tourists that visited Athens and the area of ancient

Olympia (295 respondents). This work analyses only the responses derived by Greek consumers. The sample of Greek consumers is not familiar with towel reuse as this not, as yet, a widespread practice in the Greek lodging industry. Foreign consumers and especially these from the US, Australia and Canada are more familiar to the towel re-use practice and thus have prior information and experience that differentiates them from the Greek consumers. Sample demographics are shown in Table 2.

Table 2: Sample demographics

	Category	Percentage
Age	20-29	33.8
	30-39	20.9
	40-49	25.2
	50-59	15.8
	>60	4.3
Education	Primary	5.0
	Secondary	24.6
	Tertiary	70.4
Gender	Male	42.9
	Female	57.1
Average price spent per night (euro)	40 - 60	54.1
	61 - 80	29.6
	81 - 100	11.4
	101 - 150	4.0
	more than 150	0.9
	Average	Standard Deviation
Typical number of nights spent in hotels	4.93	2.22
Size of family	3.19	1.21

The questionnaire had a screening question in which participants claim whether they would choose towel replacement every other day (instead of daily towel replacement). Participants who are not willing to participate in a towel reuse program state the most important reason for their choice. Participants who are willing to participate then need to answer whether they would support the towel reuse program solely through their participation or by also paying premium given that the hotel donates the savings to an environmental organization. Participants who are not willing to support the towel reuse in monetary terms are then asked to state the reason for their choice. The

second part of the questionnaire contains demographic (i.e.; gender, age, household size, education level) and behavioural variables (i.e.; typical length of stay in hotels, typical price of hotel room, environmentally friendly behavior, prior experience with towel reuse hotel practices).

Results

Figure 1 depicts how the derived responses are distributed among the given choices in a flow chart like diagram. Almost two thirds of the consumers respond positively to the question “Would you choose towel replacement every other day (instead of daily towel replacement)?” However, of these consumers, only 43.7% are willing to contribute a positive amount of money to support the action at an average of 2.4 euro per night. In economic terms, these consumers have a positive willingness to pay to support the action of towel reuse. This figure is well above the estimated 1 euro cost savings per night for hotels. As noted earlier, 56.3% of the 444 respondents who would subscribe to a towel reuse programme refused to support it with a premium paid on the room’s price. Of these 250 respondents, two thirds argued that there is no need for a premium because cost savings for hotels outweigh their welfare loss from not having towel replacement every day. In economic terms these consumers have a zero willingness to pay to support the towel reuse action. In addition, one quarter of the respondents argued that consumers should be compensated for this welfare loss by paying less the price of the room insofar hotels make a profit out of it. In economic terms, these consumers present a negative willingness to pay for supporting the action. Finally, and returning to the original screening question, 234 respondents refuse to participate in a towel reuse programme at all. The overwhelming majority of these respondents justify their response for reasons related to hygiene and cleanliness (figure 1).

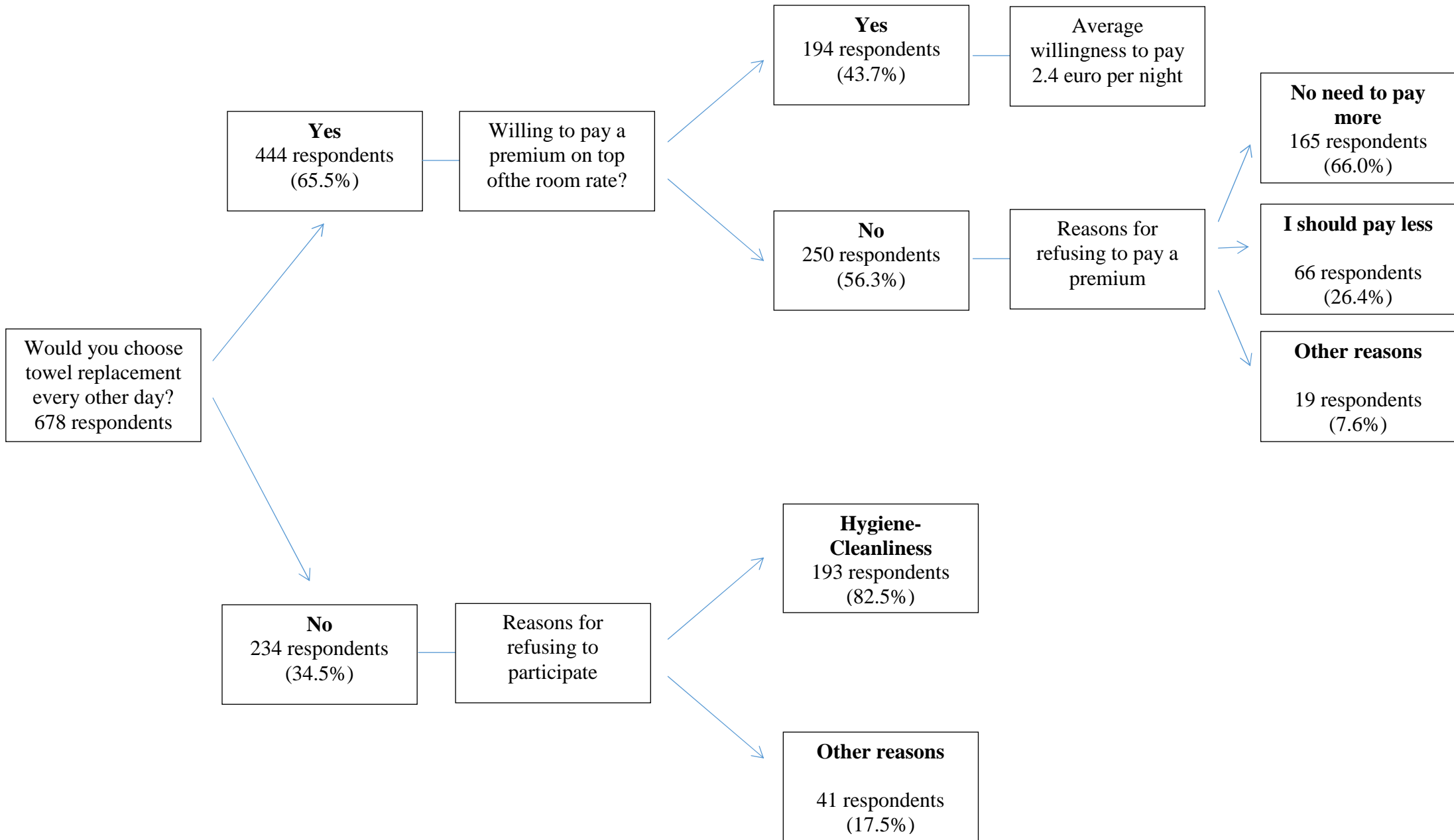


Figure 1: Flow chart of answers derived by respondents.

From the point of view of introducing and managing towel reuse programmes, the whole sample of respondents is clearly segmented to smaller groups. Of interest, is the division between respondents willing or not willing to participate in a towel reuse programme. It is of interest to note that, from a simple statistical examination we failed to reveal any significant differences between these two groups as concerns their major demographic, social and behavioural characteristics such as gender, age group, attained educational level, and usual price per night of stay paid in hotels. The major variable that differentiates these two groups is the response to the question of whether respondents adopt resource and energy saving practices in their everyday life (table 3). This may be interpreted in two ways. First, respondents who practice such actions in their everyday life may be considered as resource and environmental conscious exhibiting a higher level of “environmentalism”. This result is in accordance to Kang et al. (2011) finding that “customers with higher environmentalism exhibited greater willingness to pay premium for green hotel practices, compared to customers with lower environmentalism”. Second, respondents who adopt resource and energy saving practices in their everyday life are possibly better informed for the operation and importance of towel reuse programmes and thus more susceptible to adopt such programmes. Our future research will examine the influence played by the interactions between the “environmentalism” variable and the socio-economic and demographic on the decision to accept such a programme.

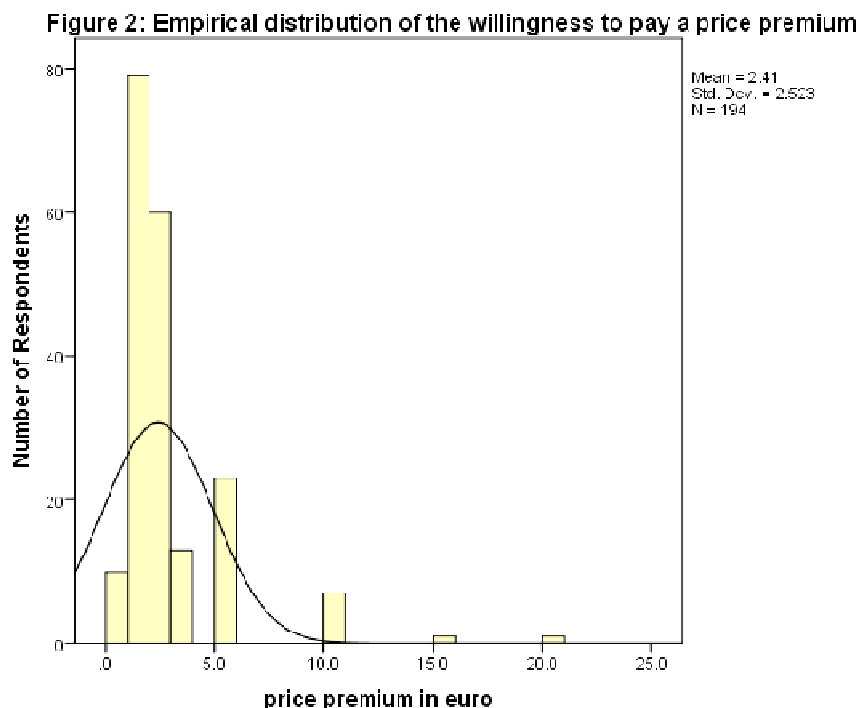
Table 3: Everyday practice of resource and energy conservation actions and the decision to accept towel reuse.

	Do you practice resource and energy conservation action in your everyday life?				Total
	Never	Usually No	Usually Yes	Always	
Would you choose towel reuse?					
Yes	8	29	142	53	232
No	12	49	231	148	440
Total	20	78	373	201	672

$\chi^2=10.91$, d.f=4, p=0.028 (significant at the 5%)

A second, equally important segmentation is, among those who are willing to adopt atowel reuse programme, to those who are willing to contribute a price premium and to those who are not. Younger people of less than 30 years of age are more willing to contribute than older people (significant at the 5%). Surprisingly enough, more educated people are less willing to pay a premium than less educated people (significant at the 10%). Education is related to the willingness to adopt a towel reuse programme but not to the willingness to contribute a price premium for this.

As concerns willingness to pay a price premium to support the towel reuse programme, the distribution of the 194 respondents who stated a premium is given in figure2. The average premium is at 2.41 euro per night with the majority of respondents placed between 1 and 3 euro. Figure 2 shows the empirical distribution of the stated price premiums. We should note that this is not an unbiased estimate of the price premium for the whole sample as it comes only from those respondents who have stated their preference to pay a premium. A proper statistical model should take into account the fact that a significant proportion of the respondents who would adopt a towel reuse programme have purposefully stated that there is no need to pay a premium or that they should be compensated by paying lower prices (figure 1).



Conclusions

The results from this examination are in accordance with more recent findings in the literature suggesting that the majority of consumers were not willing to pay premium for green practices (Manaktola and Jauhari, 2007; Lee et al., 2010; Baker et al., 2014). For those willing to pay a premium this was significantly higher than the perceived cost savings indicating willingness to support the existence of towel reuse programmes. Finally, the major determinant between consumers who would accept a towel reuse programme from those would not accept it, is their environmental attitudes captured by their everyday practices in resource and energy conservation. Those with a real environmental-conservationist attitude are more possible to accept a towel reuse programme and/or other green activities by the hospitality industry.

The preliminary results presented in this paper will be extended in the future in a more coherent and integrated statistical model. First, this model will take account of the interactions among variables in its attempt to differentiate among segments of the sample and reveal latent structures. Second, in estimating the average willingness to pay, sample selection (respondents who do not want to adopt the programme) and zero or negative willingness to pay for price premiums (respondents who stated zero premiums or stated that should be compensated) should be taken into account. This model will allow the unbiased estimation of the average willingness to pay and the approximation of welfare effects resulting from the introduction of green activities in the hotel industry.

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