Effect of Security on Hostels' Price Premiums: A Hedonic Pricing Approach

Cornell Hospitality Quarterly 2019, Vol. 60(2) 150–158 © The Author(s) 2018 Article reuse guidelines: sagepub.com/journals-permissions DOI: 10.1177/1938965518777224 journals.sagepub.com/home/cqx SAGE

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Abstract

This article evaluates the impact of security in the hostel industry on the willingness to pay by customers. More specifically, given the importance of security in the decision to travel and in the choice of a given destination, we analyze the impact of security guest reviews on a consumer-generated website on hostel room prices. Furthermore, we investigate whether the impact of security guest reviews on the hostel room prices is higher for the hostels located in the countries with the lowest ranking in the Global Peace Index. Finally, we examine whether females and older guests are willing to pay a premium in terms of price for a hostel with a higher level of security. For this purpose, we estimate a hedonic price function for a sample of consumer reviews of 477 hostels in 22 worldwide capitals, with different levels of peace, from Hostelworld. The results highlight the importance of security on the determination of hostel room prices. We find that customers are willing to pay a higher premium in terms of price, in the least worldwide peaceful countries, for a hostel room with higher levels of security. In the case of women and older guests, the premium they are willing to pay is higher.

Keywords

hostels, security, hospitality industry, prices, hedonic pricing method

Introduction

"Safety and security" has been identified as one of the five global forces that will drive the tourism industry in the new millennium. Providing quality tourism experiences which incorporate principles of safety and security is becoming an overriding objective of all tourism destinations (Reisinger & Mavondo, 2005). As Pizam and Mansfeld (1996) state, "safety, tranquillity and peace are a necessary condition for prosperous tourism . . . most tourists will not spend their hard money to go where their safety and well-being may be in jeopardy" (p. 1).

The security issue does not affect only the international tourism flow (e.g. Enders, Sandler, & Parise, 1992) but also the willingness of tourists to pay a price premium for products and services that provide them with a higher level of security (Cró & Martins, 2017). Enz (2009) and Cró and Martins (2017) also note the existence of a strong correlation between accommodation security standards and the price charged for them, referring to the existence of a premium in terms of price for accommodations that offer high safety standards. Feickert, Verma, Plaschka, and Dev (2006) and Hecht and Martin (2006) refer that factors such as tourist gender and age influence the premium in terms of price. In the case of women and older customers, they are willing to pay a higher premium in terms of price than men and young people, respectively, for an accommodation with a

higher level of security. Finally, according to Barker, Page, and Meyer (2002), the type of accommodation is also a major factor in the crime rate on tourists and on the price premium they are willing to pay. The authors refer the existence of a higher incidence of crime in hostels (39.3%), followed by the accommodation choices of friends and relatives (32.1%) and camping and caravanning (17.9%). Boakye (2010) refers that backpackers with a limited budget patronize cheap facilities which fall outside the tourist zone with "official" protection, and hence, no capable guardian which exposes them to crime. Conversely, the backpackers with a higher budget may be able to afford high quality accommodation facility which may be well protected from criminals at the destination.

The objective of this study is thus to quantify and discuss the impact that online reviews placed by hostel customers in Hostelworld website have in terms of hostel's price

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premium and absolute price using the hedonic price method. More specifically, given the importance of security in the decision to travel and destination country choice, we intend to ascertain whether hostel customers pay a premium depending on (a) the level of accommodation security, (b) the level of risk in terms of the destination country's security, and (c) demographic factors, for example, the gender and age of customers. To answer our research questions, we collect data of consumer reviews of 477 hostels in 22 worldwide capitals, with different ranking positions in the Global Peace Index (GPI; that provides a comprehensive analysis of a country's state of peace), from the website Hostelworld. We estimate a hedonic price function that includes the security, location, and cleanliness attributes together with another set of variables that the previous literature has linked with hostel room price. The security attribute is studied simultaneously with cleanliness and location attributes given that customers' perceptions of hostel security are determined by the cleanliness of the establishment, followed by location (see Amblee, 2015).

The innovative contribution of this study to the literature is the analysis of the impact of the security attribute in the price premium paid by tourists in hostels, based on the hedonic pricing method for the most peaceful/safe versus least peaceful/safe worldwide countries. Thus, it diverges from the study carried out by Cró and Martins (2017) which addressed only European countries, where the differences in terms of security are not so noticeable. Our study focuses exclusively on hostels for two reasons: (a) because it is the type of accommodation, in view of their characteristics, with a higher level of crime (see Barker et al., 2002; Boakye, 2010) and (b) the fact that the security attribute is only collected and disclosed on Hostelworld's website.

Literature Review

The Importance of Security on Tourism Industry

Tourism and security are inevitably intertwined phenomena, where security often emerges as the determining factor in the choice of a given destination (e.g., Boakye, 2010; Pizam & Mansfeld, 1996; Sönmez & Graefe, 1998). Lepp and Gibson (2003) refer that previous studies have identified four major risk factors: terrorism, war and political instability, health concerns, and crime. There are numerous studies that demonstrate that tourist destinations are strongly affected by security perceptions and safety and risk management (see, for example, Boakye, 2010; Sönmez & Graefe, 1998). The questions of security obviously could affect the international tourism flows, as has been demonstrated by several studies carried out in different parts of the world (e.g., Enders et al., 1992; Ghaderi, Saboori, & Khoshkam, 2017; Pizam & Smith, 2000). According to the model developed by Enders et al. (1992),

the prices of tourist activities depend on money outlay, the value of time, and risk factors. Alterations in travel risks, arising from increased terrorists' incidents in a given country raise the price of tourist activities, thereby increasing relative prices as perceived by the consumer. Such increased activities would necessitate loss of time and increased expenditure on protection,

reason why they tend to cause a substitution effect and consequently a change of travel plans to safer destinations, with potential tourists avoiding regions where one or more countries have taken terrorist acts or simply postponing the decision to travel to those destinations (p. 534). In addition to the substitution effect, a contagion effect may occur as the occurrence of terrorist or criminal acts in a given country may deteriorate the destination image of neighboring countries belonging to the same region (Enders et al., 1992), with tourists avoiding this region. This phenomenon is also identified in the literature by the term generalization effect.

Reichel, Fuchs, and Uriely (2007) show that the risk perceived by backpackers is a multidimensional and heterogeneous phenomenon, which tends to vary according to the characteristics of the individual and the trip, such as gender, age, nationality, previous travel experience, travel purpose, motivation, travel arrangements, the existence of fellow travelers, and destination. In addition, the authors note that in their studies, backpackers tend to present a global risk perception relatively similar to the perceptions of mass and individual tourists.

Finally, as shown by Barker et al. (2002, p. 771), the hostel segment has the highest crime rate among the various types of accommodation. In this way, it is not surprising that tourists are willing to pay a premium in terms of price when the lodgings show signs of greater security (Cró & Martins, 2017; Feickert et al., 2006). Enz (2009) points out that hotels positioned in the higher price segments, located in urban areas or near airports and new hotels, tend to maintain high safety standards. The author concludes that there is a strong correlation between hotel security standards and the price charged by hotels, mentioning the existence of a price premium for hotels that offer high security standards. In addition, Amblee (2015) based on an empirical study finds that customers perceptions of hostel security are determined by the cleanliness of the establishment, followed by location. Finally, Hua and Yang (2017) reported that the crime has a negative and significant impact on hotel operating profitability (as measured by income earned per room). Thus, in the context of hostels segment, given that cleanliness, location, and security are determining factors when guests choose a hostel, it is expected that the hostels with the best rating on these criteria require a premium in terms of price.

Research Hypotheses

We consider the following four research hypotheses:

Hypothesis 1: The security attribute (as well as location and cleanliness attributes) have a statistically significant effect on hostel prices.

In line with previous studies (Cró & Martins, 2017; Enz, 2009), it is expected that customers show a willingness to pay a premium in terms of price in hostels that offer high security standards.

Hypothesis 2: The coefficients linked to security attribute (as well as location and cleanliness attributes) have a stronger effect on hostel prices in the least peaceful worldwide countries.

Given that the level of risk perceived by the customer tends to be higher in countries with a higher level of insecurity (least peaceful countries) compared with the other countries analyzed, as a result of the existence of risk aversion by most backpackers, it is expected that there is greater propensity on the part of potential customers to pay a higher premium in terms of price in hostels that offer high security standards in the least peaceful worldwide countries compared with the most peaceful worldwide countries (see, for example, Cró & Martins, 2017).

Hypothesis 3: The females and contemporary tourism backpackers are willing to pay a premium in terms of price for a hostel with high levels of security.

Hecht and Martin (2006) refer that backpackers cannot be treated as a homogeneous group, and there are differences due to demographics factors, such as gender and age. As highlighted by Hecht and Martin (2006) "most of the recent research suggest that the backpacker market is made up of two sub segments: (i) the youth tourism backpacker between 15 and 29 years; and (ii) the contemporary tourism backpacker—30 years and older" (p. 70). Given that females and older customers are the group that tends to be more fearful of being victimized (Warr, 1984), it is expected that this group of individuals show a willingness to pay a higher premium in terms of price than males and young hostel customers, respectively, for an accommodation with a higher security level (Feickert et al., 2006; Hecht & Martin, 2006).

Hypothesis 4: The females and contemporary tourism backpacker are willing to pay a premium in terms of

price for a hostel with high levels of security in the least peaceful worldwide countries comparatively with the most peaceful worldwide countries.

As explained in the previous hypothesis, the premium in terms of price paid by hostel customers tends to be lower in the more peaceful worldwide countries (e.g., Cró & Martins, 2017).

Data and Method

To test the hypotheses, set up in the previous section, we use a database of prices, hostel characteristics, and consumer reviews of 477 hostels for 22 worldwide capitals, collected in November 2016, from the website Hostelworld.¹ The selection of capital countries was based on the level of peace in the countries, which are disclosed through the 2016 GPI² constructed by Institute for Economics and Peace and reported on the website http://visionofhumanity. org/indexes/global-peace-index/. Based on the state of peace score obtained by each country, the countries are ranked in five different groups in the GPI. They are ranked among the group of countries with a very high state of peace and the group of countries with very low state of peace. The very high state of peace group of countries contains 11 countries. Our sample is composed of the 11 countries ranked in the very high state of peace and the 11 countries with the worst score to have a balanced panel of countries. Our sample is composed of all the hostels located in the 22 capitals analyzed, for which there is the necessary information to estimate the empirical model.³ The sample distribution of hostels by country is shown in Table 1.

For the dependent variable (hostel price), in the case of hostels offering only one type of accommodation (dormitories or private rooms), a single price was recorded. For those offering dormitories and private rooms, the average of both prices was calculated and considered in the analysis. Hereafter referred to as "absolute price." Regarding price variations related to different dates, the minimum available price for November 2016 was recorded as in Santos (2016) and Cró and Martins (2017). Given that we are also interested in the hostel' price premium (or relative price), we calculate the difference between each hostel absolute price (located in the capital) and the average price of hostels in the capital. The hostel' price premium (in \in) for each hostel and the absolute price are the final dependent variables of the model. Table 2 presents the descriptive statistics.

Ordinary least squares (OLS) regressions are used to test the hypotheses formulated in "Research Hypotheses" section. Given that observations (hostels) are grouped into clusters (countries), with model errors uncorrelated across clusters but correlated within cluster, a cluster-robust variance matrix is estimated, that is, robust to both heteroskedasticity and to within-cluster correlation (e.g., Wooldridge,

		-			
Most Peaceful Countries	GPI Index	#	Least Peaceful Countries	GPI Index	#
Iceland (Reykjavik)	1.192	13	Ukraine (Kiev)	3.278	13
Denmark (Copenhagen)	1.246	11	Russia (Moscow)	3.079	29
Austria (Vienna)	1.278	20	Colombia (Bogotá)	2.764	49
New Zealand (Auckland)	1.287	11	Lebanon (Beirut)	2.752	2
Portugal (Lisbon)	1.356	55	Turkey (Ankara)	2.710	42
Czech Republic (Prague)	1.360	73	Israel (Jerusalem)	2.656	8
Switzerland (Bern)	1.370	2	Egypt (Cairo)	2.574	10
Canada (Ottawa)	1.388	7	India (New Delhi)	2.566	13
Japan (Tokyo)	1.395	51	Mexico (Mexico City)	2.557	21
Slovenia (Ljubljana)	1.408	18	Philippines (Manila)	2.511	19
Finland (Helsinki)	1.429	6	Azerbaijan (Baku)	2.450	4

 Table 1.

 Sample Distribution of Hostels by Country's Capital.

Note. This table presents the sample distribution of hostels by country's capital, the value of the 2016 GPI Index, as well as the number of hostels located in the capital (#). GPI = Global Peace Index.

2003). In line with the approach commonly used in the literature on hedonic pricing for tourism accommodations, a semilogarithmic form is used in this study.

Empirical Results

The empirical results are reported in Tables 3 and 4. In all estimates, it is clear that among the six quality hostel characteristics under scrutiny, only security, cleanliness, and location have significant positive effects on hostel's premium prices and/or hostel's absolute prices. The other three characteristics-atmosphere, facilities, and staff have nonsignificant effects on price. This evidence is in line with the results obtained by Amblee (2015) and Cró and Martins (2017). The results also show a negative significant effect off the number of reviews on both variables of hostel prices. Thus, the number of reviews is associated with lower absolute prices and hostel's price premium. Santos (2016) argues that result could be associated with economies of scale. where larger hostels are able to charge lower prices, at the same time that they have more customers and consequently a greater number of reviews. Most of the estimates also reveal that standard deviation variable for the most recent 20 reviews presents a nonsignificant effect on prices. As expected, the results reveal that accommodation in dormitories is cheaper than in private rooms, with both dummy variables statistically significant. The results also show that the policy of offering breakfast and Wi-Fi by the hostels can be a good business policy by allowing them to charge a higher price. Finally, the results show that hostels that have won the HOSCAR prize tend to charge a higher price and a higher price premium compared with other hostels. This result seems to suggest that Hostel Award dummy variable can be used to rate hostels' quality, such as in hotels with the star rating system, given the absence of this indicator for hostels.

Next, we present the evidence obtained regarding the four research hypotheses. In the first research hypothesis, the coefficients associated with the variables security, location, and cleanliness are positive and statistically significant in all estimated regressions, showing that as expected, customers are willing to pay a higher price and a premium in terms of price in hostels that offer high security standards, in line with the results obtained by Enz (2009) and Cró and Martins (2017).

With respect to the second research hypothesis, we find that multiplicative dummy variables included in both tables (security $\times D_{Least \ peaceful}$; location $\times D_{Least \ peaceful}$) and cleanliness $\times D_{Least \ peaceful}$) show positive and statistically significant coefficients. Given that $D_{Least \ peaceful}$ assumes the value of 1 for the capitals of the least peaceful countries in the world, this means that customers are willing to pay a higher price and/or higher price premium in the least peaceful countries comparatively with most peaceful countries, if the hostel has higher levels of security, location, and cleanliness.

Finally, regarding the last two research hypotheses, we conclude that females and contemporary tourism backpackers are willing to pay a higher price and/or higher price premium than males and young hostel customers, respectively, for a hostel with a higher security level, given that security \times age \geq 30 years and security \times females multiplicative dummies in Tables 3 and 4 show positive and statistically significant coefficients. Given that females and older customers are the group of customers that tends to be more fearful of being victimized (Warr, 1984), it is expected that this group of individuals show a willingness to pay a higher premium in terms of price than males and young hostel customers, respectively, for an accommodation with a higher security level (Feickert et al., 2006; Hecht & Martin, 2006), because as is shown by Barker et al. (2002), the hostel segment has the highest crime rate among the various types of accommodation. Finally, security $\times D_{Least peaceful} \times age \ge 30$ years

Table 2.Descriptive Statistics.

Variable	М	SD	Minimum	Maximum	Skewness	Kurtosis
Panel A (210 observations)						
Price premium	11.797	14.544	-19.090	101.76	1.705	10.449
Absolute price	24.011	15.271	5.620	115.56	2.407	11.360
Security	8.908	0.849	6.000	10.000	-1.251	4.618
Location	8.958	0.853	6.000	10.000	-1.275	4.808
Cleanliness	8.854	1.406	4.000	10.000	-0.762	3.032
Atmosphere	8.057	1.239	4.000	10.000	-0.924	3.688
Facilities	8.194	1.114	4.000	10.000	-0.940	3.758
Staff	8.860	1.198	5.000	10.000	2.060	7.091
Number reviews	17.685	26.158	2	183	3.215	16.072
Variance rating	2.321	3.110	0.000	21.780	3.217	16.971
Dormitories	0.138	0.345	0	I	2.098	5.401
Private rooms	0.076	0.266	0	I	3.194	11.207
Breakfast and Wi-Fi	0.495	0.501	0	I	0.019	1.000
Age ≥30 years	0.414	0.494	0	I	0.348	1.121
Females	0.481	0.500	0	I	0.076	1.006
Hostel award	0.114	0.318	0	I	2.424	6.879
Panel B (267 observations)						
Price premium	24.157	23.104	-34.36	155.855	8.986	10.600
Absolute price	52.652	35.103	4.950	198.505	8.611	9.807
Security	8.808	0.937	4.000	10.000	-1.810	7.591
Location	8.681	0.971	4.500	10.000	-0.901	3.742
Cleanliness	8.828	1.129	2.700	10.000	1.498	2.384
Atmosphere	8.024	1.199	2.700	10.000	-1.032	4.558
Facilities	8.162	1.257	2.700	10.000	-1.252	4.969
Staff	8.768	0.919	4.700	10.000	-1.218	4.581
Number reviews	42.996	64.023	2	551	3.376	20.609
Variance rating	1.945	2.478	0.000	25.205	4.270	33.751
Dormitories	0.179	0.384	0	I	1.667	3.781
Private rooms	0.149	0.357	0	I	1.962	4.851
Breakfast and Wi-Fi	0.269	0.444	0	I	1.038	2.077
Age ≥30 years	0.423	0.495	0	I	0.310	1.097
Females	0.487	0.500	0	I	0.052	1.002
Hostel award	0.202	0.402	0	I	1.483	3.198

Note. This table shows the descriptive statistics of the variables, for the 477 hostels analyzed in this study. Panel A includes hostels in the capitals of the least peaceful countries in the world.

and security $\times D_{Least peaceful} \times Females$ show positive and statistically significant coefficients in regressions 5 and 6 of Tables 3 and 4. As in the least peaceful worldwide countries, the risk perception and the objective probability of women and older customers being victimized is much higher than in the most peaceful worldwide countries, it is not surprising that in the least peaceful countries, females and older customers are willing to pay a higher price or a price premium than in most peaceful countries.

Conclusion

The results show that security, cleanliness, and location attributes are determining factors when customers choose a

hostel, with the best-rated hostels in these three attributes requiring a premium in terms of price in both country panels analyzed. However, customers are willing to pay a higher premium in terms of price for hostels located in the least worldwide peaceful countries compared with hostels located in peaceful countries, if the hostel room offers a high level of security. These results are also in line with those obtained by Cró and Martins (2017) for European hostels. Finally, in the case of female and older customers, the results show that they are willing to pay a higher price and/or higher price premium than males and young hostel guests, respectively, for a hostel with a higher security level. This is especially true in the case of least peaceful countries as females and older customers are the group of individuals

Model	-		6		6		4		5		Ŷ	
Variable	Coefficients	t Statistics	Coefficients	t Statistics	Coefficients	t Statistics	Coefficients	t Statistics	Coefficients	t Statistics	Coefficients	t Statistics
Constant	-31.124***	-3.700	-28.841***	-3.719	-28.813***	-3.498	-27.877***	-3.499	-28.944***	-3.773	-26.551***	-3.425
Security	3.825***	3.001	3.673***	3.081	3.189***	2.786	3.424***	3.233	3.525***	2.903	3.425***	2.772
Security × D			0.504***	3.210								
Location	I.986***	2.799	1.713**	2.467	I.859***	2.606	I.774**	2.186	I.840***	2.644	I.780**	2.574
Location × D			0.479***	3.066								
Cleanliness	2.296**	1.995	2.375*	I.886	2.248**	2.000	2.183**	2.099	2.457**	1.967	2.273*	1.777
Cleanliness × D			0.600***	3.622								
Atmosphere Least peacerul	0.078	0.062	0.129	0.154	0.092	0.090	0.150	0.144	0.098	0.115	0.061	0.075
Facilities	0.010	0.101	0.040	0.468	0.025	0.317	0.021	0.136	0.021	0.270	0.020	0.270
Staff	-0.527	-0.669	-0.703	-0.604	-0.329	-0.264	-0.573	-0.599	-0.397	-0.331	-0.626	-0.574
Ln (number reviews)	-1.053**	-2.111	-1.588*	-1.809	-0.748*	-1.715	-1.031**	-2.329	-0.730*	-1.519	-0.782*	-1.741
Variance rating	0.136	0.333	0.081	0.416	0.132	0.644	0.123	0.544	0.105	0.593	0.086	0.463
Dormitories	-9.847***	-5.322	-9.207***	-5.586	-9.363***	-5.978	-9.72 l ***	-5.992	-9.080**	-5.100	-9.317***	-5.334
Private rooms	I 3.099***	4.874	I4.259***	4.133	12.665***	4.022	12.943***	6.896	I 3.350***	4.717	I3.33***	4.716
Breakfast and Wi-Fi	4.142***	2.987	3.121**	2.180	4.336***	3.034	4.354***	3.568	3.971***	2.656	3.951***	2.648
Hostel award	5.404**	2.453	5.975***	3.133	4.565**	2.222	5.250**	3.215	5.242***	2.713	5.476***	2.870
Security × age ≥30 years					0.388***	2.777						
Security × females							0.239**	1.967				
Security × D _{Least peaceful} × age ≥30 years									0.510***	3.357		
Security × D _{Least peaceful} × females											0.515***	3.189
# Observations	477	7	477		477		47.		47.	-	47	
Adj. R ² (%)	37.6	52	41.9	N 0	38.7	8	38.1	0	39.0	Ξ	39.0	6
Prob. (Wald F statistic)	0.0	8	0.0	0	0.0	0	0.0	Q	0.0	0	0.0	0
Note. This table reports the	estimation result	ts for hostel'	price premiums	in the 22 leas	t and most pead	ceful worldwi	ide countries, a	ccording to C	slobal Peace Inc	lex. Cluster-r	obust standard	errors and

 Table 3.

 Effect of Security on Hostel' Price Premium.

covariance. ****, and * denote statistical significance at the 1%, 5%, and 10% levels, respectively.

Table 4. Effect of Security on Ho	ostel Absolu	Ite Prices.										
Model	_		2		ε		4		ß		9	
Variable	Coefficient	t Statistics	Coefficient	t Statistics	Coefficient	t Statistics	Coefficient	t Statistics	Coefficient	t Statistics	Coefficient	t Statistics
Constant	0.371	0.526	0.824	0.537	I.028**	2.111	I.160***	2.365	0.889	1.368	0.864	1.320
Security	0.308***	4.333	0.303***	4.017	0.278***	4.345	0.282***	4.234	0.315***	5.317	0.317***	5.290
Security × D			0.051**	4.898								
Location	0.250**	2.078	0.202**	2.002	0.232**	2.004	0.235**	2.009	0.207**	2.100	0.227**	2.125
Location × D			0.034*	1.892								
Cleanliness	0.272**	2.176	0.222**	2.199	0.259**	2.056	0.263**	2.087	0.209**	2.012	0.223**	2.099
Cleanliness × D			0.029**	2.045								
Atmosphere	-0.031	-0.511	-0.022	-0.326	-0.026	-0.443	-0.021	-0.356	-0.026	-0.370	-0.026	-0.364
Facilities	-0.003	-0.523	-0.004	-0.411	0.001	0.043	0.001	0.051	0.000	0.238	0.001	0.252
Staff	0.034	0.402	0.042	0.699	0.029	0.587	0.015	0.299	0.018	0.251	0.019	0.271
Ln (number reviews)	-0.104***	-3.767	-0.103***	-3.248	-0.037**	-2.178	-0.051**	-2.065	-0.055*	-1.751	-0.056	-1.771
Variance rating	0.001	0.120	0.001	0.062	-0.004	-0.312	-0.005	-0.412	-0.004	-0.291	-0.004	-0.275
Dormitories	-0.558***	-6.786	-0.569***	-6.456	-0.466***	-5.034	-0.483***	-5.786	-0.497***	-5.082	-0.498***	-5.189
Private rooms	0.190**	2.101	0.206**	2.076	0.216**	2.278	0.228**	2.234	0.239**	2.126	0.238**	2.134
Breakfast and Wi-Fi	0.115***	3.023	0.219***	3.080	0.115***	4.056	0.109***	4.345	0.325***	4.517	0.324***	4.525
Hostel award	0.229**	2.223	0.235**	2.542	0.236**	2.203	0.270***	2.701	0.283***	3.057	0.282***	3.010
Security × age ≥30 years					0.021***	2.699						
Security × females							0.019**	2.478				
Security × D _{Least peaceful} × age ≥30 years									0.028**	2.189		
Security × D _{Least peaceful} × females											0.031**	2.222
# Observations	47	7	47	7	47.	-	47.		47		477	
Adj. R ² (%)	37.6	52	39.9	8	38.7	ø	38.	0	40.3	4	40.3	2
Prob. (Wald F statistic)	0.0	00	0.0	0	0.0	0	0.0	Q	0.0	0	0.0	0
Note. This table reports the es	timation result	s for hostel at	osolute prices i	n the 22 least	and most peace	eful worldwide	e countries, acc	ording to Glo	bal Peace Inde	x. Cluster-ro	bust standard ei	rors and

20 Ŭ L covariance. ****, and * denote statistical significance at the 1%, 5%, and 10% levels, respectively. 5 ÷

that tends to be more fearful of being victimized according to Warr (1984).

The practical implications of the present study are of various order. First, the results suggest that security is an important factor in guests' selection of a hostel, particularly, in the least peaceful countries. Our findings show that managers should be willing to invest in improving the hostels' security systems such as high-tech security systems and staff security training. Second, for the hostels, in addition to security measures, there are practical implications from the point of view of marketing communication. Safer hostels should take advantage of this. As emphasized by Björk and Kauppinen-Räisänen (2012) "insight into risk dimensions that tourists discuss online enable destination marketers to take action, eliminate factors that cause risk perception, refine destination marketing communication, and build strong brands" (p. 65). Seabra, Dolnicar, Abrantes, and Kastenholz (2013) add the need for a suitable marketing mix for different risk segments regarding the heterogeneity in terms of risk perception among international tourists. Finally, concerns about hostel security should be higher in the case of females and older customers, where exceptional security measures should be created for this group of customers, such as the need for females' and/or older guest's floors with special security measures as they are willing to pay a higher premium for increased security compared with other customers.

Finally, to provide more conclusive results about the importance of security on lodging prices, new empirical studies should be carried out for other types of accommodation, such as hotels and apartments, to find out the impact of security attribute on prices as they have lower crime rates than hostels. Given the absence of the security attribute in consumer review reports compiled by the most common tourism platforms, such studies should be performed by surveys.

Declaration of Conflicting Interests

The author(s) declared no potential conflicts of interest with respect to the research, authorship, or publication of this article.

Funding

The author(s) received no financial support for the research, authorship, or publication of this article.

Notes

- 1. The website Hostelword is the world leading hostel booking channel and not only provides information about hostels but also about bed and breakfasts, hotels, camping sites, and other categories of accommodation establishments. This study analyzes only accommodation establishments classified as hostels.
- 2. The Global Peace Index (GPI) provides a comprehensive analysis of a country's state of peace. The index gauges

global peace using three broad themes: the level of safety and security in society, the extent of domestic and international conflict, and the degree of militarization.

3. With regard to the least peaceful countries in the world, the following countries were not considered in the analysis because they did not offer hostel-type accommodation on the Hostelworld website—Syria (GPI of 3.806), South Sudan (3.593), Iraq (3.570), Afghanistan (3.538), Somalia (3.414), Yemen (3.399), Central African Republic (3.354), Sudan (3.269), Libya (3.200), Pakistan (3.145), D.R. Congo (3.112), D.P.R. Korea (2.944), Nigeria (2.877), Palestine (2.832), Venezuela (2.651), Burundi (2.500), Mali (2.489), Chad (2.464), and Eritrea (2.460).

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References

- Amblee, N. (2015). The impact of cleanliness on customer perceptions of security in hostels: A WOM-based approach. *International Journal of Hospitality Management*, 49, 37-39.
- Barker, M., Page, S., & Meyer, D. (2002). Modeling tourism crime: The 2000 America's cup. *Annals of Tourism Research*, 29, 762-782.
- Björk, P., & Kauppinen-Räisänen, H. (2012). A netnographic examination of travelers' online discussions of risks. *Tourism Management Perspectives*, 2, 65-71.
- Boakye, K. (2010). Studying tourists' suitability as crime targets. Annals of Tourism Research, 37, 727-743.
- Cró, S., & Martins, A. (2017). The importance of security for hostel price premiums: European empirical evidence. *Tourism Management*, 60, 159-165.
- Enders, W., Sandler, T., & Parise, G. (1992). An econometric analysis of the impact of terrorism on tourism. *Kyklos*, 45, 531-554.
- Enz, C. (2009). The physical safety and security features of U.S. hotels. *Cornell Hospitality Quarterly*, 50, 553-560.
- Feickert, J., Verma, R., Plaschka, G., & Dev, C. (2006). Safeguarding your customers: The guest's view of hotel security. *Cornell Hotel and Restaurant Administration Quarterly*, 47, 224-244.
- Ghaderi, Z., Saboori, B., & Khoshkam, M. (2017). Does security matter in tourism demand? *Current Issues in Tourism*, 20, 552-565.
- Hecht, J., & Martin, D. (2006). Backpacking and hostel-picking: An analysis from Canada. *International Journal of Contemporary Hospitality Management*, 18, 69-77.
- Hua, N., & Yang, Y. (2017). Systematic effects of crime on hotel operating performance. *Tourism Management*, 60, 257-269.
- Lepp, A., & Gibson, H. (2003). Tourist roles, perceived risk and international tourism. *Annals of Tourism Research*, 30, 606-624.
- Pizam, A., & Mansfeld, Y. (1996). Tourism, crime and international security issues. Chichester, UK: John Wiley & Sons.
- Pizam, A. and Smith, G. (2000). Tourism and Terrorism: A Quantitative Analysis of Major Terrorists Acts and Their Impact on Tourism Destinations. *Tourism Economics*, 6(2), 123-138.

- Reichel, A., Fuchs, G., & Uriely, N. (2007). Perceived risk and the non-institutionalized tourist role: The case of Israeli student ex-backpackers. *Journal of Travel Research*, 46, 217-226.
- Reisinger, Y., & Mavondo, F. (2005). Travel anxiety and intentions to travel internationally: Implications of travel risk perception. *Journal of Travel Research*, 43, 212-225.
- Santos, G. (2016.). Worldwide hedonic prices of subjective characteristics of hostels. *Tourism Management*, 52, 451-454.
- Seabra, C., Dolnicar, S., Abrantes, J., & Kastenholz, E. (2013). Heterogeneity in risk and safety perceptions of international tourists. *Tourism Management*, 36, 502-510.
- Sönmez, S., & Graefe, A. (1998). Influence of terrorism risk on foreign tourism decisions. *Annals of Tourism Research*, 25, 112-144.
- Warr, M. (1984). Fear of victimization: Why are women and the elderly more afraid? *Social Science Quarterly*, 65, 681-702.
- Wooldridge, J. (2003.). Cluster-sample methods in applied econometrics. American Economic Review, 93, 133-138.

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