A Study of Heritage Hotels in Rajasthan, India

1. Introduction

Heritage tourism refers to "tourism centered on what we have inherited" from the past (Aslam and Lee 2015; Ivanov, 2014; Yale 1991). Heritage tourism may be centered on travel to experience nature (e.g. Niagara Falls, USA) or culture (e.g. Taj-Mahal, India). Many businesses and industries such as hotels, restaurants, flourish under the umbrella of heritage tourism. In this regard, suitably pricing hotel rooms and related services for heritage tourists becomes a crucial issue (Chabra, 2015; Leo, Chris and Henning, 2010) This is because a hotel's price reflects an assessment of the value that heritage tourists see and their willingness-to-pay for the hotel's rooms and services (Adam and Francis, 2014, Jain 2014).

This paper addresses the following issues concerning the "price of heritage" with respect to the hotel industry engaged in heritage tourism. The first issue concerns the pricing strategies employed by hotels serving heritage tourists. In this paper, we investigate whether the hotel industry charges heritage tourists a price premium? We evaluate whether hotels extract a "price of heritage" by charging higher prices for hotel rooms in heritage settings, compared to conventional hotel rooms?

The second issue concerns consumer perceptions and willingness-to-pay for hotel rooms in heritage versus conventional settings. In this paper, we also investigate whether heritage tourists have greater quality perceptions, purchase intentions and willingness-to-pay for hotel rooms?

Our field study empirically investigates the pricing of hotel rooms in heritage hotels located in the Indian state of Rajasthan. Rajasthan is well known for its rich cultural heritage. Many palaces and forts built by erstwhile Rajput rulers have been converted into hotels and are managed by modern five-star hotel chains (e.g. The Oberoi Raj Vilas, Jaipur, India http://www.oberoihotels.com/oberoi_rajvilas/). These hotel chains also manage conventional five-star hotels (e.g. The Oberoi, Bangalore). We empirically analyze the hotel prices set by heritage hotels in contrast to otherwise comparable, conventional hotels. We estimate a regression of hotel room prices in a mixed-model framework. Our model accounts for both fixed-effects and random-effects, controlled for unobserved heterogeneity. We estimate it using the Restricted Maximum Likelihood (REML) methodology. Our analysis reveals a significant "price of heritage" embedded in hotel room rent among heritage hotels in Rajasthan, India.

3. An empirical field study of heritage hotel prices in India

Many heritage sites get converted into managed hotel properties. In recent years, several royal forts, *havelis*, all around India have been converted into hotels and resorts. As time has wheeled in the direction of development and luxury, these accommodation options have gained in popularity and have gradually became some of the best haunts for luxury and history seekers. These heritage properties also present a competitive alternative to conventional hotels. In this light, the objective of this study is to compare the pricing strategy employed at hotels located at heritage sites with the pricing strategy employed at conventional hotels.

3.1 Hypothesis

We study how the price of a room at a hotel located in a heritage site differs from the price at a modern, contemporary hotel. If there is a "price of heritage", we expect that, the hotel room rate at heritage sites will be more than that at modern hotels, holding all else constant. We believe that consumers are asked to pay a price-premium for the pleasure of staying in a heritage property and experiencing the splendor and romance of the past. Therefore, we make the following hypothesis.

> **H1:** *The prices of hotel rooms at heritage sites are higher than the prices at modern hotels.*

3.2 Data

The state of Rajasthan in India is well-known for its rich cultural heritage, with many forts and palaces. Many traditional palaces and forts have been converted into hotels, often managed by hotel chains.

Before reviewing the data in detail, it is useful to consider an illustration. For example, consider The Oberoi Rajvilas, located in Jaipur, India. This is a heritage site, built in a traditional Rajasthani fort style. It was converted into a hotel, managed by the Oberoi Group. (Figure 1) It has a Rajasthani *haveli* (mansion) and a 280 year old Shiva temple on the premises. The gold-leaf, hand-painted wall murals, the colorful Indian miniature paintings and the old armory mounted on the walls, all add to the quintessentially traditional feel of the fort. The rooms in this hotel are priced in the range Rupees 22,000–32,900 per night (US $368 - $550).

In contrast, consider the Oberoi hotel located in Bangalore, India. It is situated on MG Road, in the heart of the business, financial and shopping districts of Bangalore. It is an ideal

venue for conferences and meetings See Figure 2). It is interesting to note that despite Bangalore being a significantly more expensive city than Jaipur, the rooms in this hotel are priced in the range Rupees 12,500 – 18,000 per night (US $210 - $302). These two hotels indicate a hefty price premium for "heritage" among Indian hotels. The aim of this research is to study this aspect with empirical rigor.

<Insert Figure 1 and 2>

For this project, our dataset is based on hotels located in four Indian cities (Jodhpur, Jaipur, Udaipur, Jaisalmer) in the state of Rajasthan, India, similar to the hotels mentioned in the above examples. The cities have hotels located in traditional, heritage sites, as well as conventional modern hotels. We collected data from the well-known website MakeMyTrip.com that aggregates hotel availability, room prices and features.

It is indeed probable that many factors other than heritage govern the prices of hotel rooms. Any meaningful empirical analysis will need to control for factors. For example, factors such as the city the hotel is located in, whether the hotel is rated as a five star hotel, how many rooms does it have, how far is it from the airport and train station are all likely to influence hotel prices.

City: It is likely that the city in which a hotel is located in will strongly influence the hotel room prices. We collected data from four Indian cities. Specifically, we used a dummy variable $City_j$ to index the cities Jodhpur, Jaipur, Udaipur, Jaisalmer, where $j \in \{0,1,2,3\}$, respectively. The choice of using Jodhpur as the benchmark city (j = 0) was arbitrary. Our results was invariant to which city is indexed as j = 0. We also indexed the hotels using a subscript $k \in \{0,1,2,..\}$. Accordingly, the subscript jk was used to refer to hotel k in city j.

Heritage: We used a dummy variable $Heritage_{jk}$ to indicate whether a hotel was a heritage hotel. $Heritage_{jk} = 1$ indicated a heritage hotel (e.g. The Oberoi Rajvilas, Jaipur), while $Heritage_{jk} = 0$ indicated a modern hotel. We marked a hotel as modern, if the location and construction was unrelated to India's cultural heritage (e.g. The Oberoi, Bangalore).

Price: We collected data in May 2014. We used $Price_{jk}$ to denote the average price of a room at a hotel. We measured $Price_{jk}$, as the average of the most expensive and least expensive room at hotel k in city j.

Star Rating: In India, the Ministry of Tourism has formulated a scheme for classification of operational hotels using a "Star" rating. Hotels are rated as either 5 Star, 4 Star, 3 Star, 2 Star or 1 Star. Accordingly, we classified the hotels in our dataset using their star rating. The reason for doing this is that the star rating of a hotel has a direct, strongly positive correlation with the price of its hotel rooms. Therefore, it is important to control for price variation because of the star rating. We used the variable $Star_{jk}$ to denote the star rating of hotel k in city j.

Rooms: We recorded the total number or rooms in hotel k in city j as $Rooms_{jk}$. Ultimately, the number of rooms in a hotel denotes the available supply and it is expected that this will keenly influence the price that a hotel will set. Accordingly, we used $Rooms_{jk}$ as a control variable to account for the possibility that the room price set by a hotel may depend upon the supply of available rooms.

Distance from the Airport and Railway Station: It is possible that hotels located close to the airport are able to charge a price premium for the greater convenience and easy access. In order to control for this alternate explanation, we recorded the distance between a given hotel and the closest airport and railway station. We used the variables $Airport_{jk}$ and $Station_{jk}$ to denote the distance of hotel k in city j from the closest airport and train station respectively.

Bar and Business Center: The amenities and facilities provided within a hotel can also potentially influence the price of a room. The greater the amenities, the higher should be the price of the hotel room. To partially control for such factors, we recorded whether a hotel had a bar and whether it had a business center. We used Bar_{jk} to denote the presence or absence of a bar at hotel k in city j. Similarly, we used $BusinessCenter_{jk}$ to denote the presence or absence of a business center at hotel k in city j. Table 1 shows the summary statistics.

<Insert Table 1>

3.3 Model

We analyzed the research question using three nested models.

Model 1: We first established the effect of heritage on the price of a room in a hotel with the simplest model we could come up with. We regressed the price on the dummy variable for whether a hotel was a heritage hotel, as follows.

$$Price_{jk} = \alpha_0 + \alpha_1 * Heritage_{jk} + \in \qquad (1)$$

We estimated Model 1, using linear least squares. If there was a "price of heritage" in the market, we expected to find α_1>0 in support of hypotheses H1.

Model 2: Next, as a robustness check, we defined a detailed model accounting for seven additional independent variables, which may also influence the variation in hotel prices. Our revised regression model was as follows.

$$Price_{jk} = \alpha_0 + \alpha_1 * Heritage_{jk} + \alpha_2 * City_j + \alpha_3 * Star_{jk} + \alpha_4 * Rooms_{jk} + \alpha_5 * Airport_{jk} + \alpha_6 * Station_{jk} + \alpha_7 * Bar_{jk} + \alpha_8 * BusinessCenter_{jk} + \in \quad (2)$$

We estimated Model 2, described in (2) using linear least squares. Once again, if there was indeed a "price of heritage" in the hotel market, we expected to find α_1>0 in support of hypotheses H1.

We expected that rerunning the regression with the seven additional independent variables would fit the data better. Recall that the Akaike Information Criterion (AIC) developed by Akaike, (1974) and the Bayesian Information Criterion (BIC) developed by Schwarz (1978), represent the trade-off between the goodness of fit of the model and the complexity of the model. If Model 2 indeed fits the data better than Model 1, we expected the AIC and BIC of Model 2 to be less than Model 1.

Another benefit of having the seven additional regressors outlined in Model 2 was that it helped us rule out some alternate explanations for the variation in hotel prices. For example, it is well-known that five-star hotels are more expensive than four-star hotels. Including the star rating as a regressor, permitted us to investigate the effect of heritage on hotel pricing, after controlling for price variation due to the star rating. We expected to find the coefficient

for $Star_{jk}$ to be positive(α_3>0). Similarly, having a dummy variable for each city, permitted us to control for city-wide variation in prices of hotel rooms, potentially arising out of differences in real-estate prices and other expenses across cities.

3.4 Results

Model 1: We found empirical support for H1. The average room prices at heritage hotels were higher than the prices at modern hotels. The regression analysis using Ordinary Least Squares yielded α_1>0, with p < 0.01, as shown in Table 2.

Model 2: The analysis of Model 2 also yielded statistical support for our hypothesis H1. Recall that Model 2 extended Model 1, by including seven additional independent variables, as shown in equation (2). We again found that the average room prices at heritage hotels were higher than the prices at modern hotels. This regression analysis also yielded α_1>0, with p <0.01, as shown in Table 2. As expected, we additionally observed a positive relationship between the average hotel room prices and the hotel star ratings, α_3>0, with p < 0.0001. Model 2 fit the data better than Model 1, as indicated by the AIC. The AIC of Model 2 was less than the AIC of Model 1. Overall, we found Model 2 to be better than Model 1 in explaining the relationship between hotel pricing and heritage.

4. Conclusion

This paper was motivated by the need for research that could improve our understanding of how heritage tourism influences the pricing strategies in the hotel industry. The unique contribution of this paper is that we investigated the price premium charged by hotels to heritage tourists who travel to experience nature and/or culture. We found that tourists

visiting Rajasthan in India pay a hefty “price of heritage” for staying in culturally rich forts and palaces that have been converted into hotels.

This research has some important managerial implications. We find that heritage matters. When consumers experience heritage, it prompts an increase in quality perceptions, purchase intentions and willingness-to-pay. It also generates positive word-of-mouth.

Table 1: Summary Statistics in the Rajasthan Heritage Hotels study

City	Type Of Hotel	N	Star	Price	Airport	Station	Rooms	Bar	Business Center
		Mean (S.D.)							
Jodhpur	Heritage	21	4.14 (0.72)	12269.04 (13921.38)	4.5 (3.35)	3.47 (2.44)	38.95 (25.9)	0.76 (0.43)	0.33 (0.48)
	Modern	1	5 (0)	12000 (0)	115 (0)	115 (0)	32 (0)	0 (0)	1 (0)
Jaipur	Heritage	13	4.92 (0.27)	14184.61 (10454.81)	14.96 (6.89)	9.16 (8.37)	114.38 (60.27)	1 (0)	0.92 (0.27)
	Modern	15	4.4 (0.5)	8333.33 (12429.32)	13.93 (11.93)	10.13 (7.87)	108.46 (55.37)	1 (0)	0.93 (0.25)
Udaipur	Heritage	15	4.66 (0.61)	13050 (7648.64)	30.73 (17.7)	12.66 (22.62)	52.8 (33.97)	1 (0)	0.86 (0.35)
	Modern	7	4.71 (0.48)	5735.71 (897.54)	25.71 (3.3)	6.28 (2.69)	87.42 (72.23)	0.85 (0.37)	0.57 (0.53)
Jaisalmer	Heritage	4	4.5 (0.57)	15000 (15448.84)	4 (1.22)	2.62 (0.62)	59 (42.03)	1 (0)	1 (0)
	Modern	1	5 (0)	3000 (0)	9 (0)	3.5 (0)	42 (0)	1 (0)	1 (0)
All	Heritage	53	4.5 (0.66)	13166.03 (11407.48)	14.45 (14.99)	7.4 (13.15)	62.88 (49.33)	0.9 (0.29)	0.67 (0.47)
	Modern	24	4.54 (0.5)	7506.25 (9869.52)	21.37 (22.78)	13.1 (22.69)	96.37 (60.46)	0.91 (0.28)	0.83 (0.38)
	Total	77	4.51 (0.62)	11401.94 (11201.7)	16.61 (17.92)	9.18 (16.77)	73.32 (54.91)	0.9 (0.28)	0.72 (0.44)

Table 2: Regression Analysis in the Rajasthan Heritage Hotels study

	Model 1		**Model 2**	
	β	**SE**	**β**	**SE**
Intercept	7506.25 **	2236.96	-31091.99 **	9753.46
Heritage	5659.79 *	2696.28	6025.79 *	2699.87
Star			8643.55 ***	2207.12
Airport			-39.84	142.04
Station			87.02	145.93
Rooms			13.49	25.79
Bar			722.37	4620.35
BusinessCenter			-1717.79	3475.35
City			-1107.97	1623.81
−2LL	-824.491		-814.612	
AIC	1654.983		1649.224	

Figure 1: The Oberoi Rajvilas in Jaipur, Rajasthan, India in Study 1
(See http://www.oberoihotels.com/oberoi_rajvilas/)

Figure 2: The Oberoi in Bangalore, India in Study 1
(See http://www.oberoihotels.com/oberoi_bangalore/)