GIVE ME THE LOWEST PRICE! AN EMPIRICAL ANALYSIS OF SPECIAL OFFERS IN THE GERMAN HOTEL MARKET

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ABSTRACT

Since its beginning in 2011, special offers by HRS Deals earned growing interest in the German hotel market. However, the nature of these offerings is still underresearched. On the one hand, hotel managers are enabled to generate better capacity utilization rates – especially in periods of low demand – and to position their hotel in an innovative and guest friendly manner. On the other hand, these special offers are seen to accelerate the price decline in the market and to potentially harm a hotel's reputation.

Therefore, we carefully have collected data on 107 hotels that participated in a HRS Deal between August 2013 and January 2014. Our efforts in collecting this data were threefold. First, we operationalized variables that were directly available from the respective special offer. Second, we complemented this data with information gathered via an intense Internet inquiry. Third, we mystery called the hotels for collecting some more information on their pricing strategy and offer satisfaction.

First results show that 64 hotels are located in a major city (<100k inhabitants), whereby 46 belong to a metropolis (<500k inhabitants). Only 51 hotels belong to the hotel chain industry. Surprisingly, the average classification was quite high (M=3.7 stars; SD=0.5). The resulting special offer price was 51€ (SD=15€; min=29€; max=129€) with an average discount of 52% (SD=3%; max=62%). On average, 3.9 additional benefits – such as Internet

access, parking space, table water, or wellness entrance – were included (SD=1.8; max=9). Our additional Internet inquiry resulted in an average capacity of 121 rooms (SD=71; min=25; max=360) with an average size of 24.5m² (SD=8.1m²; min=10m²; max=65m²). Interestingly, the average distance from the hotel to the main station was quite low (M=14km; SD=16.5km; max=78km). Finally, our investigation via telephone indicates that 35 hotels also propose a special offer after the official booking deadline when mentioning the HRS Deal (M=13%; SD=15%; max=51%). While the perceived satisfaction of participating hotels was 5.8 (SD=2.3; scale from 1 [low] to 10 [high]), 30 hotels indicated to proceed in offering such special offers, whereby only five hotels clearly denied. This indicates a high general satisfaction with such special offers.

Key Words: Special Offer, HRS Deals, Hotel Market, Empirical Analysis

1 INTRODUCTION

During the last few years special offers typically distributed via relatively new online channels earned growing interest by hotel managers and customers. However, scholars missed the chance to evaluate the nature of these offers in a systematic way. Therefore, this paper focuses on special offers in the German hotel market. Although other suppliers such as the international corporation TravelBird or the German speaking portal ab-in-den-urlaub-deals.de are present, this paper focuses on special offers by HRS (Hotel Reservation Service) covering more than 250 000 hotels worldwide and having about 80 million users per year (HRS, 2014a). As such HRS in general and HRS Deals in particular represent the most valuable example for the German hotel market.

Figure 1 shows a typical example of such a HRS Deal (HRS, 2014b). The website offers additional information about the respective hotel, including some photos, the relevant location and the evaluation of former guests. The subsequent paragraph provides some more information about the observable phenomenon of these special offers in the German hotel market.

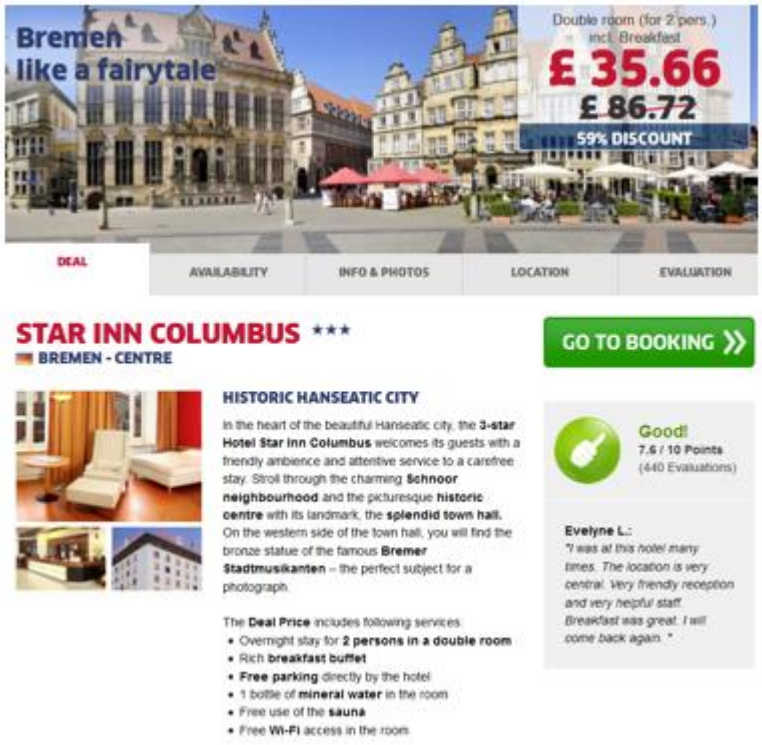

Figure 1: Example of a HRS Deal

2 Characterization of the phenomenon in practice

HRS guarantees three specific criteria (HRS, 2014c). First, every offer involves a top-hotel with at least 50% discount. Second, it compromises hotels with three to five stars. Third, chosen hotels are characterized by a high guest valuation. Moreover, each offer runs for five days, whereby customers have the possibility to be informed via a daily e-mail newsletter. Contrary to other special offers based on a voucher system, customers directly book a certain date as current room availabilities are visible on the Internet site of HRS Deals.

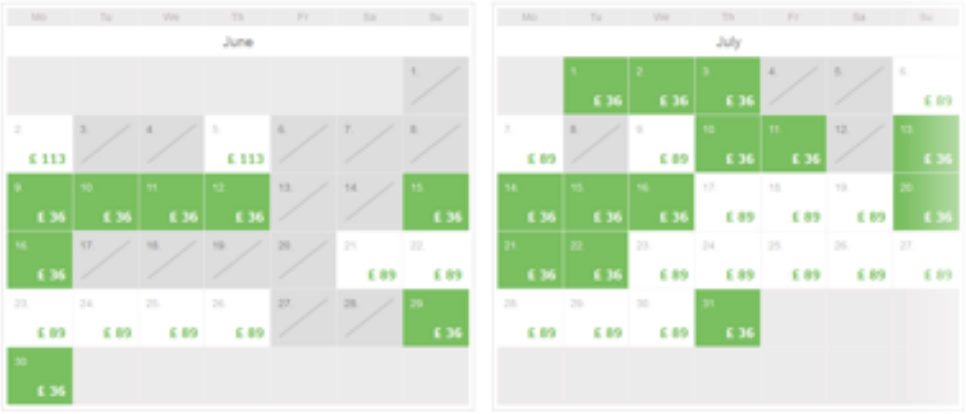

Figure 2: Example of a HRS Deal

Figure 2 shows an overview of room availabilities in relation to the introducing example above (HRS, 2014b). As each special offer faces a limited contingent of rooms, this illustration shows that – depending on the targeted arrival and departure – room prices vary between the lowest price of £ 36 and the regular price. Moreover, under some circumstance the available rate exceeds this value resulting in a room price of £ 113. However, during some periods of time all capacities are occupied. Finally, it is to highlight that customers pay when departing from the hotel. Therefore, the required credit card is only necessary for guaranteeing the room (HRS, 2014c).

3 Procedure of Analyzing the Special Offers

We carefully collected data on 107 hotels that participated in a HRS Deal between August 2013 and January 2014. Our efforts in collecting this data were threefold. First, we operationalized variables that were directly available from the respective special offer. Second, we complemented this data with information gathered via an intense Internet inquiry. Third, we called the hotels for collecting some more information on their pricing strategy and offer satisfaction.

3.1 Data Taken from the Special Offer

First of all, we were interested in the most important and obvious data point: the discount offered by the respective HRS Deal. As such, we collected the resulting discount score in two ways: First, as an absolute number indicating the percentage of that discount. Second, as a dummy variable indicating if the discount is higher than the minimum of 50% required from HRS (1 if the discount was higher than 50%; 0 otherwise).

Moreover, we also recorded the absolute room price to control for effects of premium hotels. In a similar vein, we captured the number of stars from three to five, whereby superior hotels got .5 stars. As an example, a four star superior hotel was included with 4.5 points in that category.

In addition, as every special offer clearly indicates the hotel's name, it was possible to generate another dummy variable accounting for the character of chain hotels. This variable is 1 if the hotel belongs to a hotel chain and 0 otherwise.

Finally, we counted the number of additional benefits provided by the respective special offer such as free parking, free usage of Internet access or spa, a bottle of water, or free fruits at arrival. As breakfast was included in every special offer, we only counted additional benefits here. Therefore, our introducing example would have earned four points.

Another two dummy variables were introduced to account for the location of the hotels. One represents the location within a major city with more than 100 000 inhabitants, the other one for a location within a metropolitan area with more than 500 000 inhabitants.

3.2 Data based on Internet Inquiry

In addition to the data directly observable in the special deals, we employed an intensive Internet inquiry to find some more detailed information about the hotel. First of all, we looked for the average room size as an indicator of quality. Hereby, we careful looked at accordance of categories. Hence, if the special offer included a junior suite, we also looked for the average size of this junior suite at the website. We were able to gather this information from 64 hotels.

Similarly, we looked for the total number of rooms in the hotels accounting for their capacities. 88 hotels out of our data set offer this information on their Internet site.

To account for the geographic distribution along Germany, we took into consideration the postal code of each hotel. As these codes follow a specific logic from north to south and from east to west, this is a good indicator of geography.

Finally, we were interested in some more detailed information concerning the specific geographic situation. Taken the example above, there is a huge difference if the hotel is located in the centre of Bremen or in the suburbs. Neither the postal code nor our dummy variables concerning being part of a major city or a metropolis nor any other information from the special offer is able to account for this circumstance. Hence, we needed to construct a respective measurement. Therefore, we calculated the distance by car from the hotel to the main station of the respective city. To ensure highest quality data, we always followed the same request: We typed in the hotel's address and calculated the route to the main train station of the respective city. The first result from Google's Maps in kilometres were taken to deny any errors due to the usage of different motorways.

Similarly, some hotel's unique selling proposition is not city-centred. Instead, these hotels focus on other points of interest (POI) such as airports or recreation areas. Therefore, we calculated the distance towards these specific POIs in a similar way. We were able to identify 82 POIs.

3.3 Data Taken from Mystery Calls

To really understand a hotel manager's intention behind participating in such a special offer, we called the hotels. However, as German managers are typically very conservative in communicating business-related details to universities for research reasons, we followed another concept: Mystery calls. For collecting unbiased and true information we designed a unique way to gather this information.

We called each hotel by telling them that we, unfortunately, missed the five day deadline of the deal and kindly asked for the same or another discount. As an additional option, we asked if the hotel is planning a similar special offer for the future months as we indicated to be very flexible concerning the date of our stay. During the resulting conversation about the hotel and such special offers in general, we tried to find out about the general satisfaction of the respective employee with these deals. Therefore, we recorded the

perceived satisfaction score on a scale from 1 [low] to 10 [high], evaluated from the interviewer.

3.4 Descriptive Analysis and Correlations

Table 1 summarizes our variables concerning their minimum and maximum value, their mean and standard error, their standard deviation, and their skewness and kurtosis including the respective standard errors.

Table 1: Descriptive Analysis of Data

	Min	Max	M	SE	SD	SK	SE	K	SE
Dependent Variables									
(1) Discount	50	62	51,8	0,3	2,8	2,0	0,2	3,7	0,5
(2) Discount above 50%	0	1	0,5	0,0	0,5	-0,2	0,2	-2,0	0,5
Independent Variables									
(3) Offering Price	29	129	51,2	1,5	15,5	1,8	0,2	6,4	0,5
(4) Stars	3	5	3,7	0,1	0,5	-0,3	0,2	-0,8	0,5
(5) Room Size	10	65	24,6	1,0	8,2	2,3	0,3	8,9	0,6
(6) Hotel Chain Industry	0	1	0,7	0,1	0,5	-0,9	0,3	-1,2	0,6
(7) Additional Benefits	1	9	4,0	0,2	1,8	0,6	0,2	0,0	0,5
(8) Capacity	25	360	120,7	7,6	71,7	1,2	0,3	1,0	0,5
(9) Major City	0	1	0,7	0,0	0,4	-1,0	0,3	-0,9	0,5
(10) Metropolis	0	1	0,6	0,1	0,5	-0,4	0,3	-1,9	0,5
(11) Postcode	n/a	n/a	n/a	n/a	n/a	0,0	0,2	-1,3	0,5
(12) Distance Main Station	0	78	14,0	1,7	16,6	1,7	0,2	2,7	0,5
(13) Distance POI	0	418	23,3	5,4	49,2	6,6	0,3	52,2	0,5

Notes:
Min = Minimum; Max = Maximum; M = Mean; SE = Standard Error
SD = Standard Deviation; SK = Skewness; K = Kurtosis.

First results for the interrelation of these variables can be found when looking at their correlation coefficients as illustrated in Table 2. For reasons of convenience, significant correlation coefficients are marked in bold. Interestingly, the respective discount correlates with the number of stars (positive), the belonging to a hotel chain (negative), the number of additional benefits (positive) and the dummy variables for major cities and

metropolises (both negative) on a significant level. Obviously, some variables account for the same phenomenon inducing the problem of multi-collinearity in regression models.

Table 2: Correlation Coefficients

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
Dependent Variables													
(1) Discount	1	**0,91****	-0,02	**0,21***	0,03	**-0,27***	**0,28****	0,01	**-0,38****	**-0,39****	0,01	0,13	0,21
(2) Discount above 50%	**0,82****	1	0,00	**0,25***	0,01	**-0,23***	**0,28****	0,01	**-0,29****	**-0,35****	0,11	0,13	0,18
Independent Variables													
(3) Offering Price	-0,02	0,00	1	**0,32****	0,23	**-0,38****	**0,24***	**-0,22***	-0,16	**-0,33****	0,04	**0,21***	0,06
(4) Stars	**0,18***	**0,24***	**0,27****	1	**0,32***	-0,05	0,18	**0,44****	**-0,21***	-0,18	-0,08	0,15	0,12
(5) Room Size	0,02	0,01	0,17	**0,26***	1	0,23	**0,27***	0,20	-0,22	-0,14	-0,21	0,08	-0,06
(6) Hotel Chain Industry	**-0,24***	-0,23	**-0,32****	-0,05	0,20	1	**-0,31****	**0,48****	**0,26***	**0,32***	0,02	-0,07	-0,20
(7) Additional Benefits	**0,22****	**0,25****	**0,18***	0,15	**0,19***	**-0,27****	1	-0,15	**-0,48****	**-0,51****	0,04	**0,22***	0,10
(8) Capacity	0,01	0,00	-0,15	**0,34****	0,14	**0,40****	-0,11	1	0,07	0,18	0,06	-0,01	-0,08
(9) Major City	**-0,34****	**-0,29****	-0,14	**-0,21***	-0,19	**0,26***	**-0,43****	0,06	1	**0,82****	-0,02	-0,07	-0,16
(10) Metropolis	**-0,35****	**-0,35****	**-0,28****	-0,17	-0,12	**0,32***	**-0,45****	0,15	**0,82****	1	-0,05	-0,13	**-0,28***
(11) Postcode	0,00	0,09	0,03	-0,06	-0,14	0,01	0,03	0,04	-0,02	-0,04	1	-0,12	0,06
(12) Distance Main Station	0,09	0,11	0,14	0,11	0,06	-0,06	**0,17***	-0,01	-0,06	-0,11	-0,08	1	**0,39****
(13) Distance POI	0,15	0,15	0,04	0,10	-0,04	-0,16	0,07	-0,06	-0,13	**-0,23***	0,03	**0,27****	1

Notes:
Below diagonal Kendall-Tau-b; above diagonal Spearman-Rho.
** p < .01; * p < .05; two-tailed.

4 Statistical Results

To illuminate the effects of each variable on the absolute discount, eleven regression models were run. Table 3 presents the results of these analyses, whereby significant coefficients are marked in bold. Again, the belonging to a hotel chain (negative), the number of additional benefits (positive) and the dummy variables for major cities and metropolises (both negative) show significant results.

Table 3: Results of Linear Regressions

	Dependent Variable: Discount (Linear Regression)										
Independent Variables											
Offering Price	-0,03 0,73										
Stars		0,08 0,43									
Room Size			-0,06 0,64								
Hotel Chain Industry				**-0,21** 0,08							
Additional Benefits					**0,24** 0,01						
Capacity						-0,06 0,58					
Major City							**-0,30** 0,00				
Metropolis								**-0,24** 0,04			
Postcode									-0,03 0,79		
Distance Main Station										0,10 0,30	
Distance POI											0,06 0,58
Statistics											
Adjusted R Square	0,00	0,00	0,00	0,03	0,05	0,00	0,08	0,04	0,00	0,00	0,00
Sig. Change in F	0,73	0,43	0,64	**0,08**	**0,01**	0,58	**0,00**	**0,04**	0,79	0,30	0,58

Notes:
The first black scores indicate the respective values for Beta; the second grey scores indicate the respective values for significance.

Following a similar procedure, Table 4 shows the results of logistic regressions on the dummy variable indicating a discount higher as 50%. Additionally to the results presented above, the number of stars (positive) and our two distance measurements (both positive) become significant.

Table 4: Results of Logistic Regressions

	Dependent Variable: Discount above 50% (Logistic Regression)										
Independent Variables											
Offering Price	0,00 0,99										
Stars		**0,97** 0,02									
Room Size			-0,03 0,34								
Hotel Chain Industry				**-1,12** 0,05							
Additional Benefits					**0,38** 0,00						
Capacity						0,00 0,76					
Major City							**-1,46** 0,01				
Metropolis								**-1,60** 0,00			
Postcode									0,00 0,20		
Distance Main Station										**0,03** 0,07	
Distance POI											**0,02** 0,10
Statistics											
Cox & Snell R-Quadrat	0,00	0,06	0,02	0,05	0,10	0,00	0,09	0,12	0,02	0,04	0,05
Nagelkerkes R-Quadrat	0,00	0,08	0,02	0,07	0,13	0,00	0,11	0,16	0,02	0,05	0,07

Notes:
The first black scores indicate the respective values for B; the second grey scores indicate the respective values for significance.
Detailed results are available upon request.

To better interpret the results of these two different regression analyses, Table 5 presents a synopsis illustrating these results in a condensed way. Therefore, the results are categorized in three parts. First, variables without significant results neither within linear nor within logistic regressions are presented. Second, robust significant variables in both analyses are shown. Third, mixed significant variables are illustrated.

Table 5: Overview of both Regression Analyses

	Synopsis of Linear and Logistic Regressions							
Non-Significant Variables								
Offering Price	-0,03	0,73	0,00	0,99				
Room Size	-0,06	0,64	-0,03	0,34				
Capacity	-0,06	0,58	0,00	0,76				
Postcode	-0,03	0,79	0,00	0,20				
Robust Significant Variables								
Hotel Chain Industry					**-0,21**	0,08	**-1,12**	0,05
Additional Benefits					**0,24**	0,01	**0,38**	0,00
Major City					**-0,30**	0,00	**-1,46**	0,01
Metropolis					**-0,24**	0,04	**-1,60**	0,00
Mixed Significant Variables								
Stars								
Distance Main Station								
Distance POI								

					0,08	0,43	**0,97**	0,02
					0,10	0,30	**0,03**	0,07
					0,06	0,58	**0,02**	0,10

Notes:
The first two scores represents the results of linear regressions.
The second two scores represents the results of logistic regressions.
Detailed results are available upon request.

5 Conclusions

This study was set out to broadening our understanding of special offers in two dimensions. First, we looked at antecedents, i.e., at variables that are able to explain the nature of offered discounts. Second, we regarded consequences of participating in such special offers from the perspective of hotel managers. As such, our results contribute to our understanding of the phenomenon of special offers in the German hotel market.

On the one hand, our statistical results show some solid insignificant determinants. First, the price of each offering does not affect the discount. This is somewhat surprising as one could have argued that higher prices will lead to higher discounts to attract guests.

Second, the average room size does not affect the discount. Therefore, a suspicion that smaller rooms will lead to higher discounts does not find support. The same holds true for the overall capacities as larger hotels could be seen as potential suppliers of higher discounts. Finally, we did not find any effect on geographic distribution along Germany.

More interesting, the analyses found some important significant results. First, belonging to a hotel chain is an important determinant on special offers' discounts in two dimensions. Although hotel chains participate in these offers (51 offers), they typically do not offer more than 50% discount, i.e., the minimum required discount to benefit from HRS deals. Especially the result of the logistic regression shows that hotel chains prevent higher discounts. Second, the number of additional benefits positively influences the discount. One explanation here could be that hotels with lower attractiveness need to offer more benefits and a high discount together in order to attract more guests. Third, both belonging to a city or a metropolitan area decreases the respective discount. As hotels in such an area typically show a higher average bed occupancy rate, this result is in accordance with what we have expected.

Finally, our analyses also offer some mixed significant results. While the number of stars and our distance measurements do not affect the absolute discount, there is an effect concerning our dummy variable. As such, the higher the number of stars, the higher the probability of a discount higher than 50%. The same holds true for our two distance measurements: The higher the distance to the main station or another point of interest, the higher the probability of a discount higher than 50%.

On the other hand, our mystery calls indicated that 35 hotels also propose a special offer after the official booking deadline when mentioning the expired HRS Deal (M=13%; SD=15%; max=51%). While the perceived satisfaction of participating hotels was 5.8 (SD=2.3), 30 hotels indicated to proceed in offering such special offers, whereby only five hotels clearly denied. This indicates a high general satisfaction with such special offers.

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