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### **Does ICT really matter? Preliminary evidence from the Premier Hotels case**

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#### **Introduction**

ICT and particularly the Internet are increasingly affecting the way firms do their business. Marketing is not an exception. Web marketing is acquiring momentum even for firms with a solid tradition of off-line marketing as their managers have realized the full potential of the World Wide Web in attracting a substantial amount of potential customers while keeping costs down. This is the main reason why companies, even during the worst stages of the recent economic downturn have kept on investing in online advertising (simultaneously decreasing the share of their advertising budget allocated to TV advertising). Interestingly online ad revenues grew 8.3% between 2008 (\$24 billion) and 2009 (\$26 billion) in the USA, due to consumers spending more time on the Internet and less time viewing television (<http://www.worldtvpc.com>).

Moreover, the Internet has impacted both the analytical and operational dimensions of marketing, paving the way for a further evolution of several of the theoretical cornerstones upon which marketing as a discipline is constructed. In this short article, we propose an analysis on how the introduction or improvement of ICT has impacted the performance of a hotel chain operating in the tourism sector of the Riviera Romagnola area, Italy.

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### The business Premier Hotels and ICT in synthesis

The hotel chain Premier Hotels is located in Milano Marittima (Italy) and consists of 7 hotels with different ratings, spanning from 3 to 5 stars<sup>1</sup>, offering their guests a wide variety of hospitality services.

The Premier Hotels Group has recently invested a significant amount of money to improve its visibility on the Internet and to construct a single comprehensive website showcasing all of the hotels of the chain. This website was originally set up in 2000, slightly modified in 2004 and then significantly redesigned and restructured in 2008.

Before 2008, the website showed a mere price list, namely the daily accommodation price for half board in every hotel per person, with an indication of the period and discounts for children (See Table 1).

**Table 1: Price list for 2008, with accommodation prices for Hotel C (prices in Euros) (Source: Catalogue Premier Hotels, 2008).**

Half Board Prices	08/01-14/03 13/09-26/12	15/03-13/06 30/08-12/09	14/06-27/06 23/08-29/08 27/12-07/01/09	28/06-01/08	02/08-22/08
Double Classic	87,00	100,00	116,00	131,00	144,00
Double Superior	92,00	105,00	122,00	137,00	149,00
Double Deluxe	102,00	115,00	133,00	147,00	161,00
Jr. Suite	119,00	136,00	157,00	174,00	190,00
Single	106,00	116,00	138,00	152,00	168,00

The process of adoption and implementation of ICT solutions by the Premier Hotels Chain can be synthesized largely by looking at two major watershed events: (1) the restructuring of the website which took place in 2008 and (2) the introduction and systematic implementation of revenue management techniques starting from January 2009.

#### **1st watershed event: restructuring the website**

The first watershed event is the creation of the new website in 2008. A number of professionals have contributed to its design, construction, fine-tuning and optimization, over a number of different stages including the creation of content, the classification and organization of content within the website, the graphics project, the choice and implementation of a number of web technologies. The professionals involved are as follows:

- the *Press Office* which has created the content (under the form of information and news) that periodically is published (and updated) on the Internet;
- the web company *2mlab.com* (leader in the Romagna area for ICT solutions) that has dealt with the graphics and has tested the website;
- the Search Engine Optimization specialist *BRG Communication* that has taken care of the optimization processes through which the website can be made more visible by potential users. These processes are mostly related to (1) the identification of a certain number of keywords that should be included in both the Uniform Resource Locator (URL) and the content of every web page; (2) the improvement of all those

<sup>1</sup> More specifically it consists of 2 Hotel\*\*\*\*\*, 1 Hotel\*\*\*\*Superior, 1 Hotel\*\*\*\*, and 3 Hotel\*\*\*. In this article for convenience' sake they are branded respectively as Hotels A, B (5 stars), C (4 stars superior), D (4 stars), E, F, G (3 stars).

features allowing for an increased accessibility and usability; (3) the collection of information useful for web analysis such as the number of unique viewers, the number of web page visits, the country and city the web page visitors are from, the web pages from which they accessed the Premier Hotels website, the pages visited before abandoning the Premier Hotels website, etc;

- the *Webmaster* who has taken care of updating the website and rendering it dynamic so that content can be modified rapidly and changes can be visualized in real time;
- the *managers of the individual hotels* who have created promotions and offers for customers;
- professionals such as photographers and web tourism consultants, who have contributed to define the overall final web interface.

Besides the fact that hotels' ownership was in the hands of one person, the main reason why the hotel management decided to construct a single website for the hotel chain - instead of different websites (one for each hotel) - was to empower the brand of the chain, to build up a unitary image for the chain and to provide a unified access to all the content pertaining to the chains' hotels. This said, every hotel part of the chain is graphically distinguished from the others within the website, in order to emphasize their different ratings (i.e., the three hotels with 3 stars are clearly distinguished from the two hotels with 5 stars).

Much emphasis was given to web analysis, an activity aimed at generating periodical statistics concerning for example: 1) access: these statistics allow to understand where the website visitors come from (banners, search engines, etc); 2) view: count of the numbers of views per page. Web analysis has allowed to modify and adjust the content and structure of the Premier Hotels website over time, in order to make it appealing to the visitors and thus increasing the customer conversion rate<sup>2</sup>.

### ***2nd watershed event: introduction and systematic implementation of revenue management techniques***

The second watershed event took place in January 2009 as Premier Hotels introduced Internet based Revenue Management techniques in order to increase its Sales Revenue per Available Room (RevPAR). Indeed the Premier Hotels management realized that selling all the available rooms with the old static approach rarely generated a good hotel's occupancy percentage and average room rate as there was no way to properly deal with the fluctuation of demand and to meet the willingness to pay of individual customers. Revenue management techniques in the hospitality industry instead allow to sell the right room to the right customer at the right time for the right price and, in the end, to exploit thoroughly the willingness to pay of potential customers anytime.

More specifically, the application of Revenue Management techniques implied the introduction of an improved price list, wherein the final price includes only overnight stay and breakfast, as every meal is charged separately. As a consequence, the logic of the fixed price has been abandoned and now there is a range of prices for every period, type of room (single, double, etc) and rating of the hotel (3 stars, 4 stars, etc.). This change is illustrated in the following table:

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<sup>2</sup> This rate is calculated as the ratio of number of people who actually buy something from a website in a specific amount of time (e.g., a week), to the total number of unique visitors to that site.

**Table 2: Price list 2009 for Hotel C (prices in Euros)**  
**(Source: Catalogue Premier Hotels, 2009).**

Prices per room (overnight stay and breakfast)	08/01-12/06 29/08-25/12	13/06-26/06 26/12-06/01/10	27/06-31/07 22/08-28/08	01/08-21/08
Double Classic	89-174	130-225	140-250	170-290
Double Superior	100-185	140-240	150-270	180-300
Double Deluxe	120-205	170-270	190-295	230-330
Jr. Suite	160-260	230-320	260-345	310-390
Single	60-115	90-145	100-159	120-175

The number of contacts with the reservation office have increased, as a consequence of the fact that customers can not have a clear cut idea of the final price they will pay, by just looking at the price list on the Internet..

Every level of final price is formed adding extra Euros to the basic price which is determined as the price of half board accommodation (including overnight stay and breakfast) as specified within the classic price list originally deployed in 2008 (see table 1). Any kind of additional service (such as an additional meal), is charged in addition to the basic price. The price of additional services varies according to a number of variables such as demand and occupancy percentage; moreover, when the number of reservations for a specific period is low (i.e., demand is low), specific price promotions are initiated.

Pricing in this new setting is a complex process including such known factors as the time elapsing between the reservation time and the check-in date, the occupancy, competitors' prices, etc, and many other non foreseeable variables such as atmospheric conditions, the economic situation, the trend of exchange rates.

In sum, Premier Hotels introduced a flexible B&B tariff which changes according to the periods, and the type of room, and above all, the moment in which a booking is made. Following the logic of the overall pricing strategy, the price will be adjusted towards the top of the price range if demand is high (limited room availability), typically whenever the reservation date gets closer to the check-in date.

This implies that hotel guests simultaneously accommodated at a certain hotel of the chain, might pay a significantly different price or tariff for the same type of room, depending on how much time in advance they have reserved; indeed those guests who plan their holidays with large advance are given the opportunity to receive the highest price reduction and a series of discounts and promotions over determinate periods. Of course, it is necessary to render these pricing practices as transparent as possible to avoid that hotel guests (unaware of this kind of revenue management logic) might misunderstand some comparative information. Misunderstandings can be possible and could undermine the loyalty of guests to the hotel chain.

Last but not least, revenue management has implied the elimination of promotions, that are applied only in cases when the demand is low (low number of reservations) and tools to monitor reservations over a season (with a low number of bookings, the price is kept low).

### Methodology

In this analysis we have conducted an atypical event study revolving around two watershed events: 1) the “Restructuring of the website” (Event 1) and 2) “The systematic application of Revenue Management techniques” (Event 2). The study is atypical as it does not focus on abnormal profits (as must of the finance analyses do) as a measure of performance, but rather it concentrates on hotel's occupancy percentage and average room rate, as well as total revenues. Moreover our analysis is mainly descriptive as the size of the sample does not allow us to pursue statistical inference and draw statistically significant conclusions.

The event dates are July 4, 2008 for Event 1 and January 1 2009 for Event 2 respectively. For both events we have constructed events windows including 12 months before and after the event date. We excluded from our analysis two hotels of the chain (both of them are three stars hotels), as we had not booking data for them. The Hotel analysed are the 5 Stars hotels A and B, the 4 Stars Superior C, the 4 Stars Hotel D, and one of the three Stars Hotels E. Hotel B (a 5 stars hotel) has not taken into account for the first event study (revolving around Event 1), because it was built in 2008 (data are available only since 2008 and a pre event window could not be constructed). All data concerning prices have been deflated as suggested by the relevant literature.

Hard data were interpreted after collecting soft data deriving from interviews conducted between December 2009 and January 2010 with the following professionals: Andrea Astolfi, president of the Premier Hotels Group; Silvia Palmiero, responsible of Revenue Management; Marcello Foglia, webmaster; Matteo Cosentino, manager 2mlab; Francesco Borghetti, manager BRG Communication.

Discussion and conclusions

The results of our event studies are hereby illustrated, by distinguishing the two watershed events.

### *Restructuring the website*

As far as Event 1 is concerned, we can observe that revenue has slightly decreased (by 4,7%) due to a reduction of the hotel chains's occupancy percentage by 4,77%. The decline in occupancy percentage might be partially explained in terms of negative impact of the financial crisis on demand, affecting the tourism sector in general and the hospitality industry in particular. The reason why the reduction of total revenue has been slightly less significant than the reduction of occupancy percentage is that the average rate practiced by Premier Hotels has slightly increased (a portion of the event window also includes the very early period after Event 2). These results are summarized in the following table:

**Table 3.a: Hotel Chain's Occupancy Percentage and Average Rate PRE and POST Event 1 (“Restructuring of the website”)  
(Revenue data in Euros).**

Occupancy % PRE	Occupancy % POST	Average Rate PRE	Average Rate POST	Tot. Revenue Pre	Tot. Revenue POST
40,53	35,76	94,25	95,69	3.769.257,04	3.589.048,96

More specifically, if we break down our figures by hotel, we can notice that every hotel (with the only exception of Hotel D) has benefited from the restructuring of the website as far as the average rate is concerned (see table 3.b). Hotels A and D have benefited from the investment in the website both in terms of total occupancy and in terms of total revenue, while hotels C and E have recorded a decline in occupancy. A possible explanation of the

decrease in occupancy is the decline of the total available income destined to tourism activities for the guests of these hotels.

**Table 3.b: Break-down of Hotel Chain's Occupancy Percentage and Average Rate PRE and POST Event 1 ("Restructuring of the website")**  
(Revenue data in Euros).

	OCC. % PRE	OCC. % POST	AVERAGE RATE PRE	AVERAGE RATE POST	% TOT. OCC. PRE	% TOT. OCC. POST	% TOT. REVENUE PRE	% TOT. REVENUE POST
Hotel A	39,45%	40,56%	167,08	171,22	11%	12%	18%	21%
Hotel C	56,34%	42,97%	107,88	111,37	47%	43%	52%	48%
Hotel D	33,47%	35,62%	73,93	71,00	25%	28%	19%	20%
Hotel E	26,07%	23,33%	63,16	65,17	17%	16%	11%	11%
	<b>40,53</b>	<b>35,76</b>	<b>94,25</b>	<b>95,69</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>

***Introduction and systematic implementation of revenue management techniques***

As far as Event 2 is concerned, the hotel chains's total revenue has increased (by 21,8%): more specifically, the occupancy percentage has not significantly changed after the watershed event while on the contrary, the average rate has significantly increased from 2008 to 2009 (by 9,32 Euros in absolute terms). Interestingly, while in the rest of the national hospitality industry the financial crisis has pushed hotel management to reduce their prices (instead of increasing them to keep the pace of inflation), Premier Hotels has increased the average rate.

**Table 4.a: Hotel Chain's Occupancy Percentage and Average Rate PRE and POST Event 2 ("Introduction and systematic implementation of revenue management techniques")**  
(Revenue data in Euros).

Occupancy % PRE	Occupancy % POST	Average Rate PRE	Average Rate POST	Tot. Revenue Pre	Tot. Revenue POST
37,74	37,16	119,64	128,96	5.127.218,23	6.243.259,72

More specifically, if we break down our figures by hotel, we can notice that 5 stars Hotels have generally recorded increases both in average occupancy and revenue, whereas the remaining hotels have not recorded significant benefits. Interestingly, the high rated hotels (5 stars) part of Premier Hotels have succeeded in implementing the revenue management system introduced in 2009. The results are illustrated in the following table (4.b):

**Table 4.b: Hotel Chain's Occupancy Percentage and Average Rate PRE and POST Event 2 ("Introduction and systematic implementation of revenue management techniques")**  
(Revenue data in Euros).

	OCC. % PRE	OCC. % POST	AVERAGE RATE PRE	AVERAGE RATE POST	% TOT. OCC. PRE	% TOT. OCC. POST	% TOT. REVENUE PRE	% TOT. REVENUE POST
Hotel A	38,23%	38,88%	172,95	226,88	10%	10%	14%	16%
Hotel B	32,70%	53,87%	261,65	279,46	12%	19%	25%	37%
Hotel C	50,15%	42,60%	114,25	115,95	40%	35%	38%	28%
Hotel D	33,94%	32,95%	76,71	75,39	23%	21%	14%	11%
Hotel E	26,94%	23,03%	63,75	69,34	16%	14%	9%	7%
	<b>37,74</b>	<b>37,16</b>	<b>119,64</b>	<b>128,96</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>

Overall, our findings seem to suggest that ICT (more specifically both the restructuring of the website, and the introduction and effective implementation of Internet based revenue management techniques) did partially matter for the Premier Hotels. Indeed ICT has had a positive impact on the performance of Premier Hotels only when associated with the strategic marketing approach underlying revenue management techniques. More specifically, occupancy percentages have not been significantly improved as they are negatively influenced by the decrease of demand due to the financial crisis (a kind of systematic risk that could not be diversified). Nonetheless, by pushing the average rates higher than in the past, revenue management techniques have contributed to smoothen the negative impact of reduced demand on the overall performance. Our case seems to illustrate that ICT per se is not a sufficient condition to improve performance. What really matters is a thoughtful use of technology that might be supportive to render revenue management effective.

Of course our results must be properly pondered and should be interpreted with care in light of the fact that the event study methodology does not allow us to totally disentangle the impact of the two events under consideration from the impact of other (simultaneous, systematic and/or firm specific) events that might take place over the selected event windows.