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Hotels, Online social networks, Internet, e-commerce, Cross-sectional study

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THE IMPORTANCE OF INTERNET AND ONLINE SOCIAL NETWORKS IN THE SPANISH HOTEL SECTOR

Abstract

This paper is a cross-sectional study on the use of Internet and Online Social Networks in the Spanish hotel sector compared to Spanish companies in other sectors. The conclusions from this extensive survey are that the use of online social networks is more important and is more developed in the hotel sector than in Spanish companies in general. However, although it gives considerable importance to online social networks, the hotel sector needs to revise its rules of usage. The use of new tools such as e-commerce to sell the hotel stays must increase, and marketing efforts should be geared more towards online social networks because the hotel sector is currently losing ground in a market that generates more and more potential clients and sales by the day.

1. INTRODUCTION

The Internet and online social networks are tools that generate great opportunities for businesses. It has provided a new view of communications and commerce in the business sectors both in terms of the number of users and the way to publicize and sell products [10].

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The number of Internet and online social network users and the percentage who use these media daily are growing relentlessly [1].

This phenomenon offers a business opportunity for many sectors, but in the hotel sector its usage is an absolute necessity. Hotels need to have a presence on the Internet and on online social networks to remain competitive; this presence acts as the main source of information for tourists when booking a stay and enables them to compare opinions on the hotel with other customers [20].

The hotel's presence on the Internet is based on e-business opportunities while the use of online social networks is aimed at attracting their users [3].

In sum, we discuss the adaptation of companies to a new market that is an opportunity for many firms but is essential for the hotel sector. For this, we have studied one of the countries with the most hotel beds in Europe, Spain [4], a country whose economy is influenced to a large degree by hotel sector and tourism.

The goal of this scientific research is to ascertain if the use of online social networks is more prominent in the hotel sector than in the business sector in general in Spain. We also attempt to find out whether the use of online social networks is considered important in this sector especially as it can greatly benefit the service sector by opening up constant communication with customers.

And the paper is structured as follows: the next section provides a literature review on importance of the hotel sector in Spain and the adaptation of the hotel sector to new ICT market. The third section describes our data compilation method and sample size, in addition to describe variables used to define the use of online social networks in the hotel sector and the business sector in general. The fourth section presents the results of our analysis on 7 tables (whose variables are listed in the third section): Importance of the Internet, Website presence, Presence on online social networks, Use of e-commerce to sell, Use of rules governing employee use of the Internet and online social networks, Association to 'Presence on online social networks' in the Spanish business sector and Association to 'Presence on online social networks' in the Spanish hotel sector. At the final, we discuss and conclude the paper.

2. LITERATURE REVIEW

2.1. The hotel sector in Spain

Spain is one of the biggest tourist destinations in the world, and tourism accounted for 10.9% of total GDP in 2012 [7] and 12.2% of total employment nationwide in 2013 [8]. It is the primary source of job and wealth creation in the Spanish economy.

And according to figures for 2014, hotel sector accounts for 72.96% of overnight stays, with 81.6% of tourists who choose it as accommodation. Data from the National Statistics Institute of Spain in 2014 [9] show that there were 294.4 million overnight stays in 2014 (190.24 million generated by foreign tourists, of whom more than 94 million were from Germany and the UK) an increase of 2.9% on the previous year in which Spain was still deeply immersed in its economic crisis, all of which are reasons enough to study how technology can further contribute to this sector.

Clearly the tourism industry in Spain needs ICT for contacting destinations and to enable clients and hotels to interact [6], points that are necessary to foment greater customer numbers and customer satisfaction, and to ensure quality service [2].

2.2. The adaptation of the hotel sector to new ICT market

The adaptation of the hotel sector to this new market, imposed by computerization and its various applications (the Internet and online social networks) and customer demand, has been rapid. Two of the main causes of this accelerated change have been the extent of this computerization in companies in the hotel sector [13] and the importance given to information acquisition [12]. Information plays a fundamental role in decision-making in companies [23], and no more so than in the hotel sector.

The changes resulting from this adaptation in hotel companies and companies in the rest of the business sector have been studied by authors like Infante et al. [11, 14], Nicolau and Santa-María [18], Probert et al. [19], Trainor [22] and Ip et al. [15], all of whom agree on the changes and benefits that this new market offers companies:

The Internet:

- Attracts new customers through marketing and advertising in the web environment: Presence on the Internet and online social networks.
- Develops new markets and distribution channels for products. Business becomes globalized.
- Updates processes, improves communication within the company and reduces economic costs and saves time.
- Opens a communication channel with customers via the company website, email and online social networks.
- Develops new products based on the information extracted from web usage.
 Online social networks:
- Generate customer loyalty: keep clients informed of all company activities.
- Enhance brand image (branding).
- Feedback on products and services from customers. The importance of customer service, which is essential in the hotel sector.

3. METHODOLOGY

The goal of this scientific research is to ascertain if the use of online social networks is more prominent in the hotel sector than in the business sector in general in Spain. We also attempt to find out whether the use of online social networks is considered important in this sector especially as it can greatly benefit the service sector by opening up constant communication with customers.

To this end, the researchers designed two different surveys to analyze online social network usage in the Spanish hotel sector (48 companies analyzed) and in the Spanish business sector (410 companies analyzed). Questionnaires were are sent out by post or email to these companies (defined by the Arkin and Colton formula, reproduced by Sierra in 2003 [21], using the 'Fomento de la Producción' journal's database [5] and selected through 'random sampling without replacement' procedure). The mailshot took place in 2012 and was validated in 2013. The survey is not broad (5 variables) and it avoids problems of lack of response, in addition to having had prior contact with companies.

$$n = \frac{Z^2 \times N \times p \times q}{E^2(N-1) + Z^2 \times p \times q}$$
 (1)

In the Spanish hotel sector, the values that define the sample size are: N=417; confidence level=95.5%, E=9%, p=0.5, q=0.5 and Z=2. And in the Spanish business sector, these values are: N=24,187; confidence level=95.5%, E=4.9% (lower margin because it is a larger population), p=0.5, q=0.5 and Z=2.

And the 5 variables that we have used to define the use of online social networks in the hotel sector and the business sector in general are [16, 17]: Importance of the Internet, Website presence, Presence on online social networks, Use of e-commerce to sell and Use of rules governing employee use of the Internet and online social networks.

4. RESULTS

We have performed an empirical study with non-parametric variables (qualitative variables): the qualitative variables are not numeric and, therefore, do not meet one of the requirements of Normal Distribution. Therefore, the analysis of this cross-sectional study is performed through the X2 test, a statistical method that is used to analyze the association between two qualitative variables.

Table 1 shows that the importance attached to the Internet by companies in hotel sector is similar to that in the Spanish business sector with no significant differences. The X2 calculated (4.778) is less than the critical X2 (7.81) with degree of freedom equaling 3 and level of significance at 0.05. Both sectors are aware of the importance of the Internet in their markets, almost half of the companies consider it essential and no company ignores its significance.

Tab. 1. Importance of the Internet in the Spanish business sector [source: own study]

	Importance of the Internet											
		Not ortant		lerately oortant	No	rmal		ery ortant	Essential		Total	
Sector	N	%	N	%	N	%	N	%	N	%	N	%
Spanish business sector	0	0%	7	2%	93	23%	134	33%	175	43%	409	100%
Spanish hotel sector	0	0%	0	0%	9	19%	11	23%	28	58%	48	100%
Total	0	0%	7	2%	102	22%	145	32%	203	44%	457	100%

This importance is demonstrated by the existence of web pages in both sectors, Table 2 also reveals a lack of significant differences, the X2 calculated (0.404) is less than the critical X2 (3.84), with degree of freedom at 1 and level of significance 0.05. All sectors recognize that if they do not have a website, they are invisible; 96% of companies in the Spanish business sector have websites and 98% of the companies in the hotel sector.

Tab. 2. Website presence in the Spanish business sector [source: own study]

		We	Total			
	No				Yes	
Sector	N %		N	%	N	%
Spanish business sector	16	4%	392	96%	408	100%
Spanish hotel sector	1	2%	47	98%	48	100%
Total	17	4%	439	96%	456	100%

Nowadays having a website is not enough; millions of people communicate via on online social networks and, therefore, companies are obliged to make their presence felt on these networks as well (Table 3). This tool can generate advertising and sales if well-managed. But in this variable, we find significant differences between the Spanish business and hotel sectors. The X2 calculated (49.998) is greater than the critical X2 (5.99), with degree of freedom at 2 and level of significance 0.05.

The extent of online social network presence differs in the two sectors. We observe that all firms in the Spanish hotel sector can be found on these networks or plan to be there, while 35% of companies in the business sector have no presence on the social networks and do not intend to change that stance. This reveals the value placed on online social networks by the Spanish hotel sector.

Tab. 3. Presence on online social networks in the Spanish business sector [source: own study]

		Pres						
	Y	es	,	o, but it seems No, and don't to important have one		Total		
Sector	N	%	N	%	N	%	N	%
Spanish business sector	135	33%	128	31%	144	35%	407	100%
Spanish hotel sector	40	85%	7	15%	0	0%	47	100%
Total	175	39%	135	30%	144	32%	454	100%

Both forms of presence on the Internet (via websites and online social networks) are used to sell a product (Table 4). But there are significant differences between the two sectors in terms of e-commerce. The X2 calculated (22.402) is greater than the critical X2 (3.84), with degree of freedom at 1 and level of significance 0.05. More than half of companies in the business sector (57%) do not transact via e-commerce compared to81% of companies in the Spanish hotel sector that do. It underlines the importance of e-commerce in the hotel sector.

Tab. 4. Use of e-commerce to sell in the Spanish business sector [source: own study]

	Use	of e-con	Total			
	No				Yes	
Sector	N	N % N %		N	%	
Spanish business sector	225	57%	173	43%	398	100%
Spanish hotel sector	8	19%	35	81%	43	100%
Total	233	53%	208	47%	441	100%

It is remarkable that there are no significant differences between the two sectors in terms of the rules governing employee usage of Internet and online social networks (Table 5). The X2 calculated (1.359) is less than the critical X2 (3.84), with degree of freedom equal to 1 and level of significance at 0.05. Firms need to revamp these rules and make better use of this tool to improve company performance.

Tab. 5. Rules governing employee use of the Internet and online social networks in the business sector [source: own study]

	Rules governing use of the Internet and online social networks No Yes				Total		
Sector	N %		N	%	N	%	
Spanish business sector	144	35%	265	65%	409	100%	
Spanish hotel sector	21	44%	27	56%	48	100%	
Total	165	36%	292	64%	457	100%	

Finally, we analyzed all these variables regarding online social networks in each of the two sectors to determine if there was a link between the existence of online social networks and the other variables.

In the Spanish business sector, we noted that whether a company has a presence on online social networks or not (but they plan to in the future, or not) varies according to the importance the company gives to the Internet, the existence of a company website and the use of e-commerce to sell their products (Table 6). But this does not happen in 'Rules governing use of the Internet and online social networks for employees', because 63% of companies which have no presence on online social networks, and do not intend to have one, have rules governing use of the Internet and online social networks for employees. The data show that, the highest percentage of companies with these rules are those with on online social network presence (69%).

The figure for companies that give considerable importance to the Internet or consider it essential have a presence on online social networks, or plan to have one, amounts to 69% of cases, while around half the companies that give little or no importance to the Internet or have no presence on online social networks (48%).

No company without a website has a presence on online social networks (4%), although there is a high percentage of companies that have a website but

no presence on online social networks (65%). There is a clear dependence between having a website and an online social network presence, which is because the companies analyzed are not inconsiderable in size (turnover of over 2 million euros per year). Today, many small businesses have a presence on online social networks but no website.

The survey revealed that 60% of companies with an online social network presence use e-commerce to sell their products and 73% of companies with no presence (and do not plan to have one) do not use e-commerce to trade, so it is obvious that companies should move onto social networks as a way of attracting customers and boosting sales.

Tab. 6. Association to 'Presence on online social networks' in the Spanish business sector [source: own study]

	Level of significance	Degree of freedom	Critical X ²	X ² calculated
Importance of the Internet	0.05	6	12.59	15.49
Website	0.05	2	5.99	8.395
Use of e-commerce to sell	0.05	2	5.99	29.818
Rules governing use of the Internet and online social networks	0.05	2	5.99	1.45

In the Spanish hotel sector, we find no significant differences in the presence on online social networks or not (but they plan to have one, or not) depending on the importance that the company gives to the Internet, the existence of a website and the use of e-commerce to sell (Table 7). And neither, in terms of the rules governing employees and their use of the Internet and online social networks according to presence on online social networks.

In this sector, all companies maintain an on online social network presence or plan to do so, which is symbolic of the importance of this phenomenon for this sector.

Most companies that ascribe great importance to the Internet or consider it essential (81%) have a presence on online social networks (82.5%). And almost all companies have websites (98%); few have no presence at all on online social networks (15%). In addition, all companies with a presence on online social networks have a website.

Of the 81% of companies that use e-commerce to sell their products, 83% of them already have presence on online social networks, but only 60% of companies with an on online social network presence have rules governing employee use of the Internet and online social networks for employees; clearly there is room for improvement here.

Tab. 7. Association to 'Presence on online social networks' in the Spanish hotel sector [source: own study]

	Level of significance	Degree of freedom	Critical X ²	X ² calculated
Importance of the Internet	0.05	2	5.99	0.674
Website	0.05	1	3.84	5.839
Use of e-commerce to sell	0.05	1	3.84	0.926
Rules governing use of the Internet and online social networks	0.05	1	3.84	0.716

This analysis reveals the considerable extent of online social network presence across the Spanish hotel sector, far more so than in the business sector as a whole in Spain which is less advanced in this aspect. It indicates the importance of online social networks for the hotel sector, and the need to refresh the rules governing employee use of the Internet and online social networks.

5. DISCUSSION AND CONCLUSION

After performing this comparative cross-sectional study on the Internet and online social network use between the Spanish hotel sector and the Spanish business sector, with particular focus on presence on social networks, we find two areas which show significant differences (the presence on online social networks and the use of e-commerce to sell), but none were found with regard to the level of importance attached to the Internet and the existence of a website, and the rules governing Internet and online social network use for employees.

Both Spanish hotels and companies in general are aware of the importance of the Internet in their markets, which is demonstrated by the fact that nearly have a company website, and they all recognize that they could not survive or prosper without one. But having a website is not enough, as millions of people are present on the online social networks and, therefore, a company presence in that field is deemed very necessary. At this point, we find the first significant difference between the two sectors, the extent of presence on online social networks varies in that all companies in the Spanish hotel sector are visible on these networks, or plan to be, while 35% of companies in the business sector have no presence and do not plan to have one. This reveals the value of online social networks for the Spanish hotel sector. One disturbing piece of data is the scarcity of rules governing employee use of the Internet and online social networks (and improper use of these tools can create serious problems for companies). There are no significant differences in this variable in the sectors analyzed.

These two forms of Internet presence (through websites and online social networks) are used to sell, physically and electronically, but not all companies carry out e-commerce trade. This is not true of the hotel sector where e-commerce is essential; more than half of companies in the business sector (57%) do not use e-commerce to sell, as opposed to 81% of companies in the Spanish hotel sector.

A more detailed analysis of presence on online social networks in these sectors shows that there are significant differences in the Spanish business sector in this area according to the importance the company gives to the Internet, the existence of a website and the use of e-commerce to sell. But we find no significant differences in the 'Rules governing use of the Internet and online social networks for employees', which depends on whether these companies have an online social network presence or not. In the hotel sector, there is no relationship between the existence of online social networks and the variables described above, although we emphasize that all companies in this sector have a presence on online social networks or plan to have one soon.

Finally, we can say that the use of online social networks is more pronounced in the hotel sector than in the general company sector in Spain, the former giving this tool far more importance.

To sum up, the hotel sector in Spain has a well-developed presence on Internet and online social networks, and ascribes great importance to a presence on online social networks (with infrastructures that have been created to take full advantage: branding, advertising, sales, ...), but this sector needs to improve the level of implantation of rules governing the use of the Internet and online social networks for its employees, for misuse of these tools can cause headaches. The Spanish business sector must also improve, by increasing the use of e-commerce to sell and by making its presence felt on online social networks whose importance they should recognize, because online social networks now provide a market that is expanding by the day and offer more and more sales opportunities.

This study is limited to the big companies (companies whose turnover exceeds two million euros annually) because they are companies with many employees and their ICTs have a critical role, the reason for their high percentages. This limitation may be removed in future studies and extend this study to all companies (small, medium and big companies) and to comparisons with other business sectors.

REFERENCES

- [1] AIMC (Association for Media Research). *Navegantes en la Red* (08-03-2013). Retrieved June 2015 from http://www.aimc.es/-Navegantes-en-la-Red-.html
- [2] DIXIT S. K.: A study of guest's expectation and perception of hotel service quality: case of Khajuraho, India. Enlightening Tourism. A Pathmaking Journal, 3 (2), 2013, p. 125–141.

- [3] DWIVEDI M., YADAV A., VENKATESH U.: *Use of social media by national tourism organizations: a preliminary analysis.* Journal of Information Technology & Tourism, 13 (2), 2012, p. 93–103.
- [4] Eurostat, the statistical office of the European Union. Bed places in hotels and similar establishments (2000-2013). Retrieved June 2015 from http://ec.europa.eu/eurostat/web/ products-datasets/-/tour_cap_nat
- [5] Fomento de la Producción. *España 25.000* (2011). Retrieved October 2012 from http://www.fomentodigital.com/busqueda/empresa/espana25000.jsp
- [6] GUEVARA A. Informática aplicada al turismo. Pirámide, Madrid, 2003.
- [7] IET1 (Tourism Institute of Spain). *Tourism Satellite Account of Spain* (2012). Retrieved June 2015 from http://www.iet.tourspain.es/es-es/estadisticas/otrasestadisticas/cuentasatelite/paginas/default.aspx
- [8] IET2 (Tourism Institute of Spain). Annual report on Employment in the tourism sector (2013). Retrieved June 2015 from http://www.iet.tourspain.es/es-es/estadisticas/ otrasestadisticas/empleoturistico/encuestapoblacion/paginas/informespublicaciones.aspx)
- [9] INE (National Statistics Institute). *Hospitality and Tourism* (2014). Retrieved June 2015 from http://www.ine.es/inebmenu/mnu_hosteleria.htm
- [10] INFANTE-MORO A., INFANTE-MORO J. C., MARTINEZ-LOPEZ F. J., GARCIA-ORDAZ M.: Currícula en SI/TI en las empresas españolas: Estudio longitudinal (2001–2011). Certiuni Journal, 1, 2015, p. 76–85.
- [11] INFANTE-MORO A., MARTINEZ-LOPEZ F. J., GARCIA-ORDAZ M., INFANTE-MORO J. C.: El teletrabajo en las grandes empresas del sector hotelero: El caso español. Turitec 2014: X congreso nacional turismo y tecnologías de la información y las comunicaciones, 2014, p. 309–321.
- [12] INFANTE-MORO A., MARTINEZ-LOPEZ F. J., GARCIA-ORDAZ M., INFANTE-MORO J. C.: Information exchange in big companies of the Spanish hotel sector: an inside and inter-organizational comparative analysis. TMS Algarve 2014: Management Studies International Conference, 2014, p. 209–220.
- [13] INFANTE-MORO A., MARTINEZ-LOPEZ F. J., INFANTE-MORO J. C.: *The Extent of Computerization in big companies of the Spanish Hotel Sector*. Enlightening Tourism. A pathmaking Journal, 5 (2), 2015, p. 126–154.
- [14] INFANTE-MORO A., ZAVATE A., INFANTE-MORO J. C.: The influence/impact of Semantic Web technologies on Social Media. International Journal of Information Systems and Software Engineering for Big Companies (IJISEBC), 2 (2), 2015, p. 18-30.
- [15] IP C., LEUNG R., LAW, R.: *Progress and development of information and communication technologies in hospitality*. International Journal of Contemporary Hospitality Management, 23 (4), 2011, p. 533–551.
- [16] JUSSILA J. J., KARKKAINEN H., ARAMO-IMMONEN H.: Social media utilization in business-to-business relationships of technology industry firms. Computers in Human Behavior, 30, 2014, p. 606–613.
- [17] MISLOVE A., MARCON M., GUMMADI K. P., DRUSCHEL P., BHATTACHARJEE B.: *Measurement and analysis of online social networks*. 7th ACM SIGCOMM conference on Internet measurement, 2007, p. 29–42.
- [18] NICOLAU J. L., SANTA-MARIA M. J.: The effect of innovation on hotel market value. International Journal of Hospitality Management, 32 (0), 2013, p. 71–79.
- [19] PROBERT D., DISSEL M., FARRUKH C., MORTARA L., THORN V., PHAAL R.: The process of making the business case for technology: A sales and marketing perspective for technologists. Technological Forecasting and Social Change, 80 (6), 2013, p. 1129–1139.
- [20] SHETH, J., SHARMA A.: International e-marketing: opportunities and issues. International Marketing Review, 22 (6), 2005, p. 611–622.

- [21] SIERRA R.: Técnicas de Investigación Social. Teoría y ejercicios. Thomson Editores, Madrid, 2003.
- [22] TRAINOR K.J.: Relating Social Media technologies to performance: A capabilities-based perspective. Journal of Personal Selling and Sales Management, 32 (3), 2012, p. 317–331.
- [23] UCAKTURK A., VILLARD M.: The effects of management information and ERP systems on strategic knowledge management and decision-making. Procedia Social and Behavioral Sciences, 99 (0), 2013, p.1035–1043.