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WEB 2.0 USES IN HOTEL WEBSITES

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Web 2.0 uses in Hotel Websites

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Abstract

Internet has dramatically changed the way the hospitality sector operates. In the same time internet users have matured and Internet's evolution head to web 2.0 era. In this paper a research of web 2.0 uses in hotel websites was carried out. 490 hotel websites from 49 countries round the world were examined. The study attempts to examine the relationship between adoption of web 2.0 uses in hotel websites and level of countries' travel competitiveness, network readiness and internet use. Statistical analysis shows that countries with lower tourism competitiveness and countries with high network readiness make more effort and have more innovated hotel websites. Hoteliers, web designers and tourist organizations would take into account the findings in their business planning.

Key words: web 2.0; web 2.0 uses; hotel websites

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INTRODUCTION

Web marketing in Web 2.0

It is a fact, that in the last decade the Internet has become a familiar and common tool for millions of people around the world. According to Internet World Stats in 2000 there were about 361 million users in the world and in 2009 there were about 1530 million and the prediction for 2010 shows that the number will increase to over 1650 million users (Internet World Stats, 2009). The International Telecommunication Union informs us that in 2009, more than a quarter of the world's population are using the Internet (ITU, October 2009).

The Internet has dramatically changed the way people communicate, search for information and especially the way they buy goods and services. Today analysts believe that after the *commercial* phase of the web we have entered the networking, participating and collaborating phase when the web is predominantly used for social interaction. This is what we call Web 2.0. Web 2.0 is the term used to describe the tools and the practice of using the web to communicate and interact with other like-minded people by requesting, obtaining and sharing information that is relevant to them (Ellion, 2007). Some of the basics elements of Web 2.0 are user generated (produced, created, contributes) content, user participation, rich media (multimedia), harnessing the collective intelligence. Examples of Web 2.0 include web-based communities, hosted services, web applications, social-networking sites, video-sharing sites, wikis, blogs and mashups. For example in the first internet phase people used as a source of information the site of Encyclopedia Britannica Online where experts create articles. In Web 2.0 phase users visit the website of Wikipedia where anonymous users built the content (Wikipedia). In other words Web 2.0 describes the second generation of web-based services that have gained popularity by letting people collaborate and share information online (Hepburn, 2007).

At the same time the Web is a new area for the companies to expand the markets in which they compete and gives them a new opportunity to gain competitive advantage. The Internet provides new tools and possibilities of doing business (Gratzer & Winiwater 2003) and especially now with Web 2.0 uses.

Both companies and customers have something to gain through the web market. Many researchers argue that the Internet can benefit customers from direct communication with

suppliers and from searching for and purchasing their preferred products and services without any geographical or time constraints (Law & Hsu, 2006) and furthermore they can arrange for their own tailor-made products or services (O'Connor & Frew 2004). Further more with Web 2.0 utilities the web-based information is now in the hands of the customers and they can create, share, listen, read and even sell this information in ways that suit them (Hepburn, 2007). On the other hand suppliers can enjoy the benefits of lower distribution costs, a fairer competitive environment for businesses with different backgrounds, better revenues (Law & Hsu, 2006) and of course a dramatic growth in the number of customers (Gan et al., 2006). Particularly Web 2.0 technology allows suppliers to communicate directly with their customers and increase their understanding of their brand and their offering (Ellion, 2007). In addition to the above it is observed that web users are likely to spend more money than non-web users (O'Connor & Frew 2004).

We have all accepted that the Internet has changed the daily lives of individuals, companies and organizations (Wan, 2002). This Internet gold rush to set up websites for conducting business has also penetrated tourism and the hotel industry which will be here examined in detail where most of hotels started to invest in getting an establishment online, either with their own website or via a link from a third party website (Gan et al., 2006).

Hotels on Internet

The travel and tourism industry is one of the largest application areas on the Internet (Law & Hsu, 2006). According to Scharl, Wober, and Bauer (2004), travel, transportation, and holiday services are among the most popular items to sell online in Europe (next to sales of computer hardware). Travel Industry Association of America (TIA, 2005) found out that 57% of travellers who purchased tickets online also booked accommodations over the Internet. We understand how the use of the Internet has dramatically changed the competitive dynamics for the lodging industry (Zafiropoulos & Vrana, 2006). As online travel market matures, users are no longer content just to find the lowest price or read information written by marketers. Now more sophisticated online users are looking to take control and identify the perfect destination (Grossman, 2007).

Based on the research done by the Travel Industry Association of America 82% of online travel planners, or almost two-thirds (64%) of online travellers, are booking or making travel

reservations online. This may include booking an airline ticket, hotel room, rental car or package tour online. The most popular item to purchase online is airline tickets (36 million in 2005) and second in line is reserving overnight lodging accommodation (32 million in 2005). In addition to these numbers, Schegg, Steiner, Frey, and Murphy (2002), comment that the Internet, which differs from other media, gives hotels non-stop and inexpensive exposure. Hotels can generate higher profits from their websites as hotel websites are a direct on line sales channel that has the lowest distribution cost (Law & Hsu, 2005) and furthermore travel agents are bypassed (Gratzer & Winiwater, 2003). Unlike traditional media that send messages at a passive audience, online marketers profit from a customer-controlled pull approach and at the same time users take part in the communication process (Schegg et al., 2002). This process is empowered by the opportunities given by Web 2.0 uses. Through hotel websites hoteliers bring information about their products to customers all over the world in a direct and time effective way and additionally, SME hotels which have had no possibility to use distribution channels yet, can use the Internet as an additional or new channel (Gratzer & Winiwater, 2003).

All the above indicate the strong demand for internet applications in the hotel industry (Law & Hsu, 2005). Hotel enterprises that fail to implement this new media successfully in their work process face competitive disadvantages (Schegg et al., 2007). The travel industry was among the first to be transformed by the Internet. From e-mail to website the Internet became the first line of promotion and the perfect medium of transaction for booking. Today Web 2.0 adds a social dimension that consists of a collection of tools and applications that have brought consumers, individually and as virtual groups, into global word-of-mouth (Laboy, 2007).

As websites function in many aspects in the business environment, their appearance, organization, and content can have a considerable influence on the behaviour of online consumers (Law & Chan, 2006). Unfortunately many hospitality companies still do not have adequate knowledge to build a useful website (Law & Chung, 2003) and as it is going to be emerged in this research there are very few hotel websites that are up-to-date with Web 2.0 features. Moreover some hotels have placed a lot of information onto their websites but do not include relevant information or arrange the information in an appropriate order. More importantly, some hotel websites are not updated regularly. The outdated information may eventually be negative for the hotel's image (Law & Chung, 2003) and visitor's negative

experience will usually drive him to another competitive website which is just a click away (Gratzer & Winiwater, 2003), or even to go to a physical travel agent's office rather to purchase on online.

When a customer is satisfied with a website he returns to that same one (Kim & Stoel, 2004). That is why hoteliers must evaluate their websites regularly to ensure that the site is effective, appropriate and useful to customers (Baloglou & Pecan, 2006) in order to be improved. There is a very long series of research that has been done on the topic of website evaluation by qualitative and quantitative views. The way the evaluation should be done (Law, Hashim & Murphy, 2007; Schmidt et al., 2008; Vrana & Zafiroopoulos, 2004) which are the criteria that should be used (Jeong et al., 2003; Law & Cheung, 2003; Law & Cheung, 2006; Scharl et al, 2004; Schegg et al., 2002) compare different hotel categories (Law & Yeung, 2006), what features are important for hoteliers and what for customers (Law & Chung, 2003; Law & Hsu, 2005) are some of the topics that are extensively investigated in the literature. Moreover each year the Web Marketing Association names the best hotel and Lodging website as a part of the Annual Web Award Competition using seven criteria: design, ease of use, copywriting, interactivity, use of technology, innovation and content (webaward.com).

As Wan (2002) suggested, a research focused on the developing interaction between the traditional hospitality industry and the information industry should be done. New element in the Internet use is the Web 2.0 uses which are networking sites, wikis, blogs, polls, tagging, folksonomies, mashups, podcasting, web-based services in general that let people collaborate and share information online in previously unavailable ways (Hepburn, 2007). The use of Web 2.0 in travel and tourism industry is known as Travel 2.0 and Tourism 2.0 which underlines the application of social tools to those sectors (Williams & Martel, 2008). For example Travel 2.0 is the travel industry's adaptation of the Web 2.0 and it is all about empowering users, encouraging travelers to create content online to be shared with other readers (Grossman, 2007).

In this paper the existence of all new Web 2.0 features that are met in hotels website round the world will be examined. As dramatically rapid progress takes place today in advancement of information technologies it is investigated which innovated items like 1) communication features such as chat rooms, forum – discussion board, blogs, polls, 2) information features such as IM alerts mobile, SMS alerts to mobile, RSS feeds, podcasts or 3) other progressive IT

features like accessibility via mobile, on line web cameras, live weather report, that renovate hotel websites and keep the web visitor comfortable and interested (Schmidt et al., 2008). The two first categories are typical Web 2.0 features and the third one contains technological innovated features. In particular chapter “Previous studies” examines the relevant literature and the researches that refer to hotel websites and their characteristics. In the chapter of “Methodology” it is mentioned the procedure of collecting and analyzing data and all results are record in the chapter of “Findings and Discussion”. The purpose of this study is to underline the importance of Web 2.0 uses and innovated features in general in the hotel websites, to investigate their appearance in the websites today and to research the factors that affect them such as Internet use, network readiness and tourism competitiveness.

All these Web 2.0 and innovated uses may look exaggerated for a hotel website but it should be taken into account that there is a great deal of competition in the sector and hoteliers should give their websites significant technological advantages over their competitors and infuse the innovations into their work systems (Murphy, Olaru & Schegg, 2006). Furthermore, one of the biggest challenges facing the marketing is how to engage the new generation of consumers that in 5-10 years time will form the core customer base of many organizations (Ellion, 2007). Of course online reservation, availability, and hotel photos are some of the most important features in relative websites. Moreover, travelers should also be able to make online reservations with the peace of mind that the transaction is secure (Law & Hsu, 2005) and that is why security certificates and privacy policy features are also of the highest importance. In addition a contemporary, fresh and modern site helps to keep the visitor longer which is something that augments the possibility of the viewer turning into a customer. New features aid the building of strong customer-hotel relationships (Gan, Sim, Tan & Tan, 2006). After all research in 1996 showed that many hotels believed, at the time, that conventional means of advertising, such as radio, television and printed material are the most effective way of promoting their properties than the Internet (Hill, 1996). Fourteen years later the lack of a website is a competitive disadvantage for a hotel (Wei et al., 2001). Today, usage of new information technology enables a different approach to potential clients (Crotts, Pan & MacLaurin, 2007) because simply making product information accessible to customers is not enough for effective distribution (Kim, Ma & Kim, 2006). Web 2.0 for travelling consumer point has created a very high level of expectation. Consumers are looking for utilities that will

facilitate researching and learning about their destinations of interest, reading the thoughts and recommendations of others that have been there (Laboy, 2007). Of course, the application of IT solutions requires a significant investment, and this can be a serious obstacle for single hotel management (Crotts, Pan & MacLaurin, 2007).

PREVIOUS STUDIES

The importance of the internet applications in the hospitality industry has been recently emphasised by academic researchers and industry practitioners (Law & Hsu, 2005). The quality of the information on a website, including the element of enjoyment and playfulness, is an important factor in the success of a website (Law & Yeung, 2006). Customers tend to take more notice of a website with rich information and interactive features (Schral, Wober & Bauer, 2004). Studies of customer's online purchasing behaviour showed that "receptivity of new technological innovations" should be taken into account (Kim, Ma & Kim, 2006). More specifically investigated, it is agreed that having features that provide communication with customers by on line surveys and feed back data enables hoteliers to identify customer preferences and offer superior value via customized services. For example, an online Forum facilitates discussion among members and that makes it a very powerful web feature as the word-of-mouth form of communication is highly credible (Gan, Sim, Tan & Tan, 2006). Customers comments and hoteliers reaction to suggestions are important to be seen by potential new customers. It is observed that one of the biggest reasons why people don't book a room is because they fear making the wrong decision and wasting time and money. Online guest reviews and social media have helped eliminate some of that fear (Mackenzie, 2009). In the research done by Baloglou and Pecan (2006) of 4 and 5 star hotels in Turkey they found that about 75% of the analyzed hotel websites performed poorly in terms of online comment forms and only 15% of the hotels had online guest book. The percentage of hotel websites in Singapore which utilized this feature appears to be lower as in 2006 only 4% were doing so (Gan, Sim, Tan & Tan, 2006). A relatively higher percentage appears in Croatian hotel websites where 21% of the hotels were found to present an online forum or a guest book (Stugar & Spremic, 2008) and in Swiss hotels where the percentage appears to come to 18.5% (Schegg et al., 2004).

Another contemporary way of contacting customers is blogs. Many companies are coming up with a blogging policy in addition to their internet and e-mail policies (Venkatesh, Dwivedi & Shibu, 2007). Through blogs customers speak out about their experiences both positive and negative. These opinions can be an important source of information about what customers like and could be a cause for exploration and providing a better service to customers in the future. Blogs give the advantages of 1) developing personal bond with potential guests, 2) increasing ranking and visitors to sites (as searches engines show a preference to blogs) and 3) increasing influence and accessibility reach (Mackenzie, 2008). In an extended research Pan, McLaurin & Crotts (2007) showed that travel blogs provide a cost effective method of collecting visitors' feedback and at the same time are a service quality control mechanism.

Prior studies concentrated on general characteristics of websites features such as photos (Jeong & Lambert, 2001; Law & Hsu, 2005; Wei & all, 2001; Schegg et al., 2002; Zafiropoulos, Vrana & Paschaloudis, 2006), maps (Law & Hsu, 2006; Vrana, Zafiropoulos & Paschaloudis, 2004; Zafiropoulos & Vrana, 2006), and more general in design, log file data, usefulness (Law & Hsu, 2006). But more contemporary features that seem to be more interesting are not met in the relative literature. The most modern of all the features met is the on line web camera that gives customers an experience of walking through the hotel property (Gan, Sim, Tan & Tan, 2006). In a representative sample of 125 Swiss hotels it was found that only 0.8% offer an online web camera (Schegg et al., 2002) and in a congener research in Greek hotel the percentage of occurrence was 0.5% (Vrana, Zafiropoulos & Paschaloudis, 2004) when e-travellers research showed that the presence of this attribute was somewhat important (Law & Hsu, 2005). Another fresh and contemporary feature is having the weather report on the webpage either in a static content or with web video streaming technologies or even with the use of REST/SOAP web services from various weather forecast websites. Extensive web search in Greek hotel websites (Vrana, Zafiropoulos & Paschaloudis, 2004; Vrana, Zafiropoulos & Paschaloudis, 2006; Zafiropoulos & Vrana, 2006) recorded that this feature rarely occurs on Greek hotel websites. Only 18.88% of examined web pages show weather report features.

Summarizing the above we conclude that value of added features and services on a hotel website are not very familiar but they can strengthen the customers' understanding and confidence in the hotel but more importantly they increase the traffic on the site (Vrana,

Zfiropoulos & Paschaloudis, 2004). Since until today there are no studies to investigate the relationships between web 2.0 and hotel websites in the present study is examined the occurrence of new, renovated and technological advanced features in hotel websites that would made them more interesting more modern and more attractive to potential customers.

METHODOLOGY

This study attempts to measure the frequency of appearance of the renovated Web 2.0 features in hotel websites and in a second phase compare these results with the tourism competitiveness of countries where the hotels are located, the countries' network readiness and their level of internet usage. The study analyzed the website content of 490 international hotels randomly chosen. During spring 2009, the analyzed data was collected through an extended web search. Fifty countries were randomly selected. For each country, ten hotels were randomly selected using the following websites: www.worldhoteldirectory.com, www.hotels-world.com, www.travelotica.com, atourism.com/world-hotels-index.html, 4hotels.c.uk/worldwide-hotels-index.html. For one country, the data were insufficient. For each hotel's website, a data form was filled (Appendix 1). The form contains 3 category tables. In the first one various innovated web features are marked, in the second table are marked informative features where the user must be subscribed like IM alerts to mobile, SMS alerts to mobile, RSS feeds, podcasts. Finally at the third one communication features are investigated (chat rooms, blogs, polls etc). It was marked down if Web 2.0 features appear on the website or not. The yes-no evaluations were used in these criteria. In each form is marked the origin country of the web site, the URL address and the website name. Furthermore, it was record the number of the languages appearing and the number of hotel rooms to estimate the hotel's size. Some hotels do not report the number of their rooms and so there was a lack of data.

For the second phase of comparison between the collected data and tourism competitiveness, network readiness and internet usage were used the results of World Economic Forum researches. Three tables, where the rank of each country in all three categories is marked, were analyzed. Appendixes 2 and 3 show the tables concerning tourism competitiveness and network readiness. Unluckily these World Economic Forum researches do not include the

countries of Cuba and Jamaica. So the results of the statistic analysis concern 470 hotel websites.

All data obtained from the on line research was coded, verified and keyed into a computer data file. SPSS program (Statistical Package Social Science) version 16 was used for the statistic analysis. The analysis consisted of various steps. First descriptive statistics were produced on the availability of the WEB 2.0 features on hotel websites. In a second phase, relationships between the string variable “country name” and the numeric variable “feature type” was searched. To accomplish the analysis for each category of feature the appearance or not was calculated by adding YES coded as 1 and NO coded as 2. Multiple correspondence analyses were utilized to represent the relations between countries and website characteristics. Chi-square test was also significant for the research and was found a statistical relationship between the categorized examined values. Once the significant variations were detected, the tables were aggregated.

FINDINGS AND DISCUSSION

General Findings

The research reveals mixed but not surprising results. From the features investigated in the students’ research only the Web 2.0 uses were analyzed together with four technical innovation features, categorized as aforementioned: 1) communication features (chat rooms, forum – discussion board, blogs, polls), 2) information features (IM alerts to mobile, SMS alerts to mobile, RSS feeds, podcasts) and 3) other progressive IT features (accessibility via mobile, on line web cameras, live weather report, zoom font size).

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid	41	8.4	8.4	8.4
1-30	59	12.0	12.0	20.4
31-150	199	40.6	40.6	61.0
>150	191	39.0	39.0	100.0
Total	490	100.0	100.0	

Table 1
Frequency of Small (1-30 beds), Medium (31-150 beds) and Large (>150 beds) size of hotels.

Some general information about the samples was submitted in the beginning of the research. The hotels were initially classified into three categories (S-M-L): 1) up to 30 rooms (S – small hotels), 2) 31 to 150 rooms (M – medium hotels) and 3) over 150 rooms (L – large hotels). It is noticed that the majority of the randomly chosen and examined hotels were medium (40.6%) and large (39.0%) hotels as shown in the table 1. As it has already been mentioned “number of beds”-data was not always available as many websites do not record this information (8.4%).

Another general observation was the issue of languages used on the websites. As hotels receive more international visitors, multilingual sites have become a necessity (Law & Hsu, 2005) because language localization will provide customers with convenience when viewing a website (Gan, Sim, Tan & Tan, 2006). From the hotel website data examined it was found that only 41.4% of the websites exhibited more than 2 languages. Websites using solely the domestic spoken language to provide their information reach 30.2% and websites using 2 languages (the local spoken language and English in most cases) account for 28.4%. Just a very small percentage of our sample (0.8%) presented an impressive number of more than 10 languages, (Table 2).

Languages					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	148	30.2	30.2	30.2
	2	139	28.4	28.4	58.6
	3	81	16.5	16.5	75.1
	4	40	8.2	8.2	83.3
	5	30	6.1	6.1	89.4
	6	18	3.7	3.7	93.1
	7	19	3.9	3.9	96.9
	8	7	1.4	1.4	98.4
	9	4	.8	.8	99.2
	10	1	.2	.2	99.4
	12	1	.2	.2	99.6
	14	1	.2	.2	99.8
	16	1	.2	.2	100.0
	Total	490	100.0	100.0	

Table 2
Number of spoken languages in hotel websites

Travelers general looking for the basics (Law & Hsu, 2005) and the basic features are the most common in hotel websites. In table 3 where all results of the data questionnaire are mentioned it is observed that the most frequent features are photographs (98%), maps (83%) and matters of privacy policy (99%) when all Web 2.0 features present a very small percentage of appearance.

IM alerts to mobile (1.5%) and Podcasts (1.8%) are the rarest features of all.

Features	yes	no	Total
Accessible via Mobile	10,0%	90,0%	100,0%
News	42,2%	57,8%	100,0%
Weather	27,8%	72,2%	100,0%
Site Map	41,8%	58,2%	100,0%
Search Engine	14,9%	85,1%	100,0%
Jobs & Careers with company	32,9%	67,1%	100,0%
Advertise on website	42,7%	57,3%	100,0%
Pictures/ Photos	98,0%	2,0%	100,0%
Videos	25,0%	75,0%	100,0%
Webcams	3,3%	96,7%	100,0%
Maps	83,0%	17,0%	100,0%
Zoom Font Size (A-, A, A+)	15,0%	85,0%	100,0%
Security Certificate (e.g. by Verisign)	30,0%	70,0%	100,0%
Privacy Policy	99,0%	61,0%	160,0%
Newsletter	30,0%	70,0%	100,0%
IM (Instant Messaging) alert (to Mobile)	1,5%	98,5%	100,0%
SMS alert (to Mobile)	2,4%	97,6%	100,0%
RSS feeds	8,0%	92,0%	100,0%
Podcasts	1,8%	98,2%	100,0%
Blogs	4,5%	95,5%	100,0%
Wikis	2,0%	98,0%	100,0%
Polls, Surveys, Voting	6,7%	93,3%	100,0%
Forum, Discussion Board	3,0%	97,0%	100,0%
Chat	3,3%	96,7%	100,0%

Table 3
Percentages of occurrences of different features in hotel websites

Web 2.0 uses

More specifically in table 3 the percentage of Web 2.0 uses' appearance is very low in all countries in general. For all Web 2.0 characteristic features appearance ranged between 1.5% for IM alert, and 8.00% for RSS feeds. Today RSS feeds are a very popular tool in different kind of websites from on line sales to on line radio stations. Evenly it is the most popular Web

2.0 feature in this research though 8.00% is not a sufficient number. Polls are also quite frequent with a 6.80% score. Generally polls, surveys and voting, which is the full name of the investigated category, are the features that a hotel website visitor uses also before and after visiting a hotel; the need of searching for others' visitors experience in the first step and the will of marking their own experience at the end make website visitors to look for these features. On the contrary IM alert which appears by the lowest score is not a very popular feature not only for hotel websites but in general. Conclusively web sites in general are very poor in innovated features.

Correlation tests were not performed to examine the relations among the Web 2.0 features, since correlation – as most statistical techniques – is only appropriate for certain kinds of data. Such correlation processes are applicable in quantifiable data where numbers are meaningful, usually quantities of some sort. It cannot be used for purely categorical data, such as the existence or not of Web 2.0 features in a hotel website, which is the objective of this report.

Innovation and technological readiness have prominently been featured in the World Economic Forum, as the most important competitiveness enablers for business at all levels of development (Dutta & Mia, 2009). Therefore only some of the above mentioned features will be analyzed further in this research. Two categories of Web 2.0 uses and one category of innovated features are examined. In particular the three categories involving a) communication features (Chat, Forums, Polls, Blogs), b) informative features (IM alert, SMS alert, RSS, Podcast), and c) some advanced features (Access via Mobile, Weather, Webcams, Zoom font size). All categories show a small percentage of appearance as was expected as most of them are new technology features that have just begun to be met in websites in general today.

As mentioned above, the most common Web 2.0 feature found was RSS feeds (8.%) that are used to publish frequently updated works - such as entries, news headlines, audio, and video – and represent one great way to promote the website. RSS feeds were found mostly in big hotel websites (table 4). With a percentage of appearance 8% in all websites, the 56.4% of them were found in the pages of big hotels, 25.6% in medium and a small percentage of 7.7% in very small hotels.

SML_Hotels * RSS_feeds Crosstabulation

		RSS_feeds		
		Yes	No	Total
SML_Hotels	Count	4	37	41
	% within SML_Hotels	9.8%	90.2%	100.0%
	% within RSS_feeds	10.3%	8.2%	8.4%
1-30	Count	3	56	59
	% within SML_Hotels	5.1%	94.9%	100.0%
	% within RSS_feeds	7.7%	12.4%	12.0%
31-150	Count	10	189	199
	% within SML_Hotels	5.0%	95.0%	100.0%
	% within RSS_feeds	25.6%	41.9%	40.6%
>150	Count	22	169	191
	% within SML_Hotels	11.5%	88.5%	100.0%
	% within RSS_feeds	56.4%	37.5%	39.0%
Total	Count	39	451	490
	% within SML_Hotels	8.0%	92.0%	100.0%
	% within RSS_feeds	100.0%	100.0%	100.0%

**Table 4
RSS feature in hotel websites**

Similar results appear to have almost all Web 2.0 features and an obvious reason can be that for the small companies the considerable costs associated with acquiring technologies constitute the main barriers for a stronger uptake of e-business something very similar to other small categories in other industries (E-Business Watch, 2006). Though smaller hotel leverage their website more effectively (Schral, Wober & Bauer, 2004), the lack of financial resources and the lack of professionalism by the managers hold the adaptation of information technology advancements (Schegg et al., 2007).

During the analysis it was found out that very few countries have these innovations in their hotel websites. It was interesting to observe that none of these countries are at the top of the lists of the travel and tourism competitiveness. According to the Travel and Tourism Competitiveness Report 2009 of the World Economic Forum the most competitive countries in the domain for the last two years are shown in Appendix 2. In table 5 there are some of the countries with high level of tourism competitiveness and the frequency of appearance of blogs in their hotel websites. None of them appear to have a blog and only one hotel in Canada, a country with a high level of tourism competitiveness, appears to have a blog to use word-of-mouth. Hoteliers probably do not know that there is vast data available in the form of

customer feedback online but they have to have a system of capturing and monitoring it (Venkatesh, Dwivedi & Shibu, 2007).

			Blogs		
			Yes	No	Total
country	Austria	Count	0	10	10
		% within country	.0%	100.0%	100.0%
		% within Blogs	.0%	14.5%	14.3%
	Canada	Count	1	9	10
		% within country	10.0%	90.0%	100.0%
		% within Blogs	100.0%	13.0%	14.3%
	France	Count	0	10	10
		% within country	.0%	100.0%	100.0%
		% within Blogs	.0%	14.5%	14.3%
	Germany	Count	0	10	10
		% within country	.0%	100.0%	100.0%
		% within Blogs	.0%	14.5%	14.3%
	Spain	Count	0	10	10
		% within country	.0%	100.0%	100.0%
		% within Blogs	.0%	14.5%	14.3%
	Switzerland	Count	0	10	10
		% within country	.0%	100.0%	100.0%
		% within Blogs	.0%	14.5%	14.3%

Table 5
The Blog - feature in hotel websites of competitive touristic countries

On the contrary, countries with progressive hotel website features seem to have a lower place in tourism competitiveness catalogues and that is a very good reason to make a greater effort and try to have a more competitive website to attract more potential customers. These countries also have a high level of network readiness. Network readiness is the ability to use information and communication technologies (Economist Intelligence Unit, 2008) to develop one's economy and to foster welfare (wikipedia). The e-readiness also allows governments to gauge the success of their ICT strategies against those of other countries, and to provide companies wishing to invest overseas with an overview of the world's most promising investment locations from the perspective of e-readiness (Economist Intelligence Unit, 2008). So countries with an open mind to this new technology have more opportunities in the market sector and in particular in the hotel market and that explains the more informed websites.

The new investigations in the web give them the advance to difference and to be more competitive. The catalogue of these countries for the last two years according to World Economic Forum is shown in Appendix 3 (Dutta & Mia, 2009). However, it is not coincidental that many of these countries have a rather good status in internet users. Brazil, Denmark, India, the Netherlands and Russia, countries that several Web 2.0 uses were found in their hotel websites may not be one of the first destinations for tourists but they have one of the first places in web using catalogs (Table 6).

Top 15 Countries in Internet Users: 2008		
Internet Users	Year-End 2008	Share %
1. China	235,100	14.76
2. U.S.	234,240	14.71
3. India	108,410	6.81
4. Japan	99,010	6.22
5. Germany	57,030	3.58
6. UK	44,890	2.82
7. Brazil	41,170	2.59
8. France	39,460	2.48
9. Italy	37,370	2.35
10. South Korea	36,940	2.32
11. Russia	35,890	2.25
12. Indonesia	33,300	2.09
13. Canada	26,060	1.64
14. Mexico	25,450	1.60
15. Spain	22,910	1.44
Top 15 Total	1,077,230	67.65

*eTForecast.com

Table 6
Countries in Internet Users

Statistical Analysis

A descriptive statistical analysis was used for the interpretation and evaluation of these observations. With the SPSS model hypothesis testing was implemented to exact independence between tourism competitiveness, network readiness, internet use and the Web 2.0 features appearance in hotel websites. Pearson's chi-square is used to assess whether paired observations on two variables, expressed in a contingency table, are independent of each other. Due to the size of the sample (more than 30) the Pearson Chi-Square (Monte Carlo Sig - 2-sided) was utilized. For each category the null and the alternate hypothesis were formed, as indicated in the following paragraphs.

Tourism Competitiveness

In the case of Tourism Competitiveness a two-hypothesis framework was employed:

H₀: there is no relation between the tourism competitiveness rank of the countries and the frequency of Web 2.0 uses appearance in their hotel websites.

H₁: there is a relation between the tourism competitiveness rank of the countries and the frequency of Web 2.0 uses appearance in their hotel websites.

For tourism competitiveness levels the Travel and Tourism Competitiveness Report 2009 of the World Economic Forum (Blank & Chiesa 2009) illustrated in Appendix 2 was used. In this table two countries (the Bahamas and Cuba) were not included; hence the data was obtained from 47 countries and 470 hotels. The countries were then categorized in three groups based on their tourism competitiveness level (High, Medium, Low) enabling the analysis to be carried out subsequently.

If p (Pearson Chi-Square (Monte Carlo Sig - 2-sided)) is greater than (p>) 0.05 the null hypothesis can not be rejected. If p is equal or less than (p = <) 0.05 then the null hypothesis can be rejected. Clearly in the current analysis of the relationship between tourism competitiveness and Web 2.0 features, the null hypothesis at the $\alpha=0.05$ level cannot be reject, as emerges from the results given in table 9. The variables are independent and this can be explained by the fact that there are too many calculation of NO= 0 (absence of Web 2.0 features). Consequently, these variables failed to be statistically significant and for more results we refer back to the crosstab table where statistical data are given.

		<u>Communication</u>				<u>Information</u>				
		Chat	Forums	Polls	Blogs	IM alert	SMS alert	RSS	Podcast	
Tourism Competitiveness	level of competitiveness	Pearson Chi-Square (Monte Carlo Sig - 2-sided)	0	0,193	0,249	0,798	0,431	0,559	0,345	0,037
		Pearson Chi-Square Value	17,883	3,373	2,804	0,483	2,085	0,805	2,131	6,668
	Total	%	4,70%	2,60%	6,80%	3,20%	1,50%	2,60%	7,70%	1,90%
		count	22	12	32	15	7	12	36	9
	High	%	13,60%	41,70%	34,40%	20,00%	28,60%	41,70%	22,20%	33,30%
		count	3	5	11	3	2	5	8	3
	Medium	%	31,80%	16,70%	31,20%	40,00%	28,60%	16,70%	36,10%	11,10%
		count	7	2	10	6	2	2	13	1
	Low	%	54,50%	41,70%	34,40%	40,00%	42,90%	41,70%	41,70%	55,60%
		count	12	5	11	6	3	5	15	5

Table 9
Chi-Square analysis data for Tourism Competitiveness and Web 2.0 features in hotel websites

Taking into account that hotels web sites are very poor in innovated features more specifically it is noticed, that countries with low tourism competitiveness level appear to have better hotel websites. For all Web 2.0 features categories of low level countries seem to have the higher percentage of appearance.

Hotels from countries that are not very popular destinations for tourist are trying harder to attract new clients not only by offering lower prices but also with modern and technically informed websites. Percentages from 34.40% to 55.60% indicate the difference.

However hotels from the most tourist competitive countries have adequate percentages of Web 2.0 features but it is not as sufficient as for the lower category. This hotel category may not follow so rapidly the technological innovations in order to augment their custom because they are the first travelers' choice. But still the appearance of quite a few Web 2.0 features in their websites underlines the importance and the requirement of a contemporary website.

Network Readiness

For network readiness was used the Global Information Technology Report 2009 (Appendix 3) of the World Economic Forum (Dutta & Mia, 2009). Then, two hypotheses were formed in order to statistically test them.

H₀: there is no relation between the network readiness rank of the countries and the frequency of Web 2.0 uses appearance in their hotel websites.

H₁: there is a relation between the network readiness rank of the countries and the frequency of Web 2.0 uses appearance in their hotel websites.

In all categories the null hypothesis was not rejected. All variables are independent but still some notices from the cross tab table (table 10) can be taken.

It is obvious that countries that rely more on the information and communication technologies to improve their economy, exhibit more Web 2.0 features in their hotel websites. It is rather expected that hotels from countries that appear to have a high level of network readiness have also the most technologically informed websites.

		<u>Communication</u>				<u>Information</u>					
		Chat	Forums	Polls	Blogs	IM alert	SMS alert	RSS	Podcast		
Network Readiness	Pearson Chi-Square (Monte Carlo Sig - 2-sided)		0,15	0,804	0,023		0,301	0,869	0,332	0,009	
		Pearson Chi-Square Value	8,391	0,429	7,284		2,496	0,311	2,319	8,394	
	Total	%	4,70%	2,60%	6,80%	3,20%	1,50%	2,60%	7,70%	1,90%	
		count	22	12	32	15	7	12	36	9	
	level of readiness	High	%	27,30%	33,30%	56,20%	60,00%	42,90%	50,00%	52,80%	44,40%
			count	6	4	18	9	3	6	19	4
		Medium	%	27,30%	41,70%	21,90%	26,70%	14,30%	33,30%	25,00%	0,00%
			count	6	5	7	4	1	4	9	0
		Low	%	10,20%	25,00%	21,90%	13,30%	42,90%	16,70%	22,20%	55,60%
			count	10	3	7	2	3	2	8	5

Table 10
Chi-Square analysis data for network readiness and Web 2.0 features in hotel websites

Web 2.0 features except podcasts (44.0% for countries with high level of readiness and 55.60% for low level of readiness) and Forums (33.30% for countries with high level of readiness and 41.70% for medium level of readiness) are found mostly in these hotels. That indicates that hotels follow the state policy on this topic, specifically they make an effort to follow-up the technological evolutions and use them for their own profit. Web 2.0 uses are the recent technological innovated features in the web and they were found in countries with high level of network readiness. As the level of network readiness reduce, Web 2.0 uses' appearance become rarer.

Internet Use

Third category is the comparison between internet use and the Web 2.0 features appearance in hotel websites. The internet use data are from the Global Information Technology Report in the World Economic Forum web page

(<http://www.insead.edu/v1/gitr/wef/main/analysis/showdatatable.cfm?vno=7.24>).

Next, using always the same method, two hypotheses were formed.

H₀: there is no relation between the internet use rank of the countries and the frequency of Web 2.0 uses appearance in their hotel websites.

H₁: there is a relation between the internet use rank of the countries and the frequency of Web 2.0 uses appearance in their hotel websites.

For countries with internet users the null hypothesis was not rejected also.

But in this case results given in the crosstab table differ from the other two categories. Results, in table 11, show that more Web 2.0 features appear at the hotel websites with a medium level of internet usage. This is not an unequal result because contrary to the other two categories internet use counts a variable that has to do with the website users and not the website owners.

		<u>Communication</u>				<u>Information</u>				
		Chat	Forums	Polls	Blogs	IM alert	SMS alert	RSS	Podcast	
Internet Use	Pearson Chi-Square (Monte Carlo Sig - 2-sided)		0,72	0,698	0,476	0,943	0,612	0,643	0,836	0,311
		Pearson Chi-Square Value	0,859	0,925	1,601	0,287	1,032	1,095	0,452	2,554
	Total	%	4,70%	2,60%	6,80%	3,20%	1,50%	2,60%	7,70%	1,90%
		count	22	12	32	15	7	12	36	9
	High	%	13,60%	25,00%	12,50%	20,00%	28,60%	33,30%	22,20%	0,00%
		count	3	3	4	3	2	4	8	0
	Medium	%	50,00%	33,30%	53,10%	53,30%	57,10%	41,70%	41,70%	55,60%
		count	11	4	17	8	4	5	15	5
	Low	%	36,40%	41,70%	34,40%	26,70%	14,30%	25,00%	36,40%	44,40%
		count	8	5	11	4	1	3	13	4

Table 11
Chi-Square analysis data for internet use and Web 2.0 features in hotel websites

In countries with high internet use level it is expected to find demanding web-customers who will use more frequently online booking for their travels. However hotels do not seem to follow the same tension and they keep an average level in website innovations. In addition for countries with very low level of internet use is not expected to make use of the Internet as a business tool. Most of these countries are small and economical underdeveloped. However their hotel websites appear to have an adequate percentage of popular features such as polls and RSS feeds (36.4% and 34.4%).

Advanced Features

The SPSS model hypothesis testing was used to investigate the independence between tourism competitiveness, network readiness, internet use and the category of “advanced features” that

includes weather, web camera, accessibility via mobile and zoom font size. For each category the null and the alternate hypothesis were formed.

H₀: there is no relation between a) the tourism competitiveness, b) network readiness, c) internet use rank of the countries and the frequency of advanced features appearance in their hotel websites.

H₁: there is a relation between a) the tourism competitiveness, b) network readiness, c) internet use rank of the countries and the frequency of advanced features appearance in their hotel websites.

The statistical results show that in most of cases the number p (Pearson Chi-Square (Monte Carlo Sig - 2-sided)) is greater than 0.05 (table 12) and so the hypothesis can not be rejected.

The variables are clearly independent and they are not statistically significant. However the crosstab shows some more interesting statistical results.

		<u>Tourism Competitiveness</u>				<u>Network Readiness</u>				<u>Internet Use</u>			
		Weather	Web camera	Accessible via mobile	Zoom font size	Weather	Web camera	Accessible via mobile	Zoom font size	Weather	Web camera	Accessible via mobile	Zoom font size
	Pearson Chi-Square (Monte Carlo Sig - 2-sided)	0,128	0,509	0,87	0	0,076	0,304	0,053	0	0,155	0,675	1	0,021
	Pearson Chi-Square Value	4,106	1,36	0,337	17,159	5,31	2,639	6,047	21,236	3,709	0,917	0,029	7,735
Total	%	28,50%	3,40%	10,40%	15,40%	28,50%	3,40%	10,40%	15,40%	28,50%	3,40%	10,40%	15,40%
	count	134	16	49	72	134	16	49	71	134	16	49	72
level	High	41,80%	43,80%	44,90%	27,80%	38,80%	43,80%	51,00%	20,80%	16,40%	12,50%	20,40%	9,70%
	count	56	7	22	20	52	7	25	15	22	2	10	7
Medium	%	34,70%	43,80%	30,60%	34,70%	44,00%	50,00%	20,40%	58,30%	53,00%	56,20%	46,90%	58,30%
	count	52	7	15	25	59	8	10	26	71	9	23	42
Low	%	19,40%	12,50%	24,50%	37,50%	28,50%	6,20%	20,40%	20,80%	30,60%	31,20%	32,70%	31,90%
	count	26	3	12	27	23	1	14	15	41	5	16	23

Table 12
Chi-Square analysis data for tourism competitiveness, network readiness, internet use and several advanced features in hotel websites

Compared to Web 2.0 uses, advanced features give slightly different results. In the case of internet use the conclusion is the same. They appear more often in medium level hotel websites. For network readiness case the higher frequency of advanced features appearance was observed at the medium level, not very irrelevant from Web 2.0 communication and

information features. However, in the case of tourism competitiveness all features appeared in hotel websites of high level countries, contrary to main Web 2.0 features which were found in the low level countries. Advanced features differ from Web 2.0 uses in this category. The examined features are not interaction tools but they are technical innovated web-tools that are met in websites before Web 2.0 features. Hotels from high tourism competitiveness countries use websites more intensely and often than the others and this might be the reason of advanced features appearance in hotel websites of this category.

MANAGERIAL IMPLICATIONS

From all the above discussion, it can be seen that internet market is changing by the use of Web 2.0 and the lodging industry has been left behind. Social software is popular today on the web and whenever consumer congregate, commercial opportunities exist. This study will help hoteliers to improve their websites as it underlines the lack and the importance of Web 2.0 uses in websites. Hoteliers can compare their own website and be informed of the new features that start to appear in other hotels websites and in web marketing generally in order to foster a long-term relationship with customers. Economy and upscale lodging operators need to pay attention to website features to keep their online customers satisfied and updated. Academics could use it as a tool to evaluate hospitality websites and their intentions. Also it will give new ideas to web designers and especially to those who work on hotel web pages.

Additionally marketing industry, government officers and authorities and tourist organizations could finance hotel websites of their countries as the lack of resources is one of the hoteliers' problems to innovate their webpage. However both hoteliers and states should make efforts to develop more up-to-date and competitive websites to attract potential customers and gain the oncoming generation. Without taking into account how much competitive their country is in tourism, tourist authorities of governments could take active role by informing, educating and financial supporting domestic hotels to increase the richness of their website contents.

CONCLUSIONS

As the number of websites continues to grow at an explosive rate, how the websites of each industry attract customers will become increasingly critical for business survival (Wan, 2002). This is especially true for hotels as many products are very similar, the customer satisfaction with the website can be a key competitive advantage (Essawy, 2006). Since consumers have

become more technologically savvy, not only in making purchases on the Internet but also planning vacations on line (Law, Bai & Wen, 2008), they need more innovated features to be attracted. Many individuals and organizations adopt innovation over time but it is observed that effective hotel websites are in the early stage (Schegg et al., 2002).

The findings of this study show that hotels do not use the information technologies and especially Web 2.0 uses to their full potential. This research was designed to investigate the extent of innovated features adoption in websites by hotels world wide. As not very much research has been done on this topic the study begun by examining the relevant literature available. Then 490 hotel websites from 49 countries were examined. The results from our study show that hotels have rarely exploited the potential provided by internet and Web 2.0 uses and the advances in technology which can give them a great competitive advantage. The limited size of the sample makes it difficult to make any generalized conclusions from the findings. Still the lack of many technologically innovated features in hotel websites is a fact. Furthermore it was surprising to find out that in a hotel market where multilingual matters are of the greatest importance as the tourism market has become a global market, 30% of the sample appears to provide their content in only one language.

Hoteliers should take into consideration that just web presence is not a guarantee of success. The goal of website presence is not just to attract visitors to the website but to turn the visitor into a repeat visitor and a customer (Stugar & Spremic, 2008). Frequent updating of past or potential clients through new technology elements such as RSS or SMS alerts will make customers to come back again and again to a hotel's website, become a loyal and stable customer. This will create a cyber community that will enhance long term customer relationships and will establish the ideal lifetime relationship (Essawy, 2006). In addition to the above, hoteliers must pay special attention to communication forms that provide them with customer feedback like on line comments, forums, surveys, chat rooms, 24 hour on line service and the currently popular blogs. As the number of internet users increases every year and are becoming more informed hoteliers should habitually renovate their websites with new features such as web cameras, live weather report or make their website accessible via mobile phone to keep a visitor's interest alive.

This study measures the frequency of appearance of the renovated Web 2.0 features in hotel website and the results show that the most popular of Web 2.0 uses in hotel websites are RSS

feeds and polls surveys and voting. RSS feeds are a very common feature in many kinds of websites. Also polls, survey and voting are one of the first features that a hotel customer seeks in a website looking for recommendations of other visitors.

Furthermore the collected data of appearance or not of Web 2.0 features were compared with tourism competitiveness, network readiness and level of internet usage of the countries where hotels are located. Results reveal that hotels from countries with a high level of tourism competitiveness do not pay the proper attention to technological innovations and they don't adopt them in their websites. On the contrary, Web 2.0 uses and advanced features were found in hotel websites with the lowest level of tourism competitiveness showing their tendency to attract more clients using all technological abilities. Also countries with network readiness appear to have innovated hotel websites. In these countries technological and communication innovations are used in different sectors to improve their economy. In this research it is proved that the lodging sector is one of those as network readiness level corresponds with Web 2.0 adaptations in hotel websites. Finally, internet usage level does not seem to affect the innovation style of hotel web sites.

Over the last decade there has been a dynamic development in e-business round the world. Today technology is evolving continuously and, despite economic uncertainty over the coming years, progress in most areas of IT capabilities continues at a blistering pace (Dutta & Mia 2009). Moreover low cost internet access devices will continue to be a leading internet user growth factor (eTForecasts). The use of the Internet in hotel market is inarguably required in this increasing competitive area of the global economy. E-Business is becoming a necessity rather than a means to differentiate from competitors (E-Business Watch, 2006). All the above indicate that hotels in countries with a large number of tourists should not rely on their current numbers. As the study shows countries with lower profiles in tourism but with extended and progressive use of the capabilities of the Internet are starting to adopt the new technological features in their websites. Due to rapidly developing technology, adopting innovative technological features will be imperative for creating an effective hotel website. That's why hoteliers should not hesitate in investing in innovative websites found with Web 2.0 uses.

FUTURE RESEARCH

New trends force hoteliers to choose new technology that can help them pay more attention to their guests so that they can stop looking and start booking (Stugar & Spremic, 2008). Extensive study may include the cost and benefits of having high class information technology features on a website as the financial problem that hotel managers seem to weed out for adopting a competitive use of Internet.

In this study Web 2.0 features were examined in hotel websites and that were related to the travel and tourism in countries and their familiarity with the use of web tools in business. In a next step the financial level of the countries can be compared. The efforts of future studies could explore relationships between features examined here and other hotel characteristics such as star category or what other features customers seek in a hotel Website.

One other interesting potential avenue would be to examine what motivates customers to become loyal because it is important not only to attract as many customers as possible but also to stimulate their interest into pursuing multiple purchases over time (Essawy, 2006). Moreover, future investigation could also explore what may be the possible relationship between website features and electronic customer service or eService and more specific how hotels respond to email from guests. As far as social features are concerned extended research in the case of blogs is required so that hotel marketers understand this technological phenomenon.

Since the overall quality of a website influences the traffic and the amount of business, the innovation on design topics may be a next step for this study.

Finally, the same study can be repeated after some time to examine whether there are any changes in website features over time.

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APPENDIX 1

Data form used for the research

Country:
Website name:
URL:
Number of beds:

Features	yes	no	Comments
Accessible via Mobile			
News			
Weather			
Site Map			
Search Engine			
Jobs & Careers with company			
Advertise on website			
Pictures/ Photos			
Videos			
Webcams			
Maps			
Zoom Font Size (A-, A, A+)			
Security Certificate (e.g. by Verisign)			
Privacy Policy			
Number of Languages:			
Which Languages:			
Is there an available registration to any of the following mentioned	yes	no	Comments
Newsletter			
IM (Instant Messaging) alert (to Mobile)			
SMS alert (to Mobile)			
RSS feeds			
Podcasts			
Other			
Is there a possibility to participate to any of the following mentioned	yes	no	Comments
Blogs			
Wikis			
Polls, Surveys, Voting			
Forum, Discussion Board			
Chat			
Other			

Data form used for the research

APPENDIX 2

Travel & Tourism Competitiveness Index 2009 and 2008 comparisons

Country/Economy	2009		2008	
	Rank/133	Score	Rank/133	Score
Switzerland	1	5.68	1	
Austria	2	5.46	2	
Germany	3	5.41	3	
France	4	5.34	10	
Canada	5	5.32	9	
Spain	6	5.29	5	
Sweden	7	5.28	8	
United States	8	5.28	7	
Australia	9	5.24	4	
Singapore	10	5.24	16	
United Kingdom	11	5.22	6	
Hong Kong SAR	12	5.18	14	
Netherlands	13	5.09	18	
Denmark	14	5.08	13	
Finland	15	5.07	12	
Iceland	16	5.07	11	
Portugal	17	5.01	15	
Ireland	18	4.99	21	
Norway	19	4.97	17	
New Zealand	20	4.94	19	
Cyprus	21	4.92	24	
Belgium	22	4.92	27	
Luxembourg	23	4.92	20	
Greece	24	4.91	22	
Japan	25	4.91	23	
Czech Republic	26	4.86	30	
Estonia	27	4.83	26	
Italy	28	4.78	28	
Malta	29	4.77	25	
Barbados	30	4.77	29	
Korea, Rep.	31	4.72	31	
Malaysia	32	4.71	32	
United Arab Emirates	33	4.57	40	
Croatia	34	4.54	34	
Slovenia	35	4.53	36	
Israel	36	4.50	35	
Qatar	37	4.49	37	
Hungary	38	4.46	33	
Thailand	39	4.45	42	
Maldives	40	4.43	41	
Bahrain	41	4.42	48	
Costa Rica	42	4.42	44	
Taiwan, China	43	4.40	52	
Tunisia	44	4.37	39	
Brazil	45	4.35	49	
Slovak Republic	46	4.34	38	
China	47	4.33	62	
Latvia	48	4.31	45	
Lithuania	49	4.30	47	
Bulgaria	50	4.30	43	
Mexico	51	4.29	55	
Montenegro	52	4.29	59	
Puerto Rico	53	4.27	46	
Jordan	54	4.25	53	
Panama	55	4.23	50	
Turkey	56	4.20	54	
Chile	57	4.18	51	
Poland	58	4.18	56	
Russian Federation	59	4.14	64	
Jamaica	60	4.13	57	
South Africa	61	4.10	60	
India	62	4.09	65	
Uruguay	63	4.09	61	
Egypt	64	4.09	66	
Argentina	65	4.08	58	
Romania	66	4.04	69	
Dominican Republic	67	4.03	63	

(Cont'd.)

Country/Economy	2009		2008	
	Rank/133	Score	Rank/133	Score
Oman	68	4.01	76	
Brunei Darussalam	69	3.99	n/s	
Guatemala	70	3.90	68	
Saudi Arabia	71	3.89	82	
Colombia	72	3.89	71	
Georgia	73	3.89	72	
Peru	74	3.88	70	
Morocco	75	3.86	67	
Azerbaijan	76	3.84	79	
Ukraine	77	3.84	77	
Sri Lanka	78	3.82	73	
Botswana	79	3.81	87	
Macedonia, FYR	80	3.81	83	
Indonesia	81	3.79	80	
Namibia	82	3.77	93	
Honduras	83	3.77	75	
Trinidad and Tobago	84	3.75	74	
Syria	85	3.73	94	
Philippines	86	3.73	81	
Gambia, The	87	3.72	94	
Serbia	88	3.71	78	
Vietnam	89	3.70	96	
Albania	90	3.68	92	
Armenia	91	3.65	89	
Kazakhstan	92	3.65	91	
Moldova	93	3.64	98	
El Salvador	94	3.63	97	
Kuwait	95	3.63	85	
Ecuador	96	3.62	86	
Kenya	97	3.60	101	
Tanzania	98	3.59	88	
Suriname	99	3.54	95	
Zambia	100	3.53	107	
Senegal	101	3.50	108	
Guyana	102	3.50	109	
Nicaragua	103	3.49	99	
Venezuela	104	3.46	103	
Mongolia	105	3.46	100	
Kyrgyz Republic	106	3.45	113	
Bosnia and Herzegovina	107	3.44	106	
Cambodia	108	3.43	112	
Tajikistan	109	3.41	114	
Ghana	110	3.40	n/s	
Uganda	111	3.38	110	
Libya	112	3.38	104	
Pakistan	113	3.33	111	
Bolivia	114	3.33	106	
Algeria	115	3.31	102	
Madagascar	116	3.28	118	
Malawi	117	3.27	n/s	
Nepal	118	3.25	116	
Mali	119	3.19	119	
Benin	120	3.18	120	
Zimbabwe	121	3.17	117	
Paraguay	122	3.16	115	
Ethiopia	123	3.15	121	
Mozambique	124	3.12	123	
Cameroon	125	3.09	126	
Burkina Faso	126	3.08	124	
Mauretania	127	3.07	122	
Nigeria	128	3.02	125	
Bangladesh	129	3.02	127	
Côte d'Ivoire	130	2.99	n/s	
Burundi	131	2.98	128	
Lesotho	132	2.92	129	
Chad	133	2.52	130	

Note that one country covered last year, Uzbekistan, is not included this year because of a lack of survey data.

APPENDIX 3

The Networked Readiness Index 2008–2009 and 2007–2008

Country/Economy	NRI 2008–2009		NRI 2008–2009 rank among 2007 countries	NRI 2007–2008	
	Rank	Score		Rank	Score
Denmark	1	5.95	1	1	5.78
Sweden	2	5.94	2	2	5.72
United States	3	5.68	3	4	5.45
Singapore	4	5.67	4	5	5.49
Switzerland	5	5.58	5	3	5.53
Finland	6	5.52	6	6	5.47
Iceland	7	5.50	7	8	5.44
Norway	8	5.49	8	10	5.38
Netherlands	9	5.48	9	7	5.44
Canada	10	5.41	10	13	5.30
Korea, Rep.	11	5.37	11	9	5.43
Hong Kong SAR	12	5.30	12	11	5.31
Taiwan, China	13	5.30	13	17	5.18
Australia	14	5.29	14	14	5.28
United Kingdom	15	5.27	15	12	5.30
Austria	16	5.22	16	15	5.22
Japan	17	5.19	17	19	5.14
Estonia	18	5.18	18	20	5.12
France	19	5.17	19	21	5.11
Germany	20	5.17	20	16	5.19
Luxembourg	21	5.10	21	24	4.94
New Zealand	22	5.04	22	22	5.02
Ireland	23	5.02	23	23	5.02
Belgium	24	5.02	24	25	4.92
Israel	25	4.98	25	18	5.18
Malta	26	4.79	26	27	4.61
United Arab Emirates	27	4.76	27	29	4.55
Malaysia	28	4.76	28	26	4.82
Datar	29	4.68	29	32	4.42
Portugal	30	4.62	30	28	4.60
Slovenia	31	4.57	31	30	4.47
Czech Republic	32	4.52	32	36	4.32
Cyprus	33	4.52	33	41	4.23
Spain	34	4.50	34	31	4.47
Lithuania	35	4.40	35	33	4.41
Barbados	36	4.38	36	38	4.25
Bahrain	37	4.38	37	45	4.13
Tunisia	38	4.34	38	35	4.33
Chile	39	4.32	39	34	4.35
Saudi Arabia	40	4.28	40	48	4.07
Hungary	41	4.28	41	37	4.28
Puerto Rico	42	4.23	42	39	4.25
Slovak Republic	43	4.19	43	43	4.17
Jordan	44	4.19	44	47	4.08
Italy	45	4.16	45	42	4.21
China	46	4.15	46	57	3.90
Thailand	47	4.14	47	40	4.25
Latvia	48	4.10	48	44	4.14
Croatia	49	4.09	49	49	4.06
Oman	50	4.08	50	53	3.97
Mauritius	51	4.07	51	54	3.96
South Africa	52	4.07	52	51	4.05
Jamaica	53	4.03	53	46	4.05
India	54	4.02	54	50	4.08
Ecuador	55	4.00	55	56	3.94
Costa Rica	56	3.99	56	60	3.87
Kuwait	57	3.98	57	52	4.01
Romania	58	3.97	58	61	3.86
Brazil	59	3.94	59	59	3.87
Azerbaijan	60	3.93	60	67	3.72
Turkey	61	3.91	61	55	3.96
Ukraine	62	3.88	62	70	3.69
Brunei Darussalam	63	3.87	n/a	n/a	n/a
Colombia	64	3.87	63	69	3.71
Uruguay	65	3.85	64	65	3.72
Panama	66	3.84	65	64	3.74
Mexico	67	3.84	66	58	3.90

(Cont'd.)

Country/Economy	NRI 2008–2009		NRI 2008–2009 rank among 2007 countries	NRI 2007–2008	
	Rank	Score		Rank	Score
Bulgaria	68	3.80	67	68	3.71
Poland	69	3.80	68	62	3.81
Vietnam	70	3.79	69	73	3.67
Montenegro	71	3.79	n/a	n/a	n/a
Sri Lanka	72	3.78	70	79	3.58
Kazakhstan	73	3.75	71	71	3.68
Russian Federation	74	3.77	72	72	3.68
Dominican Republic	75	3.76	73	75	3.66
Egypt	76	3.76	74	63	3.74
Botswana	77	3.72	75	78	3.59
El Salvador	78	3.69	76	86	3.72
Macedonia, FYR	79	3.67	77	83	3.49
Senegal	80	3.67	78	85	3.48
Trinidad and Tobago	81	3.67	79	82	3.95
Guatemala	82	3.64	80	80	3.58
Indonesia	83	3.62	81	76	3.80
Serbia	84	3.62	n/a	n/a	n/a
Philippines	85	3.60	82	81	3.56
Morocco	86	3.58	83	74	3.67
Argentina	87	3.58	84	77	3.59
Georgia	88	3.48	85	91	3.34
Peru	89	3.47	86	84	3.46
Nigeria	90	3.45	87	94	3.32
Gambia, The	91	3.44	88	101	3.17
Namibia	92	3.44	89	93	3.33
Mongolia	93	3.42	90	87	3.42
Syria	94	3.41	91	110	3.06
Honduras	95	3.41	92	90	3.35
Venezuela	96	3.39	93	86	3.44
Kerrya	97	3.35	94	92	3.34
Pakistan	98	3.31	95	89	3.37
Moldova	99	3.30	96	96	3.21
Guyana	100	3.29	97	102	3.16
Libya	101	3.29	98	105	3.10
Zambia	102	3.28	99	112	3.02
Ghana	103	3.25	n/a	n/a	n/a
Tajikistan	104	3.25	100	98	3.18
Albania	105	3.23	101	108	3.06
Bosnia and Herzegovina	106	3.23	102	95	3.22
Mali	107	3.18	103	99	3.17
Algeria	108	3.14	104	88	3.38
Mauritania	109	3.12	105	97	3.21
Malawi	110	3.12	n/a	n/a	n/a
Côte d'Ivoire	111	3.12	n/a	n/a	n/a
Madagascar	112	3.09	106	104	3.12
Burkina Faso	113	3.07	107	103	3.12
Armenia	114	3.06	108	106	3.10
Kyrgyz Republic	115	3.04	109	114	2.99
Ecuador	116	3.03	110	107	3.05
Suriname	117	3.03	111	117	2.91
Lesotho	118	3.02	112	122	2.79
Tanzania	119	3.01	113	100	3.17
Uganda	120	2.96	114	109	3.06
Benin	121	2.96	115	113	3.01
Paraguay	122	2.93	116	120	2.87
Cameroon	123	2.93	117	118	2.99
Mozambique	124	2.91	118	121	2.82
Nicaragua	125	2.90	119	116	2.95
Cambodia	126	2.88	120	115	2.96
Nepal	127	2.85	121	118	2.88
Bolivia	128	2.82	122	111	3.05
Ethiopia	129	2.80	123	123	2.77
Bangladesh	130	2.75	124	124	2.65
Burundi	131	2.67	125	128	2.46
Zimbabwe	132	2.49	126	125	2.50
Timor-Leste	133	2.47	n/a	n/a	n/a
Chad	134	2.44	127	127	2.40