THE IMPACT OF SOCIAL MEDIA ON THE E-REPUTATION OF ALGERIAN HOTELS. AN ANALYSIS BY SEM STRUCTURAL EQUATIONS

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Abstract:

Purpose: the purpose of this paper to study the impact of social media on the electronic reputation of hotel establishments in the wilaya of TLEMCEN.

Design/methodology/ approach: first, we define the key concepts of our research that involved social media, electronic word of mouth and electronic reputation, then we present a literature review on previous works. In the empirical study we develop a questionnaire of 230 travellers who visited the wilaya of TLEMCEN, we chose the method of structural equations for data analysis with SmartPLS software (V.3.3.0).

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Finding: we found that social media have a strong influence on the various variables; they are also an important source of information for the decision-making of travellers for the choice of a hotel, so we have confirmed our research hypothesis.

Keywords: social media, e-reputation, e-wom, hotels, Smartpls.

1- Introduction:

Today's every hotel is using social media for their professional benefits like creating customer relationship, the majority of hotels in Algeria understood the value of using social media, because they provide a huge flow of information (creating content, sharing advertisements, doing promotions, etc.). These are virtual communities where internet users can react, communicate and exchange opinions and experiences

Travellers are looking for bookings at well-known hotels that are present on social media (visibility and communication). As for electronic reputation, it is built mainly by electronic word of mouth in the form of online reviews and commentary.

The Internet has fundamentally reshaped the way tourism-related information is distributed and the way people plan and consume travel (Buhalis - Law, 2008), Different technological interfaces, such as search engines, online travel booking sites and destination websites facilitate the exchange of information between online travellers and the "online tourism domain" (Xiang & al , 2010).

Tripadvisor has more than 500 million traveller reviews, the world's largest travel site that informs travellers to help them book their tourist establishment faster. In this context, our study attempts to answer the following problem:

What is the impact of social media on e-reputation of hotels?

2- Literature review and hypothesis:

2-1. Social media:

Harison and Thomas (2009) describe social media which refers to social networking sites: Facebook, Twitter and myspace, social media facilitates the learning in the foreign languages.

Kaplan and Haenlein (2010) produce a social media classification, their distinction between the different types of social media is based on theories related to the field of media research (social presence and media richness), as well as on the social process (self-presentation and self-disclosure). For this reason, they have resulted in six forms of social media, which are: blogs, collaborative projects (e.g. Wikipedia), social networking sites (e.g. Facebbok), and content community (e.g. YouTube).

Smith (2012) defines social media: "social interactions using technology such as the internet with any combination of work, image, video or audio."

Social media is the notion of "online communities of people sharing interests and activities, or who are interested in exploring the advantages and activities of others." Hitwise and Experian (2010).

2-2. Electronic word of mouth:

Electronic word of mouth is any positive or negative information made by old consumers, current or potential consumers to certain product or a company via the Internet, the sharing of information is between small groups of individuals in synchronous mode.

The rapid development of the internet has allowed users to easily share their opinions on products or services with the large audience; electronic word of mouth affects the attitude of Internet user's .Sen and Lerman (2007).

Litvin & all (2008) define the e-word of mouth as "all informal communications to consumers through Internet technology related to the use or characteristics of certain goods and services,", for these authors, the term E-WOM has become a very influential large scale, tourism is seen as a high-risk consumer, and travellers appreciate almost all the advice of former travellers before making a decision.

In the hospitality industry, several factors affect the intention of travellers such as: brand name, price and quality of services, to evaluate hotel alternatives travellers seek information from several sources like travel agents, family and friends who are named word of mouth.

For the consumer, it would be easier to write on the web of negative comments than positive comments Cantallops and Salvi (2014).

2-3. E-reputation:

"E-reputation refers to all the information that can be found on a person on the Internet, whether via search engines, sites, blogs, social networks, forums, instant messaging or simple e-mails. This digital reputation is built individually and voluntarily, through the information we decide to publish online, but also indirectly, by what can be published by others about us. (Babkine and al 2011).

E-reputation has often been seen as an extension of online reputation, although it relates to "reputational elements that come from electronic contacts" (Chun and Davies, 2001).

E-reputation is multidimensional. Chun (2005) suggests three blocks that form the e-reputation mix: e-character (company personality); e-identity (site structure and ergonomics); and the physical experience (defines the online user experience).

2-4. Research hypothesis:

2-4-1. The influence of social media and e-word of mouth on the e-reputation:

Mack & al (2008) show that personal or corporate travel blogs are much less trustworthy than traditional word of mouth, assuming that the nature of the social relationship between viewers and message creators is a possible factor in explaining this difference: Reading blogs, so receiving word of mouth from strangers is less trustworthy than word of mouth from sources with which viewers have strong social connections, they identify differences between viewers: Those who actively publish blogs perceive the authority of personal and corporate blogs as similar to that

of traditional word of mouth, while viewers who do not publish blogs perceive less authoritative personal blogs than corporate blogs or traditional word of mouth.

2-4-2. The influence of social media on the credibility of information and the attitude of travellers:

Del Vecchio & al (2011), conclude that online comments are sources of electronic word of mouth and that negative online reviews can have a disastrous effect on the company's credibility.

(Chen and Corkindale, 2008) have studied the theory of motivations and behavior of social media use. The results showed that the perceived quality of the website influences attitudes towards the use of health websites when searching for information

The study by Luque-Martinez and al (2007) on the use of social media as a source of information is done to test the intention to use social media by tourists, the researchers conclude that social media is easy to use and that satisfaction plays a mediating role between attitude and intent to use by the model of technological acceptance (Davis1986).

Chatterjee(2001) proposes that the main dimensions of source credibility were accuracy, credibility, fairness, objectivity and persuasion.

Many agree that credibility influences brand perception (Grewal 1997). Social media is also used by major luxury brands to communicate with their customers because it helps to develop a positive attitude towards the brand (Jin, 2012).

So we propose the following hypothesis:

H1-the social media influences the e-reputation of establishments hotels

H1-1- social media impact the electronic word of mouth

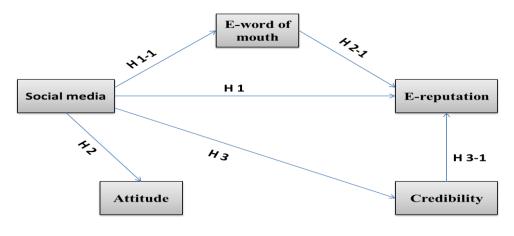
H1-2- the electronic word of mouth influences the e-reputation

H2- social media influences travellers' attitudes

H3- social media influences the credibility of information

H3-1- the credibility of information influences e-reputation

Figure1: conceptual model



Conceptual model

3- Research methodology and measurement scales:

3-1.Sample selection and data collection: We conducted an online survey, so we opted for a non-probabilistic sampling method to make it easier for us to collect information. We chose to investigate a set of hotels in the wilaya of Tlemcen. We attempted to interview any individual who knew the field of study and who could answer the questionnaire.

The data collection was carried out on a sample of 230 hotel guests located in the wilaya of Tlemcen. The survey was conducted between April and June 2019. We observe that the majority of our respondents are male, most are between 26 and 35 years old. 32.8% of respondents spend between 5 a.m. and 3 p.m. on social media per week. (Table.1)

Table1: Socio-demographic analysis of the sample

		Percentage
Gender	Man	53.7%
	Woman	39.3%

A	15.05	10 70/
Age	15-25	19.7%
	26-35	45.1%
	36-45	24.2%
	46-55	3.7%
	More than 55	1.6%
Number of hours spent on	less than 1h	4%
social media/week	1h-5h	10.2%
	5h-15h	32.8%
	15h-30h	31.3%
	More than 30h	18.4%

Source: made by the authors based on spss v23

3-2. cronbach alpha variables:

We note in the following table that the Cronbach alpha coefficients of each variable are of a good level so the scale has a good reliability of internal consistency. (0.889).

Table 2 :Cronbach Alpha

-	
Construct	Cronbach
	Alpha
Social media	0.845
E-wom	0.897
E-reputation	0.788
Credibility	0.834
Attitude	0.877
L'echelle	0.889
globale	

Source: spss v23

3-3.Measurement scales:

To measure perceived organizational e-reputation, we drew on the scale proposed by Rindova and al. (2005). It is composed of two dimensions: perceived quality and notoriety

 Table 3: E-reputation Measurement Scale

	▲
REP1	The hotel's website is enhanced by the quality of the images
REP2	Internet users assess the hotel's reputation thanks to the quality of
	its website
	satisfaction

REP3	The hotel's e-reputation is determined by the design of the site
	(logo, symbols
REP4	Guests share their e-experience on the quality of hotel services
REP5	The quality of the customer relationship is an element of customer
REP6	The number of subscribers on the hotel's Facebook page influences
	its perception of other online guests

Source: Rindova and al. (2005)

To measure electronic word of mouth we opted for the Bambauer-Sachse and Mangold scale (2011). It consists of 6 items.

Items	Significations
BAO1	I often read reviews of other guests online about hotels to find out
	which hotel has a good impression on them
BAO2	To be sure to choose the right hotel, I often read customer reviews
	online
BAO3	I often consult other guests' reviews online about hotels to help me
	choose my establishment
BAO4	I frequently collect hotel information from online customer
	reviews before choosing my property
BAO5	If I don't read the reviews online on this hotel I worry about my
	decision
BAO6	When I choose a hotel, the reviews of online guests give me
	confidence to book it

Table 4: E-Word of Mouth Scale

Source: (Bambauer-Sachse and Mangold ,2011)

Table 5: Perceived Credibility Measurement Scale

In your opinion, the information published by hotel establishments on social media is						
Unreliable	1	2	3	4	5	Reliable
Dishonest	1	2	3	4	5	Honest
Unsatisfactory	1	2	3	4	5	Satisfactory

Source: (Kirmani, 1997)

Bad	1	2	3	4	5	Good
Unpleasant	1	2	3	4	5	Nice
Negative		2	3	4	5	Positive
Senseless	1	2	3	4	5	Sense
Unfavorable	1	2	3	4	5	Favorable

Table 6: Attitude measurement scale

Source: Ayeh et al (2013)

Table 7: attendance scale for social media:

Items	Significations
Ms1	The use of social media allows me to complete my search for information more quickly
Ms2	Hotel establishments are visible on social media
Ms3	Social media is a source of information
Ms4	Hotels share content on social media
Ms5	Social media helps me search/communicate/interact
Ms6	The perceived credibility of the information refers to a good reputation of the hotel
Ms7	The user's reaction to the digital community influences the hotel's e-reputation
Ms8	Social media influences people's perception of hotels

Source: Castellano and Khelladi (2016)

3-4. Data analysis

In order to analyze the responses and data from the sample, we used the SPSS 23.0 for a descriptive analysis, and for the structural equation method we used SmartPLS software which aims to analyze and test our

structural model. The PLS method estimates a causal link between groups of variables. Its procedure validation and estimation includes two parts: first, the validation of the and secondly, the validation of the structural model.

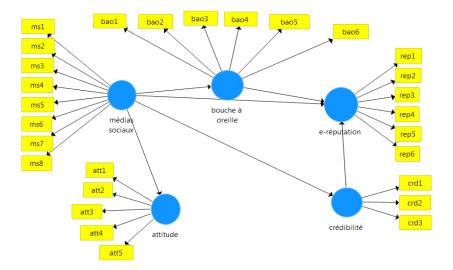
4-modeling and interpretation of the results:

The structural equation modeling is done in two stages:

- ✓ Assessment of measurements model,
- ✓ Assessment of structural model

To test our research hypothesis, we have developed a set of variables (Figure $N^{\circ}2$) that shows the path of different relationships.

Figure 2: basic model with PLS path modeling



Source: SmartPLS

4-1.validation model:

The purpose of converging validity is to verify that items from a scale intended to measure a particular construct are sufficiently correlated with each other, and with the built. Factor values greater than or equal to 0.7 reflect satisfactory convergent validity.

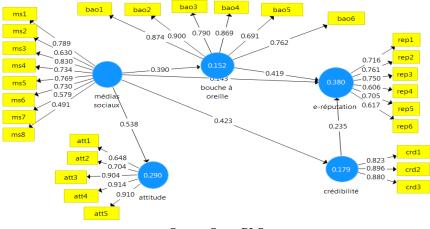
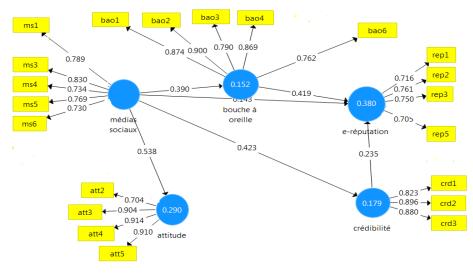


Figure3: estimating model parameters by the PLS approach



After measuring convergent validity by applying the PLS algorithm, we found that 07 items had values below 0.7 (Figure 3). What led us to remove them and retain 21items (Figure 4).

Figure4: model after correcting errors



Source: smartpls

4-1-1.convergente validity and composite reliability:

The factor values greater than or equal to 0.7 reflect satisfactory convergent validity.

We will therefore present in the table (8): the composite reliability (CR>0.7) and the average variance extracted (AVE>0.5).

Construct	Items	Loading	AVE	CR
Social media	Ms1	0.789	0.542	0.886
	Ms3	0.830		
	Ms4	0.734		
	Ms5	0.769		
	Ms6	0.730		
E-word of	BAO1	0.874	0.631	0.891
mouth	BAO2	0.900		
	BAO3	0.790		
	BAO4	0.869		
	BAO6	0.762		
E-reputation	Rep1	0.716	0511	0854
	Rep2	0.761		
	Rep3	0.750		
	Rep5	0.705		
Attitude	Att2	0.704	0623	0.838
	Att3	0.904		
	Att4	0.914		
	Att5	0.910		
Credibility	Crd1	0.823	0.712	0.831
	Crd2	0.896		
	Crd3	0.880		

Table 8: results of measurement model -convergent validity

Source: smarpls

In terms of composite reliability(CR), Nunnally and Bernstein (1994) recommending that the values of compound reliability should vary between 0.6-0.7 in an exploratory search and between 0.7-0.9 in advanced research, the results have values between **0.83-0.89** involving compliance with the threshold of 0.7.

According to (Fornell and Larcker, 1981; Kline, 2005; Hair et al., 2011) the average variance extracted (AVE) value must be greater than 0.5, so the results obtained indicate values between **0.5 - 0.72** (Table 8) convergent validity is therefore assured

This analysis allowed us to see that our variables show values (AVE, CR) above the thresholds chosen, demonstrating a good reliability of the measurements and therefore a satisfactory convergent validity.

4-1-2. Discriminant Validity:

Discriminant validity is intended to ensure that the measurement indicators of a building are weakly correlated with the measurement indicators of others built (Carricano and al. 2010). It can be evaluated in three ways; however, we choose the Fornell and Larcker test (1981). The root of AVE of each built must be superior to correlations with others Built. According to the table (9), the discriminating validity is assured.

	Attitude	E-WOM	Credibility	E-reputation	Social media
Attitude	0.790				
E-WOM	0.365	0.794			
Credibility	0.474	0.287	0.844		
E-reputation	0.312	0.442	0.410	0.715	
Social media	0.490	0.250	0.327	0.459	0.737
L	1	C	1	1	

Table 9 : Discriminant validity :

Source : smartpls

If a specific construct shows more correlated with another construct than with its own measures, this means, there is possibility that the two constructs share the same types of measures and they are not conceptually distinct (Chin, 2008).

The results reveal a good quality measure: the measurements are reliable and show an acceptable convergent validity. And the discriminating validity of the measure is acquired.

The quality of the measurement model now allows us to test the structural model.

4-2.validation of the structural model:

The second step in the SEM-PLS procedure is the evaluation of the model by examining the extent to which causal relationships are consistent with available data (Real et al., 2006)

According to this procedure, the central test for the evaluation of the model is the variance explained R^2 .

Falk and Miller (1992) suggest that a "good model" obtained by a PLS regression must have determination coefficients greater than 0.1. According to the table (10), the model accounts for 29% variance for attitude, 15% variance for electronic word of mouth, 18% variance for credibility and 38% variance for e-reputation.

Table 10: The varience explained and the relevant prediction test:

endogenous buildings	R ²	Q ²	
Attitude	0.29	0.28	
E-wom	0.15	0.14	
Credibility	0.18	0.17	
E-reputation	0.38	0.15	
G 1	•		

Source: smartpls

The second criterion for evaluating the model is to verify its ability to predict. To do this, we use the Stone and Geisser-Q2 test (1974). This test was developed to assess the predictive capacity of exogenous latent variables; Chin (1988) considers that Q2 values must be above zero for the model to have a predictive relevance. The table (10) indicates Q2 values are above zero, implying that the exogenous constructs have a predictive force.

4-3. hypothesis testing

To test our hypotheses, we followed the Bootstrapping procedure, the significance of the structural links that link latent variables will allow hypotheses to be validated or not. To do this, we need to examine the direction of the "Path coefficient" causal coefficients (original sample) We checked the results by the Bootstrap method illustrated in the table (11) and Figure 5

Table 11: The result of the hypothesis test: T-student and path coefficient

Research hypothesis	original	Average	Ecart-	T value	P value
	sample		type		
H1-social media \rightarrow E-reputation	0.368	0.366	0.072	5.077	0.000
H1-1-social media →E-wom	0.280	0.280	0.070	4.003	0.000
H1-2-E-wom→E-reputation	0.262	0.261	0.066	3.951	0.000
H2-social media →attitude	0.510	.0515	0.047	10.873	0.000
H3-social media→credibility	0.373	0.375	0.056	6.675	0.000
H3-1- credibility→e-reputation	0.198	0.200	0.064	3.084	0.002

Significant at $P^{**} = < 0.01$, $p^* < 0.05$, original sample = β .

Source:smartPLS

Social media have a positive and significant effect on e-reputation (H1) (β =0.368, *t*=5.077, ρ <0.001), and on electronic word of mouth (H 1-1) (β =0.280, *t*=4.003, ρ <0.001).

The results showed a positive effect of the social media (β =0.510, t=10.873,

 ρ <0.001) on the attitude of travelers, however e-word of mouth positively influences e-reputation (β =0.262, *t*=3.951, ρ <0.001).

The credibility of information is influenced by social media (β =0.373, *t*=6.675, ρ <0.001), and the latter also influences the e-reputation of hotel establishments (β =0198, *t*=3.084, ρ <0.05).

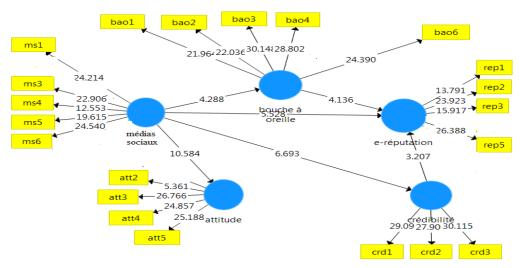


Figure 5: Measuring and structural model after the bootstrap method

Source: smartpls

5- Discussion of results

The purpose of this study was to highlight the links between social media and e-reputation in the top position, and to increase the importance of the credibility of information in the management of a good e-reputation.

The results of our research confirm the reliability and validity of the conceptual model of this research, and demonstrate that in the tourism sector, social media is positively linked to the attitude of travellers, and that the latter positively influences the electronic reputation,

In the same vein, we see a relationship between the credibility of information and e-reputation via social media. Therefore, we can conclude that social media is necessary to create a good reputation and that it influences a traveller's choice and decision.

6-Conclusion

Our research has allowed us to determine the existence of a significant relationship between social media and the e-reputation of the hotels of the wilaya of Tlemcen.

Based on our results, we recommend hotel managers provide enough more reliable and credible digital information to create effective platforms that encourage travellers to give opinions and share experiences on bookings or on the quality of hotel services.

E-reputation is a strategic issue for hotels, it is the main factor that affects the behaviors and decisions of travelers, so it must be well managed and communicated well in order to reduce or eliminate negative electronic word of mouth.

A good reputation promotes hotels to increase brand image and credibility of information

Bibliography:

- 1. AYEH J. K., AU N. ET LAW R., *«Do we believe in TripAdvisor ?. Examining credibility perceptions and online travelers attitude toward using user-generated content»*, Journal of travel research, 2013.b, 52(4), pp. 437-452.
- 2. BABKINE, ANTHONY, HAMDI, MOUNIRA, MOUMEN, NABILA, Bien gérer sa réputation sur Internet : e-réputation personnelle mode d'emploi, Paris, Edition Dunod, 2011, .p09.
- 3. BAMAUER-SACHSE S. & MANGOLD S., *«Brand equity dilution through negative online word-ofmouth communication »*, Journal of Retailing and Consumer Services, 2011, 18, pp. 38–45.
- 4. BUHALIS, D., & LAW, R., *«Progress in information technology and tourism management: 20 years on and 10 years after the Internetdthe state of eTourism research»*, Tourism Management, 2008, 29(4), PP-609–623.
- 5. CANTALLOPS. AS & F.SALVI « New consumer behavior: a review of research on wom and hotel», In.hosp. Manage, 2014, 36.PP. 41-51.
- 6. CARRINO M., PAUJOL F. ET BERTRANDIAS L., *Analyse de données*, Edition Pearson, 2éme édition, 2010.

- 7. CHATTERJEE, P., « *Online Review: Do Consumers Use Them?* », Advances in Consumer Research, 2001, PP.129-133.
- 8. CHEN Y.-H.H. ET CORKINDALE, D., « *Towards an understanding of the behavioral intention to use online news services: an exploratory study* Internet Research, 2008, 18(3), PP. 286 -288
- CHIN, W. W., PETERSON, R. A., BROWN, S. P., « Structural equation modeling in marketing: some practical reminders»., Journal of Marketing Theory and Practice », 2008, 16(4), PP.287–298.
- CHUN, R., « Corporate reputation, meaning and measurement », International Journal of Management Reviews, 2005.
- 11. CHUN, R., & DAVIES, G. «*E-reputation: The role of mission and vision statements in positioning Strategy* », The Journal of Brand Management, 2001, ,p.37.
- DAVIS F. D., A technology acceptance model for empirically testing new enduser information systems: theory and results, Thèse de doctorat. L'institue de Technologie du Massachusetts, Amherst, MA, 1986.
- 13. DEL V, PASQUALE, LAUBACHER, ROBERT, VALENTINA & PASSIANTE, «Managing corporate reputation in the blog sphére : The case of Dell computer», 2011, vol 14,n°2, PP 133-144.
- 14. FALK R. F. ET MILLER N. B., *A primer for soft modelling*, Akron, OH: University of Akron Press, 1992.
- FORNELL C. ET LARCKER D.F., « Evaluating structural equation models with unobservables and measurement error », Journal of Marketing Research, 1981,18, pp. 39-50
- 16. Geisser S., « A predictive approach to the random effect model », *Biometrika*, 1974, 61(1), 1974, PP.101-107.
- 17. GREWAL, D., S. KAVANOOR, E. F. FERN, C. COSTLEY, AND J. BARNES. « Comparative Versus Non-comparative Advertising: A Meta-Analysis », Journal of Marketing, 1997.
- HAIR J. F., RINGLE C. M. ET SARSTEDT M., « *PLS-SEM: Indeed a Silver Bullet* » Journal of Marketing Theory and Practice, 2011, 19 (2), PP. 51-139
- 19. HARISON R & THOMAS M. «*Identity in online communities, social networking site and language leaving*", International Journal of emerging technologies and society, 2009, PP 109-124.

- 20. HITWISE, EXPERIAN, Social networks now more popular than search engines in the UK, Experian Hitwise report, 2010.
- Jin S-A. A., « The potential of social media for luxury brand management », Marketing Intelligence & Planning, 30(7), 2012, PP. 687-699.
- 22. KAPLAN A.M & HEINLEIN M., «Users of the world unite, the challenges and opportunities of social Media», Business Horizons, 2010, (53), p. 61.
- 23. KIRMANI, A., *«Advertising repetition as a signal of quality: if it's advertised too much something must be wrong. »*, Journal of Advertising, , 1997, 26(3), pp.77-98.
- 24. KLINE R.B., *«Principles and Practice of Structural Equation Modeling*, 2nd ed.Guilford Press.New York, NY, 2005.
- LITVIN, S.W., GOLDSMITH, R.E., PAN, B., « *Electronic word-of-mouth in hospitality and tourism management* », Tourism Manage, 2008, 29,,PP. 458–468.
- 26. LUQUE-MARTINEZ T, CASTANEDA-GRACIA J A.FRIAS-JAMILENA D M.LEVIA F ET RODRIGUEZ MOLINA.M.A, «Derterminants of the use of the internet as a tourist information source. The service», Industie, 2007, Journal.27(7), pp.881-891.
- 27. MACK, R., BLOSE, J. AND PAN, B., *« Believe it or not: Credibility of blogs in tourism»*, Journal of Vacation Marketing, 2008, 14 (2), PP.133-144.
- NUNNALLY J. C. ET BERNSTEIN I. H., *Psychometric Theory*, 3ème Edition. New York: McGrawHill, 1994.
- REAL J. C., LEAL A. ET ROLDÁN J. L., «Information technology as a determinant of organizational learning and technological distinctive competencies », Industrial Marketing Management, 2006, 35(4), PP. 505–521.
- RINDOVA V.P., WILLAMSON I.O., PETKOVA A.P. AND SEVER J.M..« Beeing good or being known : an empirical examination of the dimensions, antecedents and consequences or organizational reputation », Academy of Management Journal, 2005, 48(6), pp.1033-1049.
- SEN, S., & LERMAN, D., «Why are you telling me this? An examination in to negative consumer reviews on the web», Journal of Interactive Marketing, 21(4), 2007, pp.76–94. http://dx.doi.org/10.1002/dir.20090
- 32. SMITH .M. C, « *The interaction of social media and the law and how to survive the social media revolution*», New Hampshire Bar Journal, 2012, PP. 24-39.

- 33. STONE M., « Cross-validatory choice and assessment of statistical predictions », Journal of the Royal Statistical Society, 1974, 36, PP. 111-147
- 34. www.trpadvisor.com
- 35. XIANG ZHENG, WLIRKE GRETZEL, « *Role of social media in online travel information search*», Tourisme management, 2010, P177-188. Accepted 24 february2009.