



Social media as a source for cities reputations: Evidence from top-ranked cities

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Abstract

The purpose of this paper is to investigate the relationship between popularity in a social media network and cities reputations. Additionally, city reputation is measured in this study by the Reprtrak score provided by the Reputation Institute and numbers of tourist. This study used a quantitative methodology. The sample was composed of the top thirty-seven ranked cities. Content analysis was used to examine the correlations between reputation ranking and social media metrics from Facebook, Twitter, YouTube, and Instagram. The results indicated that popularity in social media is clearly a major determinant of the reputation of cities but only from a tourism perspective.

Keywords: Social media, reputation, cities, influence.

Introduction

In the last decade, the use of social media has been the most important development of the internet information technology. Social media has changed the communication styles of billions of people and the interaction between cities, organisations, firms, and people has increased and became more participative and transparent in orientation (Wigmo & Wikström, 2010). Because of the rapid propagation of social media and the large number of users, more research focused on the consequences of social media on corporate reputation (Eccleston and Griseri, 2008; Hanna et al., 2011; Swani et al., 2014). However reputation is not linked to corporations but also to cities (Harmaakorpi, Kari, and Parjanen, 2008; Wæraas, 2015). Cities are in competition at regional, national and international levels (Anholt,2007) and in this competitive environment, reputation is a source of strategic competitive advantage (Harmaakorpi et al.,2008). Generally, the primary players in city reputation are local governments, residents, and firms (Cao, 2011). The traditional approaches to promote city reputation such as inter alia, TV media, press, tourism events, professional events or sports events have a unidirectional transformation of information that lacks efficient interaction and participation with all stakeholders of a city (firms, investors, tourist, inhabitants, residents, etc.). This article seeks to demonstrate if there is an impact of the social media on city reputation. In order to do so, the researchers' measured reputation by two indicators namely city Reprtrak score provided by the Reputation Institute and the number of tourists visiting a city.

This study was organized as follows: Firstly, it drew on the importance of reputation for cities. The researchers then reviewed empirical evidence on the influence of social media on cities



reputations. The third section focused on the methodology and the fourth provided the results. The study closes with a conclusion and implication of the study.

The importance of reputation for cities

The concept of reputation changes its meaning when viewed from different perspectives: image (in marketing), prestige (sociology), goodwill (accountancy) (Shenkar and Yuchtman-Yaar, 1997; Wartick, 2002). City reputation is a projection of corporate reputation. Fomburn (2002) defines corporate reputation as “the collective representation of a company’s past actions and future prospects that describes how key resource providers interpret a company’s initiatives and assess its ability to deliver valued outcomes”. Additionally, Waddock (2000) points out that reputation is the “organization’s perceived capacity to meet its stakeholders’ expectations”. From these definitions, (Delgado-García, et al., 2017) define city reputation as “...the aggregation of a single stakeholder’s perceptions of the capacity of the city to meet the demands and expectations of many city stakeholders”. From this perspective and according to transaction cost economics, there are several studies that indicate that reputation is a provider of the reductions of transactions costs with stakeholders, in the sense that it reduces the stakeholder’s efforts to gather information, making easier the willingness to contract and act as a guarantor of services.

For the various cities, there are multiple stakeholders with diverse needs and expectations (Kasabov and Sundaram, 2013). For its citizens, a city is a place to work, and which has facilities for education and healthcare. For firms and investors, a city is generally a place to do business and gain a competitive advantage and find the ‘good talent’ to employ. For visitors and tourists, it is a place of relaxation, culture, and entertainment (Van den Berg & Braun, 1999). Investors and tourists look for maximizing their satisfaction, and if a city doesn’t allow them to realize their expectations and demands, they will seek another city (Caremli and Kemmet, 2006). Individuals and firms are attracted by a city with a high reputation because it is perceived to offer better socio-economic services and offer greater job opportunities (Wæraas, 2015).

The influence of social media on cities reputation

Many studies have pointed out the benefits of the impact of social media on a firm’s reputation Eccleston and Griseri, 2008; Hanna et al., 2011; Swani et al., 2014). For example, for Dell the use of Twitter led to US\$1 million in additional revenue due to sales alerts (Kaplan and Haenlein, 2010). Ye et al. (2009), observed a significant relationship between online consumer reviews and business performance in the hotel industry as a result thereof. These studies lead us to pose the question as to ‘what is the influence of social media on cities reputations?’. Historically, cities dominated the release of information about themselves by using marketing campaigns and press releases to send information to their various stakeholders. Nowadays, a high number of cities have a social media presence.

Social media utilizes mobile and web-based technologies to virtually connect and engage with customers, thus creating interactive platforms in the digital sphere where participants can create, share, discuss and modify user-generated content (Kaplan and Haenlein, 2010; Miller and Skinner, 2015). Participants on social media are at the same time consumers and producers of information, and they can influence and change public opinions by a mere click on a computer, or a post, or rate a service (Hearn2010). Social media gives power to individuals to destroy or to build a digital reputation (Helm and Salminen, 2010). A city’s stae of ‘wellness’ and thus desirability, can be be successfully discernible with an effective presence on social media, even if there is an oversaturation of information and it is not easy to attract attention and cities can also involve their celebrities on social media platforms to raise tourism levels .



According to Kaplan and Haenlein (2010), social media can be blogs, content communities, social networking sites, virtual game worlds, and virtual social worlds. Social media utilisation becomes more easy and quick with their incorporation on the smartphones. The role of social media and their effectiveness for cities can be seen especially in an increase in awareness, engagement, liking/friends, trust and social validation (Pergolino, Rothman, Miller & Miller, 2012; Királ'ová, 2014). The social media can attract individuals and firms if there is a development of a strategic plan that integrates the demands and expectations of the stakeholders such as inter alia, health, education, security, infrastructure, jobs, competitive advantage).

Methodology

Study population

The researchers beginning point was the reputation city rankings established by the Reputation Institute (2016), which classified the 55 most reputable world cities, depending on:

- Advanced Economy: Business environment, financially stable and future growth, well-respected products and services, headquarters of leading companies technology.
- Effective Government: well-developed political and legal institutions, social, economic and environmental policies, adequate transport, communications and infrastructures, well-respected leaders and safety.
- Appealing Environment: beautiful city, appealing experiences and well-known personalities.

Of these 55 cities, the present study took only those which have a relatively strong score (from 70 to 80+), thus reducing the study sample to 37 cities (Table I). The time horizon of the observations was limited to one year -2016- due to the latest report provided by the Reputation Institute (See <https://www.reputationinstitute.com/>).

Research methodology

The third stage of research on intellectual capital was characterized by numerous qualitative studies (Dumay and Garanina, 2013; Dumay, 2013). In spite of the current focus on the third stage of research, there is still room for a quantitative approach to intellectual capital (Massaro et al., 2015). For that aspect, this research uses a quantitative approach in order to identify the relationship between popularity in social media and the reputation index, number of tourists and city prosperity index. The empirical analysis was based on information technology theory (Davis, 1989), that city government might choose social media as a useful tool for improving the organisation's performance and reputation is an expression of cities performances of their relational capital.

First hypothesis

The research question aimed to investigate whether social media correlate to cities reputation indices, and can be used as a tool for improving the score of the cities. According to Kietzmann et al. (2011), in a study of a social media it was found to "significantly impact a firm's reputation, sales and even survival"

H1. There is a positive correlation between popularity metrics in social media and city reputation index

A linear correlation analysis was made of the relationship between the city reputation index of 37 top ranked cities and the metrics obtained from four social media network platforms- Facebook, Twitter, YouTube, and Instagram was conducted. The selected metrics quantify popularity in social media are: fans on Facebook; Facebook's "people are talking about this" (talking about); the followers on Twitter; the number of tweets; the followers on Instagram; the

number of Instagram posts; the subscribers on YouTube; and the YouTube views (see Figure 1).

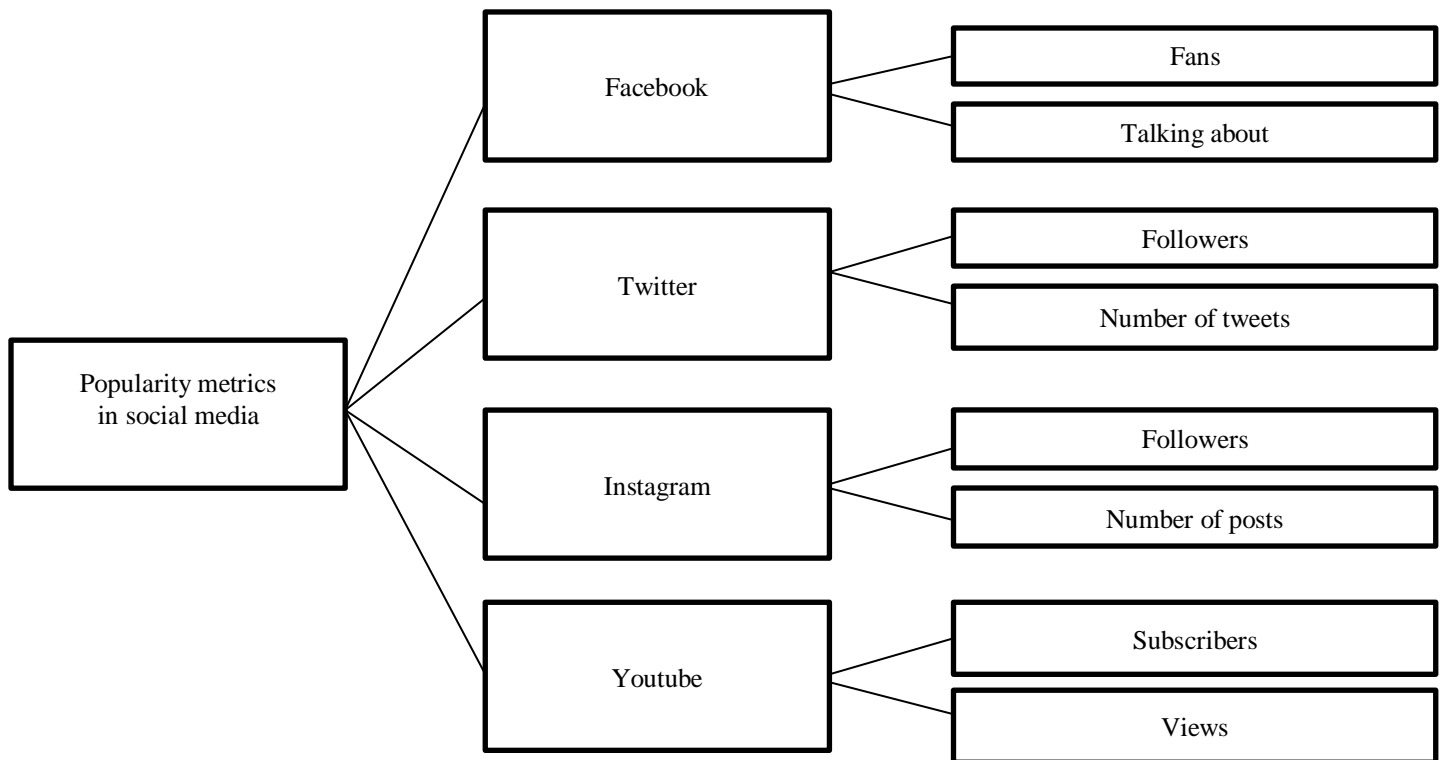


Figure 1: Social Media Metrics

Second hypothesis

The second hypothesis was based on relational capital. Following other studies the researchers demonstrate the benefit of social media and their effectiveness to destinations and this can be seen especially in an increase in brand awareness, brand engagement, word of mouth, friends/liking, trust and social validation (Pergolino, Rothman, Miller & Miller, 2012; Kiráľová, 2014).

H2. There is a positive correlation between popularity metrics in social media and number of tourists.

Data source:

Data were sourced from:

- (1) Sumorank analyser provided the statistics about historic of interactions and fans of Facebook pages.
- (2) The official pages of cities on Facebook, Twitter, Instagram and Youtube, accessed directly on the same date so as to gain information about the popularity of each city.
- (3) Official websites of cities.
- (4) Reports of: reputation institute (2016) for city reputation index; Euromonitor international (2016) for the number of tourists.

Rank of city	Score	Rank of city	Score	Rank of city	Score
1 Sydney	81.8	16 Frankfurt	76.9	31 Budapest	71.9



2 Vienna	81.7	17 Amsterdam	76.9	32 Orlando	70.9
3 Zurich	80.2	18 San Francisco	76.5	33 Manchester	70.5
4 Toronto	79.5	19 Tokyo	76.5	34 Athens	70.4
5 Stockholm	79.5	20 Dublin	76.3	35 Brussels	70.3
6 Edinburgh	78.9	21 Milan	76.1	36 Miami	70.1
7 Montreal	78.7	22 London	75.6	37 Washington DC	70.0
8 Rome	78.6	23 Paris	75.2		
9 Vancouver	78.4	24 Munich	74.7		
10 Copenhagen	78.4	25 Prague	74.4		
11 Helsinki	77.7	26 Seattle	74.2		
12 Venice	77.5	27 New York	73.5		
13 Melbourne	77.4	28 Singapore	73.5		
14 Barcelona	77.2	29 Berlin	72.9		
15 Madrid	76.9	30 Boston	72.3		

Table 1: cities reputation ranking

These research sources are secondary. In order to demonstrate the correlation between variables, we used IBM's SPSS statistics software.

Research findings

The findings are focused on the three prior hypotheses that examine the impact of presence on social media on cities reputation measured by the city reputation index and the number of tourists.

The results of the first hypothesis

In order to test our hypothesis, the researchers used the Pearson correlation for each metric. The findings are shown in Table 2. The signification of results is ($p\text{-value} < 0.05$), with a confidence level of 95% for all analyses. The analysis of the metrics for each social media is mentioned in the table below. Pearson's correlation coefficient (R) indicates a low positive linear correlation between city reputation index and social media networks, with a signification more than 0.05 for all metrics except followers on Instagram.

For the multiple regression analysis, the social media metrics can explain only 24.2% of the city's reputation ranking and 75.89% must be explained by others variables. The Anova analysis enhances the Pearson correlation and the multiple regression analysis, in the way that the statistical signification is 0.382 (more than 0.05).so we can reject this first hypothesis.

H1: There is no relation between popularity metrics in social media and city reputation index

City Reputation Index					
	R	R ²	R ² correct	Sig.	SD estimate error
Fans on Facebook	0.182	0.033	0.005	0.282	3.33873
Facebook "talking about"	0.261	0.068	0.042	0.119	3.27758
Followers on Twitter	0.021	0.000	-0.028	0.901	3.39454
Number of tweets	0.226	0.051	0.024	0.089	3.30727
Followers on Instagram	0.414	0.171	0.148	0.011	3.09056



Number of Instagram posts	0.259	0.067	0.04	0.122	3.27943
Subscribers on YouTube	0.021	0.000	-0.028	0.900	3.39541
Number of YouTube views	0.041	0.002	-0.027	0.809	3.39243

Table 2. Correlation between The city reputation index and popularity in social media

Model	R	R ²	R ² correct	SD estimate error
1	0.492	0.242	0.025	3.30521

Table 3. Model Summary

Model	Sum of squares	df	Mean Square	F	Sig
Regression	97.597	8	12.200	1.117	0.382
Residual	305.884	28	10.924		
Total	403.481	36			

Table 4. ANOVA

The results of the second hypothesis

As shown in table 5, the correlation between popularity on social media and number of tourists is positive and significant for YouTube network.

For the multiple regression analysis, popularity on social media can explain the increase of tourist's number in order to 64.3% with a very important contribution of YouTube subscribers (coefficient signification: 0.04)

These findings confirm the hypothesis H2: popularity in social media explains the increase of tourist's number.

Number of Tourists					
	R	R ²	R ² correct	Sig.	SD estimate error
Fans on Facebook	0.318	0.101	0.075	0.55	3668425.110
Facebook "talking about"	0.282	0.079	0.053	0.091	3712111.342
Followers on Twitter	0.444	0.197	0.174	0.06	3465892.380
Number of tweets	0.037	0.001	-0.027	0.827	3866008.395
Followers on Instagram	0.076	0.006	-0.023	0.655	3857477.988
Number of Instagram posts	0.072	0.005	-0.023	0.672	3858652.641
Subscribers on YouTube	0.729	0.532	0.518	0.000	2647418.088
Number of YouTube views	0.561	0.315	0.295	0.000	3202680.756

Table 5. Correlation between The Number of tourists and popularity in social media

Model	R	R ²	R ² correct	SD estimate error
1	0.802	0.643	0.541	2584409.52400

Table 6. Model Summary



Model	Sum of squares	df	Mean Square	F	Sig
Regression	336816166300000.000	8	42102020780000.000	6.303	0.000
Residual	187016832500000.000	28	6679172588000.000		
Total	523832998700000.000	36	42102020780000.000		

Table 7. ANOVA

Model	Standardized Coefficients Beta	t	Sig.
(Constant)		5.110	.000
fb_fans	.036	.119	.906
fb2_talking	.090	.411	.684
Tw_followers	.030	.119	.906
Tw2_nbre_tweets	.053	.460	.649
Yb_subs	1.481	3.123	.004
Yb_views	-.830	-1.870	.072
Inst_followers	-.228	-.897	.377
In2_posts	.095	.653	.519

Table 8. Coefficient

Conclusions

During the last couple of decades, researchers have been interested in the consequences of social media as a source of reputation. Research has traditionally focused on its effects in the context of firms, i.e., corporate reputation. This research extends the analysis to cities, i.e., city reputation. The researchers analyzed the influence the social media on the cities reputations. The analyses show an endogenous relationship between social media and city reputation only from the tourism perspective. Specifically, the results show that social media positively affects the increase in the tourist numbers to a destination city. The hypothesis about the social media popularity effect of city reputation measured by city Reprtrak score was not supported. This result may be explained by the methodology adopted by the Reputation Institute which integrates economic and social variables that have no relation to social media. The hypothesis about the impact of social media on reputation of a city measured by the number of tourists was accepted. This result may be explained by the importance of determinants of tourism destinations such as the sharing of photos and videos, and rating services, and clearly, social media provides all these functionalities.

Finally, the results are also interesting for local authorities and/or city planners, since they provide evidence that justifies increasing efforts to build their cities' reputation via the internet and other avenues. To consolidate the reputation of their cities, local authorities and/or city planners should be present on the social media and carefully analyze interactions that could improve their services and thus promote their cities reputations. They should also be careful not to build attributes that cannot satisfy tourist needs and wants, since city reputation, like corporate reputation, is a fragile asset.

The research had a number of limitations. Firstly, the study explored a new topic, so that results should be interpreted with caution. Moreover, the researchers tested their hypotheses through



a sample of 37 cities and for a period of only one year. Future research could adopt a longitudinal methodological approach. Finally, the researchers could have opted to use choose other measures to evaluate Cities reputations.

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