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Modelling the relationship between counter-knowledge and open-mindedness for policy development

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Counter-knowledge refers to flaws in citizens' mental models arising from utilization of rumours, inappropriate knowledge structures, outdated routines or procedures. When counter-knowledge is applied to civil servants, it may result in problems of efficiency, equity and motivation. This paper examines the relationship between counter-knowledge and open-mindedness to model a framework for improving city marketing and policy development. This study tested two measurement models. While the theoretical model represents the effect of counter-knowledge on city marketing and that the latter has a negative effect on open-mindedness, the alternative model involves that counter-knowledge has a positive indirect impact on open-mindedness. These relationships are examined through an empirical investigation of 203 Spanish city halls. The results show a potential positive indirect effect of counter-knowledge on open-mindedness through city marketing programmes. This paper clarifies the existing literature, which tries to contribute to the discussion of city marketing, and helps us to obtain meaning out of the relationship between counter-knowledge, city marketing and open-mindedness. Copyright © 2016 John Wiley & Sons, Ltd.

INTRODUCTION

Citizens and businesses demand better public services (McCunn & Gifford, 2014). They want more friendly civil servants who should always be approachable, willing to listen and willing to provide great advice when needed (Wiig, 2002). In local government, a large number of workers are knowledge workers. Drucker (1999) describes knowledge workers as those who think for a living, utilize their brains more than their hands to produce value and are carriers of organizational knowledge (Galbreath, 2002). In this vein, civil servants as knowledge workers play a key role within local administration, shaping and modelling local policy and delivering quality services to citizens (Wiig, 2002; Hájková & Hájek, 2014). Their responsibilities are considerable and include such areas as management of local affairs, administration of local services and external relations with citizens (Farrell, 1996; Van Ryzin, 2011).

The preceding considerations call on civil servants to be open-minded and willing to learn. Open-mindedness is receptiveness to new ideas (Sinkula, Baker, & Noordewier, 1997), and it is one of the most sought-after employee traits (Baker & Sinkula, 1999). Being open-minded attributes to a willingness to listen to other ideas and opinions and consider the possibility that you may change your own perspective (Sinkula *et al*., 1997). While open-mindedness may be considered as a way of acknowledging and correcting mistakes (Baker & Sinkula, 1999), being open-minded is an innovation that potentially helps civil servants to focus on the

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right things and, thus, find the best way to provide benefits for taxpayers with limited resources (Stoker, 2006; Baglieri & Consoli, 2009). This view supports public choice theorists who claim that by creating markets and giving consumers more choices, more efficient service delivery alternatives will be created (Savas, 2000; Baglieri & Consoli, 2009).

In this study, the term counter-knowledge refers to the flaws in citizens' mental models (e.g. misperceptions and misinformation) that arise from rumours or inappropriate knowledge structures that hinder citizen–government relations. Counter-knowledge may have many different senses and multiple meanings, but common elements include false or bogus rumours (Thompson, 2008). Extrapolating this concept to local administrations, counter-knowledge may lead individuals to develop world views that are distorted and at most partially true. For example, false or bogus rumours at a government level, such as untruths about policies and politicians, are just some of the examples that illustrate citizens' seemingly inexhaustible capacity to believe 'facts' that are nothing of the sort. In other words, counter-knowledge reflects a world that is only partially true (or totally incorrect), which might lead citizens and municipal managers to do the wrong things right or the right things wrong (Harvey & Lusch, 1999).

Although some research has stressed the need to consider ethical values that can establish trust and dependability between the people who live in the city (e.g. Okano & Samson, 2010; Zenker & Peterson, 2014), little is known about the way to overcome or counteract the presence of counter-knowledge. This study investigates how cities overcome counter-knowledge and/or replace this knowledge to stimulate open-mindedness in local governments, the relationship between public administrators and citizen is modelled to create a framework for enhanced public policy. The paper proposes that development of city promotion activities will facilitate knowledge updating, which in turn will evoke positive thoughts and actions in local citizens.

This paper focuses on city promotion activities (city marketing) that support knowledge development and encourage updating of knowledge through mutual interaction of its citizens (Sevin, 2014), as well as reciprocal action with tourists of other regions (Ergazakis, Metaxiotis, & Psarras, 2004). The degree to which municipal managers are receptive to new ideas strongly depend on factors such as the size of the city (Cook & Pandit, 2007), the city's amenities (Hájková & Hájek, 2014) and the nature of a city's marketing programme (Jae-Lee, 2007; Ward, 2000). Municipal managers using these promotion activities are able to accurately represent critical problems of the city and create new solutions, because they have in their minds the knowledge to instigate change (Ergazakis *et al.*, 2006). By adopting more complex communication to increase resident-city identification, numerous desirable outcomes such as favourable identity to a place, commitment and residential satisfaction become obvious (Zenker & Peterson, 2014).

To date, few (if any) empirical studies have analysed the concept of counter-knowledge and how it relates to city marketing and open-mindedness, particularly in relation to city halls. This paper is organized as follows. The next section outlines the theoretical framework. The Methodology section provides details of the empirical tool (survey) used to collect appropriate data to test the conceptual model presented in the Conceptual Framework section. Results of conceptual model testing are presented in the Results section. The Discussion section presents the findings and managerial implications followed by general conclusions and future considerations.

CONCEPTUAL FRAMEWORK

Civil servants have broad responsibilities in pursuit of public service goals. As Wiig (2002) noted, these responsibilities include collaborating with citizens with advanced state-of-the-art understanding. In doing so, it is important to have an open mind so that all opinions can be heard and understood. Opening up decision-making processes to external scrutiny or wider public involvement stems from the fact that scientific and technical evidence used to support particular decisions is often contested by different social groups, greeted by scepticism or antagonism (Gouldson, Lidskog, & Wester-Herber, 2007). Regarding this, the European Commission (2012) suggests that civil servants should be impartial, open-minded, guided by evidence and willing to hear different viewpoints. As described earlier, open-mindedness relates to the way in which people in general, and civil servants in particular, approach the views and knowledge of others (Tjosvold & Poon, 1998) and incorporate the beliefs that others should be free to express their views and that the value of others' knowledge should be likely to recognize and correct mistakes (Hernández *et al.*, 2010).

Kurland and Pelled (2000) claim 'We live and work in a world where we do not have all the truth

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and we share rumours, beliefs and assumptions about what we think is the truth'. Gossip, rumours and malicious lies proliferate in the organization-embedded learning process; hence, people can be manipulated to learn some wrong things (Cegarra, Wensley, & Eldridge, 2014). In this vein, Thompson (2008) defines counter-knowledge as 'misinformation packaged to look like fact' (p. 1). Thompson further proposes that counter-knowledge is based on gossip, rumours and malicious lies and may lead to inappropriate or outdated assumptions that, in turn, can lead to a contortion of knowledge between users (Markoczy, 1994; Darr, Argote, & Epple, 1995; Fernandez & Sune, 2009).

City marketing is a behaviour used to determine the needs of and influence the desires of a target audience, adjusting the delivering city's amenities to satisfy desires better than other tourist destinations, thereby creating jobs and wealth (Metaxas, 2002). City marketing may become operative with the help of several initiatives such as encouraging network formation, collective marketing and the provision of generic services (Cook & Pandit, 2007). A city marketing plan not only advertises the placement and recreational activities of a city to potential tourists and investors but also constitutes a tool (basic or complex) that supports the creation and storage of knowledge (Urban, 2002: Jae-Lee, 2007). For example, city marketing initiatives promote research and analysis of the strategies and practices to interconnect citizens, which create knowledge within the local network (Cegarra & Martinez, 2011).

Counter-knowledge in contrast to city promotion activities can be shown to be untrue with reference to known facts or shown to lack appropriate supporting evidence. Indeed, the very lack of supporting evidence for counter-knowledge may be used as evidence of the truth of a particular statement—for example, the statement that all politicians are corrupt (Thompson, 2008). In other words, existence of counter-knowledge will influence city promotion activities and, by extension, open-mindedness as citizens share inappropriate assumptions. Counter-knowledge can influence city promotion activities and open-mindedness because citizens and municipal managers perceive and follow knowledge structures that arise from rumours and partial truths, especially about civil servants.

Research hypotheses

Cities constitute a constructivist context to share and co-produce knowledge (Anderson *et al*., 2013). With respect to this issue, authors such as Yigitcanlar, O'Connor and Westerman (2008) have argued that the knowledge city concept is an umbrella metaphor for geographical entities, which focus on knowledge creation and covers other knowledge zones such as knowledge corridors. It should be noted here that all so-called knowledge generated within these corridors is not necessarily good knowledge (Cegarra *et al*., 2014). For example, inappropriate or false beliefs generated via unsupported belief, rumour and gossip are just some of the examples that illustrate citizens' propensity to create and accept partial truths and even outright falsehoods.

On the other hand, counter-knowledge can provoke doubts about the efficacy and appropriateness of some citizen's mental models and with respect to aspects of knowledge shared among the citizens and citizen environments. From this perspective, counter-knowledge could make known valuable information about how local administrations and civil servants perform their functions. In this vein, Ben-Ze'ev (1994) emphasizes the importance of gossip to allow people access to personal and intimate information about others'. This way, information that otherwise would be a secret can be used to comprehend their personal lives and other lives. Furthermore, counter-knowledge may reveal managerial problems that citizens may not want to express directly such as downed trees and limbs or eroded trail sections.

A possible explanation for the discrepancy in the results of counter-knowledge may be due to the fact that counter-knowledge is simultaneously a hindrance and a challenge stressor. On some occasions, counter-knowledge is an important trigger that contributes to a process of destabilization of the citizen environment. This process of destabilization and subsequent reconsolidation may be a means by which established knowledge may be updated or modified. When citizens and municipal managers participate in cultural and social events, as well as positive impressions, counter-knowledge may have a positive effect on these initiatives, inducing incorrect assumptions about how to meet population needs and how to improve citizen–government relationships. As Anderson *et al*. (2013) noted, it is not sufficient to simply generate knowledge; for knowledge to have any value, it needs to be actively communicated, or 'brokered', and city marketing plans achieved this.

The preceding considerations also imply that in practice, counter-knowledge can be a trigger for trust that helps public administrators from reporting and dealing with citizens' queries. From the citizen's point of view, trust is the confidence citizens have in

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the content of city marketing programmes available to them, as well as their reliance on these programmes to help them address problems and correct mistakes. That might mean that whether face-to-face or virtual, rumours about the civil servants in a city can support the free flow of knowledge and ideas if they are perceived as something that truly represents the core values of civil servants (Ben-Ze'ev, 1994; Cegarra, Eldridge, & Wensley, 2014). Therefore, this paper proposes the following:

Hypothesis 1: *Counter-knowledge has a positive effect on city marketing.*

On other occasions, counter-knowledge can be negatively associated with citizens' attitudes towards the public sector by (1) narrowing the cognitive process of citizens and (2) hindering their ability to plan, reason and understand the situation effectively. As Inn (2004) highlights, negative impressions that arise as a consequence of current urban challenges are critically related to the living conditions of the city, and when the rumour of negative mental pictures extends out of the sphere of the city hall, they become a social representation of the city. For instance, once people perceive corruption within a local government, the overall impression of the city is reduced (letting the city down) in different forms, for example, the appeal of the negative image of the city for citizens or for potential tourists. In this regard, the potentially negative impacts of flawed mental models in use on decision-making in terms of biases in recall, belief systems and blind spots have been discussed by several authors (e.g. Perrow, 1984; Toft & Reynolds, 1994; Reason, 1990, 1997; Chapman & Ferfolja, 2001). From this perspective, counter-knowledge can provoke doubts about the efficacy and appropriateness of some council workers' mental models and with respect to aspects of knowledge shared among the council workers and connectivity.

It seems logical to think that the more an individual begins questioning malicious rumours and partial truths, the more the individual begins noticing things that would be wise to simply not hear or pay attention to. In addition, employees or municipal managers may draw inappropriate or incorrect inferences from gossip, rumours and malicious lies (Chapman & Ferfolja, 2001; Donovan, 2007); therefore, learning may result in incorrect insights and might actually reduce the quality of citizen–government relations (Donovan, 2007). As Sunstein and Vermeule (2009) highlight, governments that instil values of corporate governance such as fairness, transparency, open communication and trust can reduce the effects of local rumours, mistrust of citizens and scepticism of staff members' competence. These considerations lead to the argument that a city's weaknesses can be related to the city's counter-knowledge. This consideration frames the second hypothesis of the work:

Hypothesis 2: *Counter-knowledge has a negative effect on open-mindedness.*

Building infrastructure for open-mindedness within local governments requires an adaptable plan to provide desired connectivity (Wiig, 2002). In so doing, different knowledge structures may be implemented to support effective open-mindedness. For instance, Ergazakis *et al.* (2004) write that cities have to support planned marketing initiatives, which may help civil servants understand the need to help citizens when they need someone to listen to and understand them. This means that promotional initiatives that connect city halls with their citizens are corridors for the flow of information resources (Nahapiet & Ghoshal, 1998) and determine the structures for knowledge transfer (accessibility). In other words, through city promotion initiatives, local administrators create a context where council workers are not only able to be more transparent to citizens, giving access to a greater range of information collected and generated by city halls, but also to help civil servants obtain flawless information, in some circumstances, a more accessible approach of accomplishing an amenity or solving an inquiry or problem that was unsolved in the past (Connell, Klein, & Powell, 2003). Therefore, the paper proposes the following:

Hypothesis 3: *City marketing has a positive effect on open-mindedness.*

Figure 1 depicts the conceptual model. The upper path of the model represents the effect of counter-knowledge on city marketing and that the latter has a negative effect on open-mindedness. The lower paths consider that counter-knowledge has a positive impact on open-mindedness. Thus, this paper also investigates whether a positive indirect ef-

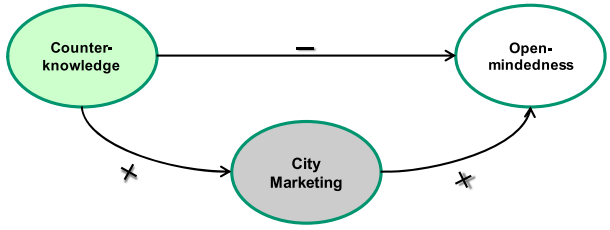

Figure 1 Our meditational model of the effects of counter-knowledge

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fect of counter-knowledge on open-mindedness through the city marketing exists.

METHODOLOGY

The preceding hypotheses were tested by employing data from the Spanish local government. This decision was made because in the case of local governments in Spain, careful attention to the nature of city marketing programmes has been paid in the last few years (De-Miguel-Molina, 2010). The local government is the closest level of authority to people, and it is mostly interested in the everyday lives of inhabitants of a city. In Spain, there are 17 autonomous communities. These autonomous communities are divided into 50 provinces, which in turn are divided into 8108 municipalities (municipios), the governance of the municipalities belongs to the City Council.

The City Council is a group of delegates from local parties of a city as an advisory whose members are elected by popular vote and equal in power and authority. Counter-knowledge plays a central role also in so-called municipios, where both the City Council members and citizens form a community with common interests living in a particular city and, in many occasions, they are being driven by gossip, exaggerations and partial truths. Under this framework, local civil servants have an opportunity to counteract the negative effects of counter-knowledge and combine depreciated knowledge with new knowledge updated and created by city marketing structures. These structures can give public administrators more information about what is being said inside the city and put them in a position where they can make better decisions for community development.

Data collection

A list of municipal governments provided by the Spanish County Councils was used as an initial sampling frame. This list was combined with a similar list provided by the municipal website database http://www.lawebmunicipal.com/. As a result, 2299 municipal governments with population over 2000 inhabitants—based on the National Statistics Institute—were considered as an initial sample for the research (INI, 2010). Respondents were invited previously to participate in the study. They were informed by email of the study goals and were also assured of its confidential character and the anonymous treatment of the data to be obtained through the study.

From a sample of 2299 municipal governments, the total number of completed answers was 203. The study was conducted between February and March 2014 with a response rate of 9.04% and a factor of error of 6.56% for $p = q = 50\%$ and a reliability level of 95%. Respondents represent all geographic regions of Spain, and comparing municipal governments that had answered and municipal governments that had not answered regarding the number of inhabitants reveals no significant difference between the two. Therefore, non-response bias may not be a problem in this study (Armstrong & Overton, 1977).

Measures

A questionnaire survey was developed as the instrument for data collection. All items were measured using a 7-point Likert-type scale with anchors from 'strongly disagree' to 'strongly agree'. The survey asks 12 questions to civil servants who managed each city's official e-government website and is administered online (refer to Appendix 1 for a list of the questionnaire items).

Four items made up the scale for 'counter-knowledge'. Previous studies by Szvetelszky (2003) and Chapman and Ferfolja (2001) provide guidance on how to develop items to measure counter-knowledge. Among the indicators of counter-knowledge, factors relating to lack of congruity between the intended communication and its recipient (e.g. misunderstandings) are most often used (Thompson, 2008). Questions focusing on gossip that thrives on lies, exaggeration and partial truths (Chapman & Ferfolja, 2001) were also adopted.

Literature review contributes to the 'city marketing'-scale construction, identifying appropriate items for this construct. Kavaratzis and Ashworth (2007) provide guidance for item development to measure city marketing initiatives. Among city marketing indicators, factors relating to the vision of the city, government services and infrastructures are the most frequent items (Kavaratzis & Ashworth, 2007). Four items construct the scale for city marketing initiatives, these questions focusing on accesses to clean outdoor recreational areas, public transport, citizens' grants, cultural events and festivals (Kavaratzis, 2004a, 2004b).

Four items construct the scale for open-mindedness. Item measurement uses a 7-point Likert scale from Baker and Sinkula (1999). These items describe how local governments face up to mistakes and learn from them and how they

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recognize the value of learning new skills and the time needed to learn.

Data analysis

With regard to the measurement model, descriptive statistics for the individual scaled items are assessed (Appendix 2). To analyse the non-normality of the data, the normalized multivariate kurtosis and Mardia's coefficient (MacCallum, Roznowski & Necowitz, 1992; Lei & Lomax, 2005) were adopted. Since the normalized multivariate kurtosis was 12.41 and Mardia's coefficient was 31.95 (Mardia, 1970), the Satorra–Bentler adjustment to χ^2 values, fit indices and standard errors were employed (Satorra & Bentler, 1994).

Based on the aforementioned results, this study conducts a confirmatory factor analysis (CFA) using the covariance matrix as input via the EQS 6.1 robust maximum-likelihood method (Bentler, 1988; Shah & Goldstein, 2006). From result examination in Table 1, data support the CFA. For all measures, Bagozzi and Yi's (1988) composite reliability index and Fornell and Larcker's (1981) average variance extracted index are higher than the evaluation criteria of 0.7 for composite reliability and 0.5 for the average variance extracted.

A comparison of the square root of the average variance extracted (i.e. Table 2 diagonals) with the correlations among constructs (i.e. the lower triangle of the matrix in Table 2) determines discriminant validity. On average, each construct has a stronger relationship with its own measures than with others' (Fornell & Larcker, 1981). The construct's correlation matrix means and standard deviations are shown in Table 2.

RESULTS

Following the recommendations of Anderson and Gerbing (1988), a more restricted model was tested to see if it led to a worsening of the fit using sequential chi-squared difference tests. Figure 2 summarizes the structural models resulting from the EQS analysis and shows the explained variance of endogenous variables (R2) and the standardized path coefficients. Even though the fully mediated model resulted in an acceptable fit (Figure 2), the incremental chi-squared statistic indicated that the fit worsened significantly in comparison with the partially mediated model, $\Delta\chi^2_{(1)} = 8.53$, $p < 0.01$. In addition, the partially mediated model explained more variance in open-mindedness, and the goodness-of-fit indices show that this model has more adequate fit indices (χ^2/df, comparative fit index, incremental fit index and root mean square error of approximation) than the fully mediated model has, indicating that one model represents a significant parsimony gain over another (Hair *et al.*, 1998).

The preceding discussion essentially supports the partially mediated model. Figure 2 also summarizes structural competing links of the partially mediated model, which do not support H_1 and strongly support for H_2 and H_3. Firstly, it was

Table 1 Construct summary: confirmatory factor analysis and scale reliability

Constructs	Items	Standardized loading	*T*-value	Reliability	
				SCR[a]	AVE[b]
Counter-knowledge	CK_1	0.89	16.15	0.93	
	CK_2	0.94	17.75		0.77
	CK_3	0.86	15.19		
	CK_4	0.65	10.16		
City marketing	CP_1	0.79	11.54	0.91	
	CP_2	0.59	8.26		0.73
	CP_3	0.63	8.82		
	CP_4	0.64	9.04		
Open-mindedness	OM_1	0.87	14.98	0.84	
	OM_2	0.88	15.48		0.57
	OM_3	0.78	12.76		
	OM_4	0.67	10.45		

Notes: The fit statistics for the measurement model were as follows: Satorra–Bentler $\chi^2_{(51)} = 118.21$; $\chi^2/df = 2.31$; comparative fit index = 0.94; incremental fit index = 0.94; root mean square error of approximation = 0.062. The asymptotic covariance matrices were generated to obtain the scaled chi-squared (Satorra and Bentler, 1988) and robust estimation of standard errors. SCR, scale composite reliability; AVE, average variance extracted. [a]SCR of $p_c = (\Sigma\lambda_i)^2\mathrm{var}(\xi)/[(\Sigma\lambda_i)^2\mathrm{var}(\xi) + \Sigma\theta_{ii}]$. [b]AVE of $p_c = [\Sigma\lambda i2\mathrm{var}(\xi)]/[\Sigma\lambda i2\mathrm{var}(\xi) + \Sigma\theta ii]$.

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Table 2 Descriptive statistics and discriminant validity

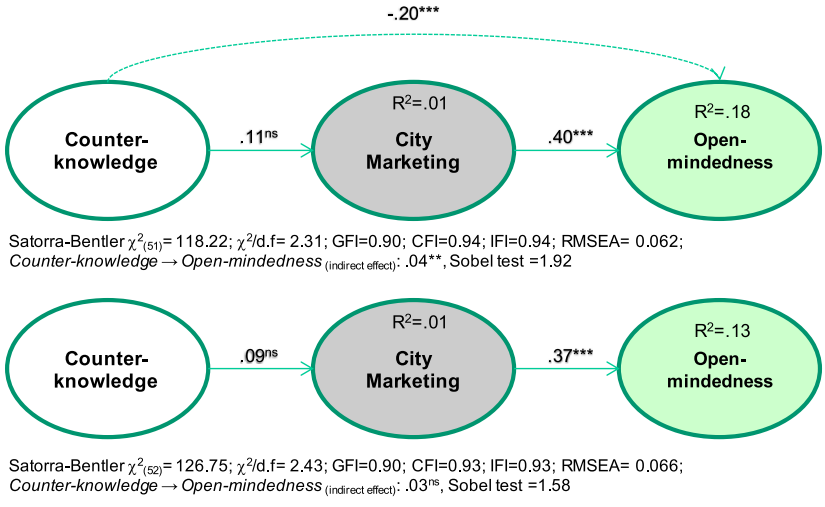
	μ	σ	AVE	CR	1	2	3
1. Counter-knowledge	4.80	1.55	0.77	0.90	**0.87**		
2. City marketing	4.95	1.24	0.73	0.88	0.12	**0.85**	
4. Open-mindedness	4.17	1.41	0.57	0.76	−0.17	0.28	**0.75**

Notes: Mean (μ); standard deviation (σ); the bold numbers on the diagonal are the square root of the AVE; shared variances are given in the lower triangle of the matrix. AVE, average variance extracted; CR, composite reliability.

determined that a positive relationship exists between city marketing and open-mindedness ($\gamma = 0.40$, $p < 0.01$). Secondly, it was determined that the influence of counter-knowledge on open-mindedness is fully verified, ($\beta = -0.20$, $p < 0.01$). Thirdly, it was determined that the relationship between counter-knowledge and city marketing becomes statistically insignificant in the partial mediation model ($\gamma = 0.11$, not significant).

Following the recommendations of MacKinnon *et al*. (1995), we adopted Sobel's test to analyse the indirect effect of independent variables on the dependent variable by way of the mediator. Sobel's test, suggested by Sobel (1982), performs best with sample sizes greater than 50 or so (Preacher & Leonardelli, 2003). The test was significant at the $p < 0.05$ level ($\kappa = 0.04$, Sobel test statistic = 1.92); thus, counter-knowledge has a significant positive impact on open-mildness through city marketing. Therefore, suppressor effects are present (MacKinnon, Krull & Lockwood, 2000). The direct effect of counter-knowledge on city marketing is positive, as is the direct effect of city marketing on open-mindedness. However, the positive indirect effect of counter-knowledge on open-mindedness is more than offset by the negative direct effect.

On the basis of the preceding findings, a conclusion is reached that the best-supported model is technically a suppressor model (MacKinnon *et al*., 2000). It is important to note here that suppressor models share important similarities with partial mediation models (MacKinnon *et al*., 2000). In particular and as in a partial mediation model, the independent variable influences the dependent variable directly and indirectly via a third variable in a suppressor model. Because of



Notes:
***p <0.01, **p 0<.05, ns=not significant;
Sobel Test Statistic computed via
http://www.danielsoper.com/statcalc3/calc.aspx?id=31 (accessed June 17, 2014)

Figure 2 Structural equation models of the effects of counter-knowledge. Notes: ***$p < 0.01$, **$p < 0.05$, ns = not significant. Sobel test statistic computed via http://www.danielsoper.com/statcalc3/calc.aspx?id=31 (accessed 17 June 2014). CFI, comparative fit index; GFI, goodness of fit; IFI, incremental fit index; RMSEA, root mean square error of approximation

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opposing effects, the bivariate correlation between the independent and dependent variables can be small or even zero. For suppressor models, the correlation between the independent and dependent variables does not have to be statistically significant (MacKinnon *et al*., 2000; Shrout & Bolger, 2002).

DISCUSSION

Spanish local government leaders face a number of challenges, including limited funding, personal biases, stereotypes and much misunderstanding and misinformation surrounding them. Regarding this, there has been an increase in the number of people spreading misleading information or rumours (i.e. counter-knowledge) about local governments thanks to digital social media platforms and high-tech gadgets like tablets and smartphones (Hirose & Sonehara, 2008). Thus, as Koller and Alpar (2008) noted, wikis, blogs and Web 2.0 technologies are nowhere as reliable as print journalism. There are checks and balances for print journalists, and newspapers are far more likely than Web 2.0 technologies to be prosecuted if they get the facts wrong.

This paper explores the relationship between counter-knowledge, city marketing programmes and open-mindedness for people who work at city halls. The results of testing the models shown in Figure 2 present three findings. Firstly, the better fit of the partially mediated model is an important result because it proves that counter-knowledge is a variable that will lead to negative and positive effects on open-mindedness. Secondly, our data revealed that counter-knowledge contributes to a process of hindering of open-mindedness among civil servants; these results are consistent with researchers who assert that, when left uncontrolled, counter-knowledge is likely to result in heightened apprehension and negative affect manifesting in many forms (e.g. disseminating misleading information that create public panic), thereby disrupting normal daily activities (e.g. Thompson, 2008).

Thirdly, the results show a potential positive indirect effect of counter-knowledge on open-mindedness through city marketing programmes. Although these results differ from some published studies, they are consistent with those who assert that gossip is useful for revealing personal or sensational facts about others (Yerkovich, 1977), as well as for entertainment or social influence (Baumeister, Zhang & Vohs, 2004). A possible explanation would be the fact that the existence of counter-knowledge facilitates new strategies and practical approaches towards citizen orientation through the knowledge acquired from city marketing programmes. It enables civil servants to be sensitive to acknowledging and correcting mistakes and to allow for the development of behaviours oriented to the development of successful innovations based on updated or modified knowledge.

This paper also presents the results of empirically testing the proposed hypotheses. While the relationship between counter-knowledge and city marketing programmes becomes statistically insignificant, the results show a significant relationship between counter-knowledge and open-mindedness, which means that counter-knowledge creates a hostile environment and undermines the trust local government leaders want to establish, which in turn could lead us to think that most but not all counter-knowledge is channelled through the city's marketing programme.

With regard to H_1 (*counter-knowledge → city marketing*), the results did not indicate any significant effects of counter-knowledge on city marketing; although there was a positive correlation in Figure 2, it was not significant. This confirms the position adopted by Cegarra *et al*. (2014) when they argued that all counter-knowledge generated via rumour, gossip, exaggeration and the acceptance of partial truths is not necessarily bad. Ben-Ze'ev (1994) supports this opinion by suggesting the idea of using gossip as a source of private information to comprehend their personal lives and other lives. From this perspective, counter-knowledge could reveal potentially useful information about how citizens operate and use marketing programmes. Surprisingly counter-knowledge had no significant effect on city marketing, and consequently, the relationship between counter-knowledge and city marketing needs to be investigated further.

With regard to H_2 (*counter-knowledge → open-mindedness*), results support that counter-knowledge often leads to lack of motivation (or incentives) to undertake open-mindedness (e.g. project reviews). Thus, in bringing together municipal managers, civil servants and citizens, it is hoped that, through mutual relationships, community members have access to rumours, gossip and erroneous or inaccurate information (i.e. what is being said). When this happens, counter-knowledge results in misunderstandings that quickly lead to conflict, and sometimes to such strained relationships that some employees can no longer work together effectively. Therefore, municipal managers need to overcome erroneous or inaccurate information to maximize the impacts of city marketing on open-mindedness; only by

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overcoming these barriers and creating equal access and opportunities for all staff members will managers not find themselves frustrated and spending an enormous amount of time trying to figure out who said what to whom. For local government leaders, this could mean that city marketing programmes may be seen as a strategic response to a changing misinformation or rumours, and a means for local governments to improve their access to resources and decision-making processes (Nahapiet & Ghoshal, 1998).

With regard to H_3 (*city marketing → open-mindedness*), the results support the position that city promotion initiatives drives the efficiency of knowledge creation. A possible explanation for these findings relies on the fact that a city promotion programme is a practical tool that will help civil servants better understand and utilize city services while reinforcing the city brand (Inn, 2004; Cegarra & Martinez, 2011; Ward, 2000). For example, the European Night of Museums, which is held every year on the Saturday closest to the International Museum Day, may help with the enjoyment of both visitors from around the world and municipal managers, which in turn potentially has the benefit of allowing civil servants to listen and hear the demands of citizens. This also corroborates the proposals of Kavaratzis (2004a, 2004b) that city promotion programmes may be essential to take information and convert it to something useful (e.g. innovative amenities capable of being put to use). Thus, city promotion initiatives allow mutual relationships to become less firmly set in people's mind, potentially helping and supporting civil servants in their efforts to become more imaginative (Sinkula *et al*., 1997; Hurley & Hult, 1998).

CONCLUSION

Open-mindedness is indispensable to listening to other ideas and opinions and correcting mistakes. This paper aims to clarify the existing literature, which tries to contribute to the discussion of city marketing, and helps us to obtain meaning out of the relationship between counter-knowledge, city marketing and open-mindedness. The proposed method involves the identification and testing of two structural models. Although the fully mediated model results in an acceptable fit, the partially mediated model has more adequate fit indices. This means that the use of city marketing programmes for municipal governments enables civil servants to identify a little part of, but not all, counter-knowledge. A possible explanation for these findings may relate to the fact that although the majority of municipal governments have marketing infrastructure such as city websites and citizen consensus conferences to collect public opinions from citizens, these programmes alone are not sufficient (Moon & Norris, 2005). By these programmes, municipal governments can channel a little part of, but not all, counter-knowledge. As Wiig (2002) noted, market mechanisms may too often lack in-depth dialogue and may be inefficient to correct wrongful understandings that many citizens have of proposed actions.

A practical implication for municipal managers is to carry out informal actions that allow them to channel counter-knowledge. The importance of informal face-to-face exchange between civil servants and citizens is extremely high as it provides opportunities for the development of trust between community members, providing a corridor for different stakeholders to gain the right knowledge. Perhaps, in Spain where there are so many Tapas Bars and canteens, local government should establish these places as meeting points to achieve good solutions. For example, Tapas Bars can promote trust and informality through strong interpersonal relationships that bring beneficial goals up to date in pursuit of common interests.

One drawback to this study is that only a causal photograph of a dynamic process was made. In this vein, researchers need to be careful about the unstable time in which our data were gathered. In times of great commotion and agitation, such as the Spanish local government sector during the period under examination, undesirable city marketing programmes might produce more gossip and rumours for municipal managers than in stable times. The overcoming of such a limitation can only be verified by longitudinal research. Moreover, only subjective measures were included in the analyses. Therefore, objective measures such as number of tourists, money spent by tourists or the average time spent in each visit should be added to improve the reliability of the study. In addition, the results of this study might not be generalizable to other civil servants as our findings might reflect the skewed attributes of people in charge of the city's official e-government websites. Additional research is needed to investigate the *counter-knowledge* of other knowers within a city hall. Specifically, sampling multiple city council members or municipal managers will be helpful to test the measuring procedure and to confirm the validity of this study.

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APPENDIX 1 QUESTIONNAIRE ITEMS

Counter-knowledge: with respect to your current position indicate the degree of agreement or disagreement (1 = high disagreement and 7 = high agreement):

CK_1: There is gossip that thrives on lies, exaggerations and partial truths
CK_2: There are malicious rumours which support mistrust
CK_3: There are malicious stories about staff that often lead to misunderstandings
CK_4: Organizational members share unverified information using technology tools
Source: Chapman and Ferfolja (2001)

City marketing: with respect to your City indicate the degree of agreement or disagreement (1 = high disagreement and 7 = high agreement):

CP_1: The city provides its citizens access to clean outdoor recreational areas
CP_2: The city provides its citizens access to an adequate public transport
CP_3: The city provides its citizens grants to help them thrive
CP_4: The city organizes many cultural events and festivals
Source: Kavaratzis (2004a, 2004b)

Open-mindedness: with respect to your council workers at your local government indicate the degree of agreement or disagreement (1 = high disagreement and 7 = high agreement):

OM_1: Council workers at your local government seem to be open to see mistakes and learn from them
OM_2: Council workers at your local government show sincere interest in learning skills which will be required in the future
OM_3: Council workers at your local government are able to learn each other
OM_4: Council workers at your local government have time to learn
Source: Baker and Sinkula (1999)

APPENDIX 2 DESCRIPTIVE STATISTICS FOR THE INDIVIDUAL SCALED ITEMS

	μ	σ	CK_1	CK_2	CK_3	CK_4	CP_1	CP_2	CP_3	CP_4	OM_1	OM_2	OM_3	OM_4
CK_1 (range 1–7)	5.03	1.72	1.00											
CK_2 (range 1–7)	5.11	1.66	0.86	1.00										
CK_3 (range 1–7)	4.67	1.77	0.75	0.82	1.00									
CK_4 (range 1–7)	4.39	1.89	0.57	0.58	0.68	1.00								
CP_1 (range 1–7)	5.47	1.41	0.09	0.07	0.08	0.18	1.00							
CP_2 (range 1–7)	4.33	1.89	−0.02	−0.05	−0.03	0.14	0.50	1.00						
CP_3 (range 1–7)	4.23	1.82	0.06	0.07	0.06	0.13	0.43	0.47	1.00					
CP_4 (range 1–7)	5.81	1.39	0.10	0.11	0.14	0.22	0.53	0.28	0.48	1.00				
OM_1 (range 1–7)	3.94	1.71	−0.11	−0.10	−0.15	−0.12	0.24	0.13	0.17	0.18	1.00			
OM_2 (range 1–7)	3.96	1.66	−0.12	−0.11	−0.14	−0.06	0.37	0.18	0.17	0.17	0.79	1.00		
OM_3 (range 1–7)	4.55	1.64	−0.12	−0.13	−0.18	−0.13	0.31	0.13	0.09	0.11	0.67	0.67	1.00	
OM_4 (range 1–7)	4.23	1.60	−0.18	−0.13	−0.16	−0.15	0.32	0.13	0.16	0.18	0.55	0.57	0.64	1.00

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