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HOW MACEDONIAN MUNICIPALITIES ARE USING SOCIAL MEDIA FOR PUBLIC COMMUNICATION

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Abstract

The purpose of this paper is to investigate the way Macedonian municipalities use social media platforms for public communication and participation. Data have been collected through the process of observation and visual inspection of local government's presence on three social media platforms: Facebook, Twitter and YouTube. The results from the data analysis confirmed that municipalities in Macedonia are mostly active on Facebook, followed by their activity on Twitter and YouTube. The visual inspection of the social media profiles of municipalities showed that citizens are not sufficiently engaged in public participation, especially when measures for commitment and virality are taken into consideration. The one way ANOVA confirmed significant relationship between the size of the municipality in terms of population and the level of social media activity measured as number of posts, tweets and video uploads. Therefore in the larger municipalities with greater population, which usually are more urban communities, local governments are more active on social media platforms. The study revealed that local governments need to develop and adopt well a managed social media strategy. The lack of integration of communication among different social media platforms and with the information posted on the municipality official website is evident. Most of the municipalities need to adopt social media strategy for public communication and to improve management of social media activity, in order to improve the public interaction with the citizens.

Keywords: public communication, engagement, social media, municipality, web 2.0

JEL classification: M1, M15, M21

Introduction

Social media became essential part of the digital world in which we live today. They offer vast communication opportunities to everyone: to businesses, central and local governments and to citizens. On social media platforms people usually share their opinions and comment news, but apart from private use mainly from personal reasons, social media can be used to give opinions about company products, support or criticize public services and policies. Although social media platforms were invented by the private sector, they are rapidly adopted by public institutions, as a new communication channel with the public. Public institutions very quickly realized the power of social media and grasped the opportunity to improve their daily interaction with the citizens.

Social media offers the possibility to change the relationship between public administrations and citizens from mono or bidirectional exchange of information into a many to many communication process, by which a person can reach millions of people through the web (Agostino, 2013). They have radically transformed the traditional one way communication channels used for promotion and public communication.

It is very difficult to provide a universally accepted definition of social media. According to Blackshaw, (2006) “social media can be generally understood as Internet-based applications that carry consumer-generated content which encompasses “media impressions created by consumers, typically informed by relevant experience, and archived or shared online for easy access by other impressionable consumers”. O’Reilly (2005) explains Web 2.0 as movement from static web pages towards an environment with easy-to-use web tools that enable creative and collaborative use of the Web. The Web 2.0 has an “architecture of participation” as it offers data and services from multiple sources, including individual users, and these data and services can be updated, consumed and remixed by others (O’Reilly, 2005).

Initially, e-government applications were designed to provide information from government to citizens in a mono-directional manner and consequently without any reflexive feedback mechanisms (Karakiza, 2015). In comparison to e-government, the concept of Gov 2.0 is not just an adoption of Web 2.0 tools but it is about integrating new technologies together with a change in organizational culture, to increase openness, participation, transparency and collaboration in the public sector. Gov 2.0 provides a high interaction between government and citizens, who are co-creators of government information (Mergel, 2013).

According to Bonson et.al. (2016) the main benefits that social media offer to public administration are the enhancement of transparency and citizen participation. Thus, the use of social media should be understood as

paradigmatic shift toward greater citizen empowerment and participation through government transparency, accountability and collaboration. Sobaci (2016) have identified several important benefits that social media can provide to local governments: 1) improving efficiency and productivity 2) improving local public services 3) improving policy making 4) strengthening the local democracy and 5) collaboration and knowledge management.

Social media are technologies that facilitate social interaction and engagement, and public administration uses them as a powerful tool to promote public goals and to advance public service. According to Agostino (2013), and Rowe & Frewer (2000) public engagement can be implemented on two levels, as public communication and public participation. Public communication is a way of providing unidirectional information flow from the administration to citizens, while public participation is characterized by establishing a dialogue with citizens based on a two way information flow. Social media provide great opportunities for local governments to improve transparency and accountability and to strengthen the mutual trust with its own citizens. The two way process of communication and information dissemination is possible only with web 2.0 platforms, something that static website cannot provide.

The contribution of social media to the private sector, including companies and the banking industry in Macedonia was already investigated (Levkov, Mijoska, Jovevski, 2015; Levkov, 2011;), but the impact of social media platforms for public administration in Macedonia, particularly local governments did not attract researchers' attention. Based on the studies of Agostino (2013) and Hoffman and Fodor (2010) three main goals were derived for this study:

1. To explore the level of social media activity of local governments in Macedonia
2. To evaluate public communication, taking into consideration the awareness of citizens about the presence of the municipality on social media.
3. To evaluate public participation through measures of engagement, considering the number of actions by citizens on social media platforms.

Although the benefits of social media use are highly promoted, it is important to mention that research studies done in the past confirm that the use of the social media have some risks. Spurrell (2012) argues that it is not quite clear whether social media is an opportunity or a threat. Sobaci (2016) identifies the potential risks and barriers that local governments encounter while using social media: 1) lack of sufficient resources 2) legal issues 3) security 4) information and content concerns and 5) reputation management. All of these barriers can prevent municipalities and local governments in taking more

proactive steps for using social media for public communication with the citizens. However, it is possible to say that there is in general a dominant optimistic point of view (Sobaci, 2016).

Meijer et. al. (2012) identified three key success factors for realization of government 2.0: 1) leadership in government – meaning shifting the focus of interaction with interest groups from formal to more informal interaction with individuals, 2) Incentives for citizens – the willingness of citizens to participate is crucial for 2.0 government success and finally 3) mutual trust needs to be established in the government – citizens interactions.

Methodology, sample and research design

An empirical investigation was conducted to explore the use of the three major social media platforms Facebook, YouTube and Twitter by Macedonian municipalities. The author was following a consistent procedure regarding the research methodology. First a comprehensive list of eighty (80) Macedonian municipalities was created based on the latest changes in the law of territorial organization of local governments made in 2013. Three main social media platforms Facebook, YouTube and Twitter were selected for data collection, because these three platforms were ranked as top websites in Macedonia by Alexa, a web analytics tool.

Following the approach of Hoffman and Fodor (2010) and Agostino (2013) public communication and participation was measured through awareness and engagement. The awareness of the citizens about the presence of the municipality on the social media was measured by counting the numbers of visitors on the social media page. Accordingly visitors are calculated as the number of fan likes for Facebook, the number of subscribers for YouTube and the number of followers for Twitter. The data obtained were divided by the municipality's population to compare data across administrations.

The activity of the municipality on social media was measured through number of posts on Facebook, number of tweets on Twitter and number of videos uploaded on YouTube. All these data regarding the measurement of the social media activity of the municipalities were collected for the month of July, 2017. Public participation of the citizens was determined by measuring the engagement which provides a picture about the level of interaction between citizens and local governments. In this paper metrics were borrowed from the study of Bonson (2016) to measure the number of actions performed by the social media users. Bonson (2016) was measuring engagement through popularity, commitment and virality on FB using three measures for each category. In this study only the first measure from all three categories including popularity, commitment and virality was used in the measurement process. The table 1 below presents the metrics used in the study.

Table 1. Metrics used to measure social engagement on Facebook, Twitter and YouTube

	Popularity	Commitment	Virality
Facebook	Number of posts liked/over total posts (in July 2017)	Number of posts commented/over total posts (in July 2017)	Number of posts shared/total posts (in July 2017)
Twitter	Number of tweets liked/over total tweets (in July 2017)	Number of tweets commented/over total tweets (in July 2017)	Number of tweets shared/over total tweets (in July 2017)
YouTube	Number of videos liked/over total videos (in July 2017)	Number of videos commented/over total videos (in July 2017)	Number of videos shared/over total videos (in July 2017)

Data collection and analysis

All data have been collected at the beginning of August, 2017. The procedure for data collection followed several steps. The first activity was opening the official web page of the municipality, of all 80 municipalities in Macedonia. The second activity was visual inspection and observation of the municipality's home page in order to verify the existence of official links to one of the three platforms: Facebook, Twitter and Youtube. This meant that the author entered the official web page of each municipality and redirected his browsing towards particular social media platform if official presence on the webpage was found. If that was not the case, meaning that the official government did not have official link to some of the three social media platforms, then the author entered the social media webpage and typed the name of the municipality and recorded its presence on the social media itself.

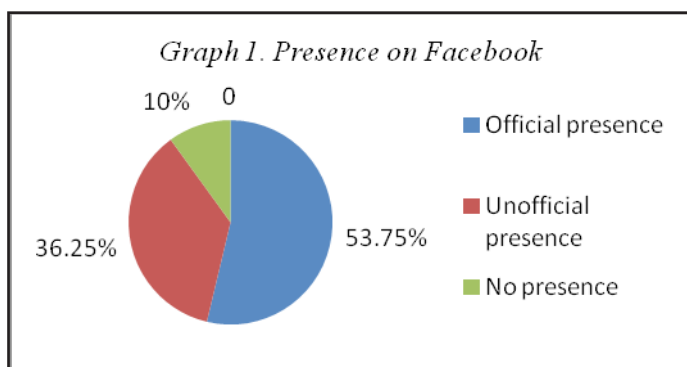
Results and discussion

The aim of this study was to measure the level of social media activity of municipalities in Macedonia and the social engagement of the citizens. From the research design and data collection and analysis, five main findings resulted regarding the web presence of municipalities, the level of social media activity of the municipalities, official and unofficial social media presence, the level of citizen awareness and the level of engagement.

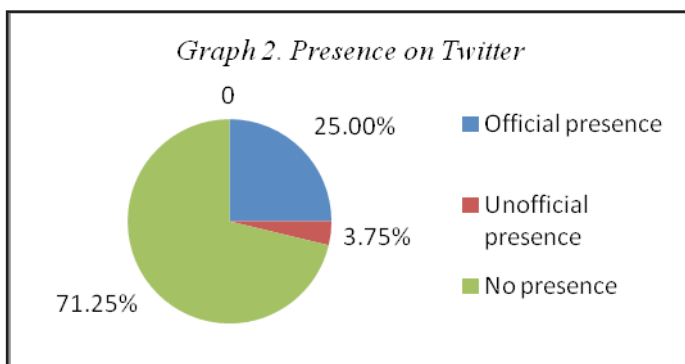
Regarding the first finding the data analysis revealed that 97.5% (78 out of 80) of the municipalities have an official web page which is very high percentage.

At the moment of the data collection phase one web page was unavailable due to maintenance and updates and the other one was not officially present on the internet at all. Although 97.5% of the municipalities have official web presence which is very high percentage in today's world of the broadband internet, mobile communications and e-government services it would be normal to expect 100% of web presence.

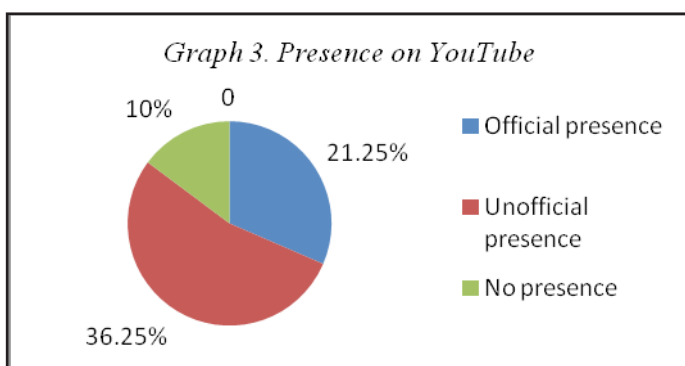
Measuring the social media activity of the municipalities through average number of posts on Facebook, average number of tweets on Twitter, and average number of videos on YouTube all in July 2017, showed that Facebook is the social media platform on which municipalities are the most active (with average value of 9.3 posts, per municipality), Twitter is the second most used platform (with average value of 2.0375 tweets per municipality) and YouTube as the least active social media platform (with average value of 0.7375 videos per municipality). The average values were obtained as a sum of all averages of posts, tweets and videos in July 2017. The average value of posts, videos and tweets per municipality were obtained when the total posts, videos and tweets in month of July 2017 were divided by the municipality's population. In the study official and unofficial presence of the municipality on the social media was traced. The presence is considered as official when on the home page on the municipality there is a direct linkage to Facebook, Twitter or YouTube, while the presence is unofficial when there are no such type of linkages. Investigating the official versus non official social media presence the results from data analysis revealed that 53.75% of the local governments have official presence on Facebook on their municipality webpage, while 36.25% of the municipalities have unofficial presence on Facebook. The rest of the 10 % of the municipalities did not have any presence on the Facebook platform. 34.37% of the official presence links to social media platforms were broken or dead links meaning that those links did not redirect from the official municipality home page to the official social media platform, while 72.72% of the municipality web pages with broken links have unofficial presence on Facebook.



Regarding the official presence on Twitter the data analysis revealed that 25% of all municipalities have official presence on Twitter, while 3.75% have unofficial presence on the same platform. 50% off all official linkages to the relevant social media platforms were broken or dead links, while 0% of broken links have unofficial presence on twitter. The rest of the 71.25% of the municipalities did not have any presence on the Twitter platform



The third platform on which official and unofficial presence of the municipalities was traced is YouTube. 21.25% of all municipalities have official presence on YouTube while 22.5% of all municipalities have unofficial presence on YouTube. The rest of the 56.25% of municipalities did not have any presence on YouTube platform. 29.41% of the official presence links to YouTube were broken or dead links, while 40% municipalities which have official presence dead links to social media platforms also have unofficial presence on YouTube.



The analysis of the data for all three platforms revealed the obvious advantages of Facebook over the other two platforms in terms of official and unofficial presence of the municipalities. Comparing the data for Twitter and Youtube,

it clearly showed that in total (official and unofficial), the municipalities are more present on Youtube, and in terms of the official presence, and the municipalities are more present on Twitter. But, if we take into account the large number of dead links (50%) on Twitter and the fact that 0% of the municipalities which have dead links on Twitter are present on this platform through unofficial account, it's easy to draw a conclusion that YouTube is second most preferable platform for public communication by municipalities in Macedonia.

The fourth goal of the study was to investigate the level of awareness of the citizens on each of the three social media platforms. Following the procedure described in the methodology section the average level of awareness on Facebook is 10.94, on YouTube 0.076 and on Twitter 0.1187. Again the results clearly indicated that Facebook is the social media platform for which the citizens showed greatest awareness, followed by Twitter and YouTube.

The fifth goal of this study was to measure the level of engagement or the level of interaction between the citizens and the public administration on the social media platforms. The procedure previously described in the methodology section reveals that three measures for three categories were used to measure the level of engagement: 1) popularity 2) commitment and 3) virility.

Considering the popularity (number of posts, videos and tweets liked) it can be concluded that municipalities have significantly higher number of likes on posts on Facebook, compared with likes of tweets or likes of videos on YouTube. The average number of likes of posts on Facebook is 39.856 posts per municipality, average number of liked tweets is 2.0375 and the average number of liked videos on YouTube is 9.418. This means that measuring the popularity of the three social media platforms Facebook, Twitter and YouTube showed that the most popular is Facebook, followed by YouTube and Twitter as the least popular.

The second measure of engagement (average number of comments) showed that citizens are the most actively engaged on Facebook with 14.14 comments per municipality, than on Twitter with 0.802 comments per municipality and finally YouTube with 0.618 comments per municipality. The data for the second measure of social engagement again confirms that Facebook is the most popular and most actively used by citizens for public communication.

The third measure of engagement is virility and it was obtained as an average number of posts shared, average number of videos shared and average number of tweets shared. The results showed that Facebook has an average value of 16.09 posts shared, Twitter has 0.044 of tweets retweeted and YouTube has 5.44 videos shared. Again the same trend was confirmed as Facebook being the number one platform considering the third measure of engagement virality.

The results presented above suggest that Facebook is the most widespread social media platform used by local governments to engage with citizens. Also it can be concluded that citizen engagement on social media platforms

is modest, because mostly they are willing to click the “like” button, but when the participation of the citizens requires greater effort such as giving comments or sharing posts and videos or retweeting tweets the level of engagement rapidly decreases. The results and conclusions from this study are quite similar to the results of research done in the past (Bonson, 2016; Hansard Society, 2009; Wright, 2009)

The author tested also the relationship between the size of the municipality and social media activity on each platform Facebook, Twitter and YouTube. The main assumption that author was following is that the significantly more populated municipalities are usually the urban and business centers in Macedonia, where usually citizens put stronger pressures on local governments to be more proactive on social media. For that purpose, the author created three categories of municipalities: 1) large municipality which has more than 50000 inhabitants, 2) medium sized municipality with 10 000-49 999 inhabitants and 3) small municipality with fewer than 9999 inhabitants. These three categories were used as categorical variables while the number of Facebook posts, the number of shared tweets and the number of uploaded videos were used as dependent variables. A one way analysis of variance (ANOVA) was performed to determine whether municipality size plays a significant role in the level of social media activity on Facebook, Twitter and Youtube. All assumptions for performing ANOVA have been previously satisfied. The results are presented in table 2.

Table 2. Testing the relationship between municipality size and social media activity - One way ANOVA

Grouping variable – municipality size	Large municipality above 50000	Medium municipality 10000-49999	Small municipality 0- 9999	F ratio	F probability
Number of posts on Facebook	23.08	7.53	4.93	7.769	0.001*
Number of uploaded videos on YouTube	163.6	16.20	3.20	9.502	0.000*
Number of tweets shared	845.5	107.47	56.43	4.251	0.018*

The results in table 2 show that social media activity by municipalities significantly differed across the three groups for all three platforms: Facebook, Twitter and YouTube. The value of F-probability is significantly below p-value of 0.05, which represents highly significant relationship between the municipality size as number of population and its social media activity on the three social media platforms included in this study.

Research limitations

The aim of the researcher in this study was to explore the level of use of social media platforms by municipalities in Macedonia. Although this study has contributions, it has inherent limitations that warrant caution in interpretation of the results. First, the results in the study are based on data collected from visual inspection and observation of municipalities' websites and their social media platforms. This means that data from surveys and interviews with officials from local governments were not included in the study. It would be interesting in the future to include data from field research regarding the use of social media strategies and tactics by local governments. The study does not include longitudinal data, but all of the data have been collected at the beginning of August, 2017 backwards for the social media activity of the municipalities in July, 2017. It would be interesting the process of data collection to continue in the future and to compare the metrics for social media activity and citizen engagement, especially in before and after the local elections in Macedonia scheduled for October 2017. In addition, although the author was following consistent procedure in the process of data collection and analysis, the subjective interpretation of the results from the author can also be seen as limitation of the study.

Conclusion

The use of social media by local governments for public communication and participation will remain a hot topic in future research by scholars. A lot of studies are published on a daily basis, but this study is a rare study of social media use by municipalities in a developing country from Western Balkan region. Apart from covering a region which was not sufficiently covered with this type of research, several contributions can be derived from the study. The first contribution is related with the measurement of the level of social media activity of the municipalities on the three platforms, where the most frequently used platform is Facebook, followed by Twitter and Youtube. Also the results showed that although many of the municipalities have official presence on the social media, vast number of them has also unofficial presence. This situation requires adoption of a carefully planned and managed social media strategy integrated with other public communication channels in order to avoid noise and to deliver consistent messages. This also means that social media activities of local governments need to be budgeted and measured through appropriate KPIs.

In addition, the results of this study revealed that the use of social media for public participation is on a low level, meaning that interaction between the local administration and the citizens is not on a high level. The data confirmed

that citizens do not engage enough on social media and perform only easy actions (like clicking the “like” button), but when greater effort is required from them to actively participate through comments and shares they remain passive. This means that if local governments want to obtain the benefits from social media activity they must provide stronger incentives for citizens to actively engage on social media and to develop and implement social media strategy. The low level of social media participation and relatively low level of social media presence of local governments (especially on YouTube and Twitter) shows that municipalities mainly arbitrary use social media for public communication.

Finally, an interesting conclusion can be derived regarding the interdependence between the size of the municipality and social media activity. The results showed that bigger municipalities are more active on social media platforms. The assumption behind this result is that bigger municipalities in Macedonia are more urban communities, where citizens are also more active on social media and are more proactive citizens regarding the local problems and services. Also the expectations of these citizens from local governments are bigger and they put greater pressure on municipalities for better public communication. However a key recommendation to local governments from this study is that they must adopt the best social media strategy for their local community. This means they need to establish a well managed process of social media activity, also to carefully choose the social media platforms on which they will be present, to integrate the social media activity with other communication channels, and to budget and measure the social media activity. For most of the local governments consulting and training will be required because the results suggest that probably most of the municipalities have a lack of knowledge and understanding of how to use social media platforms to improve the process of public communication with own citizens.

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