
Adoption of social networks as Web 2.0 citizen engagement tool in the local e-government context

Artan Rexhepi*

Faculty of Mechanical and Computer Engineering,
University of Mitrovica “Isa Boletini” (UMIB),
rr. Ukshin Kovacica, 40000 Mitrovica, Kosovo
Email: artan.rexhepi@umib.net

*Corresponding author

Sonja Filiposka and Vladimir Trajkovik

Faculty of Computer Science and Engineering,
“Ss. Cyril and Methodius” University in Skopje,
ul. Rudzer Boshkovikj 16, 1000 Skopje, North Macedonia
Email: sonja.filiposka@finki.ukim.mk
Email: vladimir.trajkovik@finki.ukim.mk

Abstract: Information and communication technology (ICT) in public administration is typically used for the purpose of e-government service implementation that provides strengthening of certain democratic functions. Recognising this, most of local government institutions (LGI) utilise ICT for services implementations and building relationship with stakeholders and citizens, allowing the adoption of Web 2.0 tools as platforms for promoting the public dialogue and participation in decision and policy making. This paper explores the e-participation implementation through usage of Web 2.0 tools in context of Kosovo LGIs from perspective of usage practices and potential relationships with citizen engagement. We have argued that the LGI online activity is an important factor influencing citizen engagement. Different set of metrics were examined to obtain relevant dimensions of citizens’ reactivity and dialogue engagement. The analysis has not shown any significant correlation between the LGI activity and overall citizen engagement level. Implications and importance of those findings are discussed.

Keywords: e-participation adoption; e-governance; e-government; ICT tools; social media; social networks; Web 2.0, citizen engagement.

Reference to this paper should be made as follows: Rexhepi, A., Filiposka, S. and Trajkovik, V. (2021) ‘Adoption of social networks as Web 2.0 citizen engagement tool in the local e-government context’, *Int. J. Electronic Governance*, Vol. 13, No. 1, pp.48–72.

Biographical notes: Artan Rexhepi holds a PhD in Computer Science from the Faculty of Computer Science and Engineering at the Ss. Cyril and Methodius University in Skopje. He has held research positions at the Technical University of Dresden and has worked in programme management on many international projects. He worked for several years at the Faculty for Electrical Engineering and Computer Sciences at the University of Prishtina with research activities which focus on information systems and e-government, particularly on the issues of Web 2.0 and e-participation. Currently, he is an

Assistant Professor at the Faculty of Mechanical and Computer Engineering, UMIB University in Mitrovica. His research work on e-government and e-participation has been published at various international refereed conference proceedings and journals.

Sonja Filiposka is a Full Professor at the Faculty of Computer Science, Ss. Cyril and Methodius University in Skopje. Since obtaining her PhD in 2003 from the Faculty of Electrical Engineering and Information Technologies she has been actively taking part in a number of research projects related to e-infrastructure, networking and ICT education. During her professional carrier she has authored over 100 research papers published in conference proceedings and journals. Her main research fields of interest include e-services, orchestration of systems, complex networking and security.

Vladimir Trajkovik is a Full Professor at the Faculty of Computer Science, Ss. Cyril and Methodius University in Skopje. Since obtaining his PhD in 2003 from the Faculty of Electrical Engineering and Information Technologies he has been actively taking part in a more than 50 research projects related to novel ICT services in e-government, healthcare and ICT in education. He has co-founded three companies and two NGOs. During his professional carrier, he has authored over 200 research papers published in conference proceedings and journals. His main research fields of interest include e-government, connected health and ICT in education.

1 Introduction

The increased connected citizens and stakeholders are demanding that governments be more transparent and deliver services more rapidly and efficiently. The increased transparency in government operations and a greater willingness to listen to citizens and secure their involvement are the requirements of an efficient, open and responsive government (Rodriguez-Bolivar, 2014). The search for new styles of governance which promote higher levels of transparency and the engagement of citizens is viewed as a way of improving citizens' trust in governments (Bonsón et al., 2012). Making government data available online allows citizens to comment, derive value and take action in their own communities (Milakovich, 2012). These interactive online tools can promote the consultations and dialogue between citizens and their governments (Lenihan, 2005) and support the delivery of democratic services.

One of the most popular options for e-government interactive online tools today is social media. Social media refers to a set of online tools that are designed for and centred around social interaction (Bertot et al., 2012). Unlike traditional solutions, the social media is designed to provide a platform for dialogue (Porter, 2008) which allows large group of geographically dispersed users to produce valuable information resources (Benkler, 2002), exercising collective intelligence, aggregating talent, leveraging ingenuity. In parallel, it helps reducing the costs and time formerly needed to solve problems (Brabham, 2008), and promotes gaining valued and diverse insights and new perspectives through discussion (Bertot et al., 2012). The social networks with their millions of users worldwide, have introduced new methods for communication and are providing new opportunities for users to engage in community participation as powerful tools for citizen inclusion in government processes and trust towards e-government

services. The use of social networks as Web 2.0 tools and applications is increasingly seen as a potential turning point with a developing change in the role of users and represents a crucial development in the use of ICT in e-government. These applications, which support the enhancement of interaction levels between information creators and information users, allowing the officials to exploit the extensive information and knowledge possessed by citizens (Loukis, 2018) and allowing the citizens to impact the process of information creation, remain certainly attractive for adoption, but in the long run prove difficult to be professionally employed by government authorities (Lidén and Larsson, 2016). It is the task of the government authorities to develop trust and to ensure that the principles of good governance and the relationship of trust with the new social, political and economic requirements is maintained (Santamaria-Philco and Wimmer, 2018).

The understanding of governance and e-governance by the Kosovo government has undergone significant transformation over the past years. There are pressures and expectations from the citizens to the public administration aiming for governance with a modern approach that will ensure efficient and effective administration. In addition, the transition period is showing increased demand for an open government which is increasingly transparent and accountable to the public. However, there is still a considerable gap evident between the political priorities and agenda on the one hand and the actual implementation and users' expectations on the other hand (Rexhepi et al., 2012).

Under the assumption that prior studies have not looked at the social media interaction metrics between local government and citizens in Kosovo (Rexhepi et al., 2016), this paper aims to provide an insight to the Kosovo government usage of the main social media platform Facebook as a citizen engagement tool to provide the overview of key benefits that governments can achieve from using social networks. The presented findings should garner more attention from researchers for further e-participation performance measurement at local government level, and motivate local government leaders to manage social media platforms more efficiently for increasing interaction between citizens and local government.

The rest of the paper is structured as follows. In Section 2, we provide a background of e-government and e-participation public sector maturity models. In Section 3, we elaborate on government and social media, and we provide a layout of propositions derived from literature research and observations of social media activity. Sections 4 and 5 present our research methodology and results of our analyses. The results are analysed and interpreted in Section 6. Finally, Section 7 concludes the paper with some considerations and perspectives for future research.

2 Background

One of the general objectives of e-government country strategies is to pursue the achievement of enhanced services, less complex (Porwol et al., 2013) dealings, as well as transparency, interaction, cooperation and trust for both citizens and the business community (*Switzerland's eGovernment Strategy*, 2014; *The European eGovernment Action Plan 2011–2015: Harnessing ICT to Promote Smart, Sustainable & Innovative Government*, 2010). The concept of e-government maturity model was introduced with the aim to identify, through evaluation of selected indicators, the current

development stage of the progress made by each country in terms of implementing e-government, from basic to advance (Andersen and Henriksen, 2006; Ifinedo and Singh, 2011). Such benchmarking models provide a reference for ranking e-government portals and improving their quality as well as reflect how public authorities, citizens and other stakeholders can interact with each other (Jayashree and Marthandan, 2010; Layne and Lee, 2001; Andersen and Henriksen, 2006; *United Nations E-Government Survey 2012 – E-Government for the People*, 2012 Alhomod et al., 2012; Hiller and Belanger, 2001; West, 2004; Moon, 2002; Shakhkooch et al., 2008). The participatory interaction between government and citizens in the e-government process is generally grouped in the most advanced stage ‘Citizen Inclusion’ of the maturity model ‘Citizen Inclusion’ (Sandoval-Almazan et al., 2011; Budinoski and Trajkovik, 2012). On the other hand, Grunig (2013) introduced the fundamental four maturity model of public relations shown in Table 1, used to examine social media communication of government organisations (DePaula and Dincelli, 2016).

Table 1 Public sector communication models (Grunig, 2013; DePaula and Dincelli, 2016)

<i>Strategy</i>	<i>Mission</i>
Impression management	Increased appeal
Push/One-way symmetric	Transparency
Pull/Two-way asymmetric	Participation
Networking/Two-way symmetric	Collaboration

The most advanced stage of such maturity models follows the continuously increasing understanding among local governments of the Web 2.0 capacity to bring people closer together and promote the citizens' participation and online engagement in governance and public decision-making processes. The most critical factors that would contribute to the success of e-government relate to the change and simplification of administrative processes and the establishment of appropriate communication channels between citizen and administration, which would generate a sense of accountability and assurance and would allow inputs from the public. The political willingness, an adequate technological infrastructure, and an overall client oriented development strategy remain the most critical factors for the e-government project implementation (Rexhepi et al., 2012). It is apparent that the social media is enhancing the abilities of governments to interact with citizens as well as to meet their expectations for transparency and communication. The tools provided by social media can improve the interactivity between the government and the public, and they reach populations that do not consume traditional media as frequently as others (Jaeger et al., 2010). For identifying the requirements and addressing the problems of citizens, as well as for designing new public policies and services, a proper involvement of citizens throughout the decision making process is required. This requires the utilisation of information from the public through combination of inputs from citizens' representatives as well as directly from citizens by allowing their active participation in the process. Many governments are increasing their efforts for utilising a variety of innovative tools for enabling an increased participation of citizens in policy design and decision making for the purposes of getting new ideas and feedback, which would provide better understanding and needs recognition (Rexhepi et al., 2018). This inclusion promotes increased acceptance of adopted policies; as unnecessary discussions would be avoided after a decision is made. The current advanced and broadly

disseminated information and communication tools are providing an additional foundation for enabling this interaction with citizens through e-participation.

3 Government and social media

There are currently multiple definitions of social media in the public sector associating the use of social media with Government 2.0. For example, some governments and agencies have comprehensive definitions, such as the National Archives and Records Administration in the USA:

“Social media refers to the various activities integrating web technology, social interaction, and user-generated content. Social media includes blogs, wikis, social networks, photo libraries, virtual worlds, location-based services, and video sharing sites. Agencies use social media internally and externally to share information, support business processes, and connect people to government” (*The US National Archives and Records Administration Guidance on Managing Social Media Records*, 2014)

The European Commission defines ‘social media’ as the

“term used for online technologies and practices to share content, opinions and information, promote discussion and build relationships. Social media services and tools involve a combination of technology, telecommunications and social interaction. They can use a variety of formats, including text, pictures, audio and video” (*Communicating with the Outside World, Guidelines for All Staff on the Use of Social Media*, 2014)

Alternatively, Gartner defines Government 2.0 as the use of information technology to socialise and commoditise government services, processes and data (Maio, 2009), while Meijer et al. (2012) provides a fundamental definition of E-government 2.0 as a government that uses interactive communication technologies to transform connections between government and citizens into increasingly open, social and user-centred relations. In general, the Web 2.0 technologies refer to a collection of social media through which individuals are actively participating in creating, organising, editing, combining, sharing, commenting are rating web content as well as forming a social network through interacting and linking to each other. The emphasis is on an outside-in wisdom of crowds approach, where data and information are created by a network of users outside of an organisational boundary in a collaborative manner (Chun et al., 2010). The terms collaborative, traceable, searchable, linkable, and open are to be understood as core features of the utilisation of social media tools in public administration (Criado et al., 2013).

There are additional important opportunities, which are offered by the employment of social media by the government. This includes:

- the democratic participation and engagement in fostering the participatory dialogue and providing a voice in discussions of policy development and implementation
- co-production, which allows the government to jointly develop, design and deliver improved government services
- crowdsourcing solutions and innovations, which utilise the public knowledge for development of innovative solutions to various social issues (Bertot et al., 2010).

Social media, open data portals and other interactive features online promise to raise new challenges and opportunities for local public administrators and elected officials to provide more open government and opportunities for citizen participation (Mossberger et al., 2013).

Rowe and Frewer (2004) have defined the public participation as the practice of consulting and involving members of the public in the agenda-setting, decision-making and policy forming activities of organisations or institutions responsible for the policy development. The required inclusion of citizens in the public planning and decision processes is also institutionalised by several laws, such as law on local self-government, law on spatial planning and so forth. The legal mechanisms set by law for the public participation are provided in the form of public consultations, advisory committees or study groups, through which the citizens can provide their contributions in the decision-making processes. Apart from this, there are also other forms of informal participation, where the dialogue or even the cooperation between citizens and administration is in foreground (Berding et al., 2007). There is a common understanding that the acting of public administration needs to be a partnership communication process between the citizens and the government (Behringer, 2002), which includes the offer of information, communication, dialogue and processing of transactions. Aside from the usual administrative processes, the transactions additionally include the inclusion of citizens in the planning and decision-making processes, i.e., public participation (Fuehles-Uhbach, 2005). E-participation is an element of e-government and is defined by the participation of individuals, legal entities and other groupings in the decision-making processes of government authorities by using ICT technologies.

“It is not enough just to implement organizational change... to make real progress on transforming government services one should aim to positively transform the relationship between government and citizens by making the front office fully customer focused, and understanding the citizen as a customer with complex needs, far beyond the private sector understanding of a consumer” (Blakemore et al., 2010)

It is evident that the public participation through electronic media may considerably benefit from the increased usage of internet by citizens and other stakeholders. The social networks can be directly used by the government to provide the means for the empowerment of citizens to participate actively in the decision-making process of government administration, which would actively engage the citizens, it would generate the acceptance and ownership of the governmental decisions and their results and would build trust among citizens and government administration. For example, the social media channels could be used for grassroots mobilisation and exchange of ideas and information, by providing the information directly to the citizens. This will decrease the further disengagement of citizens while it would offer the possibility for encouraging more active participation in debate and decision-making.

Social media applications are used to create additional channels for government' interaction with its stakeholders (Mergel, 2013b). One of the greatest challenges for governments in using the possibilities of social networks is the change of behaviour of government structures and government officials. The government needs to understand the benefits of social networks and to enable its officials to use the social networks in their daily work. The governmental officials need to be prepared and trained in working in this environment, as there is a big risk for the government in not being involved in the

use of the benefits of social networks thus losing the opportunities for real engagement, innovation, change and transparency.

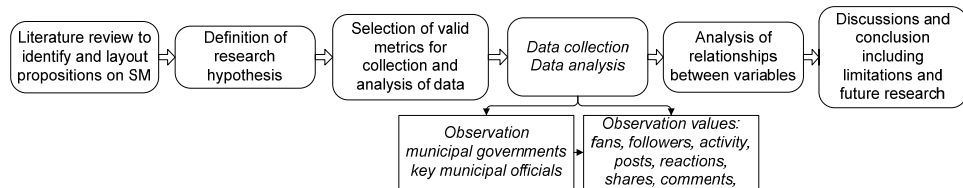
A study conducted by Bonsón et al. (2012) with focus on the local government level found that many governments have realised the opportunities that social media represent and, by making their news available through social media, they can considerably increase their audience reach at a very low cost. However, the potential of social media for promoting e-participation is still under used. The government public administrators are engaging social media similar to their active use of e-government and e-democracy platforms (Bryer and Zavattaro, 2011). A research of the social media usage on the local government level in the Phoenix metropolitan area showed that it seems to offer promise of increased citizen engagement, reaching citizens on a common platform and allowing for citizen's comments (Hand and Ching, 2011). The literature review conducted by Magro (2012) found that defining an ultimate goal for e-government, changes in government culture, and resource management are needed before governments can achieve success in the use of social media. The study conducted by Graham and Avery (2013) on the use of social media by local government and their perceptions of social media as used by their citizens, which involved government officials across the USA, showed that the social media are relatively underutilised by local governments, with about a 70% overall usage rate with Facebook and Twitter as most commonly used social media.

There are many ways to analyse the current research on social media in government. Criado et al. (2013) propose the use of three different interrelated dimensions: tools, goals and topics. The first dimension refers to the social media instruments in use by the public administration. It is assumed that the most used social media tools by the public administration are those with high utilisation in the society. The assumption that Facebook, Twitter, YouTube, blogs, Flickr, and Instagram are the most widespread social media technologies is confirmed (Mahler and Regan, 2011), as well as by the 2012 study from Bonson et al. which confirms this conclusion at the local government level in the European Union (Bonsón et al., 2012). This was also confirmed for Mexico and the USA by Sandoval-Almazan et al. (2011), Snead (2013), Bridges et al. (2012), Kavanaugh et al. (2012) and Landsbergen (2010). By May 2012, 698 department agencies and initiatives of the US government have created 2956 Facebook pages, 1016 Twitter accounts, 695 YouTube channels and 498 Flickr pages to promote their online content to their citizens (Mergel, 2012a) while in Greece, a study that has covered posts from major Greek cities during a 5-year time span from 2014–2017 identified Facebook as the platform used by more than 86% of the cities, followed by 60% of cities present with Twitter accounts (Karamagioli et al., 2018), which have both become instruments for communication and change. The second dimension relates to the goals from the use of social media. This dimension assumes the importance of the social, policy and managerial objectives over their technical side that are expected to directly or indirectly arise from the use of social media (Criado et al., 2013). The expected achievements to be accomplished with the use of social media include openness, transparency, citizen participation, policy effectiveness, cost savings, good governance and public employee and citizen satisfaction (Criado et al., 2013; Bailey and Singleton, 2010; Criado and Rojas-Martín, 2013; Hrdinová et al., 2010). The third dimension according to Criado relates to the main features, theories framing the usage of social networks in government and methods applied to its investigation.

4 Research methodology

The methodology used for this research is outlined in Figure 1.

Figure 1 Methodology and research approach diagram



For the purposes of analysing the usage of Web 2.0 tools in local government context, the first step must be a thorough investigation on the usage of communication platforms by the local governments, i.e., whether functional government accounts exist on the web, to what extent are they used, how they compare to personal campaign accounts of government key officials, and to what extent do they reach the intended audience.

Therefore, this study proposes the following hypotheses related to use of social media platforms by local governments and government key officials in Kosovo:

H1: Local governments and local government key officials are regularly using the main social media platforms for communication with citizens.

H2: There is an adequate level with positive trend of citizens engaging with their local governments and key officials using Web 2.0 tools.

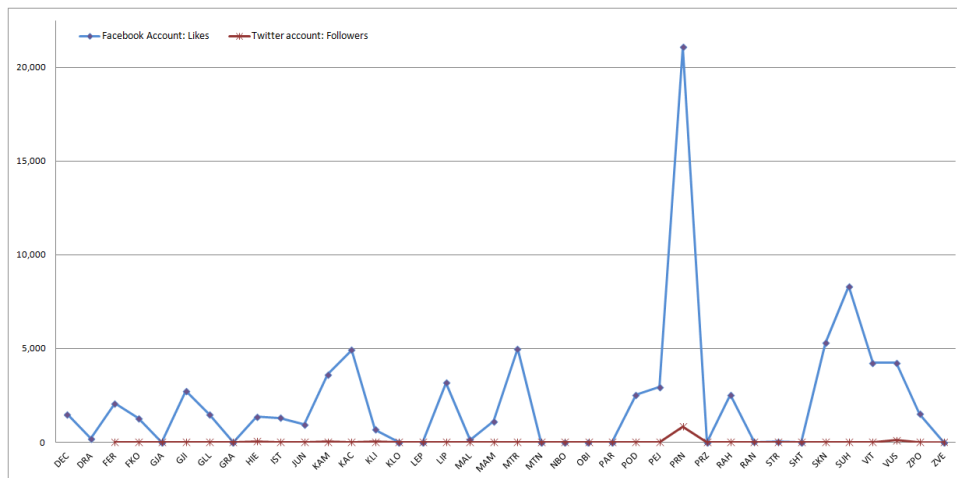
H3: The online activity of local governments and local key officials is one of the main factors that influence the engagement of citizens.

A short literature review has been conducted to explore how social network tools correspond to e-participation tools. In order to examine the research hypotheses, we have analysed the use of social networks by all local governments and local key officials in Kosovo. For determining the development trends, the related websites were observed in different periods of time, specifically observations in regular intervals between 2014 and 2017, followed by the final observation in 2018. The gathered data is listed in two categories, for the entire three years' period and for the last year alone. This will allow an additional insight on the latest activity development trend.

In the context of new ICT and social media applications reflecting the government organisation's adoption and implementation of new ICT solutions, this research focuses at the organisational dynamics of the process while considering only the new ICT solutions that are available to individuals via normal market mechanisms and exclude complex, interdependent innovations that require system wide consideration for adoption, such as ERPs (Mergel and Bretschneider, 2013). Based on the number of internet users and the most popular social media platform in Kosovo (Fazliu, 2013; Khanche, 2013; Gerguri, 2016), this research observed the social networking site Facebook (social network services), as the most commonly used social network service both in Kosovo and globally. The two social platforms Twitter and Youtube were also observed; however, it was noted that due to their low popularity (Fazliu, 2013; Khanche, 2013), the local government has not shown any major attempt to use them, as shown in Figure 2. Since

the Facebook pages of local governments demonstrate much higher rate of popularity and followers on Facebook compared to Twitter accounts, the last was not included in the further analysis. For testing the first hypothesis, only the Facebook accounts of local governments and local key officials are analysed.

Figure 2 Comparison between number of followers of public institutions on Facebook and Twitter in 2015 (see online version for colours)



The required data has been gathered using a common collection method for online research. The web-based research has proven to be the most appropriate means to collect the inputs needed to rate the e-government supply-side (Capgemini et al., 2009). The data used for the purposes of this paper was gathered from the Kosovo government websites and social media networks. The researcher logged on to the current Kosovo government websites and social media networks at the local level and conducted a detailed analysis of the utilisation of three social networking sites. The target population of this research consists of the websites and social media accounts of 38 local government institutions and the corresponding 38 mayors in Kosovo thus fully covering the activity of all Kosovo municipalities and respective key officials. The municipal websites were obtained from the Kosovo eGovernment portal at <https://www.rks-gov.net/sq-AL/vegeza/Pages/InstitucionetLokale.aspx>. Additionally, the search engines integrated in the particular social media were used for determining the social media site in cases when the website did not contain the required link for the social networking site. In order to get the results related to the use of social networks, it was first determined whether the Web 2.0 tools were used, followed then by their frequency.

Once the websites and the addresses of the three social networking platforms of all local government institutions and key officials were identified, each platform was visited to determine whether the municipal website had valid Facebook accounts, by verifying that the links are functional and are directing to the correct social networking site. For all identified social networking sites a number of characteristic values were observed: the number of fans and followers, the activity, the posts, the reactions, the shares and other relevant data in each year of interest. The number of posts per day was calculated by dividing the total number of posts by the number of working days. In addition, the social networking sites were checked, where the number of friends and followers of Facebook

accounts were noted. In addition, for comparison purposes, but also in order to determine if there were significant differences between the two groups, the same data was also gathered from individual social networking accounts of municipal key officials, which were commonly used for personal campaign purposes.

Apart from the basic Facebook variables, such as account activity and the number of fans, additional metrics is required to test the second hypothesis on the existence of adequate level of citizens engagement with their local governments and key officials via Web 2.0 tools. For this purpose, the proposed metrics set by Bonson and Ratkai (2013) shown in Table 2 were used for determining the public quantitative information available on Facebook, for providing a better view of reactivity, dialogue and engagement of stakeholders, and for measurement of stakeholders engagement on government Facebook pages. According to this set of metrics, popularity, commitment and virality is measured to offer a better view of reactivity, dialogues and stakeholder engagement. Popularity is measured by the number of likes, commitment refers to the number of comments, while virality is measured by the total number of shares.

This set of metrics allows the collection of necessary data and identification of relevant dimensions of citizens engagement in social media platforms of local governments. Bonsón et al. also introduces the combined stakeholder engagement index as a corporate metrics (Bonsón et al., 2014) defined as the sum of popularity, commitment and virality $E = P3 + C3 + V3$, which seem to be most representative in measuring the overall citizen engagement.

Table 2 Metrics table for reactivity, dialogue and engagement of stakeholders (Bonsón and Ratkai, 2013)

<i>Name</i>	<i>Sign</i>	<i>Principle</i>	<i>Measures</i>
Popularity	P1	Number of posts with likes/total posts	Proportion of total posts that have been liked
	P2	Total likes/total number of posts	Average number of likes per post
	P3	$(P2/\text{number of fans}) * 1,000$	Popularity of messages among fans
Commitment	C1	Number of posts with comments/total posts	Proportion of total posts that have been commented on
	C2	Total comments/total posts	Average number of comments per post
	C3	$(C2/\text{number of fans}) * 1000$	Commitment of fans
Virality	V1	Number of posts with shares/total posts	Proportion of total posts that have been shared
	V2	Total shares/total posts	Average number of shares per post
	V3	$(V2/\text{number of fans}) * 1000$	Virality of messages among fans

The third hypothesis testing involves the existence of linear relationship between variables of engagement and social media platform activity, which shall determine if the named factors influence the activity level of local governments and the engagement of citizens. For this purpose, the linear correlation among variables is calculated in order to determine the relationship between the activity, popularity, commitment, virality and the continuous independent variables. As a statistical quantification of the strength of relationships between activity and engagement variables and municipality characteristics, the following linear coefficient equation shown in Table 3 was used:

The main goal of this combined assessment is to identify the trend and prospects for relationship building with citizens through social medial platforms. The next section presents the analysis and results in sequence of research hypotheses.

Table 3 Correlation coefficient formula with crude estimates for interpreting strengths of correlations using Pearson's correlation

<i>Correlation</i>	<i>Value</i>	<i>Relationship</i>
	>0.70 (<-0.70)	Very strong positive (negative)
	0.40...0.69 (-0.69...-0.40)	Strong positive (negative)
	0.30...0.39 (-0.39...-0.30)	Moderate positive (negative)
	0.20...0.29 and -0.29...-0.20	Weak
	-0.19...0.19	No or negligible

$$r = \frac{n(\sum xy) - (\sum x)(\sum y)}{\sqrt{[n\sum x^2 - (\sum x)^2][n\sum y^2 - (\sum y)^2]}} \Rightarrow$$

5 Analysis and results

In this section, we introduce the main finding and observations on the use of Web 2.0 tools as a part of social networks by local governments in Kosovo. Initially we analyse the general trend of implementation of social network tools from 2014 to 2018 with specific focus on the evaluation of the use of Facebook as the most adopted Web 2.0 application. In addition, this section presents the data demonstrating how the Kosovo local government is using social media platforms as a citizen engagement tool.

Facebook maintains two types of accounts, profile accounts that relate to personal accounts, and pages that are used to market a business, service group, organisation or politician. This study has analysed the public Facebook pages set by the local government institutions in Kosovo. In addition, for comparison purposes, the public Facebook pages opened by key officials/mayors of the same institutions were additionally analysed. Each Facebook page has a network of users, who have shown interest in the content by pressing the 'Like' and/or 'Follow' button.

Facebook remains definitely the social network with the largest presence in Kosovo at local level. Twenty-nine out of 38 local level institutions or 76% have a presence in Facebook, with only 24% of them having an established direct link from the municipal website to the Facebook account. The most prominent account at the local level is that of the Municipality of Prishtina with 39,831 users.

The growth of number of fans on Facebook during the period through four year period was relatively high, with a stabilising trend in fourth year at 13%. Only several local governments show no, or very limited, growth in the number of registered friends or likes (see Table 4) or remain not active in this social media. On the other hand, majority of municipalities have shown a consistent growth of friends on this platform. The data presented in the last column with the number of fans as percentage of total municipal population, shows that an estimated 18% of total population at municipalities active on Facebook, are already following the posts of their local governments.

Table 4 Growth rates of local government Facebook page followers

Municipal code	Annual growth rate (%)					Number of fans March 2014	Municipal code	Fans as % of Inhabitants	Average annual increase (%)	Number of fans May Y4	Average annual increase (%)	Fans as % of Inhabitants
	Y1	Y2	Y3	Y4	Y4							
DEC	207	616	67	40	38	4818	120	12	4992	0	-100	1
DRA	162	-100	-	-	-	-	-100	0	-	-	-	2
FER	78	7	10	22	5	35,431	362	33	-	-	-	-
FKO	483	163	87	58	20	4507	75	13	-	-	-	-
GJA	0	7	15	12	4	17,493	-	18	-	-	-	-
GJI	0	7	16	17	8	13,748	-	15	-	129	69	12
GLL	1249	18	68	40	28	4448	37	8	2211	48	46	8
GRA	0	100	83	63	63	3593	1277	34	18,263	21	18	34
HIE	919	95	140	36	12	6551	63	70	-	-	384	49
IST	0	7	5	4	21	1730	-	4	2291	11	-	-
JUN	615	54	58	53	6	2444	41	40	654	-99	-	67
KAM	1169	209	-	-	-	1279	2	4	-	-	-	-
KAC	4122	35	25	28	7	9591	24	29	-	-	34	28
KLI	670	0	56	117	1	2293	36	6	4233	34	19	42
KLO	-	-	-	-	-	-	-	-	5907	64	45	9
LEP	-	-	-	-	-	-	-	-	3729	14	47	27
LIP	1832	95	47	57	10	9061	49	16	3709	-12	97	47
MAL	77	77	7	34	10	6605	204	11	-	-	-	-
MAM	0	-	11	16	2	1464	-	27	-	-	-	-
Totals									57,572	131	24	32
									243,588	43	13	13

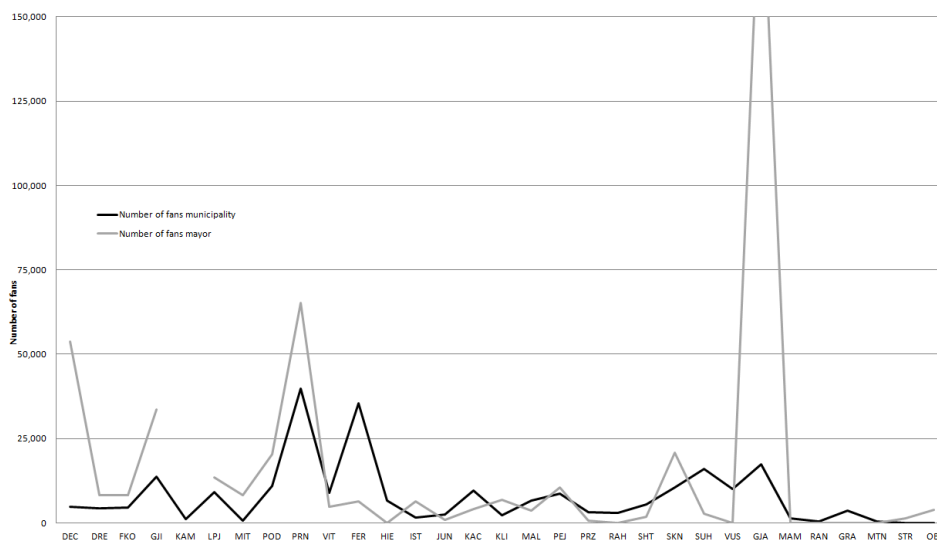
Table 5 is outlining the minimum, maximum, average median number of activity of local governments, as well as individual accounts of municipal key officials. On average, the municipalities have posted 0.85 times per calendar day during the last three years, or an average of 0.97 times during the last year, which is almost twice as much as posts by the key officials of municipalities, which in average totals to 0.45 and 0.49 times per calendar day, respectively. The table additionally shows that the maximum, minimum and the lower difference between the average and median together with the standard deviation values for official municipal accounts are much more consistent compared to the personal accounts.

The most remarkable feature of the data from Table 5 is that the average number of fans among all municipal accounts is to a large extent lower than the average number of fans of personal campaign accounts maintained by municipal key officials, explicitly 8400 vs. 21,165.

Table 5 Outline of municipal government and mayors activity and audience on Facebook

Calculation	Municipal account N = 29			Individual account of key municipal officials N = 23		
	3y	1y	3y	3y	1y	3y
	Activity	Activity	Fans	Activity	Activity	Fans
M	0.84829	0.97648	8400	0.44930	0.49064	21,165
Median	0.75923	0.98675	5527	0.11557	0.35099	6965
Maximum	2.65169	2.66225	39,831	2.59711	2.11921	200,088
Minimum	0.00001	0.00000	500	0.00080	0.00000	713
SD	0.72162	0.70417	9332	0.70740	0.55768	42,406

Figure 3 Number of fans of official pages of local government institutions compared to personal campaign pages of key officials of same institutions



Tables 4 and 5 together with Figure 3 show the considerable number of fans where, during the last year, the Kosovo local government institutions and the local key governmental officials have posted in average 1 time and 0.5 times per day respectively, which is directly supporting the first Hypothesis, that governments and government key officials at local level regularly use Facebook as a main social media platform.

5.1 The level of citizens engagement with their local governments using Web 2.0 tools

Table 6 presents the calculated metrics data used to identify relevant dimensions of citizens engagement in social media platforms of local governments and on personal pages of municipal key officials.

The average popularity as given in Table 6 (9.92494 and 38.00266) outline extremely stronger values compared to the average commitment and virality (0.24422 and 1.00815) and (0.39845 and 0.57564). Additionally, the high standard deviation in the popularity shows high variety of popularity among municipalities and among municipal key officials. It can be noted that, among municipal key officials, the mayor of Strpce had the highest score in popularity (135.33835) on his personal account, while his municipality is not running an official Facebook page. In comparison, the commitment and virality resulted are particularly low. The data from last year show a decline of main activity and engagement values among municipal mayors, with a slight improvement of those values for local governments.

Table 6 Municipal Facebook corporate metrics of popularity, commitment and virality to calculate engagement (E) for local governments and municipal mayors

	<i>P3_3y</i>	<i>P3_1y</i>	<i>C3_3y</i>	<i>C3_1y</i>	<i>V3_3y</i>	<i>V3_1y</i>	<i>E_3y</i>	<i>E_1y</i>
M_gov	9.92494	12.51212	0.24422	0.29457	0.39845	0.45170	10.56760	13.25840
M_may	38.00266	21.14169	1.00815	0.67038	0.57564	0.41308	39.58645	22.22515
Med_gov	6.98634	8.34926	0.18318	0.22167	0.18453	0.23355	7.40800	8.81961
Med_may	29.71933	24.61095	0.78778	0.36776	0.52411	0.28753	31.42030	26.10555
Max_gov	42.45113	60.22222	0.87048	0.99369	3.30827	3.22222	46.16541	64.00000
Max_may	135.33835	73.65311	2.76708	4.01768	2.37864	1.60190	138.41422	78.48728
Min_gov	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Min_may	3.72748	0.00000	0.00000	0.00000	0.000000	0.00000	3.95878	0.00000
SD_gov	8.40712	12.24573	0.21020	0.24452	0.62596	0.64850	9.11220	13.02248
SD_may	35.44432	19.41091	0.79917	0.87560	0.54558	0.42467	36.50451	20.50937

Ngov = 29, Nmay = 23

The detailed metrics related to the commitment data C2 and C3, popularity data (P2 and P3) and virality data (V2 and V3) are outlined in Table 7 for both, local government official pages and personal pages of key officials of local government. The average of likes received per posts of government pages was 51, while for personal pages, the average number of likes per post was 339. The average number of comments per post of government pages was only 1, while for pages of key officials,

the average number comments per post was 9. The average number of shares of posts of government pages was only 1, while for pages of key officials, the average number of shares per post was 6. Thus, Tables 6 and 7 do not support the second hypothesis, which states that there is an adequate level with positive trend of engagement of citizens with their local governments and key officials through Web 2.0 tools. Despite the high popularity and the derived engagement, the analysis has shown low commitment and virality. This indicates that the citizens are ready to like the posts of the municipal government or key official; however the proportion of citizens ready to comment or share further these posts is still very low.

Table 7 Detailed metrics of popularity (P2, P3), commitment (C2, C3) and virality (V2, V3) for local government official pages and pages of key officials of local government

	<i>P2</i>	<i>P3</i>	<i>C2</i>	<i>C3</i>	<i>V2</i>	<i>V3</i>
<i>Local government official pages (N = 29)</i>						
M	51.85682	9.92494	1.29335	0.24422	1.57165	0.39845
Median	46.14476	6.98634	0.86391	0.18318	1.48470	0.18453
Maximum	179.62354	42.45113	3.19893	0.87048	5.26765	3.30827
Minimum	0	0	0	0	0	0
SD	38.65696	8.40712	0.94818	0.21020	1.16576	0.62596
<i>Pages of key officials of local government (N=23)</i>						
M	339.27364	38.00266	9.73562	1.00815	6.30472	0.57564
Median	191.12072	29.71933	6.74335	0.78778	3.59036	0.52411
Maximum	2316.80435	135.33835	44.10870	2.76708	49.78261	2.37864
Minimum	7.00000	3.72748	0	0	0	0
SD	477.30131	35.44432	10.26029	0.79917	10.03693	0.54558

5.2 *Main factors that influence the activity level of local governments and the engagement of citizens*

The analysis of correlation between activity of local governments and key officials and popularity, commitments, virality and engagement series is outlined in Table 8. The three year results indicate that for local governments, with values in the order of $-0.34 \dots -0.051$, there is a weak negative relationship, while for the activity of key officials, with values in the order of $-0.40 \dots -0.52$, there is a weak to moderate negative relationship. However, when evaluating only the last year's metrics, the results are showing a weak negative relationship for local governments, and no linear relationship for municipal mayors. Based on this, the amount of posting was not related to increased engagement level of citizens, or, particularly for key officials, it was in a very weak or no relation to the overall engagement of citizens.

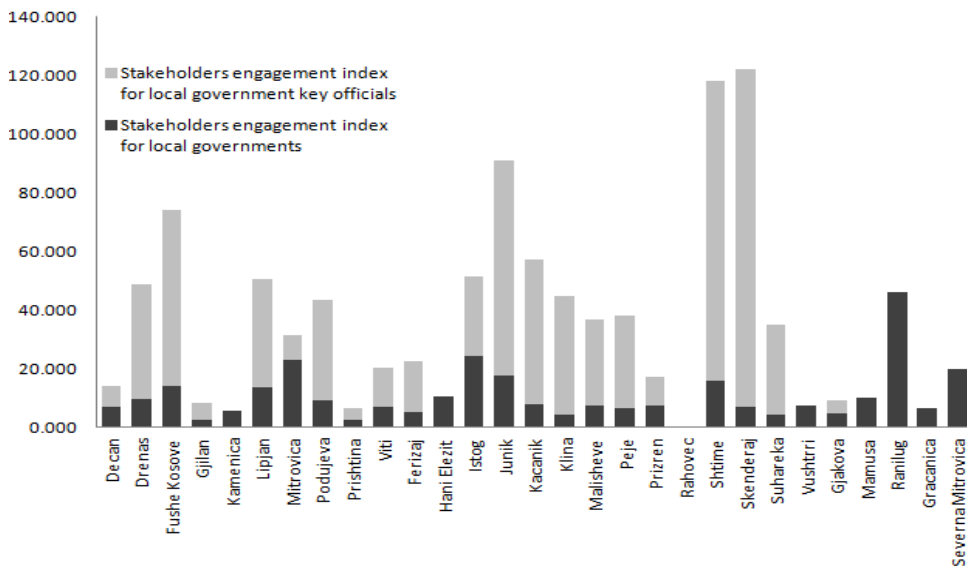
Figure 4 presents a comparison of the calculated stakeholder engagement index (E) for local governments and municipal mayors for several Kosovo municipalities. There is still a high deviation between the metrics for local governments and mayors. This is mainly due to the fact that mayors have recognised the opportunity to use this social media for personal campaign purposes without any investment, thus reaching a large group of people who are potential voters.

In order to evaluate the influencing factors for the engagement level of citizens, the calculation of linear correlation was made with three additional independent variables, in this case number of inhabitants, existing fans and satisfaction level with municipal government administration (for local government institutions). The calculated correlations figures with activity and the three indicated engagement variables of popularity, commitment and virality are outlined in Table 9 and Figure 5.

Table 8 Linear correlation between activity of local governments and key officials and popularity, commitments, virality and engagement figures

	<i>Activity</i>			
	<i>Local government</i>		<i>Mayors</i>	
	<i>3y</i>	<i>1y</i>	<i>3y</i>	<i>1y</i>
P3	-0.45037	-0.3568	-0.49713	-0.06542
C3	-0.51035	-0.32982	-0.52021	-0.01760
V3	-0.34663	-0.33199	-0.40046	0.000516
E	-0.45111	-0.35825	-0.50007	-0.06266

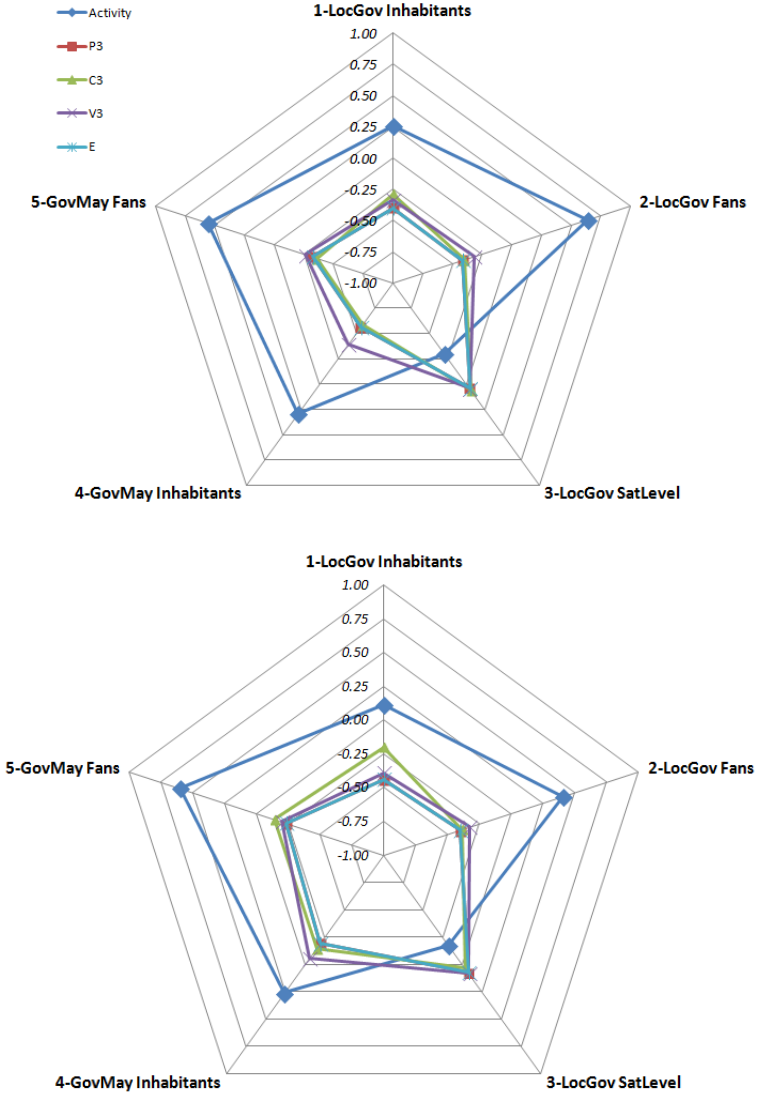
Figure 4 Comparison table of stakeholders engagement index for local government officials and local governments



Significant positive correlation at moderate to strong level was found only between the activity and the number of fans, which is only moderately confirming the third Hypothesis. Other significant correlation with a negative moderate level was found between fans and the three engagement variables. While there is only a moderate negative correlation between the municipal population and the mayor’s activity, Table 9 has not shown and significant correlation neither with the satisfaction level

with municipal performance, nor with its population. We could determine only a weak to moderate negative correlation of number of fans with popularity, commitment and engagement variables.

Figure 5 Correlation among the activity and engagement variables and selected independent variables in local governments and individual sites of mayors: three years period (left), one year period (right) (see online version for colours)



Correlation coefficient with independent variables:

Local government: 1-Inhabitants, 2- Fans, 3-Satisfactory level with municipal services,
Municipal mayors: 4-Inhabitants, 5-Fans.

Table 9 Correlation among the activity and engagement variables and selected independent variables in local governments and individual sites of mayors

	<i>Activity</i>		<i>P3</i>		<i>C3</i>		<i>V3</i>		<i>E</i>	
	<i>3y</i>	<i>1y</i>	<i>3y</i>	<i>1y</i>	<i>3y</i>	<i>1y</i>	<i>3y</i>	<i>3y</i>	<i>3y</i>	<i>1y</i>
<i>Local government level (N = 29)</i>										
Population	0.258	0.113	-0.402	-0.442	-0.287	-0.200	-0.333	-0.390	-0.400	-0.439
Fans	0.639	0.405	-0.415	-0.400	-0.400	-0.383	-0.314	-0.327	-0.414	-0.399
Satisfaction level	-0.298	-0.177	0.042	0.074	0.063	-0.094	0.0413	-0.337	0.043	0.074
<i>Individual campaign page of key municipal official (N = 23)</i>										
Population	0.292	0.261	-0.559	-0.194	-0.585	-0.146	-0.395	-0.055	-0.561	-0.191
Fans	0.556	0.597	-0.323	-0.236	-0.357	0.146	-0.265	-0.201	-0.325	-0.234

6 Discussion

The current status of utilisation of the main social networking tools by the Kosovo local government administration can be used as an indicator of trend for moving towards the Web 2.0 technology based public institutions. The political agenda of key officials remains one of the most crucial elements in influencing the capability or opportunity factors. The information systems and tools cannot wear down the power of politics as the main carrying element of the public government and locomotive of change. It is evident that the social media has raised new issues for implementation by municipal officials.

The analysis of usage of social networks provides some relevant facts about the social networking tools at disposal within administration and show converging views that the key officials are having an increased understanding on the importance and utilisation of the social media with focus on Facebook. On the other hand, it is noticeable that there are also clear priorities on the sides of public officials on utilising the personal campaigning social networking sites in parallel with their official institutional sites, which in case of Facebook accounts, were partially used more intensively than the official accounts. The latest survey has shown that internet users constitute 81% of total Kosovo population (Internet World Statistics, 2016) with estimated 45% Facebook usage rate among the total Kosovo population. A comprehensive data capturing effort has been made by Fazliu in order to determine the state of use of internet in Kosovo, showing that 73%, 7% and 43% of internet users regularly use the social and media-sharing network services of Facebook, Twitter and YouTube, respectively (Fazliu, 2013; Khanche, 2013). The results of this study show that approximately 76% of all local government institutions are present on social networks, and that is overall encouraging. With the current usage figures of social media networks among the 1.85 million population, there is a large potential for a substantial strengthening of e-participation component of e-government, which would not only cover the public consultations processes, but, moreover, it could strengthen the G2C cooperation at local level as well as significantly increase the institutional transparency towards citizens, thus increasing the trust of citizens towards governmental institutions. The data gathered so far shows that the Kosovo government institutions are in their initial stage of utilisation of social networks for interaction with citizens. However, the results also show that 23% of local government public institutions

are still not using any social media for interaction with citizens, which requires further consideration. On the other hand, both, the three years and one year figures from this study revealed only a moderate correlation between the activity and the number of fans, without a significant correlation with the other variables.

The insights from this study indicate that the local government is still mainly using the social media channels to provide information in a one-way interaction mode, where the citizens simply view and eventually like the government posts. As emphasised by Mergel, this means of interaction leaves out large portions of the possibilities social media applications provide that can help government understand deeper levels of engagement. The more the governments engage in higher levels of citizens' participation, measuring the extent to which they are engaging unlikely audiences will help them gain access to innovative knowledge to potentially solve government problems. By asking citizens to submit their ideas and comments, the potential for bi-directional citizen participation is actively pulled in through crowdsourcing (Mergel, 2013a). This would demonstrate a higher level of engagement of citizens and create insights that go beyond the one-way postings by government officials themselves (Halpern and Katz, 2012) and would convert the e-participation from government-controlled to more citizen-controlled process (through making postings and initiating discussions on the topics of their choice). In addition, whether or not citizens actually participate online, social network features may communicate the message that government is more responsive, open, and democratic by allowing citizens to express their views if they wish (Hibbing and Theiss-Morse, 2002), even if the participation is more likely to occur when individuals are dissatisfied.

The study also observed that the increased activity of municipal authorities or number of their fans has not shown to directly improve the engagement level of citizens. Moreover, it further supported the view, that the primary utilisation of one-way interaction mode when connecting with citizens is not contributing in achieving the overall goal of increasing the commitment and engagement of citizens in city related issues. While the study mainly focused in determining the relationships between the measurable variables, it has not shown any evidence on the extend the citizens opinion is taken into consideration by the local government authorities.

In the fast developing environment of social media, the government needs to find a way for including these efficient tools into their daily interaction with citizens. Social media are extremely popular and can facilitate an easy communication between the government and the population. The importance of organisational response by introduction of work assignments, tasks roles, dedicated resource allocation and formal social media policies (Mergel and Bretschneider, 2013) is hereby emphasised. The Web 2.0 tools offer many possibilities for transforming the relationship between citizens and public institutions, but their utilisation requires a clear vision and a development of a digital implementation strategy. The government has the important task in this early phase to initiate the process for creating and adoption of the rules and regulations which would define the data and interactions that could be collected by the local governments and to initiate the setup of initial measurement goals that would lead to an insight on what the government wants to gain (Mergel, 2013a), especially in regard to the responsibilities of the local government and how the social media with its diverse set of audiences can be used to productively support the local governments. Mergel emphasised the importance that for each update in social media the government needs to understand how it was perceived, how it is spread and

how their stakeholders engaged with the information. The more the governmental institutions engage on social media, the more citizens will expect responsiveness and real time information sharing in their future interactions with government (Mergel, 2012b). The usage of social networks for implementation of projects in e-government and e-participation will have a chance to succeed if the municipalities adopt the spirit of experimentation, learning, and persistent engagement that characterises organic participatory change (Mansuri and Rao, 2014), a task, which for municipalities is much harder to achieve than building infrastructure. A critical challenge remains the initiation of appropriate interaction arrangements and forms for the engagement of citizen, which do not necessarily become more willing to participate simply because such e-participation services are provided for them, that focus on citizens demand for political expression and participation using ICT tools that citizens find appropriate and effective, rather than on the outline of ordinary services that governments supply and as political campaigning and influence tools (Sæbø et al., 2009). While the number of posts in main social media is endlessly growing, the selection of appropriate two way interaction arrangements and tools for listening, monitoring and analysing social media data will remain a key challenge for ensuring the link with citizens, building public trust and strengthening the impact of citizens in policymaking processes.

It is evident that the local government institutions are nowadays facing new challenges as well as new expectations. We therefore strongly believe that local governments should initiate their reorganisation in order to be in optimal working order for facing these new challenges in utilisation of Web 2.0 tools. It is important to have the working procedures effectively transferred to information or communication officers, who will carry out the main load for productive results. In the Kosovo case we have evidenced the high participation by government officials, without a specific evidence that participants input is taken into consideration. While the information and transparency remain enablers of participation and collaborative value production, they are a mean instead of an effect (Edelman et al., 2012).

Looking forward, the insights emerging from this review may guide researchers in their continued investigation of Web 2.0 tools implementation in Kosovo and the wider region. It is obvious that the key government officials must further explore the functionalities of social media platforms on their own, as the research work can only analyse and describe respective structures and functionalities.

7 Conclusion

There is an increased effort of the local government authorities in using social media networks to disseminate information and engage in community building. Most of local government institutions declare that they recognise the roles of ICT and how they can be utilised for both strengthening the public administration and for building relationship with stakeholders and citizens. This allows the adoption of Web 2.0 tools as platforms for promoting the dialogue and participation in decision and policy making as well as for influencing the relationship between the public and the government. However, this empirical analysis has shown that the use of social media networks does not automatically enhance participation, collaboration, and engagement between citizens and government and it finds there is room for improvement.

The analysis of social media usage by local government was conducted along four different axes: usage of social media platforms; availability of functional government social media accounts; extent of their use compared to personal campaign sites of local government key officials; and corresponding interactivity of audience. In general, the analysis has been reasonably comprehensive withstanding the fact that this research covered fully the social media accounts of all local government institutions in Kosovo, that were observed during a four year time period through 2018.

This study has shown that the application of social media by the government is increasingly understood as a tool for improving the implementation of local public services based on transparency, participation, and citizen-oriented features, where all of them use mainly Facebook as the main social media platform. The municipal mayors have begun to use the social media tool to share information, send personal messages and share their location, political activities, and personal messages. During the research period we found a growing publishing frequency of content and increasing number of fans.

There is a continuous growing interest of citizens for the government accounts on social media platforms. At the same time the study has confirmed that the importance of self-promotion and political campaigning of municipal officials is still dominating over the transparent, participative, and citizen-oriented provision of public services. In specific terms, in two thirds of Kosovo municipalities with Facebook presence, the individual campaign pages of mayors have shown a much higher citizen engagement index and much more followers compared to the citizen engagement index and number of followers of the official accounts of their institutions.

Hence, the follow-up by officials who master both the technical aspect and the etiquette of this social media platform is required, since using Facebook solely for posting self-campaigning news is far from increasing the engagement of citizen/enhancement of e-participation.

We hope that this study will provoke a further discussion and increased interest in utilisation of Web 2.0 tools and will lead to a better understanding and development of suitable environments for utilisation of social networking tools. Further research should be made in order to determine the most relevant factors that would improve the success of e-government in relation to the change of administrative processes as well as the establishment of appropriate communication channels through platforms of social networks between citizens and the government, which would generate a sense of responsibility, transparency and assurance.

References

- Alhomod, S.M., Shafi, M.M., Kousarrizi, M., Seiti, F., Teshnehlab, M., Susanto, H. and Batawi, Y. (2012) 'Best practices in e government: a review of some innovative models proposed in different countries', *International Journal of Electrical & Computer Sciences*, Vol. 12, No. 01, pp.1–6.
- Andersen, K.V. and Henriksen, H.Z. (2006) 'E-government maturity models: extension of the Layne and Lee model', *Government Information Quarterly*, Vol. 23, No. 2, pp.236–248.
- Bailey, C. and Singleton, R. (2010) *National Survey of Social Media Use in State Government*, Lexington (Ed.), NASCIO.

- Behringer, P. (2002) 'Die informierte Stadt – Empirische Befunde und praktische Beobachtungen zu kommunalen Internetauftritten', *TATuP – Zeitschrift des ITAS zur Technikfolgenabschätzung*, E-Government: Zwischen Vision und Wirklichkeit, Retrieved 3/4, 11 Jg., from https://www.tatup-journal.de/downloads/2002/tatup023_behr02a.pdf
- Benkler, Y. (2002) 'Coase's penguin, or, Linux and the nature of the firm', *The Yale Law Journal*, Vol. 112, No. 3, pp.369–446.
- Berding, U., Roesener, B. and Selle, K. (2007) 'Information, Partizipation, Kooperation – Entwicklung und Stand der Diskussion zur bürgerorientierten Kommunikation in Stadt und Quartier', in Rolf Neuhaus, S.W. (Ed.): *RaumPlanung spezial*, Informationskreis für Raumplanung (IfR) e.V., Dortmund, Vol. 11, pp.11–28.
- Bertot, J.C., Jaeger, P.T. and Hansen, D. (2012) 'The impact of polices on government social media usage: issues, challenges, and recommendations', *Government Information Quarterly*, Vol. 29, No. 1, pp.30–40, doi: doi:10.1016/j.giq.2011.04.004
- Bertot, J.C., Jaeger, P.T., Munson, S. and Glaisyer, T. (2010) 'Engaging the public in open government: social media technology and policy for government transparency', *IEEE Computer*, Vol. 43, No. 11, pp.53–59.
- Blakemore, M., McDonald, N., Hall, N. and Jucuite, R. (2010) *Delivering Citizen-Centric Public Services through Technology-Facilitated Organisational Change*, Routledge, Abingdon.
- Bonsón, E. and Ratkai, M. (2013) 'A set of metrics to assess stakeholder engagement and social legitimacy on a corporate Facebook page', *Online Information Review*, Vol. 37, No. 5, pp.787–803, doi:10.1108/OIR-03-2012-0054
- Bonsón, E., Royo, S. and Ratkai, M. (2014) 'Facebook practices in western European municipalities: an empirical analysis of activity and citizens' engagement', *Administration & Society*, doi: 10.1177/0095399714544945
- Bonsón, E., Torresb, L., Royob, S. and Flores, F. (2012) 'Local e-government 2.0: Social media and corporate transparency in municipalities', *Government Information Quarterly*, Vol. 29, No. 2, pp.123–132.
- Brabham, D.C. (2008) 'Crowdsourcing as a model for problem solving an introduction and cases', *Convergence: the International Journal of Research into New Media Technologies*, Vol. 14, No. 1, pp.75–90, doi: 10.1177/1354856507084420
- Bridges, F., Appel, L. and Grossklags, J. (2012) 'Young adults' online participation behaviors: an exploratory study of web 2.0 use for political engagement', *Information Polity*, Vol. 17, No. 2, pp.163–176, doi: 10.3233/IP-2012-0271
- Bryer, T.A. and Zavattaro, S.M. (2011) 'Social media and public administration', *Administrative Theory & Praxis*, Vol. 33, No. 3, pp.325–340, doi: 10.2753/ATP1084-1806330301
- Budinoski, K. and Trajkovik, V. (2012) 'Incorporating social network services in eGovernment solutions: a case study', *European Journal of ePractice*, Vol. 16, pp.58–70.
- Capgemini, Europe, R., IDC, Sogeti and DTI (2009) *Smarter, Faster, Better eGovernment: 8th Benchmark Measurement, U. C. E. a. S. Analysis, Trans.*, European Commission, Directorate General Information Society and Media, Brussels, p.20.
- Chun, S.A., Shulman, S., Sandoval, R. and Hovy, E. (2010) 'Government 2.0: making connections between citizens, data and government', *Info. Pol.*, Vol. 15, Nos. 1–2, pp.1–9.
- Communicating with the Outside World, Guidelines for All Staff on the Use of Social Media* (2014) European Commission, Brussels.
- Criado, J. I., Sandoval-Almazan, R., & Gil-Garcia, J. R. (2013). Government innovation through social media. *Government Information Quarterly*, 30(4), 319-326. doi: <http://dx.doi.org/10.1016/j.giq.2013.10.003>

- Criado, J.I. and Rojas-Martín, F. (2013) 'Social media and public administration in Spain: a comparative analysis of the regional level of government', in Gil-Garcia, J.R. (Ed.): *E-Government Success around the World: Cases, Empirical Studies, and Practical Recommendations*, IGI Global, Hershey, USA, pp.276–298.
- DePaula, N. and Dincelli, E. (2016) 'An empirical analysis of local government social media communication: models of e-government interactivity and public relations', Paper presented at the *Proceedings of the 17th International Digital Government Research Conference on Digital Government Research*, Shanghai, China.
- Edelman, N., Hoehtl, J. and Sachs, M. (2012) 'Collaboration for open innovation processes in public administrations', in Charalabidis, Y. and Koussouris, S. (Eds.): *Empowering Open and Collaborative Governance*, Springer-Verlag, Berlin, Heidelberg.
- Fazliu, A. (2013) *Internet Penetration and Usage in Kosovo*, Kosovo Association of Information and Communication Technology, Prishtina, pp.18–24.
- Fuehles-Uhbach, S. (2005) 'e-Demokratie – im Umfeld des e-Government', *Verwaltung & Management*, Vol. 11, pp.74–79.
- Gerguri, D. (2016) 'Political power of social media in Kosovo', *Romanian Review of Political Sciences and International Relations*, Vol. XIII, No. 1, pp.95–111.
- Graham, M. and Avery, E.J. (2013) 'Government public relations and social media', *Public Relations Journal*, Vol. 7, No. 4, pp.1–21.
- Grunig, J.E. (2013) *Excellence in Public Relations and Communication Management*, Taylor & Francis.
- Halpern, D. and Katz, J.E. (2012) 'From e-government to social network government: towards a transition model', Paper presented at the *Proceedings of the 4th Annual ACM Web Science Conference*, Evanston, Illinois.
- Hand, L.C. and Ching, B.D. (2011) 'You have one friend request' an exploration of power and citizen engagement in local governments' use of social media', *Administrative Theory & Praxis*, Vol. 33, No. 3, pp.362–382, doi: 10.2753/ATP1084-1806330303
- Hibbing, J.R. and Theiss-Morse, E. (2002) *Stealth Democracy: Americans' Beliefs About How Government Should Work*, Cambridge University Press.
- Hiller, J.S. and Belanger, F. (2001) 'Privacy strategies for electronic government', *E-Government*, Vol. 200, pp.162–198.
- Hrdinová, J., Helbig, N. and Peters, C.S. (2010) *Designing Social Media Policy for Government: Eight Essential Elements*, The Research Foundation of State University of New York.
- Ifinedo, P. and Singh, M. (2011) 'Determinants of eGovernment maturity in the transition economies of Central and Eastern Europe', *Electronic Journal of e-Government (EJEG)*, Vol. 9, No. 1, pp.166–182.
- Internet World Statistics (2016) Retrieved 15.05.2017, 2016, from <http://www.internetworldstats.com/europa2.htm#kv>
- Jaeger, P.T., Bertot, J.C. and Hansen, D. (2010) 'Designing, implementing, and evaluating user-centered and citizen-centered e-government', *International Journal of Electronic Government Research*, Vol. 6, No. 2, pp.1–17, doi: 10.4018/jegr.2010040101
- Jayashree, S. and Marthandan, G. (2010) 'Government to e-government to e-society', *Journal of Applied Sciences*, Vol. 10, pp.2205–2210, doi: 10.3923/jas.2010.2205.2210
- Karamagioli, E., Staiou, E-R. and Gouscos, D. (2018) 'Assessing the social media presence and activity of major Greek cities during 2014–2017: towards local government 2.0?', in Chhabra, S. (Ed.): *Handbook of Research on Civic Engagement and Social Change in Contemporary Society*, IGI Global, pp.272–293.
- Kavanaugh, A.L., Fox, E.A., Sheetz, S.D., Yang, S., Li, L.T., Shoemaker, D.J. and Xie, L. (2012) 'Social media use by government: From the routine to the critical', *Government Information Quarterly*, Vol. 29, No. 4, pp.480–491, doi: 10.1016/j.giq.2012.06.002

- Khanche, Z. (2013) *A Guide to Implementing Social Media in Support of Kosovo's Eu Integration Process*, European Union Office in Kosovo, Prishtina, Retrieved from https://www.mei-ks.net/repository/docs/Social_Media_Guideline_ENG_-_FINAL_PDF.pdf
- Landsbergen, D. (2010) 'Government as part of the revolution: Using social media to achieve public goals', *Electronic Journal of Electronic Government*, Vol. 8, No. 2, pp.134–146.
- Layne, K. and Lee, J. (2001) 'Developing fully functional e-government: a four stage model', *Government Information Quarterly*, Vol. 18, No. 2, pp.122–136.
- Lenihan, D.G. (2005) 'Realigning governance: from e-government to e-democracy', in Khosrow-Pour, M. (Ed.): *Practicing E-Government: A Global Perspective*, IDEA Group, Hershey.
- Lidén, G. and Larsson, A.O. (2016) 'From 1.0 to 2.0: Swedish municipalities online', *Journal of Information Technology & Politics*, Vol. 13, No. 4, pp.339–351, doi: 10.1080/19331681.2016.1169242
- Loukis, E. (2018) *Citizen-Sourcing for Public Policy Making: Theoretical Foundations, Methods and Evaluation*, pp.179–203.
- Magro, M.J. (2012) 'A review of social media use in e-government', *Administrative Sciences*, Vol. 2, No. 2, pp.148–161.
- Mahler, J. and Regan, P.M. (2011) 'Federal agency blogs: agency mission, audience, and blog forms', *Journal of Information Technology & Politics*, Vol. 8, No. 2, pp.163–176, doi: 10.1080/19331681.2011.536416
- Maio, A.D. (2009) *Government 2.0: Gartner Definition*, Gartner Inc., Retrieved from http://dcps.dc.gov/DC/OCTO/Publication%20Files/government2_0_Gartner_Definition_G00172423.pdf
- Mansuri, G. and Rao, V. (2014) 'Localizing development. does participation work?', *Journal of Economics*, Vol. 112, No. 2, pp.201–205.
- Meijer, A.J., Koops, B.-J., Pieterse, W., Overman, S. and Tije, S.t. (2012) 'Government 2.0: key challenges to its realization', *Electronic Journal of e-Government*, Vol. 10, No. 1, pp.59–69.
- Mergel, I. (2012a). *Social Media in the public sector: Participation, collaboration and transparency in the networked world*. San Francisco: Jossey-Bass.
- Mergel, I. (2012b) 'Tool help agencies manage social media messaging', *Nextgov*, Retrieved from <http://www.nextgov.com/technology-news/tech-insider/2012/10/government-finding-measured-voice-social-media/58923/>
- Mergel, I. (2013a) 'A framework for interpreting social media interactions', *Government Information Quarterly*, Vol. 30, No. 4, pp.327–334, doi: 10.1016/j.giq.2013.05.015
- Mergel, I. (2013b) 'Social media adoption and resulting tactics in the U.S. federal government', *Government Information Quarterly*, Vol. 30, No. 2, pp.123–130, doi: 10.1016/j.giq.2012.12.004
- Mergel, I. and Bretschneider, S.I. (2013) 'A three-stage adoption process for social media use in government', *Public Administration Review*, Vol. 73, No. 3, pp.390–400, doi: 10.1111/puar.12021
- Milakovich, M.E. (2012) *Digital Governance, New Technologies for Improving Public Service and Participation*, Routledge, Taylor & Francis Group, New York.
- Moon, M.J. (2002) 'The evolution of e-government among municipalities: rhetoric or reality?', *Public Administration Review*, Vol. 62, No. 4, pp.424–433, doi: 10.1111/0033-3352.00196
- Mossberger, K., Wu, Y. and Crawford, J. (2013) 'Connecting citizens and local governments? Social media and interactivity in major U.S. cities', *Government Information Quarterly*, Vol. 30, No. 4, pp.351–358, doi: 10.1016/j.giq.2013.05.016
- Porter, J. (2008) *Designing for the Social Web*, New Riders Publishing.

- Porwol, L., Ojo, A. and Breslin, J. (2013) 'On the duality of e-participation – towards a foundation for citizen-led participation', Paper presented at the *Technology-Enabled Innovation for Democracy, Government and Governance*, Berlin, Heidelberg.
- Rexhepi, A., Filiposka, S. and Trajkovik, V. (2016) *Social Networking for eGovernment: An Initial Assessment of Web 2.0 Tools Used by the Kosovo Central Government*, <http://ceur-ws.org/Vol-1746/paper-13.pdf>
- Rexhepi, A., Filiposka, S. and Trajkovik, V. (2018) 'Youth e-participation as a pillar of sustainable societies', *Journal of Cleaner Production*, Vol. 174, pp.114–122, doi: <https://doi.org/10.1016/j.jclepro.2017.10.327>
- Rexhepi, A., Rexha, B. and Dika, A. (2012) 'Assessment of success factors of e-government project implementation: challenges for the Kosovo e-government perspective', Paper presented at the *ICEGOV '12 – 6th International Conference on Theory and Practice of Electronic Governance*, Albany, New York.
- Rodriguez-Bolivar, M.P. (2014) *Measuring E-government Efficiency*, M. P. Rodriguez-Bolivar Ed., Springer, New York.
- Rowe, G. and Frewer, L.J. (2004) 'Evaluating public participation exercises: a research agenda', *Science, Technology and Human Values*, Vol. 29, No. 4, pp.512–557, doi: 10.1177/0162243903259197
- Sæbø, Ø., Rose, J. and Nyvang, T. (2009) 'The role of social networking services in eParticipation', Paper presented at the *International Conference on Electronic Participation, ePart 2009*, Springer Verlag, Berlin, Heidelberg.
- Sandoval-Almazan, R., Gil-Garcia, J.R., Luna-Reyes, L.F., Luna, D.E. and Diaz-Murillo, G. (2011) 'The use of Web 2.0 on Mexican state websites: a three year assessment', *Electronic Journal of e-Government*, Vol. 9, No. 2, pp.107–121.
- Santamaría-Philco, A. and Wimmer, M.A. (2018) *Trust in E-Participation: An Empirical Research on the Influencing Factors*, Association for Computing Machinery, Delft, The Netherlands.
- Shahkooh, K.A., Saghafi, F. and Abdollahi, A. (2008) 'A proposed model for e-government maturity', Paper presented at the *3rd International Conference on Information and Communication Technologies: From Theory to Applications, 2008. ICTTA 2008*, 7–11 April, 2008.
- Snead, J.T. (2013) 'Social media use in the U.S. Executive branch', *Government Information Quarterly*, Vol. 30, No. 1, pp.56–63, doi: 10.1016/j.giq.2012.09.001
- Switzerland's eGovernment Strategy* (2014) *Program Office E-Government Switzerland, Federal IT Steering Unit (FITSU)*, Swiss Federal Council, Bern.
- The European eGovernment Action Plan 2011–2015: Harnessing ICT to Promote Smart, Sustainable & Innovative Government* (2010) (COM(2010) 743, European Commission, Brussels.
- The US National Archives and Records Administration Guidance on Managing Social Media Records* (2014) The U.S. National Archives and Records Administration.
- United Nations E-Government Survey 2012 – E-Government for the People* (2012) (ST/ESA/PAD/SER.E/150). United Nations, United Nations Department of Economic and Social Affairs, United Nations Division for Public Administration and Development Management, New York.
- West, D.M. (2004) 'E-government and the transformation of service delivery and citizen attitudes', *Public Administration Review*, Vol. 64, No. 1, pp.15–27.