

EVALUATION OF ePARTICIPATION SERVICE'S AVAILABILITY ON CZECH MUNICIPAL WEBSITES

Eva Ardielli

VŠB – Technical University of Ostrava, Ostrava, Czech Republic

Email: eva.ardielli@vsb.cz

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ABSTRACT

Rapid expansion of eParticipation as a tool of engagement and strengthened cooperation between governments and citizens is a contemporary trend worldwide. The objective is to improve access to information and public services as well as to promote participation in policy-making by usage of Information and Communication Technologies. eParticipation is also considered as a necessary component or a prerequisite of eDemocracy. The paper is focused on the issue of eParticipation and its application on local level of government in the Czech Republic. The aim of the research is to evaluate the offer and availability of eParticipation services provided on the municipal websites by the municipalities with extended powers in Moravian-Silesian Region. The methodology and structure of the criteria for assessing the level of eParticipation services in the presented research was designed on the basis of the Digital Governance in Municipalities Worldwide methodology. The data were obtained from author's own investigation on the municipal websites. The data analysis was supplemented by cluster analysis. On the basis of the results of cluster analyses, the municipalities were divided according to their success in the selected criteria. The results of the research point out the insufficient offer of eParticipation services on municipal websites and on the poor options of citizen's eParticipation at the local level of government in the Moravian-Silesian Region. Similar results may be expected across the Czech Republic. The results of this research are particularly relevant to the municipal authorities of the selected region and local government to indicate the weaknesses of online opportunities for society. At present, the topic of participation at the local level is very important as it contributes to the implementation of the concept of Smart Cities. This research emphasizes that the offer and availability of eParticipation services for citizens needs to be expanded. It is very useful and comfortable to use current technological possibilities and offer participation services online.

KEYWORDS: eParticipation services, Moravian-Silesian Region, municipalities with extended power

JEL CLASSIFICATION: H11, H83

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INTRODUCTION

eParticipation is considered as a means for strengthening of civic engagement and suitable instrument for ensuring open and participatory governance through Information and Communications Technologies (ICT) (United Nations, 2017). eParticipation enables the public to participate more broadly and deeply in the policy making process across all levels of government. The services of eParticipation refer to the means of ICT-supported participation in processes concerning administration, policy-making, decision-making, service delivery, information provision, consultation, deliberation, etc (Silva, 2013). Nowadays eParticipation is becoming a preferred decision-making participation for many people, as well the electronic services are becoming very important for the citizens. As stated by Mergel & Desouza (2013) or Wiewora *et al.* (2016) the idea of participating citizens into administrative tasks has considerable potential to strengthen citizens' trust in government and to improve the efficacy and effectiveness of public service delivery (Lee, 2017). eParticipation helps people engage in politics and policy-making and makes the decision-making processes easier to understand, thanks to Information and Communication Technologies (eParticipation, 2017).

The paper is focused on the evaluation of eParticipation services on local level of government in the selected municipalities with extended powers in the Czech Republic. The aim of the research is to evaluate the offer of eParticipation services provided on the municipal websites by the municipalities with extended powers in the Moravian-Silesian Region.

1 LITERATURE REVIEW

Citizens act in two roles towards public administration - as an object of its activity (they must respect measures and regulations) and as a source of legitimacy of public administration activities (in terms of the Constitution, citizens are the source of all state power). The basic way in which citizens fulfill the role of a source of power is the participation in elections. They can also exert their influence on public affairs in other ways, but in general it is about political participation, i.e. involving citizens in governance processes (King *et al.*, 1998 and Europa, 2017).

Čermák & Vobecká (2011) state that participation is a balancing of power inequality between citizens and civil organizations on the one hand and a public administration apparatus on the other. eParticipation covers all democratic processes supported by ICTs. It is also one of the two basic components of eDemocracy, the latter being eElections (Khosrow-Pour, 2005). eParticipation is about involving citizens in public decision-making processes by using ICTs, so that citizens are involved in governance as such (Pekárek, 2008). However there is no all-inclusive definition of eParticipation, the general consensus is that it includes three interactions between governments and citizens, see (Lironi, 2016; OECD, 2001; United Nations 2014):

- eInformation - enabling participation by providing citizens with public information.
- eConsultation - engaging citizens in decision-making on public policies and services by appropriate tools.
- eDecision-making - empowering citizens through possibility to co-design the policy and service components and delivery modalities.

Nowadays, it is not enough for the local government to disclose information to citizens only on a bulletin board in the office or on its website. Citizens expect more from the office when they use the Internet, smart phones and social media as a means of communication. In today's communication skills, eParticipation is becoming a preferred decision-making participation for many people. As stated by Suebvises (2018) above all the social networks have the great potential to increase the motivation and ability of citizens to participate in public affairs. Also electronic services are very important to website users (citizens), as they save time and money (Bruno, 2016). They are the tool to support urban development and innovations as well (Komninou & Schaffers, 2012). New platforms using data processing tools are emerging nowadays. They are supporting the development of Smart Cities. However as stated by Alaverdyan *et al.* (2018) not only technological aspect of Smart Cities should be developed. It is equally important to improve the interaction between city and citizens in the local government level because citizen involvement is crucial and collaboration between government and other stakeholders is necessary and crucial aspect of implementation of Smart City concept, see Nevado *et al.* (2020) or Dias & Cacho (2018). The citizen-government interaction in open government arenas and collaboration platforms is investigated for example by Schmidhuber *et al.* (2017 and 2019) and Kube *et al.* (2015).

The subjects of the analysis were the websites of individual Czech municipalities with extended powers in the Moravian-Silesian Region. The evaluation of the government and municipal websites is discussed by many authors as Ancarani (2005), Carrizales (2008) or Špaček & Malý (2010). For example Torres *et al.* (2005) evaluated regional and local level websites of 47 selected administrative units in the EU in

terms of availability of services for citizens and businesses online. There were also developed several methodologies that are designed to evaluation of web portals. Web Content Accessibility Guidelines (WCAG), the first ever Web Accessibility Guidelines, were created by the Web Accessibility Initiative (WAI), which is officially part of the W3C Consortium (W3C, 2017). In 2004 for example also at the Czech Ministry of Informatics, the Best Practice methodology was developed to evaluate the accessibility of public administration portals, which was redesigned two years later as part of the research project (Rules of Accessibility, 2017).

2 RESEARCH BECKGROUNDS

At present, researches are being developed the quantifiable evaluation criterion of eParticipation tools and eParticipation services using the information available on municipal web portals (Agudo *et al.*, 2017). eParticipation services can be determined according to the Digital Governance in Municipalities Worldwide (2015-16) methodology, see Holzer & Manoharan (2016). The methodology currently includes 20 items, many of which are included in the evaluation criteria in this research. The following 10 items are the selected eParticipation services that are crucial for this research, see Table 1.

Table 1 Selected eParticipation services

NAME OF THE SERVICE	CHARACTERIZATION OF THE SERVICE
Payment for utilities, fees or penalties online	This is a service where the local government website allows users to pay for public services online, such as tap and waste water, gas, electricity, dog fees, parking fines, and so on. The user only logs in with his / her login data on the web page, clicks on the "pay" button and the system automatically redirects the user to the payment gateway, when the system itself generates data such as bank details, variable symbol and amount. The user is not concerned about finding out this data and paying for the transfer or going to the office. From the comfort of your home it also has an overview of paid or unpaid services.
Filing a tax return or paying tax online	The local government website will allow users to submit a tax return, for example, from real estate, acquisition of immovable property, income, etc. The user only logs in with his / her login information, clicks the tax button and has a complete overview of filed returns, payment, etc. The user is automatically redirected to the appropriate online tax office page. After clicking on the "Submit Return" button, he will fill in the necessary data and send the data. Subsequently, the local government website allows users to pay the tax directly and online by clicking on "pay".
Apply for permission, license and track their online status	The user is allowed to apply for permission through the local government website, such as building permission or license and tracking their online status, possibly under a generated submission number.
Online procurement	The user is allowed to submit a public contract online through the local government website, have an overview of their assigned orders and responses, and there is also the opportunity to respond to answers.
Filing a complaint online	The user is allowed to file a complaint through the local government website, whether on the behavior of the official or on the running of the office and monitoring the status of the complaint online, possibly under a generated submission number.
Making inquiries about civil affairs online	Local government websites allow the user to submit to the Authority any questions about civil matters, such as when a new pavement will be

	built or the local road will be repaired. The user also has the option to see answers to other users' questions in the section.
Search the FAQ section (Frequently Asked Questions) to accompany citizens by online city administration	Local government websites allow users in the FAQ to search for information that the user needs to know, concerning his rights, responsibilities, forms of document submissions, paying, office functions, etc.
Apply for information online	The user is allowed to request the Office for information via the website, when he / she enters his / her email and the authorized officer sends the requested information to the user immediately.
Crime announcements, administrative law violations, or online corruption	The User has the opportunity to notify the Office of a crime, violation of administrative laws and regulations or corruption, including anonymously, by means of an appropriate form on the local government website, which will be sent to the responsible official in the matter.
Book or buy tickets for events in the city or municipal hall, arenas or other city facilities online	The user is allowed to buy an ticket online at the local government website. He selects a specific action in the event calendar, bookes a ticket and pays it online. The ticket is then sent to him electronically with a bar code.
Searching databases online	Local government websites allow the user to search the databases, such as in the clerk's database, when the user enters a specific letter or enters the full name and searches the database for the appropriate data.

(Source: Author's processing according to Holzer & Manoharan, 2016)

In the Czech Republic there is quite a good level of eInformation services and eParticipation tools at the national level. However at the local level, the situation is different. In local government, officials are not obliged to use eParticipation tools and provide eParticipation services. There is also no legal framework for their implementation. The main reason for the lack of implementation of participatory instruments is the lack of political will to do so. After their election, politicians rely more on expert advisers and on their own decisions than on consulting citizens, which they consider costly and lengthy. Local government eParticipation tools in the Czech Republic include mainly:

- Electronic surveys: They include electronic polls and questionnaires. They are commonly used as a tool to detect public response.
- Public consultations: They are relatively rare, the most frequent organizers of consultations are mainly non-governmental organizations, usually on the subject of the environment.

From this reason the research is aimed on the local level of government in the Czech Republic, on the evaluation of eParticipation services and tools offered on web portals of municipalities with extended powers falling under the Moravian-Silesian Region in the Czech Republic.

The Moravian-Silesian Region lies in the northeast of the Czech Republic. Its western neighbor is the Olomouc Region, in the south the Zlín Region. It also borders Slovakia in the southeast, specifically the Žilina Region. And in the north it borders on the Polish Voivodeship of Opole and Silesia. With its area of 5 430 km², it occupies 6.9 % of the territory of the Czech Republic and is the 6th largest region. The name of the region itself refers to two historical territories. To Silesia, which is now mostly located in Poland, and Moravia.

The Moravian-Silesian Region, as we know it today, was established on January 1st, 2001. Its territory can be divided into 22 municipalities with extended powers, those in the region can be found 22. If we go further into the administrative division, there are 300 municipalities in the region. Of these, 42 have city status, of which 5 are statutory cities. The largest and most populous city is Ostrava. Within the

NUTS classification, the Moravian-Silesian Region forms a separate unit in both NUTS 3 and NUTS 2 classification.

The Moravian-Silesian Region, with a population of 1.2 million, ranks as the third most populous region in the Czech Republic. It has an above-average population density of 223 inhabitants per km². Most of the population (60 %) live in cities over 20 thousand inhabitants. The most densely populated region is the core region of the region (Interaktivní učebnice Moravskoslezského kraje, 2018). The economic importance of the region is also significant. Gross domestic product (GDP) of the region is 19641 million EUR and the share of the region in GDP of the Czech Republic (%) is 9.5 % (ČSÚ, 2020).

In this research the municipalities with extended powers falling under the Moravian-Silesian Region (22 municipalities in total) were selected for the analysis, see Figure 1. There are in total 205 municipalities with extended powers in the Czech Republic, most of them in the Central Bohemian Region (26) and Moravian-Silesian Region (22). On the other hand, the lowest number is in the Karlovy Vary Region (7) and Liberec region (10).

Figure 1 Municipalities with extended powers in the Moravian-Silesian Region



(Source: ČSÚ, 2020)

Administrative districts of municipalities with extended powers were established by Decree of the Ministry of the Interior No. 388/2002 Coll., and updated most recently by Decree No. 388/2015 Coll. The districts are defined by the list of municipalities mentioned in the decree, respecting the borders of regions. Municipalities with extended powers are the municipalities of III order in the Czech Republic. It forms an intermediary of the delegated powers of state administration between regional and municipal authorities. In addition to basic self-governing activities, they carry out delegated state administration and other activities not only for their own administrative territory, but also for other municipalities in their designated administrative district determined by the implementing legislation. In fact, the extended scope is defined both in the Municipalities Act and in many special laws. These

include, for example, the issuing of travel and personal documents, driving licenses, trade licenses, water management proceedings, etc.

The basic statistical indicators of municipalities with extended powers in the Moravian-Silesian Region are given in the Table 2. The figures refer to the year 2018, see (ČSÚ, 2020).

Table 2 Research sample of municipalities

MUNICIPALITY WITH EXTENDED POWERS	NUMBER OF INHABITANTS	AREA (IN KM ²)	NUMBER OF MUNICIPALITIES
Bílovec	25620	162.4	12
Bohumín	33419	72.9	3
Bruntál	36567	629.8	31
Český Těšín	25801	44.4	2
Frenštát pod Radhoštěm	19509	98.7	6
Frýdek-Místek	112033	480.2	37
Frýdlant nad Ostravicí	24909	317.4	11
Havířov	87096	88.19	5
Hlučín	40603	165.32	15
Jablunkov	22703	176.10	12
Karviná	64316	105.62	4
Kopřivnice	40763	121.31	10
Kravaře	21315	100.61	9
Krnov	40113	574.45	25
Nový Jičín	48907	275.36	16
Odry	16881	223.99	10
Opava	101006	507.01	41
Orlová	37255	45.08	3
Ostrava	321273	331.53	13
Rýmařov	15338	332.34	11
Třinec	54542	234.67	12
Vítkov	13330	282.9	12

(Source: Author's processing according to ČSÚ, 2020)

3 RESEARCH METHODOLOGY

The main objective of this paper is to evaluate the availability of eParticipation services on municipal websites in selected region of the Czech Republic. The offer of eParticipation services was investigated on the websites of municipalities with extended powers in Moravian-Silesian Region. The research procedure was as follows:

- Proposing a structure of evaluation criteria.
- Obtaining data on selected websites of municipalities.
- Data processing using descriptive statistics and cluster analysis.

The structure of the criteria for assessing the level of eParticipation services in the Czech municipalities with extended powers was designed on the basis of the Digital Governance in Municipalities Worldwide methodology, see Holzer & Manoharan (2016), where the Rutgers-SKKU eGovernance Performance Index is calculated. This is the instrument used to evaluation of municipal web portals

with respect to delivery of public service and citizen participation in governance. This index is the base for the evaluation of the web portals of the major cities of the world's largest states. This evaluation is performed in two-year cycles and is organized by The eGovernance Institute, part of Rutgers University, Newark. It is a prestigious and at the same time the most comprehensive methodology for evaluating web portals, so it was chosen as the basis for this research. The criteria of the Digital Governance in Municipalities Worldwide methodology are covering 5 major areas: privacy and security, usability, content, services, citizen and social engagement. The method is based on 100 measurements. Scoring scales vary according to the type of question. When the information occurs 1 point can be obtained when it does not occur 0 point is obtained. There are also questions where different rates can be obtained (from 0 to 3 points respectively). In the overall score, each area is equally represented, regardless of the number of questions it contains.

For the needs of analysis of provided eParticipation services in the presented research, 10 evaluation criteria (Q1 – Q10) were used, see Table 3.

Table 3 Selected criteria for evaluation of eParticipation services

NO.	CRITERIA	NUMBER OF POINTS
Q1	Does the web site include FAQs?	0 or 1
Q2	Does the web site allow database searches?	0 or 1
Q3	Does the web site provide information for users to solve life situations?	0 or 1
Q4	Does the web site allow citizens to comment on or respond to the work of individual municipal departments through online forms?	0 or 1
Q5	Does the web site allow citizens to create online complaints and notifications to be requested?	0 or 1
Q6	Does the web site allow citizens to pay online for utilities, fees or fines?	0 or 1
Q7	Is there a live chat on the web site to receive suggestions?	0 or 1
Q8	Does the web site offer newsletters or community news to subscribe?	0 or 1
Q9	Does the web site offer calendar of events?	0 or 1
Q10	Does the web site offer online records from the council meeting?	0 or 1

(Source: Author's processing according to Holzer & Manoharan (2016))

The criteria according to which the eParticipation services are evaluated have been selected taking into account our local conditions and based on preliminary surveys in this area, see for example Ardielli & Vavrek (2015). Criteria that are not implemented ever in the Czech Republic on websites of regional level have been omitted. For example the possibility of online permission and licensing applications, following the status of their processing or online access to private information or health records. The selected criteria are based primarily on Digital Governance in Municipalities Worldwide methodology. Some evaluation parameters have been taken over, others have been modified and several have been newly included. The maximum number of points that could be earned was 10. Specifically, there were visited 22 specified municipal websites of Moravian-Silesian Region and searched monitored information (Q1 – Q10). In case that the desired information was found 1 point was added. In case that the information was unavailable 0 points were earned. The data are valid for year 2018.

Obtained data were then evaluated using descriptive statistics and cluster analysis. Cluster analysis is a multivariate statistical method that is used to classify objects. It is used to sort units into groups (clusters) such that the units belonging to the same group are more similar than objects of the other groups. Cluster analysis can be carried out both on a set of objects, each of which must be described by the same set of characters that makes sense in the argument track and on a set of characters that are characterized through a specific set of objects, the holders of these characters. There are 5 classes of clustering methods: hierarchical clustering, partitioning methods (k-means, PAM, CLARA), density-based clustering, model-based clustering and fuzzy clustering. In the presented article was used hierarchical clustering (Kaufman, L., & Rousseeuw, 1990). By hierarchical clustering a system of subsets is created, where an intersection of two subsets - clusters is either empty set, or one of them. If there is at least once the second case, the system is hierarchical. The hierarchical clustering can be divided into two approaches -divisional approach and agglomerative approach. Hierarchical clustering offers several alternative solutions, the result of clustering is then possible to express as the dendrogram.

There are different approaches to clustering objects based on their distance or similarity. In the presented research was used the Ward's method. Ward's method is based on an analysis of variance. Combines those clusters where is the minimal sum of squares. Generally it can be said that this method is very effective, however, it tends to form relatively small clusters. Distances of objects are measured by Squared Euclidean distances. There are also several distance measurements for dichotomous variables (Dice, Jaccard, Russell / Rao, Matching), see Finch (2005). The results of these methods were not compared in this research.

A fundamental issue in partitioning clustering is determining the optimal number of clusters in a data set. There are more than thirty indices and methods for identifying the optimal number of clusters. The optimal number of clusters is somehow subjective and depends on the method used for measuring similarities and the parameters used for partitioning. A simple and popular solution consists of inspecting the dendrogram produced using hierarchical clustering to see if it suggests a particular number of clusters (Kaufman, L., & Rousseeuw, 1990). This approach was used in this research.

4 RESULTS

In this research survey, 10 eParticipation services were analyzed that should already be routinely used on municipal websites, according to a study in European cities, see Holzer & Manoharan (2016), or their occurrence is desirable. The research showed that eParticipation services are provided to a very low degree in municipalities with extended powers in the Moravian-Silesian Region. Total number of points earned by all 22 municipalities was 69 from 220 possible. It means that the overall availability of desirable eParticipation services was only 31.4 %. The basic statistical analysis of individual criteria is summarized in Table 4.

Table 4 Selected criteria for evaluation of eParticipation services

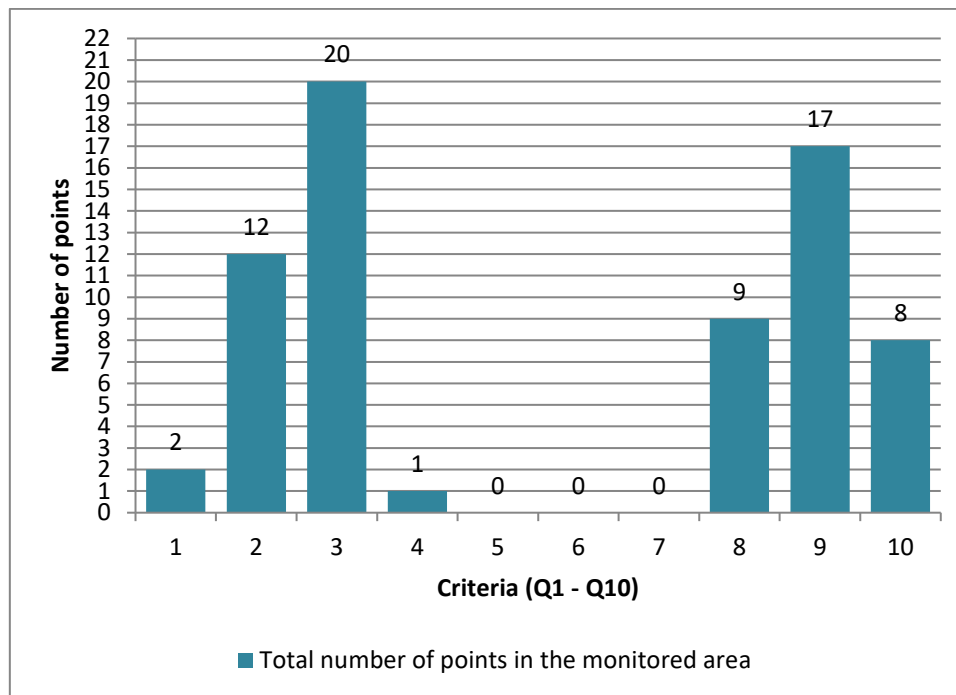
CRITERIA	MEAN VALUE	MEAN VALUE ERROR	MEDIAN	STANDARD DEVIATION	VARIANCE	RATE (IN %)
Q1	0.091	0.063	0.000	0.294	0.087	9.1
Q2	0.545	0.109	1.000	0.510	0.260	54.5
Q3	0.909	0.063	1.000	0.294	0.087	90.9
Q4	0.045	0.045	0.000	0.213	0.045	4.5
Q5	0.000	0.000	0.000	0.000	0.000	0.0
Q6	0.000	0.000	0.000	0.000	0.000	0.0

Q7	0.000	0.000	0.000	0.000	0.000	0.0
Q8	0.409	0.107	0.000	0.503	0.253	40.9
Q9	0.773	0.091	1.000	0.429	0.184	77.3
Q10	0.364	0.105	0.000	0.492	0.242	36.4

(Source: Author's processing according to information on municipal websites)

Figure 2 shows the results by criteria (Q1 - Q10) for all municipalities. The maximum number of points per area is 22 points (the eService was found on all municipal websites), minimum is 0 (the eService was found on no municipal website).

Figure 2 Evaluation of monitored eParticipation services on municipal websites by criteria



(Source: Official websites of municipalities)

As visible in Table 4 and Figure 2, most often are citizens offered eServices about information dealing with life situations – Q3 (90.9 % of municipalities) and about calendar of events – Q9 (77.3 % of municipalities). Unfortunately, in no case was available the eService of buying tickets online for these events – Q6. Quite often is the possibility of searching in databases – Q2 (54.5 % of municipalities), offering newsletters or general news with the possibility to subscribe – Q8 (in 40.9 % of municipalities) and availability of online council meeting records – Q10 (in 36.4 % of municipalities). In a few single cases there is on the web portals a FAQ section with answers to frequently asked questions and the possibility to comment or respond to the work of individual departments via online forms. Nowhere is available the eService for citizens to file online complaints and notifications, ask for online information, pay for public services online, charges or fines, and use live chat to receive different incentives.

According to the results of the research the average number of points earned per municipality was 3.14, it means 31.4 % of the possible maximum of 10 points. Maximum value obtained by the municipality was 6 points, minimum value was 0. The variability of the distribution of the set of random values around its mean value indicates the variance having the value 2.22. In more detail see Table 5.

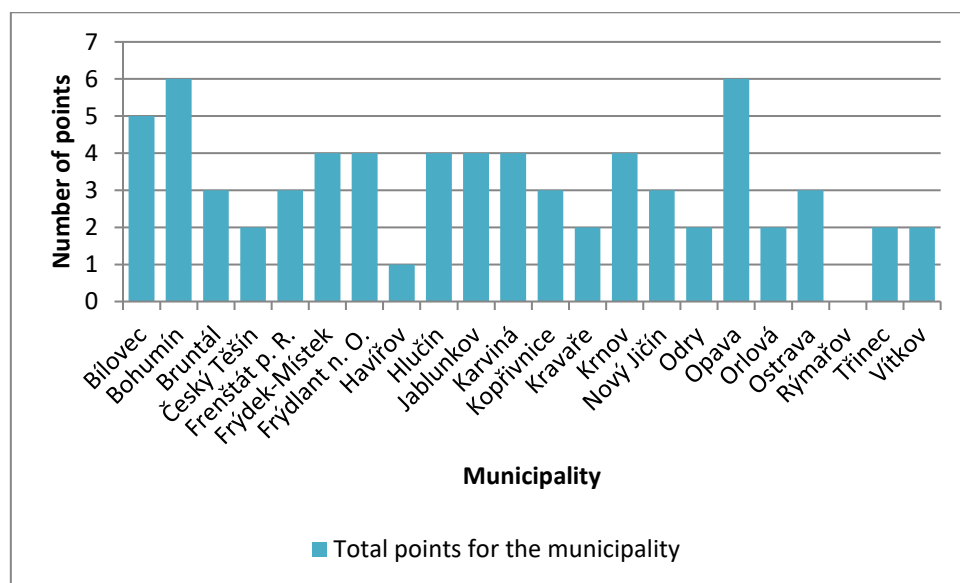
Table 5 Selected criteria for evaluation of eParticipation services

QUANTITY	MIN	MAX	MEAN VALUE	MEAN VALUE ERROR	STANDARD DEVIATION	VARIANCE	RATE (IN %)
22	0	6	3.14	0.32	1.49	2.22	31.4

(Source: Author's processing according to information on municipal websites)

Figure 3 shows the results by individual municipalities. The maximum number of points per area was 10 points (all monitored eServices were found on the municipal website), minimum was 0 (no eService was found on municipal website).

Figure 3 Evaluation of municipalities according to the availability of eParticipation services



(Source: Official websites of municipalities)

The worst of the evaluated municipalities was Rýmařov, which does not provide any of the monitored eParticipation services. Havířov offers its citizens a single eService from monitored 10 eServices (information about life situations); Český Těšín, Odry, Orlová, Třinec and Vítkov offer two eServices (mainly information about life situations and calendar of events); Bruntál, Frenštát pod Radhoštěm, Kopřivnice, Nový Jičín and Ostrava offer three eServices (mainly information about life situations, calendar of events online and records from the council meeting or database searches); Frýdek-Místek, Frýdlant nad Ostravici, Hlučín, Jablunkov, Karviná and Krnov offer four eServices (these municipalities usually offer additionally newsletters or community news to subscribe). Five eServices are offered by Bílovec. The highest number of eParticipation services is offered by Bohumín and Opava. These municipalities offer for example the FAQs on web site or the web site allow citizens to comment on or respond to the work of individual municipal departments through online forms.

The evaluation of eParticipation Services in municipalities was also based on the application of cluster analysis. In Table 6, there are evaluated the municipalities according to the level of eParticipation services based on the Cluster analysis, Ward's method. The municipalities are divided into 3 groups on municipalities with available eServices, limited-available eServices and not available eServices. They are sorted also from the best to the worst, according to the availability of eServices in percent value.

Table 6 Classification of municipalities according to the level of eParticipation services

CLUSTER	MUNICIPALITY	RATE (IN %)	CLUSTER	MUNICIPALITY	RATE (IN %)
1	Bohumín	8.7	2	Kopřivnice	4.3
1	Opava	8.7	2	Nový Jičín	4.3
1	Bílovec	7.2	2	Ostrava	4.3
1	Frýdek-Místek	5.8	2	Český Těšín	2.9
1	Frýdlant n. O.	5.8	2	Kravaře	2.9
1	Hlučín	5.8	2	Odry	2.9
1	Jablunkov	5.8	2	Orlová	2.9
1	Karviná	5.8	2	Trinec	2.9
1	Krnov	5.8	2	Vítkov	2.9
2	Bruntál	4.3	3	Havířov	1.4
2	Frenštát p. R.	4.3	3	Rýmařov	0.0

(Source: Author's processing according to information on municipal websites)

In Cluster 1 are placed 9 municipalities with extended powers that offer eParticipation services to their citizens. Bohumín and Opava is on the top of the ranking, because the share of available services is 8.7 % (6 points) from total reached score of all 22 municipalities (69 points). In Cluster 2 placed 11 municipalities with extended powers that offer eParticipation services to their citizens at least to some extent. Cluster 3 covers 2 municipalities with extended powers that offer no or almost none eParticipation services. Havířov offers eServices only in value of 1.4 % of total score and Rýmařov offers even no eServices and placed on the last place.

5 DISCUSSION

The area of eParticipation services has not been in the Czech research sufficiently analyzed yet, but the existing results of web sites evaluation in the Czech Republic (Ardielli and Vavrek, 2015; FOM, 2012 and OS, 2014) point out the low level of citizen participation in the decision-making process. Similar conclusions were reached also from the results of studies in Slovakia and Poland see (TIS, 2014) in the Slovakia or Ziemba et al., (2014) in Poland. For example Ardielli and Vavrek (2015) described in the year 2014 the 14 % availability of online discussion forums on the websites of municipalities with extended powers in the Moravian-Silesian Region. In the international context, for example, the Smart Cities in Europe in terms of determining factors were analyzed by usage of cluster analyses by (Nevado et al., 2020). Burhanudddin (2019) deals with evaluation of citizen intention on online eGovernment services. This area is closely linked to the implementation of eParticipation tools. The intention of citizens to use eGovernment and eParticipation services should be broad supported by governmental authorities.

From the existing evaluations of eParticipation services is clear that scope and level of eServices is insufficient for the needs of eGovernment to function properly. Unfortunately, the observed state of practical implementation of eParticipation services in municipalities with extended powers of the Moravian-Silesian Region corresponds to the current state of the whole Czech eDemocracy, which is significantly behind the general state of information and communication technology development, see DESI Index (Europa, 2017) or EGDI Index (United Nations, 2017).

As regards eGovernment in the Czech Republic, more steps have already been taken to implement it, but in the area of eDemocracy and especially eParticipation, the situation is much less favorable. As the biggest problem of implementation of eParticipation services in the Czech Republic there is little interest in this form of communication, both from the representatives and officials and from the citizens themselves. Moreover meantime no comprehensive methodology has been developed in the Czech Republic to draw information, especially in terms of the complexity of the tools and conditions of their usage, so it is no wonder that only a fraction of eParticipation options such as electronic discussions and similar tools is used nowadays. For example, ePetitions and active participation in online broadcasts of Council meetings are not accessible to citizens at all.

An important factor that can significantly influence the future of this part of eGovernment are also citizens themselves, that should put pressure on representatives and officials of their municipalities to make more use of the various eParticipation tools and services that will make them easier and better life. In particular, it should be possible to submit online complaints and notifications, pay online for public utilities, fees and penalties, apply for various licenses online and follow-up their status, and access various personal information about individual person online.

6 LIMITATIONS AND FURTHER RESEARCH

The presented research of municipal websites was carried out in the year 2018. Nevertheless, the area of digitization is developing very quickly and new electronic services are being developed and offered to citizens. New functionalities are gradually reflected in updates of municipal websites. The presented research must therefore be interpreted with this in mind. Currently, the author is conducting a follow-up research for 2020 (currently not finished) and there are considerable advances and differences from the situation in 2018. For example, on the website of the Statutory City of Ostrava, eServices are already available which allow payment through the municipal website, such as payment for municipal waste, fee for dogs, etc. Unfortunately, the situation remains unchanged in some municipalities also. The results of both studies will be compared in the follow-up research and the development in this area will be evaluated. The second limitation is that the research is aimed on regional level of one selected region of the Czech Republic. It is therefore not possible to draw general conclusions.

CONCLUSIONS

The research results of eParticipation service's implementation on municipal websites in the Moravian-Silesian Region were evaluated for individual criteria (according to the number of points achieved in individual areas by question number Q1 – Q10) and by individual municipalities (according to the total number of points in all monitored criteria Q1 – Q10). Overall, the level of eParticipation services offered by municipalities with extended powers in the Moravian-Silesian Region can be assessed as unsatisfactory (state to 2018). The total availability of eServices reached only 31.4 %. Some services are not available at all. For example in Rýmařov, there was detected no eParticipation service. It may be connected with the fact, that the offer of eParticipation services is not regulated by legislation and there are no specific recommendations in this respect. For individual municipalities, this may entail additional costs for managing the web portals, so they are not interested in offering these services or they do not have the necessary know-how. Another reason may be the unwillingness to consult citizens on public affairs or the lack of active approach.

Given that city web portals are currently the most preferred way for citizens to obtain information and to communication, eServices should be also a crucial part. Municipalities should focus on introducing neglected but very effective forms of citizen involvement in decision-making processes through information and communication technologies. In particular, these are live chats designed to receive a

variety of suggestions, embed various information in the form of a blog, MMS, text and graphic files, and tools for online decision making as ePetition and eReferendum. The involvement of these instruments is already common in some countries (Estonia, United Kingdom).

The verification of the proposed methodology for the evaluation of eParticipation tools and services in 22 municipalities with extended competences enabled to reveal the strengths and weaknesses in the process of involving citizens in public decision-making processes. It should be noted that the eParticipation process requires all stakeholders to allocate the necessary capacities, especially financial, material and personnel. The main reasons why eParticipation services are not implemented in the Czech Republic include distrust of politics, insufficiently developed civic competences, insufficient legislative anchoring and lack of motivation tools for participation development, poor academic reflection (including the absence of a comprehensive professional publication) and insufficient financial support.

In the context of the current situation of the coronavirus epidemic, it is particularly evident that the development of eParticipation services and government eServices is appropriate. If these services were implemented in the Czech Republic and commonly used by citizens, this would significantly ease the situation. Even in the case of quarantine or curfew, citizens could handle many things from home and without the need to visit a particular authority office. In the future, it is therefore desirable to extend eGovernment services to citizens and to mediate the active participation of citizens in online transmissions of discussions of public affairs, with the possibility of interfering, and the introduction of online discussion forums with immediate feedback from officials. With the development of Information and Communication Technologies, new tools will also certainly emerge, suitable for increasing the level of eParticipation of citizens and these will be more than appropriate to start using.

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BRIEF DESCRIPTION OF AUTHOR/AUTHORS:

Ing. Eva Ardielli, Ph.D. completed her PhD in Public Economics and Public Administration in 2015 on the Faculty of Economics of VŠB – Technical University of Ostrava. Since 2012 she has been an academic staff at the Department of Public Economics, Faculty of Economics of VŠB – Technical University of Ostrava. Subjects taught include eGovernment, Economics of Public Administration and Public Economics and Administration.