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DO LOCAL GOVERNMENT WEBSITES MEET THE MINIMUM CRITERIA TO SERVE THEIR PURPOSE?

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Abstract
Despite the fact that Romania has one the highest number of IT professionals per capita in Europe and one of the fastest Internet speed in the world, the application of e-government in the Romanian public administration is still in its early development, and the country ranks poorly in most digital governance rankings.
The local administration website is the most known e-governance tool promoted in Romania. Our aim is to investigate whether these tools meet the minimum criteria to increase citizen participation and governmental accountability as well as to build public trust.
Taking as a framework the evaluation method used in the Digital Governance in Municipalities Worldwide study (Holzer et al, 2016), we propose three criteria for our assessment of the websites: Content and Usability; Services and Security; Citizen Engagement. These three criteria incorporate the essential components that assist local government in its ability to function in the most effective and efficient way. For each of these components, our research applied 8 to 18 measures and each measure was coded on a scale of five points (0, 1, 2, 3,4).Using a randomized sample of cities, town and communes, we analyze 343 websites and generate an average and a composite score for each one.
Although Romanian local public administration made a significant progress in embracing information and communication technology to diversify communication channels with citizens, our study suggests that most websites of local governments are underdeveloped in terms of citizen participation and usability criteria.
The study concludes that Romanian local governments need to dedicate more effort and resources in website development to meet the minimum criteria needed to provide citizens with the ability to seek and receive administrative services.
Keywords:E-Governance, Local administration, Romania

1. INTRODUCTION

The definitions and meanings of government have evolved greatly, so that if in 2001 it was only understood as a tool that would provide citizens with the necessary information and services (UNDESA, 2001), in 2015 we talk about the transformation of relations between government bodies and citizens, as well as interactions with companies and other stekholders (WB, 2015). Although, the definitions head in a similar direction and demonstrate common points, they show differences in scope, subject, and technology, too (Wirtz, 2015):

TABLE 1 - RANGE DIFFERENCES OF E-GOVERNMENT DEFINITIONS

	Minimum range	Maximum range
Scope	Information and service delivery	Enabler for e-democracy
Subject	Citizen	All public sector stakeholders
Technology	Computer and presence	Internet

Source: Authors

We can not say anymore that „the approach to e-government has too often been driven by ICT solutions instead of user demand" (OECD, 2005). Local governments were reinvented by the Internet, a powerful tool that encouraged the transformation of traditional bureaucracy that emphasizes cost-efficiency binomics, standardization and departmental organization, e-government modeling that bayeaya on the coordinated network, customer service, and external collaboration (Tat-Kei Ho, 2002). Another study of the same period (Moon, 2002) suggests that the progress of e-government is hampered by a series of technical barriers, staffing or financial capacity, as well as legal issues such as confidentiality. The study shows that large cities are associated with complex and longevive web sites. The high capacity of the Internet to disseminate information can improve the responsibility of the government, but if e-government projects are in the early stages, the benefits are not what they expect. That is why ICT has not had a decisive impact on local governance in the EU(Pina, 2010).These brief references to the history of e-governance show that it is time to reduce the discrepancy between technological achievements and institututional capacity and legal barriers, in order to bring the information required by the user as closer to him as possible.

E-Government improves public sector efficiency, service quality and the relationship with the business environment. The interaction of citizens and businesses with the government is more transparent and more effective through the use of digital public services, and of course cheaper. Modern governance strategies can not bypass digital technologies. Thus, the EU's 2016-2020 Digital Governance Action Plan stipulates that public administrations should provide personalized, user-friendly, non-frontier digital services by 2020 (European Commission, 2016). In the new digital environment the needs and demands of citizens and businesses must be inspired by innovative approaches with flexible and precise interactions between economic and social actors. Also, digital media provides NGOs the opportunity to interact with the government. The services and data which link public authorities and institutions will facilitate the free movement of citizens, but also the flexibility of the business environment. Citizens' expectations in the digital era are increasing towards the performance of public administration, they want greater transparency, but also a better understanding of the function of services. The principle behind this Action Plan is Digital by Default, which encourages not only the replacemanet of classic services with digital ones, but also those who can become digital to do so. The delivery of public services should be done through a single point of contact or by accessing a one-stop shop through different channels.The high quality of public services can not be separated from competitiveness. This implies increasing the involvement of citizens, businesses, and researchers in order to ensure the design, supply and maintenance of these services. Thus, with the low cost of digital services, public administration can support new opportunities for knowledge, growth and employment. With a more transparent and accountable approach, public authorities can move closer to citizens (European Commission, 2016).E-Government research at the level of local public administration should also take into account the status of the state in the parameters of the human and material resources that it can make available to the local administration at a given moment. In this respect, the indicators used within the

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European Union, as well as the annual United Nations survey, are relevant.In Romania, according to the Law no.161 of April 19, 2003, regarding certain measures for ensuring transparency in the exercise of public dignities, public functions and business environment, prevention and sanctioning of corruption, the concept of E-government refers only to the activity of the central state institutions , which will use information technology in order to improve the access to public information and services of central public administration authorities, eliminate bureaucratic procedures and simplify working methodologies, improve the exchange of information and services between the central public administration authorities and improve the quality of public services at the level of central public administration. Local public administrations will apply the concept of e-administration, very similar in content with the precedent, but without the component of improving the quality of public services. (Law 161/2003, art 11) Thus, the National Electronic System consists of the "e-government system" and the "e-administration system".

2. LITERATURE REVIEW

2.1. E-Government evaluation in EU rankings

The following graphs (Figure 1) present data for the latest e-government Indicators for Romania compared to the EU average. Statistical indicators in this section reflect the evolution of the usage of internet in the relationship with public authorities (local and central institutions and authorities), from 2010 to 2015. (European Commission through Joinup,e-Government in Romania):

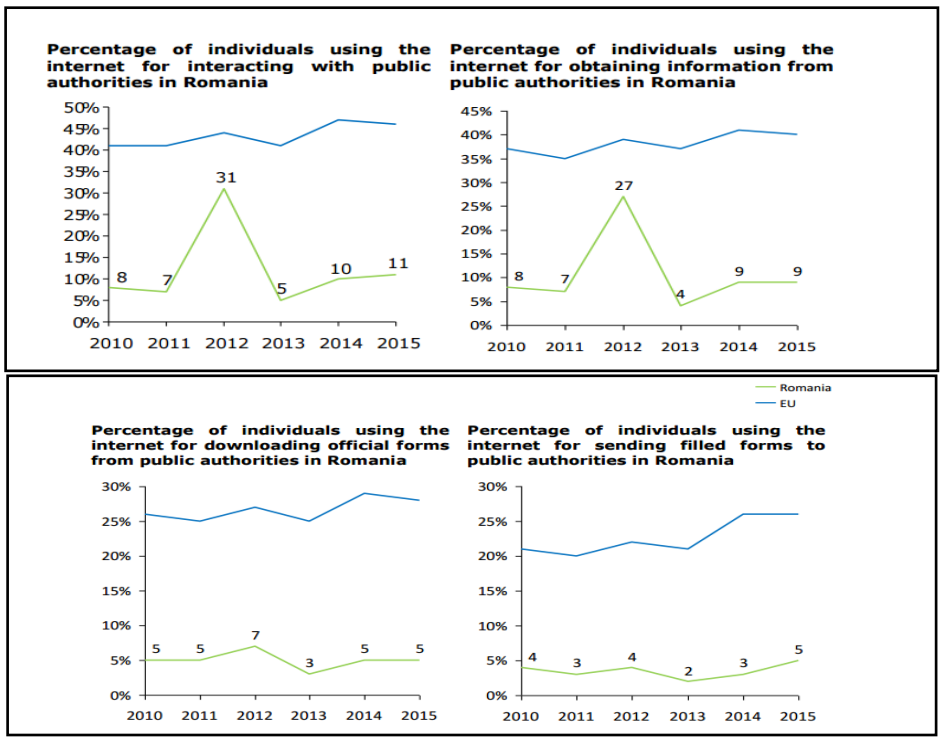

FIGURE 1 - PERCENTAGE OF INDIVIDUALS USING THE INTERNET IN ROMANIA
Source: Eurostat Information Society Indicators

The DESI Index (Digital Economy and Society Index) is a composite index. It synthesizes the digital performance of European countries, thus pursuing their evolution in the field of digital competitiveness. (European Commission, 2017).

TABLE 2 - DESI MEASURES PROGRESS IN DIGITAL THROUGH FIVE COMPONENTS

1	Connectivity	Fixed Broadband, Mobile Broadband, Broadband speed and prices
2	Human Capital	Basic Skills and Internet Use, Advanced skills and Development
3	Use of Internet	Citizens' use of Content, Communication and Online Transactions
4	Integration of Digital Technology	Business digitization and eCommerce
5	Digital Public Services	eGovernment

Source: Digital Economy and Society Index

The DESI index focuses on e-government, but measures the digitization of public services in general. The expected outcome is to increase the efficiency of public administration in relation with citizens and businesses, as well as better services provided to them.In the field of digital public services, in 2016 the countries with the most remarkable results were the Netherlands, Estonia and Finland, while at the opposite were Croatia, Hungary and Romania.

The public services available in the online environment have increased in recent years (online services completed haveincreased the rate from 74 in 2014 to 81 in 2016), which means a qualitative increase in the interaction with local authorities.Data reuse of previously known users has remained stable, with a specific indicator marking the facilitation of on-line service delivery. 34% of internet users sent online forms to government, compared to 27% three years ago (which suggeststhe use of online public services, not just searching information on thewebsite).

DESI Profile for Romania

As shown in Figure 2 and Table 3, the DESI indicator profile in Romania has contradictory components.

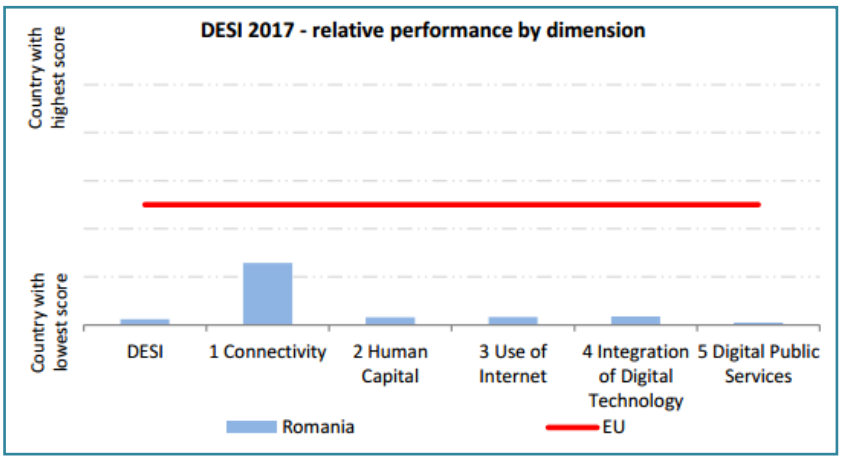

FIGURE 2 - ROMANIA IN DESI 2017 RANKING
Source: European Commission, Romania DESI Country Profile

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TABLE 3 - DESI COMPONENTS IN ROMANIA

Connectivity	Romania has one of the highest shares of subscriptions to fast broadband in the EU, as more and more people are accessing mobile broadband. More spectrum is made available, however the coverage of fixed and mobile (4G) broadband networks remains one of the lowest in the EU
Human Capital	More people are online, and digital skills levels are improving but remain the second lowest in the EU. Romania can benefit from a good pool of science, technology, math and engineering graduates
Use of Internet	Romanian Internet users engage in online activities much less than the EU average, in particular when it comes to e-Commerce and e-Banking. However, they are intensive users of social networks and online video call services
Integration of Digital Technology	Romania is not closing the gap with the EU on business digitisation, particularly regarding the use of cloud computing or online trade channels. The turnover from online sales slightly decreased
Digital Public Services	Romania made significant progress in the availability of Open Data (Figure 4) but the supply and use of e-Government services remain low (Figure5) (European Commission, 2017).

Source: European Commission, Romania DESI Country Profile

Although in some chapters the score of Romania is satisfactory, the final result and position no.28 in the standings, ranks the country very far even against the EU average (Figure 3).

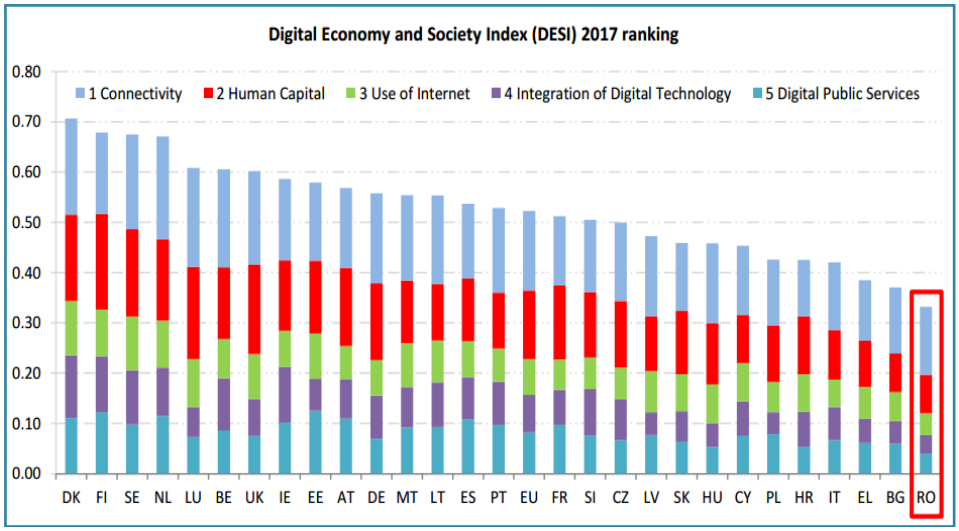

FIGURE 3 - DESI 2017 RANKING
Source: European Commission, Romania DESI Country Profile

In urban areas, people benefit from fast broadband connections, which explains the second place in the EU in terms of subscriptions, a favorable situation being also recorded in mobile broadband. However, these positive aspects are not found in the digitization of the economy or public services, often due to modest digital skills.

Evolution of the DESI indicator in Romania is shown in Figure 4. There is a slight improvement in all three practical forms of implementation, but also a decrease from 8% to 6% of the number of Internet users.

	Romania				EU
	DESI 2017		DESI 2016		DESI 2017
	value	rank	value	rank	value
5a1 eGovernment Users ↓ % internet users (last year)	6% 2016	28	8% 2015	28	34% 2016
5a2 Pre-filled Forms ↑ Score (0 to 100)	12 2016	27	6 2015	28	49 2016
5a3 Online Service Completion ↑ Score (0 to 100)	55 2016	28	54 2015	28	82 2016
5a4 Open Data[8] ↑ % of maximum score	63% 2016	11	44% 2015	17	59% 2016

FIGURE 4 - EVOLUTION OF DESI COMPONENTSIN ROMANIA
Source: European Commission, Romania DESI Country Profile

As far as digital public services are concerned, the growth rate of Romania over the past two years is higher than the rate of increase of the European rate, as shown in Figure 5

5 Digital Public Services	Romania		Cluster	EU
	rank	score	score	score
DESI 2017	28	0.27	0.43	0.55
DESI 2016	28	0.21	0.42	0.51

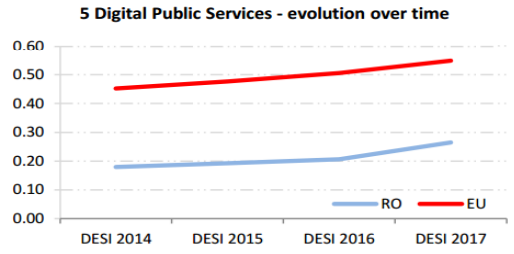

FIGURE 5 - EVOLUTION OF DIGITAL PUBLIC SERVICE IN ROMANIA
Source: European Commission, Romania DESI Country Profile

2.2. E-Government in United Nations Rankings - The E-Government Development Index

For benchmarking The United Nations Organization uses EGDI as a composite index in order to provide an e-government ranking across UN States. Mathematically, EDGI is a weighted average of scores (normalised) on three important dimensions of e-government (UN, 2016):

- OSI (Online Service Index) - quality and scope of online services;
- TII (Telecommunication Infrastructure Index) - status of the telecommunication infrastructure development;
- HCI (Human Capital Index)

Each index is a composite measure, so all the dimensions can be analysed independently. The Z-standardization procedure was applied to each of the three components in order for EGDI to be equally influenced by them. Otherwise, EGDI will be decisively influenced by the larger dispersion component. The normalisation of indices from range of 0,00 to 1,00 is done by the formula: EDGI=1/3*(OSI norm.+TII norm.+HCL norm.)

To develop a set of OSI values, a great number of UN researchers and volunteers assessed the national websites (only the native language ones) of each country. This has included the national portal, e- participation portal, e-services portal, websites of some ministries, like labour, education, health, social services, environment and finance (UN, 2016). Each question calls for Yes/No response. Every "Yes" answer generates a new question (more in depth question) inside/across the patterns. The outcome leads to an enhanced quantitative Survey. The total score reached by each country is again normalised between the range [0,1].

Four of five components of TII are calculated per 100 inhabitants:

- internet users in the last 3 months from any location;
- main fixed telephone lines connecting customer's terminal equipment;
- mobile subscribers;
- fixed broadband subscriptions to highspeed access to the Internet.

The fifth component is the Wireless-broadband subscription, which refers to: terrestrial fixed wireless broadband, mobile-broadband public internet subscriptions and satellite broadband.

HCI consists of four components:

- the rate of adult literacy;
- the combined gross enrolment ratio (primary, secondary and tertiary);
- average years of schooling;
- expected years of schooling.

Romania's position for the EDGI global index is 75, out of 193 investigated states, and among European countries 40, out of 43 states. Analyzing the causality of these very modest positions in terms of partial indicators it can be noticed a very low OSI and even TII, while the HCI component shows the preoccupation of the Romanian educational system in the field of applied informatics. The migration of Romanian specialists to more economically developed and higher-lived states has made the leap due to HCI not impressive.

TABLE 4 - ROMANIA IN EDGI RANKINGS 2016

	World Ranking				Europe Ranking			
Indicator	**EDGI**	**OSI**	**TII**	**HCI**	**EDGI**	**OSI**	**TII**	**HCI**
ROMANIA	0.5611	0.4565	0.4533	0.7736	0.5611	0.4565	0.4533	0.7736
Average	0.4922	0.4623	0.3711	0.6433	0.7241	0.6926	0.6438	0.6897
Ranking position	75/193	94/193	69/193	58/193	40/43	39/43	40/43	37/43

Source: Authors

EPI is the acronym for the UN Electronic Participation Index in the e-Government survey[1].The index has three components: first the exchange of E- information between government and citizens, then the involvement of

[1] Mathematically, the EPI is normalised by taking the total score value for a given country subtracting the lowest total score for any country in the Survey and dividing by the range of total score values for all countries.

citizens in debates related to public policies and services, E-consultation, and finally the component related to citizen participation in decision-making, E-decision-making.

The ranking of the EPI index indicates a higher position of Romania than the previous index, ranking 60th out of 193 countries reviewed.The media is also superior to the world average, but much closer to the European one. Component analysis shows that these observations are also valid, Romania's position within the European Union and alignment with its legislation having a beneficial effect on the relationship with the beneficiaries of e-governance, as can be seen in Table 5.

TABLE 5 - ROMANIA IN EPI RANKINGS 2016

Country	EPI	Total	Stage 1	Stage 2	Stage 3
Romania	0.6271	63.30%	70.60%	57.90%	42.90%
World Average	0.4625	47.10%	56.40%	43.10%	12.90%
Europe Average	0.6985	70.30%	80.10%	67.90%	29.60%

Source: Authors

2.3. E-Government Rankings at Municipality Level

The Romanian researchers in the field of assessment the performance and transparency of the official websites of the local public institutions were inspired by some methods developed by international specialists and organisations.

WebQEM is a method of evaluating and quantifying web site quality, developed between 1998-2000 by a group of researchers at the La Pampa National University of Argentina (Olsina, 2000). This method has as its starting point the international and professional quality standards specific to the field of software evaluation. Applying the WebQEM method involves going through four related phases, each phase being defined by a series of main activities: definition and specification of quality requirements; element assessment; global evaluation and analysis and documentation of results, formulation of conclusions. The first phase of the method is completed by drawing up a document called the Specification of Quality Requirements (according ISO 9126), which contains the tree structure of the measurable characteristics, sub-characteristics and attributes. The second important phase consists of two main activities according to ISO 14598. The first consists in selecting a set of a system of measurements according to the objectives of the evaluation and site descriptions, such as architecture, features, functions, etc. Each measurable attribute is associated with a variable whose value is obtained by applying a direct or indirect metric. To assess the quality level, scales are established using elementary criteria, representing the percentage of satisfaction of a requirement for a particular attribute, so the preference scale is divided into three levels of acceptability: unsatisfactory (from 0% to 40%), average (from 40% to 60%) and satisfactory (from 60% to 100%). The implementation of the assessment involves performing some actions to measure the attributes of the website, both by manual methods (inspecting the site's appearance, observing the various visual features), as well as by computer assisted methods using specialized software tools (Ștefan, 2007).

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The subject of the analysis are the city halls of all the county's capital cities in Romania and the City Hall of Bucharest, in total 41 public institutions of local public administration (LPA). Criteria for analysis were hard and soft. The hard criteria come from the analysis of the legal framework, ie all the existing regulatory documents that refer to LPA online communication directly or indirectly (Kádár, 2014). There were identified 104 elements provided by the legislation, each element being transposed into a variable. Each variable was dotted with 0.5 points, for formal existence of elements (including structural elements and just recommended items). Into the cases of information with increased public interest, 1 or 2 points were awarded depending on the fulfilment not only of the forms and structures required, but also according to the existence of appropriate content. For the hard elements, the city hall could gather a maximum score of 106 points. The soft criteria are made up of the elements of effective communication, the transparency and the accessibility of information. The list of variables for the soft criteria is taken from the Guide of the Ministry of Communications and Information Technology (2008) for Online Communication and from the Report of the National Association of Informatics in Public Administration (ANIAP) on the content of local public administration sites (2005). The criteria for the analysis of the communication campaigns were developed by the author (Kádár, 2010). The existence of each identified communication element was dotted with 0.5 points, and the cases of high online responsiveness were scored with 1 or 2 points. Soft criteria counts 92 elements for which a total of 106 points could be obtained.

The scores made on the hard and soft criteria by the LPA institutions were marked on a gradual scale. The first level relates to the fulfillment of the legislative and regulatory requirements. The second level refers to soft criteria that indicate effective communication, transparency and accessibility of information, provided in the law but without methodological application. At the same time, this scale also reflects the attitude of the institutions regarding the information and involvement of the citizens. Applying the evaluation sheet for both the hard and the soft criteria reveals firstly a ranking of the county residences regarding the fulfillment of the variables provided by the law, respectively the facilitation of the access to the public information. The total data analysis shows the percentage of fulfillment of these variables at national level. It is noticed that the legislative requirements are fulfilled in a proportion of 45%, and the soft communication criteria, transparency, and accessibility in the total of 36% (Kádár, 2014).

As far as municipalities are concerned, the Rutgers e-Government survey tool is the most comprehensive electronic research index (Holzer, 2016). It defines five categories of appreciation in e-Government, aiming to identify the best practices in this field. Confidentiality and Security is the first criterion of appreciation, followed by Ease to Use, Content, Services, and last but not least, Commitment to Citizens and Society. The total number of measures that the Rutgers e-Government survey tool employs is 104. The model was developed successively, with only 98 measures being recorded in 2007 in the same five categories (Holzer and Kim, 2007).

In this research, the capital of Romania, Bucharest, held in the 2015-2016 edition the 59th rank out of 97 major cities investigated by the evaluators. It has obtained a score of 28.95 out of 100 possible maximum points. Table no.6 illustrates a selection of Results of Evaluation of European Cities (2015-16), (Bucharest is the 31 rank out of 38 evaluated cities), but also the score on the components, for a more accurate interpretation of the results.

TABLE 6 - BUCHAREST IN E-GOVERNMENT RANKING AT MUNICIPALITY LEVEL

Rank	City	Overall	Privacy	Usabiity	Content	Services	CS Engagement
1	Helsinki	69.83	14.44	17.5	13.17	11.8	12.92
2	Madrid	69.24	12.22	16.56	15.56	13.44	11.46
	…						
10	London	52.54	12.22	15	10	11.15	4.17
	…						
12	Berlin	50.06	12.96	12.81	9.84	8.2	6.25
	…						
20	Rome	42.83	11.85	10	10.95	8.36	1.67
	…						
23	Paris	41.43	7.41	9.06	9.68	8.2	7.08
	…						
30	Sofia	29.63	7.78	11.88	5.56	2.95	1.46
31	**Bucharest**	**28.95**	**1.85**	**15.31**	**5.87**	**2.79**	**3.13**
32	Minsk	27.15	3.70	10.63	4.29	3.11	5.42
33	Warsaw	26.13	8.15	10.31	4.29	2.13	1.25
	…						
37	Skopje	19.12	1.85	8.13	4.76	2.30	2.08
38	Tirana	15.74	0.00	10.63	4.13	0.98	0.00

Source: Authors

3. RESEARCH METHODOLOGY

To examine the perception of the local population regarding their local governments online in Romania, our study evaluated the websites of 343 city halls official websites, randomly selected from the total number (3228) of Administrativ Territorial Units in Romania at the date of the research (MDRAP, 2017) using the Excel function of Random selection. The websites were evaluated between 3rd and 28th March 2017. Of the 343sample of city hall's websites,33 appeared without an official websites, under construction, maintenance during the period of the evaluation, or could not be located.Our instrument for evaluating websites consisted of three components, inspired by the above-mentioned classical methodology, grouped in a way to evaluate:

1. The quality of site information and functionality (Content and Usability);
2. The services available and their degree of IT security (Services and Security);
3. The degree of possible user involvement (Citizen Engagement).

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TABLE 7 - E-GOVERNANCE PERFORMANCE MEASURES

Content and Usability	Addresses of the premises listed
	External links to related institutions
	Contact information
	Minutes of public meetings of the Council
	Local legislation applicable
	Policy priorities of the cityhall
	Mission/ Objective
	Public procurement information
	Budget information
	Documents, reports, or books (publications)
	Maps of the city/ commune
	Live alerts
	Access in other language
	Name of employees mentioned on website
	Calendar of events
	Search tool
	Site map
	Open data (Excel or Word documents instead of scanned documents)
Service and Security	Pay taxes or fines directly on the website
	Apply for permits online
	Track request online
	Make complaints online
	FAQ section available
	Section where you can request information
	Create a personal account on the website
	Purchase goods or services online
	Online forms
	Available jobs section
	Secure server if accessing sections that allow paying online
Citizen Engagement	Can make comments on the articles from the website
	Newsletter available
	Forum/ online discussion section available
	Online surveys or polls
	Citizen satisfaction polls available
	Website has Facebook account
	Website has Twitter account
	Website has Youtube account

Source: Rutgers University

For each of these three components, our research applied 8 to 18 dichotomous measures (Table 7) rated with „YES" if the aspect of interest was present on the website and „NO" if not.The score of each component was recorded on a 5-step scale as follows:

1. There is no information on the site;
2. 25% of the measured aspects were rated YES;
3. 50% of the measured aspects were rated YES;
4. 75% of the measured aspects were rated YES;
5. All the measured aspects were rated YES.

Starting from the methodologies of previous studies conducted by Rutgers University and Sungkyunkwan University's e-Politics Institute, in order to establish a total score without misrepresenting a particular component, each of the three categories was considered to have the same weight, even if the number of questions was different for each of them.

Official websites were evaluated based on the information provided online about services and cityhall administration. Throughout the world, municipalities, towns, and communes give increasing importance to official sites, beacuse they represent the main interface with citizens (Holzer et al., 2010). The use of digital technologies to provide information and services is the objective that local authorities should focus on.

Thus, a municipal website should include information about the mayor and the local council, about the specialized departments and available municipal services. In the case of separate home pages, the evaluators examined the connection to the homepage menu. Sites that were not properly connected were excluded from the evaluation, with users not having easy access to information (Holzer et al, 2016).

4. RESEARCH FINDINGS

The research was done by random selection of 343 localities, of which 33 municipalities (all communes) have no official websites under construction or maintenance at the moment of our evaluation or could not be located. Thus, 310 localities with non-zero scores were evaluated: 8 cities, 31 towns and 272 communes.The points obtained during the survey by types of localities (municipalities, towns and communes) are presented in Figure 6.

From the graphical presentation (Figure 7) we can see that the contribution of points for the three categories of localities is different according to criteria, but the Content & Usability criteria is for all types of localities a size that far exceeds the other two criteria in the area of the big scores. As Diagram 2 shows, the surveyed cities are characterized by a mean of the components placed on the right side of the chart (mean = 2,458), the towns have a more central average (average = 1,527) and the communes have a leaning to the left in the small score area (mean = 1,311). In fact, there are only 3 localities which obtained a maximum score of 4, all three being cities at Content&Usability criteria: Satu Mare, Sibiu and Buzău. These observations were formulated on the basis of descriptive statistics. The Skewness indicator (which shows the distribution of the symmetry axis) is positive or negative as the extreme values are concentrated to the left or right of the graph.

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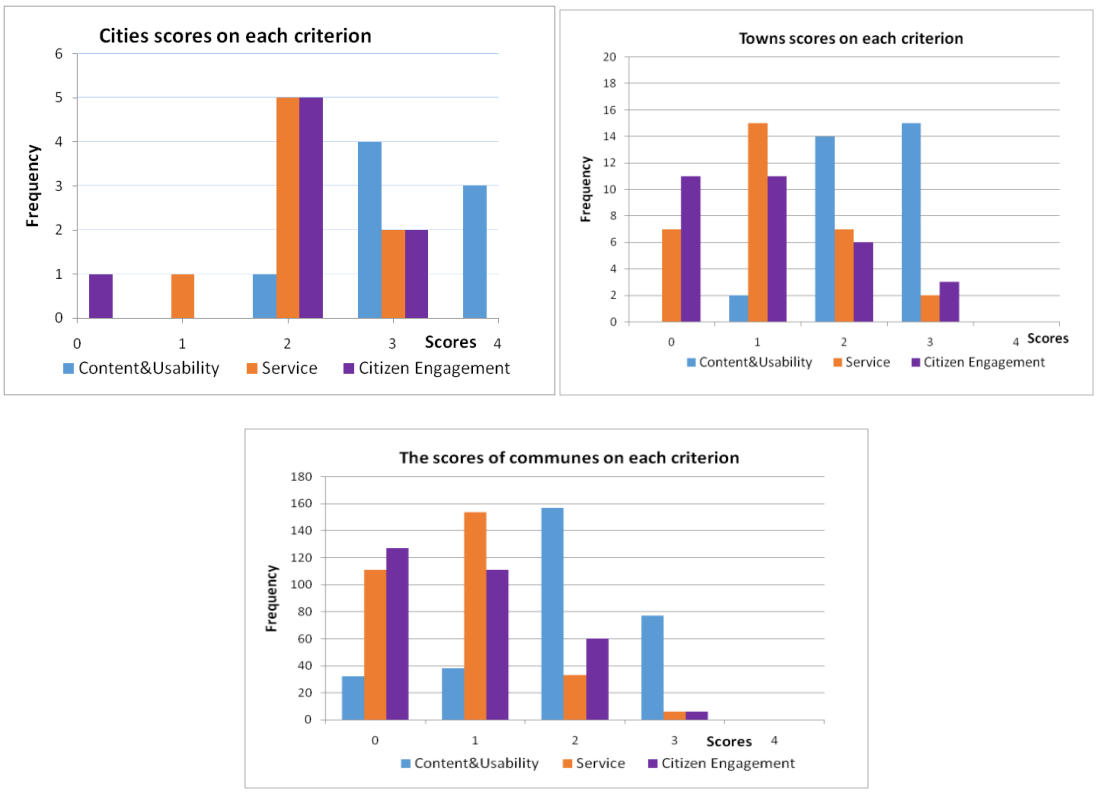

FIGURE 6 - THE FREQUENCY OF OCCURRENCE OF THE SCORES ON EACH INVESTIGATED CRITERION
Source: Author's calculations

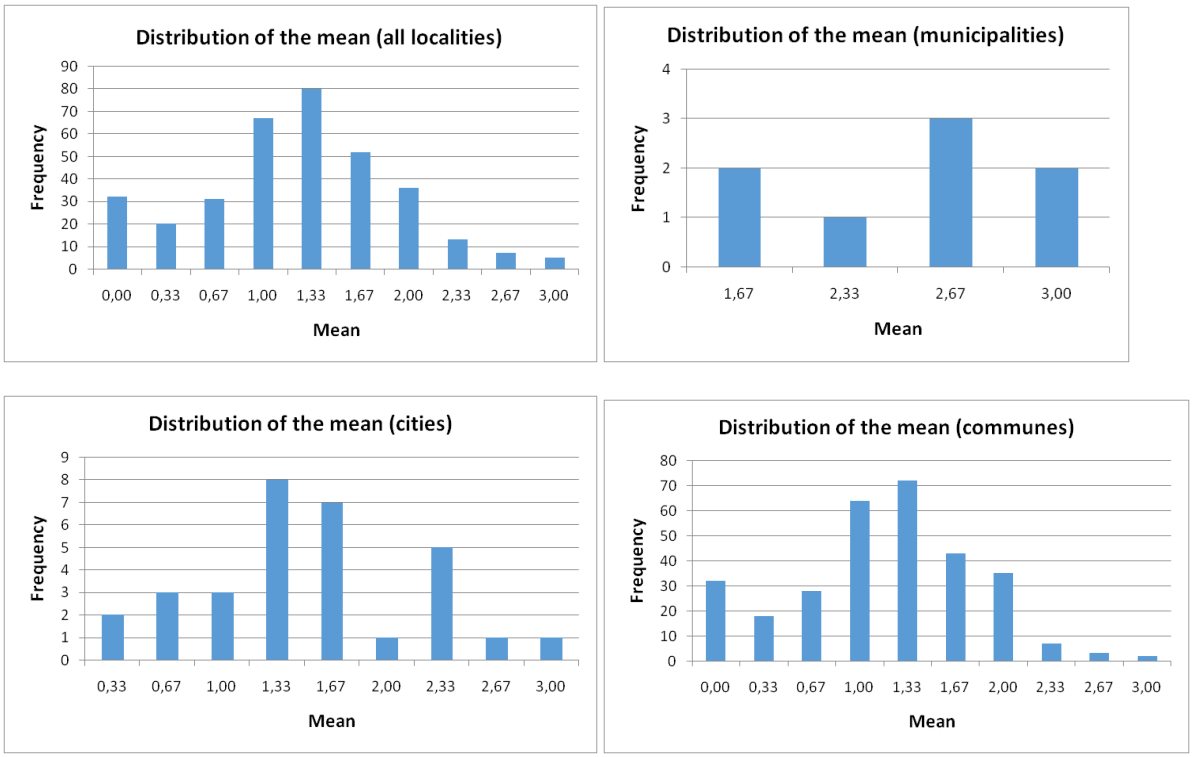

FIGURE 7 - THE GRAPHICAL DISTRIBUTION OF THE MEDIA
Source: Author's calculations

The paticipation of each criterion in the total score (Figure 8) was one of the specific objectives of the research.

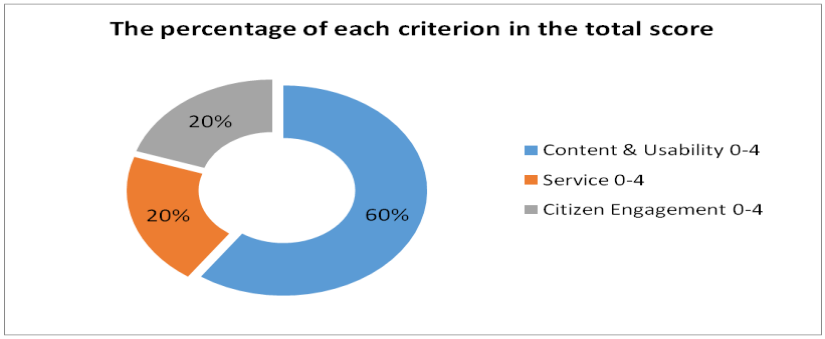

FIGURE 8 - THE PARTICIPATION OF EACH CRITERIA IN THE TOTAL SCORE
Source: Author's calculations

Another specific objective of the research was the deviation of the scores obtained against the maximum possible values, and the definition of a minimum acceptable score for the qualitative assessment of the fulfilment of the Serve their Purpose condition, as we were asked at the beginning. In this research it was considered that the fulfilment of half of the score for each criterion but also of the global assessment (P / Pmax = 0.5) represents this minimum limit. Under these circumstances, the status of the overall and partial score are presentet in Figure 9 and Table 8.

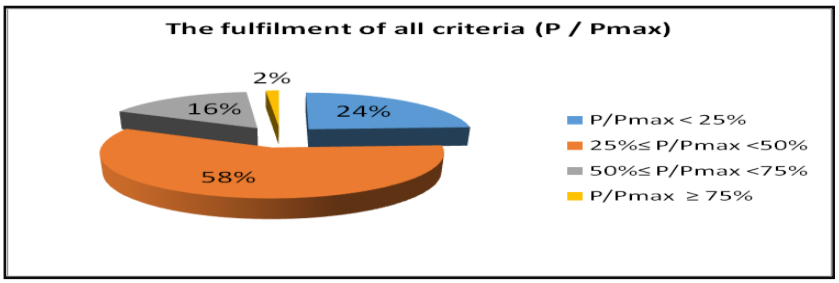

FIGURE 9 - THE FULFILMENT OF ALL CRITERIA
Source: Author's calculations

TABLE 8 - SCORE RELATIVE TO THE MAXIMUM

Score relative to the maximum possible (P/Pmax)	Number of localities		
	Count of Content & Usability	Count of Service	Citizen Engagement
0%	32	118	139
25%	40	170	122
50%	172	45	71
75%	99	10	11
Fulfilling minimum conditions	271	55	82
Percentage of total localities	87.42%	17.74%	26.45%

Source: Author's calculations

A last specific objective of the research was to establish a ranking by counties, the results being concentrated in Table 9 and Figure 10.

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TABLE 9 - ROMANIAN COUNTIES IN COUNTRY RANKING AND AVARAGE SCORES OF COMPONENTS

Rank	Judet	Average of Average Scores	Average of Content&Usability	Average of Services	Average of Citizen Engagement
13	Alba	1.38	2.14	0.71	1.29
21	Arad	1.26	1.89	0.67	1.22
35	Arges	1.00	1.70	0.60	0.70
15	Bacau	1.33	2.14	1.00	0.86
9	Bihor	1.46	1.92	1.31	1.15
30	Bistrita-Nasaud	1.14	2.14	0.71	0.57
10	Botosani	1.46	1.88	1.00	1.50
4	Braila	1.58	2.63	1.00	1.13
38	Brasov	0.96	1.78	0.56	0.56
1	Bucuresti	2.67	3.00	2.00	3.00
11	Buzau	1.43	2.43	1.14	0.71
29	Calarasi	1.15	1.78	0.67	1.00
25	Caras-Severin	1.21	2.00	0.75	0.88
22	Cluj	1.26	1.78	0.89	1.11
36	Constanta	1.00	1.73	0.64	0.64
23	Covasna	1.22	2.33	1.00	0.33
24	Dambovita	1.21	2.00	0.75	0.88
34	Dolj	1.03	1.83	0.83	0.42
26	Galati	1.17	2.00	0.75	0.75
42	Giurgiu	0.50	1.00	0.33	0.17
37	Gorj	1.00	1.92	0.75	0.33
3	Harghita	1.67	2.50	1.50	1.00
2	Hunedoara	1.73	2.40	1.60	1.20
17	Ialomița	1.29	2.50	0.88	0.50
33	Iasi	1.03	1.60	0.70	0.80
5	Ilfov	1.56	2.50	1.50	0.67
31	Maramures	1.10	2.00	0.57	0.71
39	Mehedinti	0.93	1.30	0.60	0.90
14	Mures	1.38	2.14	0.71	1.29
8	Neamt	1.53	2.42	1.08	1.08
18	Olt	1.29	2.20	0.87	0.80
12	Prahova	1.41	2.15	1.00	1.08
28	Salaj	1.17	1.75	1.00	0.75
16	Satu Mare	1.33	2.14	0.86	1.00
7	Sibiu	1.53	2.42	0.83	1.33
32	Suceava	1.06	1.91	0.82	0.45
41	Teleorman	0.74	1.33	0.33	0.56
19	Timis	1.27	2.00	0.91	0.91
27	Tulcea	1.17	2.00	0.50	1.00
20	Valcea	1.27	2.00	0.80	1.00
40	Vaslui	0.83	1.50	0.75	0.25
6	Vrancea	1.55	2.27	1.09	1.27
AVERAGE		**1.24**	**1.99**	**0.85**	**0.87**

Source: Author's calculations

The top of the list is the capital of the country, Bucharest, which was something to be expected given the concentration of funds, technology and the population with a higher level of training. It is surprising to place some counties with leading positions in terms of income, production and living standards, on the second place of this ranking (Timis 19, Cluj 22, Iasi 33 and Constanta 36). This can be explained by the concentration of concern only at the level of the county capitals.

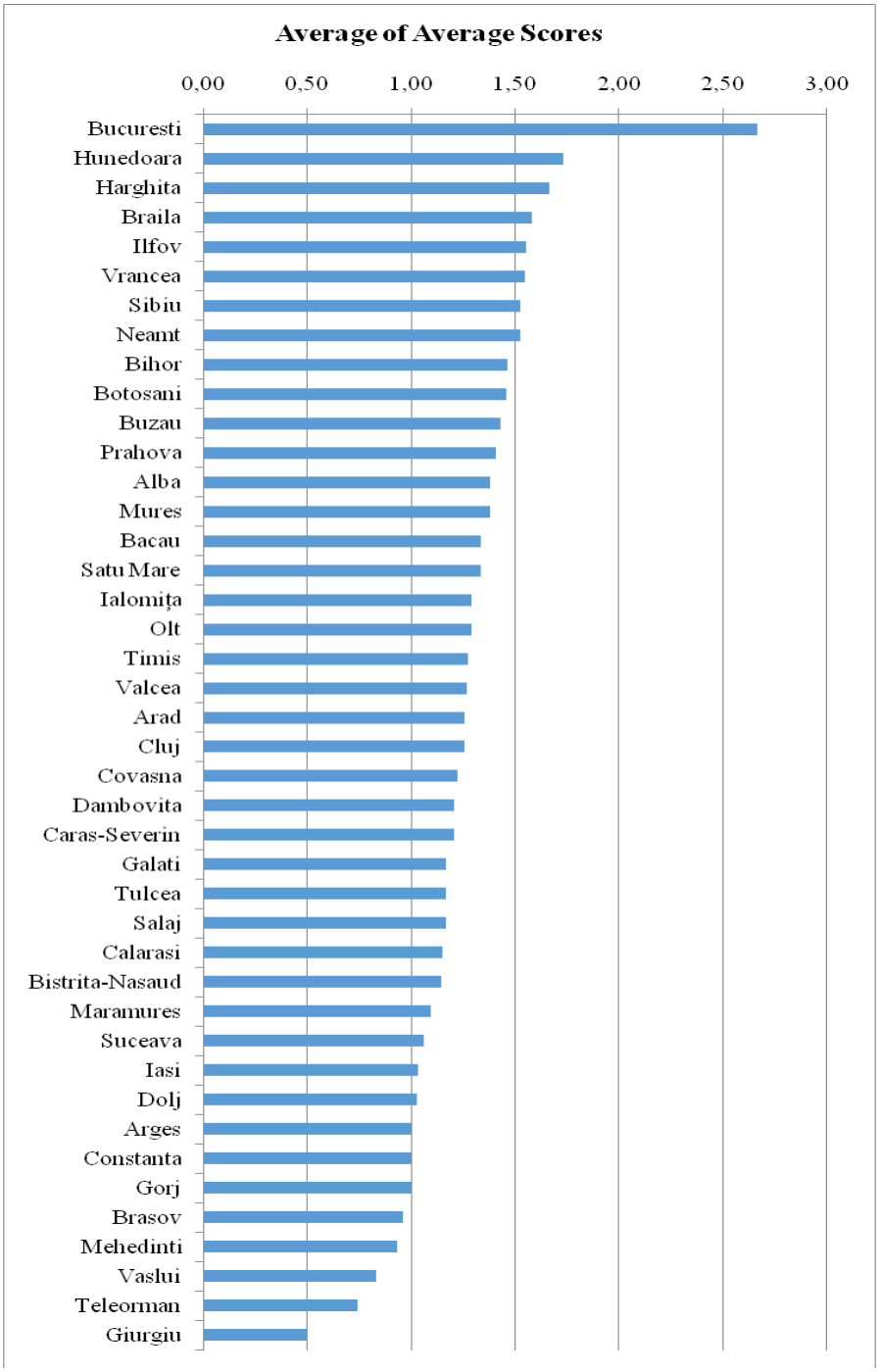

FIGURE 10 - RANKING BY COUNTIES - ROMANIA
Source: Author's calculations

5. DISCUSSION OF THE FINDINGS

Although Romanians frequently use the Internet and mobile applications in various domains, the public administration is not so easily convinced by the modern way of communication, which is confirmed by all the statistics presented in this research, where Romania occupies the last positions in the e-government .

The Romanian legislation in this field is a vulnerable point, introducing a dichotomy of the concept, e-government and e-administration, which may indicate either the exclusion of the governance component from the local administration, and consequently a reduced managerial activity at unit administrative teritorial level, or a poor implementation of the Community acquis on e-government.

Essential is also the establishment of the minimum necessary criteria for fulfilling e-government requirements in relation to the minimum legal requirements and absolute desideratum. The Romanian legislative system stipulates a series of public interest information which each public authority or institution is obliged to communicate by default on the institution's website. This is covered by the "Content & Usability" criterion that this study observed. Also, each public authority has a legal obligation to provide quality information and services to its citizens, the "Services" component analysing this issue.

Following the analysis of the data recorded at randomly selected localities, we can see their trend towards complying with legal requirements, providing the minimum necessary information and public services required, even if not all of them comply with the requirements of the law. From this perspective, the degree of implementation of e-governance is directly influenced by legislative norms, most of the localities being limited to this minimum, even if the concept is wider in the specialized literature. The Citizen Engagement component is the sensitive point of local government, the participatory governance component generally summing up the creation of an official facebook page of the institution.

The openness to the citizen is minimal though Romanian local public administration made a significant progress in embracing information and communication technology to diversify communication channels with citizens. The study concludes that Romanian local governments need to dedicate more effort and resources in website development to meet the minimum criteria needed to provide citizens with the ability to seek and receive administrative services through the websites of local governments, even if not all requirements are stipulated by national laws (Law 161/2003).

While the previous study (Kadar, 2014) only referred to county residences, the present study represents a broadening of the sphere studied in the entire public administration system in Romania, the sample being chosen at random on a national level. For this reason, the ranking by county is only informative and does not correlate with the results of previous studies on the quality of local public administration sites at the county level (Stefan, 2006).

The study does not want to find the reasons behind the differences between the analyzed institutions. These reasons can only be found through other studies that focus on reasons such as:

- the personal performance of the people in charge with website development in each public institution and their openess towards e-services and online transactions;
- the type of the management in institutions (participatory or autocratic);
- internet access and its use in different regions of the country;
- the reaction of the community, press and local institutions to the publication of information and its accessibility;
- local particularities such as multilingualism, minorities, neighborhoods with other countries, belonging to historical regions.

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