

E-government: the State in Slovenian Local Self-government

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The paper presents the results of empirical research intended to ascertain the level of Slovenian municipal web services. Analysing the municipal websites, we were interested in how many of municipalities perform legal duties by transmitting various documents via the World Wide Web; we observed the state of local e-services evolution and the presence of virtual forums and polls as the most important segments of e-participation. Furthermore, we examined how many municipalities publish their basic contact data and information of various social fields, such as health, economy and educational data on their websites. Slovenian local self-government's web services are weak, but strongly and positively correlated to the populations of municipalities.

Key words: e-government, e-local self-government, municipal website, web services

E-uprava: stanje v slovenski lokalni samoupravi

Prispevek predstavlja rezultate raziskave, katere namen je bil ugotoviti stanje spletne ponudbe slovenske lokalne samouprave. V okviru analize občinskih spletišč nas je zanimalo, koliko občin izpolnjuje normativne obveznosti posredovanja različnih dokumentov in vsebin v svetovni splet; opazovali smo stanje razvoja elektronskih lokalnih storitev in prisotnost virtualnih forumov in/ali anket kot poglavitnih segmentov elektronske participacije. Nadalje nas je zanimalo, koliko občin je v svetovni splet posredovalo osnovne kontaktne podatke ter koliko jih je na svoja spletišča umestilo podatke iz različnih družbenih področij, kot so zdravstvo, izobraževanje in gospodarstvo. Ugotavljamo, da je spletna ponudba slovenske lokalne samouprave šibka, a močno in pozitivno povezana z velikostjo občin glede na število prebivalcev.

Ključne besede: e-uprava, e-lokalna samouprava, občinsko spletišče, spletna ponudba

1 Introduction

E-government is not just a tool enabling faster and cheaper services, it is the way of operation that should be implemented at the central, regional and local levels of each country. However, it can be ascertained that e-government research focuses most often on services provided by central levels of individual countries, even though Slovenian internet users, for example, visit their municipalities' websites most often (53%), while the state e-government portal is visited less frequently (28%) (Vehovar *et al.*, 2005).

Thus, the purpose of this paper is to present the results of research, in the range of which we examined 52% of Slovenian municipal websites. In general these websites were evaluated for three main components: (1) publication of various data, (2) presence of e-services and (3) the state of e-democracy. The survey was conducted in the first quarter of 2005.

In the first part, the state of previous local e-government development in Slovenia is presented as well as the main findings of other author's surveys. Furthermore, the research design is given and the results are presented in the fourth chapter. In the next part, the results are evaluated and compared with other countries' local e-government indicators. In the conclusion some suggestions for further e-(local) government development are given.

We presume that Slovenian e-local self-government's web supply is weak and the reason for that can be seen specially in the (overly) large number of small municipalities, whose budgetary capabilities are, as a rule, smaller. As Oplotnik (2003) ascertained, shared tax (personal income tax) represents around 42% of local income in Slovenia. Therefore, municipalities with fewer residents have less income from personal income tax. Additionally, strong cooperation between municipalities as well as between municipalities and the state is necessary for the evolution of e-local self-government phenomenon, and none

of these forms of cooperation is common practice in Slovenia.

2 Presentation of the state

There was the Strategy of E-commerce in Local Communities formed in Slovenia in 2003. This document hasn't been verified by the Government, which is why its content can only be used as a guideline. In spite of that, there are also some concrete goals for further development of e-local self-government in this Strategy, such as establishment of united information portal with information on processes and with the ability to search official databases (MOK *et al.*, 2003), but this goal has not been achieved during the analysis.

As a matter of fact, Slovenia does not have any concrete, formal goals regarding the implementation of e-commerce in local communities. The Strategy of E-commerce in Public Administration of the Republic of Slovenia for the period from 2001 until 2004 and the Action Plan make almost no mention of local self-government, therefore their provisions can also be used only as guidelines. One of the main directives of this Strategy is "to ensure a more constant and faster development on regional and local levels" (CVI, 2001, p. 9), but this directive is too abstract to be measured.

The municipalities are autonomous communities, therefore they are not obliged to join or follow any strategy and especially not any action plan. This is the reason electronic commerce has taken its own way in each municipality and the speed and quality of its realization depends especially on local budgets and also on the mayors' attitudes toward e-government. Within electronic commerce of local self-government, we are confronted with the problem of disproportional development - some municipalities have perfected their web sites and they also enable the possibility of an electronic intake with an official electronic forms with digital certificates, some of them are rather static and a few of them are not present on the internet at all.

Moreover, according to the current situation, municipal web supply is very much dispersed. Currently e-local services can be found in four web places: (1) firstly, there are municipal websites, provided by the majority of municipalities, (2) furthermore, 11 e-forms for co-operation with municipalities exist at the state e-government portal, (3) along with this, residents can find the forms for operation with local or central level on the 'Informiran.si' portal, (4) moreover, the portal named 'Informative door' (<http://www.obcine.net/>) offers environmental information, information about projects, calls for applications, municipal councils' decrees, meetings material and press releases. However, this portal is not service-oriented, its nature is informative and it does not contain application forms for concrete services. So, municipal web supply is

currently developing at several places, but the state is satisfying nowhere.

E-local self-government's dispersed supply is probably also the reason for local self-government being much less thoroughly surveyed in the past in comparison to other fields of e-government in the nation. The most thorough research concerning e-local self-government in Slovenia is the research paper 'Development of the Measurement System of IT use in the Public Sector in Slovenia' (Vintar *et al.*, 2003), which analysed the public sector's web services, tested the responsiveness of individual bodies of public sector, and also acquired information with the inquiry of representatives of the state bodies. The results of this research shows that 68% of municipalities are present on the internet and, on the basis of previous research, the anticipation about 100% municipal web presence within three to four years (2006, 2007) is expressed (*ibid.*). Furthermore, other research (Pinterič *et al.*, 2004) is worth mentioning; the methodology of this research is based on questionnaires sent to municipal government directors; part of this questionnaire refers to municipal governments' readiness for ICT's challenges. It is interesting that 65% of municipalities express the need for extra computer education (writing text, use of electronic post).

Another analysis (Ojsteršek, 2004) is also informative. It examined the current state in the field of access to information of public character, implementation of e-services and e-democracy on the local level. The author (*ibid.*) ascertains that municipal websites are deficient and that there are many technical and content errors, lack of quality search engines and other issues.

Comparative analysis concerning local e-governments among other countries was made in 2003 (The E-Governance Institute and The Global e-Policy e-Government Institute); its instrument for the evaluation of the websites consists of five components: security and privacy, usability, content, services and citizen participation. Among 80 cities, Ljubljana, the capital of Slovenia, is ranked as 56th. Moreover research (Socitm & IDeA, 2002) analyses local levels of e-government worldwide; it analyses 14 countries¹, within which it focuses on two to four local communities. In this place, the results of some Finnish local e-government evolution indicators are interesting and enviable: 99% of Finnish municipalities had a website in 2002 and 3% provided services with electronic signatures/digital certificates. Presently, three and a half years later, Slovenian local communities are hardly comparable to these results.

Furthermore, we can find some research and articles focused only on the local governments of one country. One research paper (PTI/ICMA, 2001) ascertains that local governments in US are enthusiastically adopting e-government elements. In 2000 83% of them had a website, while 10% had planned the establishment of one in the next 12 months. Other research (PSI Group, 2002) centres on America's cities; its results show that 87% of cities

¹ In addition to these countries, Singapore, Hong Kong and Japan are included; they are represented in more general way.

websites offer downloadable forms. Moreover, research (West, 2004) examined 1,873 US city government websites – 40% of them offered fully executable on-line services. In 2004, 98% of America's city governments could be found on the web (Taylor and Grenslitt, 2005).

The methodologies of the research cited above and below are diverse, therefore their reciprocal comparison should be taken into account with a certain degree of reserve.

3 Research design

The methodology, used by Capgemini for the measurement of 20 services in EU countries is well-known, but in case of Slovenia none of these 20 selected services fall within the competence of local government (IDABC, 2005a). Furthermore, a four-stage framework of service development is only partly applicable to our research, since our scope is not only service-oriented and, in general, concrete municipal services are very rare (with the exception of informational services).

The main goal of our research, which occurred in February 2005, was to evaluate e-local government's supply of services. The evaluation tool was the model of 24 indicators², listed in Table 1.

Table 1: The list of indicators

	Indicator
1.	web presence
2.	publication of address data
3.	publication of municipal telephone number
4.	publication of mayor's telephone number
5.	publication of telephone number of government director or/and other departments' managers
6.	publication of other employees' telephone numbers
7.	publication of municipal e-mail
8.	publication of mayor's e-mail
9.	publication of e-mail of government director or/and other departments' managers
10.	publication of other employees' e-mails
11.	publication of official hours
12.	publication of tourist information
13.	publication of economy data
14.	publication of health data
15.	publication of education data
16.	publication of news
17.	publication of municipal work data
18.	presence of forum/poll
19.	access to municipal regulations
20.	access to municipal statute
21.	presence of application forms
22.	number of application forms
23.	classification of application forms
24.	presence of search engines

To reach the highest measure of objectivity and easily scanned results, every indicator was valued with YES/NO values and some of them with a PARTLY value. The indicator of web presence is excluded from the final estimation, since the positive value of this indicator is necessary for estimation of further indicators; the number of application forms available on the municipal websites is also excluded from the final estimate. Every municipality presented on the web had had the possibility to collect 22 YES values which represents 100%. As for how many of these values were collected by each municipality, we calculated the estimation of each municipal web site in percentages and established the criteria for the final marks shown in Table 2.

Table 2: Criteria for estimating municipal web services

Percent	Mark
to 50%	1
51% — 64%	2
65% — 78%	3
79% — 90%	4
91% — 100%	5

3.1 Sample description

The survey involved 101 (52% of all) municipalities in Slovenia. First, they were classified regarding the number of residents and then, using the same criterion, divided into 11 categories, defined at Statistical Office of the Republic of Slovenia (SY, 2004). From this list, we collected every other municipality into the sample (random systematic sampling), and the categories with 1, 2, 3 or 4 municipalities (four categories) were entirely included in the sample.

4 Presentation of the results

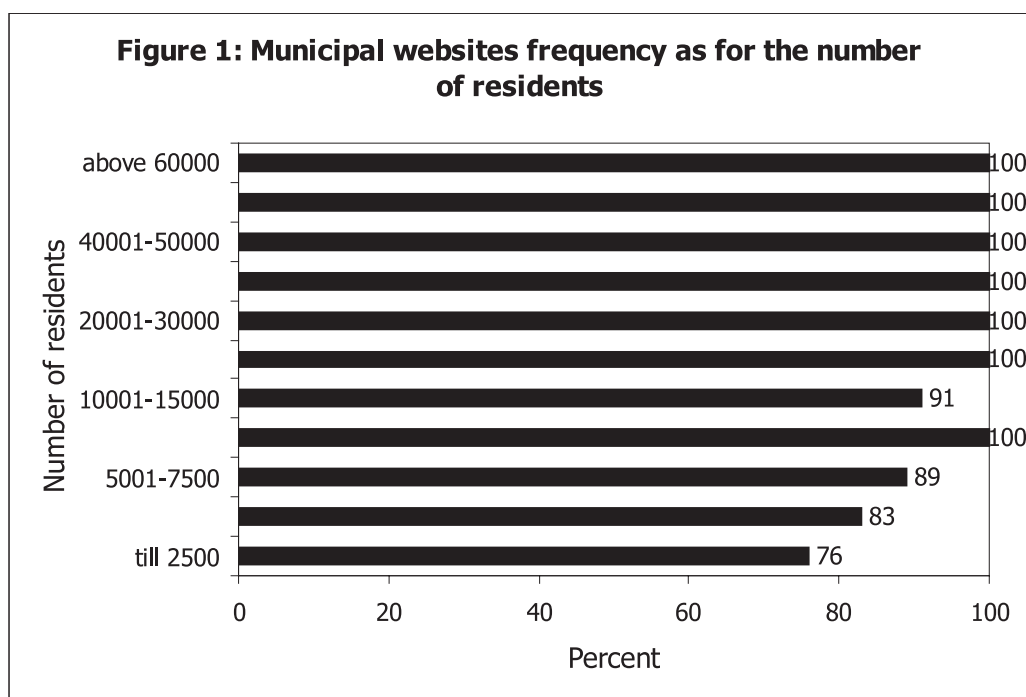
4.1 Web presence

Results of the analysis show that 88% of municipalities are present on the web (Figure 1), which is not satisfactory, since US local governments reached a similar (83%) result five years earlier (2000) (PTI/ICMA, 2001).

A year earlier (2004) Portugal had 91% of municipalities present on the web (IDABC, 2005b) while America had 98%³ (Taylor and Grenslitt, 2005); both a much higher web presence than Slovenia in 2005.

² All indicators have the same weight.

³ The other 2% were developing web sites.



4.2 Basic data publication

At this point we were interested in basic municipal data publication such as:

- address,
- official hours,
- telephone numbers and e-mails of municipality (central), mayor, municipal government director and/or other departments' managers and other employees (secretariat, accounting etc.).

The municipal address is published on 91% of municipal websites, and information on official hours can be found on 57% of websites. Regarding telephone numbers and e-mails, we ascertained that central municipal telephone numbers and e-mails are published most frequently (89%), while telephone number and e-mail addresses of mayors (tel. number 45%, e-mail 43%) and directors of municipal administration and/or other departments managers (49%) are least frequently published. Publication of the telephone number of at least one department manager or administration director is moderately correlated to the size of municipalities (coefficient value is +0,56). Furthermore, 56% of municipalities publish the telephone number of other employees and 54% publish other employees' e-mail addresses.

4.3 Economy, health and education data

To reach a positive value of these indicators, a website had to contain basic data of at least five enterprises or links to

their websites⁴ and basic data or links to at least one educational/health public institution.

Analyses of these indicators show that economy, health and education data are placed on websites of all municipalities with the number of residents above 40,000. However, if we examine the results more closely, we can see that they are not encouraging: health information is published on 44% of municipal websites, economic information on 47% and educational information on 57% of municipal websites. Municipalities most often publish data about nursery schools, homes, hospitals and 24-hour pharmacies.

4.4 News and tourist information

The date of news publication is also a good up-to-date indicator, which is why we only took into consideration news published in 2005. 74% municipalities publish news and the correlation between this indicator and the size of municipal population is moderate and positive (coefficient value is 0,47).

Tourist information can be found on 72% of municipal websites and the correlation between this indicator and the size of municipalities is weak and negative (coefficient value is -0,30). Evidently, smaller municipalities are trying to increase income through tourist activity. The tourist information most frequently describes the location, natural beauty and other items; a few of municipalities also offer a so-called virtual view of their surroundings.

⁴ In the field of economic information, we also took into consideration link to the Business Register of Slovenia.

4.5 Municipal work data, forum and polls as an important e-democracy segments

At this point, we were looking for municipal council meetings (minutes, invitations or orders of the day) and information about municipal projects. At least one of these is published on 51%⁵ of municipal websites.

Regarding e-democracy, we also observed the presence of forums and/or polls referring to the municipal work; it has been proven that their presence is not correlated to the size of municipalities (the coefficient value is -0,15). This method of participation is offered by only 21% of the studied municipalities. Non-functioning forums (6,7%) and a forum with only sport topics are excluded from this percentage. Likewise, the poll with the question "How old are you?" which was not active on one municipal website is excluded because we presume that this question does not refer to municipal work.

Forums and e-polls are probably the easiest way for internet users to convey their opinion, proposals and to pose questions. It is likely that regular internet users are considerably less interested in actually visiting municipal offices just to express their opinion. Some people do not want to expose themselves via e-mail and other ways which could also uncover their identity.

The Municipality of Velenje is an exception to these findings; it is an example of e-democracy excellence. It offers a complete e-democracy system enabling:

- mediation of opinions and initiatives on a published topic to which mayor also comments once a week,
- mediation of questions and initiatives to councillors, councillors' party or municipality and
- viewing of videos of municipal council meetings.

Even though the e-democracy system is well-formed it is not yet popular or well-used. Only few residents put questions and mediate the initiatives and even these questions are rarely answered by the councillors. No topical subjects had been published; nor was it possible to view videos of council meetings. It is questionable if residents knew about the possibilities offered by their municipal website at all or if they were interested in mediating initiatives and opinions. Several authors (eg. Ojsteršek, 2004) highlight the problem of inadequate promotion of these forums in the media. Irrespective of that, establishing e-democracy in the Municipality of Velenje is a major step forward in comparison with other municipalities.

Reviewing some 2003 e-democracy indicators in Norwegian and Hungarian local governments, it can be perceived that establishing the concept of e-democracy is superior in Slovenian municipalities. In 2003 e-polling/voting was provided on 25% (Vintar *et al.*, 2003) of Slove-

nian municipal websites, while in the same period only 5% of municipal websites presented any form of on-line public opinion poll, voting etc. in Norway (Baldersheim and Øgård *et al.* in: Haug and Jansen, 2004); 20% (Vintar *et al.*, 2003) of Slovenian municipalities provided forums or discussions in real time (chat) on their web sites, while 14% of Norwegian municipal web sites provided any form of discussion boards etc. and only 1% presented any form of chat (Baldersheim and Øgård *et al.* in: Haug and Jansen, 2004); at that time only 8,6% of Hungarian municipalities had a generic e-mail box or forum for suggestions (Regional IST, 2003).

Still, in the information society era we should not be satisfied with any of these results. E-forums, e-chats, e-polls etc. should be considered to be "must-have" tools each municipality should provide if they want to create politics and decisions that suit the majority of residents.

4.6 Application forms and their classification

At least one application form is placed on 57% of municipal websites (Figure 2), which is only 5% more than in 2003 (Vintar *et al.*, 2003). The correlation between this variable and the size of municipalities is moderate and positive (coefficient value is +0,57). The highest number of application forms within one municipal website is 44.

The larger the number of application forms, the more important their classification. Classification of forms according to different municipal offices or by different social fields can be observed in merely 29% of municipal websites (Figure 2), which is an issue of concern, since residents already have problems distinguishing between municipal and state responsibilities and functions and they often refer to the wrong one when starting a specific procedure. On some websites application forms are hard to follow, in some cases some of them can even be found in the "news" section. Only two municipalities provided execution of services with digital certificates.

4.7 Publication of regulations

In the 8th article of the Decree on Communication and Re-use of Information of Public Character it is determined that "local authorities shall publish on the world-wide web the official or unofficial consolidated texts of their regulations and a register of local authority regulations"⁶.

The survey revealed that only 52%⁷ municipalities publish regulations (or at least links to them) and only 44% of them publish their statutes. Some of them list the link to the Catalogue of Public Information in 'Lex loca-

⁵ It is possible that the percentage is so low because we were only collecting information published in 2005 and according to the Local Self-Government Act mayors should convene the council meetings at least four times a year.

⁶ The Decree on the Provision of Public Information was in force before the Decree mentioned above; in its 7th article it also contained this provision; an English version is available on <http://www.ip-rs.si/index.php?id=162>.

⁷ In this place we did not take into consideration municipalities that: merely list regulations or official gazette issues in which the regulations are published or/and lists of links to the official gazettes but not to the texts of the regulations.

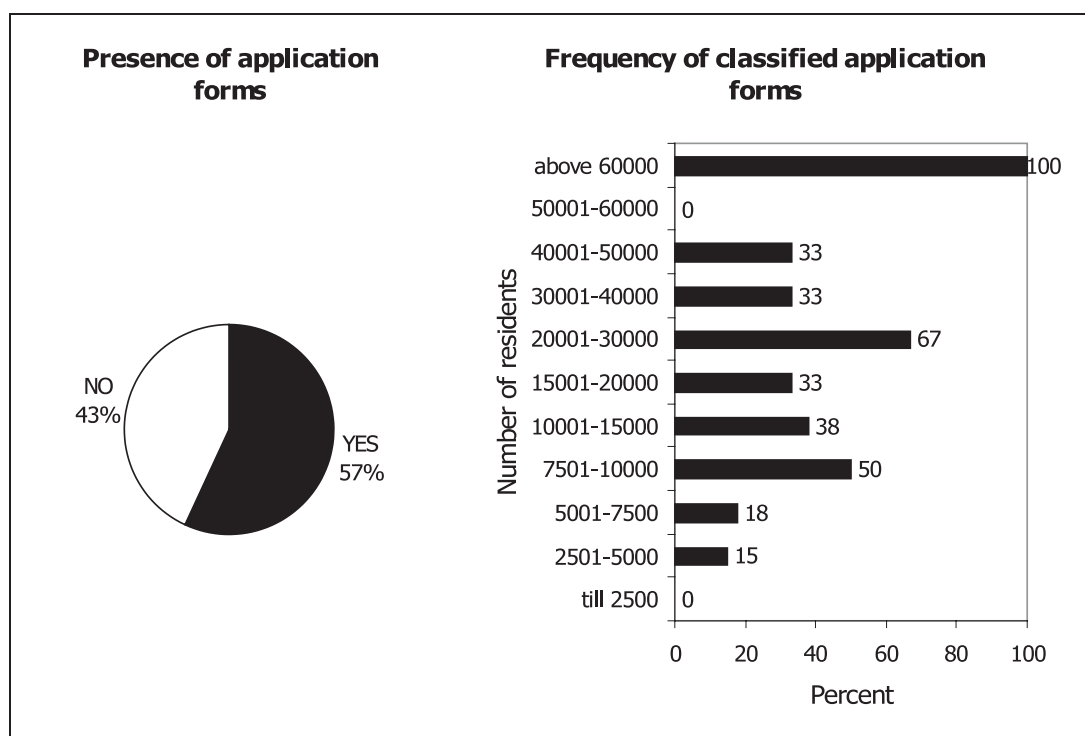


Figure 2: Presence of application forms and their classification on municipal websites regarding the number of residents

lis' information network (legal information system containing full text documents), which has been established by the Institute for Local Self-government and Public Procurement Maribor⁸.

4.8 Presence of search engines

A complete search engine is present on 46% of municipal website, while 12%⁹ of websites have partial search capabilities, enabling searching only through news, articles etc. The extenuating circumstance is that this variable is moderately and positive correlated to the size of municipalities (value of coefficient is +0,66); since larger municipalities have more content on their websites, such search systems are vital in these cases.

4.9 Final estimation of municipal websites

After all indicators were measured, every website was given an 1-5 estimation in accordance to established criteria. Afterwards, the average for every category of municipalities was reckoned regarding the number of residents and the average for all websites being observed.

The average estimation of all websites is 2,2; 4 (4,5%) websites were given the highest estimation (5) and 35 (39%) websites were given the lowest (1).

There is strong and positive correlation between average estimations and the size of municipal populations (coefficient value is +0,76). The category of municipalities with the number of residents above 60,000 reached the highest estimation, while the lowest estimation was given to municipalities with the number of residents to 2,500 (Figure 3). These estimations refer merely to observed indicators, which is, in fact, not enough for developing a basis for strategic planning. In spite of this, we can maintain that municipal web services are weak.

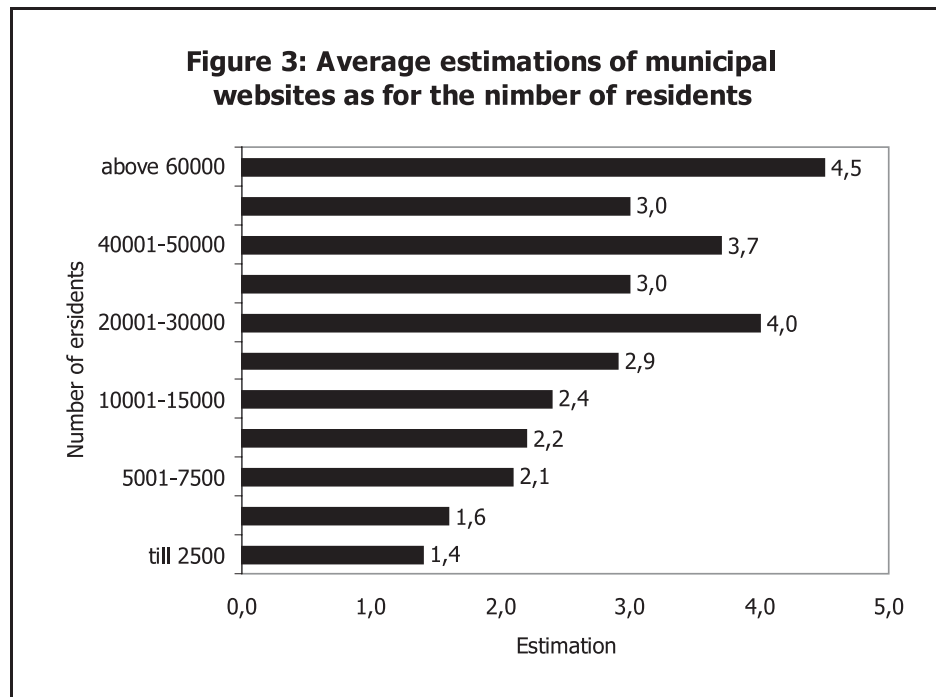
5 Evaluation of the results

Results of the research confirm our hypothesis about poor municipal web services. Many municipalities have not even disclosed their complete contact data, while the possibility of accomplishment of more complex e-services seems to be a real luxury. We can also confirm hypothesis about the poorer web services of smaller municipalities.

Comparison with other countries shows the following:

⁸ We included municipalities that list direct links to the municipality's regulations.

⁹ Seven municipalities which are present within the portals 'Goričko.net' and 'Pomurje.net', where only searching among entire portals is enabled and searching within one municipality is not possible. The Selnica ob Dravi Municipality also has a partial search engine, because it is presented within information portal 'Sraka.com' which only enables searching within the entire portal. Other partial search engines enable limited searching only (among articles, news etc.).



- in 2001 49% of Polish municipalities and 72% of Polish counties had websites (Glomb in: Sakowicz, 2001), while at the same time 57% of Slovenian municipalities were present on the web (Vintar *et al.*, 2003) and 83% of US local governments had websites as early as 2000 (PTI/ICMA, 2001); in 2002 58% of Slovenian municipalities had a website (Vintar *et al.*, 2003), while in Finland 99% of municipalities were present on the web (Socitm & IDeA, 2002); 88% of Slovenian municipalities were present on the web in 2005 and 98% of US cities had a website in 2004 (Taylor and Grenslitt, 2005);
- 91% of Slovenian municipal websites had address data in 2005 and 77% in 2003 (Vintar *et al.*, 2003), while this type of information was part of 95% of American city government websites as early as 2002 (West, 2004);
- in 2005 72% of Slovenian municipal websites contained tourist information and 88% of Polish cities' websites already contained this information in 2002 (Sakowicz, 2004);
- Application forms were available on 57% of Slovenian municipal websites in 2005, while in 2002 87% of US cities offered downloadable forms (PSI Group, 2002) and 36% Polish cities offered this service in the same period (2002) (Sakowicz, 2004);
- 3% of Finnish municipalities were providing services with the electronic signature/digital certificate in 2002 (Socitm & IDeA, 2002), while 3 years later (2005) 2% of Slovenian municipalities (or 2,2% if we only take into account municipalities that had a website) offered that kind of service; 40% of American city government websites offered fully executable online services in 2004 (West, 2004);

Local e-democracy is in the early stages of development. Twenty percent of municipal websites provided forums or chat in Slovenia in 2003 (Vintar *et al.*, 2003); in the same period 8,6% of Hungarian municipalities had generic e-mail or forum for suggestions (Regional IST, 2003). Five percent of Norwegian municipal web sites presented some form of on-line public opinion poll, voting etc. in 2003 (Baldersheim and Øgård *et al.* in: Haug and Jansen, 2004), while e-polling was provided on 25% of Slovenian municipal websites in the same period (Vintar *et al.*, 2003).

6 Conclusion

It seems that carrying out e-local self-government in the way in which every municipality takes its own approach is not the right one. We believe that there are two main reasons for relatively slow development of e-local self-government in comparison to other segments of public administration in Slovenia: (1) local authorities being left to their own scant resources and willingness in this field and (2) absence of coordinated action, guidelines and support from the central level (see section 2).

In order to improve the current situation, outlined in the paper, we can foresee two better possibilities in organizing further web supply of e-services at the local level:

- integration of all local e-government services at the central e-government portal. That would mean that e-local self-government is equally important segment of the e-government system in the country as a whole;
- establishment of a separate municipal portal which would be a united entrance point for all municipalities; this solution is easier, but still does not solve the problem of distinguishing between responsibilities of

municipalities and state bodies. Introduction of intermediate levels – that is regions, which formally still do not exist in Slovenia – could help to a great extent since cooperation between 193 municipalities would be much easier.

Since the general strategy of further e-government development is still under preparation, right now would be a very convenient moment to reconsider the policy concerning e-government development at the local level. Further disharmonious realization of e-local self-government might cause real chaos and dramatically decrease the level of efficiency and usefulness of e-services.

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