



## Citizens' Satisfaction with "Citizens' Initiatives": The Case of the Municipality of Ljubljana

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### Abstract:

Based on a survey, this article analyses the satisfaction with communication between citizens and public servants in the Municipality of Ljubljana (MOL). It highlights the potential of a citizen relations management tool to emphasise the importance of effective communication between the municipality and citizens, the role of civic engagement in the development of the municipality and the importance of understanding and managing differences in satisfaction between citizens and public servants. A notable satisfaction gap exists, with citizens generally more satisfied than public servants, except for accessibility to initiatives and problem-solving. The study recommends adopting successful tools, such as those used in Ljubljana, to improve communication, citizen participation and the quality of services. It emphasises the importance of understanding communication dynamics to tailor municipal improvements and promote civic engagement and calls for further research in Central and Eastern European municipalities.

### Keywords:

citizen, communication, municipality, participation, public servant

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## **1. Introduction**

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Managing relations with citizens is becoming increasingly important in European municipalities since more citizens want to be more involved in the decision-making processes and be regularly informed about the municipalities' decisions. According to Kruzmetra et al. (2018), cooperation between municipalities and citizens is essential for developing cities and societies, which is only feasible with adequate communication between municipalities and citizens. As argued by Fiľa et al. (2015), taking into account the democratic development of society and modern technology, citizens feel the need to actively participate in public life by expressing opinions, comments or suggestions and influencing the development of the environment in which they live. Verba et al. (1995) defined such participation as 'citizen participation', which refers to citizens' voluntary actions to influence public decision-making and manage collective affairs. In addition, Kruzmetra et al. (2018) argued that local authorities must consider the needs of citizens and ensure confidentiality and quality services. Effective communication is, therefore, the key to understanding the different needs of stakeholders and coordinating the necessary actions. Furthermore, mutual trust facilitates improving, transforming, and adapting municipal services to citizens' needs and social change. Cooperation between local government and citizens is therefore essential for the development of the city and society.

Public sector organisations defined new organisational features to enhance the relationship between organisations and citizens, changing internal processes and the relationship with citizens. According to Demirci & Gürer Bildik (2023), municipalities set up multi-channel platforms to integrate online and offline channels for citizen-municipality communication. In addition, Jurásek and Wawrosz (2021) state that this approach can strengthen the participation of citizens in public decision-making. According to their assertion, this is 'a first but essential step towards the municipality's active (pragmatic) communication'. Furthermore, Borge et al. (2009) argued that technology could profoundly improve citizen participation if citizens' initiatives are exclusively electronic or complement the face-to-face processes. Therefore, to achieve appropriate communication with citizens and their participation, municipalities need special approaches enabling citizens to interact with public servants through various channels such as websites, emails, call centres or personal service, where each interaction results in a different service experience.

In addition, online and offline channels for citizen-municipality communication have many advantages. Cegarra-Navarro et al. (2012) argued that such solutions increase the transparency of local government and provide access to a broader range of information and services. Macnamara (2016) points out that organisations, including government departments and agencies, companies, and non-governmental organisations, claim to prioritise and practise two-way communication, dialogue and collaboration with citizens, public servants, and other stakeholders. The authors note that the two-year study results show that public and private sector organisations invest

significant resources in creating an architecture for communicating with the public and other stakeholders. However, this communication is often characterised by poor listening. Based on the findings, the author suggests that organisations should focus more on listening and develop a 'listening architecture' to restore trust and engage people. According to the author, listening in organisations is crucial for promoting healthy democracy, ensuring organisational legitimacy, promoting organisational sustainability, and achieving social justice.

Furthermore, it benefits organisations, stakeholders, and society. According to Vivier et al. (2015), an effective 'communication interface' between the city government and its citizens can strengthen the city government's or municipality's responsiveness and deepen the collaboration with its citizens. Such communication and information exchange takes many forms, especially in terms of the various platforms and technologies available. Tsampoulatidis et al. (2013) state that in modern societies, there is an increasing need for direct communication between public administration and citizens to address existing problems from the citizens' perspective and to respond to their needs. Modern technologies have become valuable tools that serve as rich sources of information and as an integral part of everyday communication activities to meet these requirements. As a result, every citizen can act as a 'living sensor', perceiving and reporting on what is happening in the city. Following these concepts, the authors in Spain have developed the platform 'ImproveMyCity' or 'Improve Our City'. Furthermore, Todisco et al. (2021) argued that the advantage of such citizen-municipality communication is enhanced citizens' satisfaction.

Citizens' expectations change as society changes; public sector organisations must, therefore, understand and adapt to the changing expectations of citizens, especially the shift towards continuous interaction and engagement (Luoma-aho et al., 2020). Communication channels and ICT tools enable increased interaction, and policies emphasise citizen activity. Even if not all citizens are active, their expectations and experiences shape their interactions, attitudes, and behaviour towards municipalities. The research problem presented in this article emphasises the importance of effective communication between the municipality and citizens, the role of civic engagement in the development of the municipality and the importance of understanding and eliminating differences in satisfaction between citizens and public servants. It also opens up the possibility of examining different aspects of communication strategies, such as the use of different communication channels, the effectiveness of citizen participation mechanisms, and the impact of satisfaction with communication on citizen participation in public decision-making. It provides a broad framework for examining the dynamics of communication in local government and its impact on citizen engagement and satisfaction. The Municipality of Ljubljana (MOL) was chosen as a case study. The overarching research question of the article is: How can the MOL optimise its communication strategies to increase citizen engagement and satisfaction, especially in the context of changing citizen needs? One aspect of the communication system between citizens and the city government, namely stakeholder satisfaction with the

communication conducted in the Citizen Relationship Management Tool 'Citizen Initiatives' and comparing satisfaction between citizens and public servants, was analysed to answer the overarching research question. The operational research questions were analysed:

RQ1: In what aspects of communication do MOL's public servants and citizens differ?

RQ2: How do citizens and public servants differ in

1. the perceived satisfaction with communication practices between the municipality and citizens?
2. the evaluation of the evaluation of the citizens' initiatives access to the municipality and problem-solving between citizens and public servants?

The literature review is presented in the following chapter, followed by research and measures, results, discussion and conclusion.

## **2. Literature review**

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Effective citizen-municipality communication involves impressing citizens to participate. Johnson et al. (2011) suggest that particular approaches are needed to capture citizens' attention and willingness to engage in dialogue via direct and indirect communication. Literature about citizen-municipality communication (e.g. Tsampoulatidis et al., 2013; Sørsum, 2014; Svidroňová et al., 2018; Vitálišová et al., 2022; Demirci & Güler Bildik, 2023) shows that municipalities communicate with citizens through a variety of channels to provide information, gather feedback and engage citizens to ensure citizen participation and improve access to quality services. They usually use official websites to share information about services, events, policies, display infrastructure projects, service locations, contact details, and the like. With newsletters and other publications, email alerts, and public-access TV or radio, they provide updates on municipal activities, reports, detailed accomplishments, initiatives, and upcoming projects, announcements, or events. Municipalities publish legal notices, announcements, and important information in local newspapers, on bulletin boards and through other public notice platforms. To share updates, news, surveys, and events and interact with citizens more informally and interactively, they usually use social media platforms (i.e. Facebook, Twitter, Instagram, LinkedIn) and mobile apps. Municipalities also organise community meetings and online discussion platforms to allow citizens to engage with municipal officials, ask questions, and voice concerns. They also provide phone lines or citizen service centres where citizens can inquire about services, report issues, and seek assistance. They also organise events like municipal festivals, workshops, and gatherings to foster community engagement and provide information. Some municipalities use online platforms for citizen engagement and

participation, allowing residents to propose ideas, vote on projects, and collaborate on decision-making. As a contribution to previous findings, the study presented in this article analysed how the MOL can optimise its communication strategies to increase citizen engagement and satisfaction, especially in the context of changing citizen needs. Even if not all citizens are active, their expectations and experiences shape their interactions, attitudes, and behaviour towards municipalities.

Different research was conducted about citizen-municipality communication; Demirci & Güler Bildik (2023) conducted a study to investigate citizens' attitudes towards online communication channels and emerging integrated multi-channel platforms in the Muratpasa municipality. These platforms combine online and offline communication channels for interacting with local governments in Antalya. The study analysed citizens' attitudes regarding awareness, intention to use and satisfaction. The findings revealed that citizens still exhibit a preference for traditional offline communication channels when engaging with the municipality. Phone calls were the most popular method, followed by in-person visits.

Interestingly, social media ranked among the least preferred communication channels. While the integrated model was widely recognised and frequently used, it was not always utilised consciously. The recognition has paved the way for the emergence of integrated multi-channel platforms. In addition, Sachs and Schossböck (2019) tested Austrian tools for electronic citizen participation. They assessed potential application areas from a stakeholder perspective and the acceptance of tools from users' points of view. Based on the user feedback, both users and political stakeholders found the location- and time-independent aspects of participation appealing, as well as the transparency of the processes. Their research emphasises that utilising information communication technology does not inherently lead to greater participation. In a separate study, Bhatia and Mabillard (2021) investigated the use of traditional and digital communication channels in Swiss and Austrian municipalities. Their findings reveal that Swiss and Austrian municipalities continue to intensively utilise traditional and digital communication channels, such as city journals and newsletters, compared to social media. The researchers also observed cities' gradual adoption of Facebook, particularly in Austria, the most widely used social media platform.

Furthermore, the results of the research about the use of Facebook (as the most popular social networking site) that Jukić and Merlak (2017) made among 112 Slovenian state administration organizations have shown that only a few public organisations have established their Facebook presence and identified it as the highest potential of reach and engagement of its users. In addition, Zumofen et al. (2023) investigated the potential of social media for disseminating important information and changing citizen engagement with the government in Central and Eastern European cities (including Slovenia). Their findings show that many municipalities are experimenting with social media, but only some actively measure their performance on these platforms and user interactions. In order to contribute to the research presented above and to analyse the citizen relationship management tool 'Citizen Initiatives', the

study presented in this article investigated which aspects of communication between MOL public servants and citizens differ, i.e. citizens' municipal press, local newspapers, municipal websites, social networks, communication (relatives, friends, acquaintances) and contact with municipal public servants.

Furthermore, concerning the Muratpasa Municipality, Demirci & Gürer Bildik (2023) found that 62% of the participants using the municipality's social media accounts were satisfied with the services/communication provided. In a separate study, Sørum (2014) investigated response time and quality concerning electronic mail suggestions and citizens' initiatives in Norwegian municipalities. The results show that response times in the public sector are generally short. The responses provided are of a relatively high quality, although there was significant variation in their depth and complexity. Notably, 17% of the municipalities did not respond to the electronic requests, indicating room for improvement. In addition, Lis-Staranowicz and Giżyńska (2020) analysed local citizens' initiatives in Poland, particularly the so-called signature requirements, and found that EU citizens more easily implement an initiative than Polish citizens submit a draft law to parliament. Specific approaches are required to attract the attention of citizens effectively.

Using direct and indirect communication through various channels or integrated multi-channel platforms is crucial for the success of sustainable policies, the promotion of citizen participation and the satisfaction of both citizens and public servants. Various studies have been conducted in the area of perceived satisfaction. Akgül (2012) conducted a study to measure citizens' satisfaction with the Kirşehir Municipality. The results showed positive perceived satisfaction among citizens, especially regarding the municipality's effective communication with beneficiaries and easy access to municipal public servants to raise complaints. In another study, Lameiras et al. (2022) focused on measuring responsiveness to citizens' needs and expectations. Their findings suggest that municipalities are consistently attentive and respectful towards citizens. They argue that such an approach strengthens citizens' sense of belonging and suggest analysing the different channels available to citizens in more detail.

The literature review shows that active listening is paramount in organisational communication. Existing studies on citizen communication at the local level have mainly focussed on the frequency of use, especially of social media, and the degree of citizen participation. These studies have also analysed the tools and methods of e-participation in the context of local government. However, satisfaction with the communication process between public servants and citizens has been only relatively little analysed. Nowadays, more and more emphasis is being placed on comprehensively analysing the various aspects of communication between local authorities and citizens. Contributions to the literature and practice answer the research question: How do citizens and public servants differ in their perceived satisfaction with communication practises between the municipality and citizens? The study presented in the article analysed whether the submission of initiatives through the MOL tool 'Citizen Initiatives' is easy, whether the responses to initiatives are quick and of high quality, whether the

response time in processing initiatives is short, and whether the operation of the initiative submission system is good. In addition, the study presented in this article analysed how citizens and public servants differently assess the municipality's accessibility to citizens' initiatives and problem-solving between citizens and public servants. The study, therefore, also analysed responses to initiatives, namely whether the MOL is responsive to all citizens' initiatives, understands citizens' wishes and suggestions, makes efforts to listen to, respect and satisfy citizens, and fulfils citizens' wishes as much as possible.

### **3. The case of the Municipality of Ljubljana**

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As a contribution to the research presented above, it was analysed how the municipality can optimise its communication strategies to increase citizen engagement and satisfaction, especially in the context of changing citizen needs. The research presented in this article has analysed the perceived satisfaction with communication practises between the municipality and citizens, as well as the assessment of the municipality's accessibility to citizen initiatives and problem-solving, and identified the differences in perceived satisfaction between citizens and public servants. The focus is on areas such as accessibility to citizens' initiatives and primary sources of information.

The Municipality of Ljubljana (MOL) was selected as a case study. In order to integrate the online and offline channels for communication between citizens and the municipality and to strengthen citizen participation and satisfaction, the MOL defined new organisational characteristics and changed internal processes in 2018 by introducing the Citizen Relationship Management tool and calling it 'Citizen Initiatives'. Citizen Initiatives encompasses a wide range of interactivity that citizens have with the MOL, with the roles and responsibilities of public servants clearly defined. Citizen Initiatives includes suggestions for improvement, legitimate criticism of the MOL's services, pointing out errors and deficiencies, and asking questions about the MOL's policies and related services. Several organisational units, colleagues within the MOL, public organisations associated with the MOL and various interest groups are involved in reviewing initiatives. The process of handling initiatives is multi-layered as citizens can submit initiatives through seven different channels: directly to the Mayor, through the Citizens' Initiatives Department, through the Citizens' Initiatives Commission in the City Council, through the City Councillors, directly to various departments of the City Council, through the neighbourhood communities and modern communication channels such as social networks. Public servants respond to initiatives as part of their duties. Citizen service initiatives are not anonymous and the MOL public servants are obliged to respond; no further comments are possible. To summarise, such a citizen relations management tool can help solve the problem of declining citizen participation and improve access to quality services. It can also manage citizens'

initiatives, communication with citizens, stakeholder management, and the like. Even if not every citizen is active, they all have expectations and experiences that shape their interactions, attitudes and behaviour towards the municipality.

Therefore, it is important to ensure effective communication between the municipality and citizens. To achieve this, various aspects of communication strategies, such as using different communication channels, the effectiveness of citizen participation mechanisms, and the impact of satisfaction with communication on citizen participation in public decision-making, were analysed. The study is presented below.

## 4. Research

### 4.1 Sample

The sample consisted of 290 participants (73 (25%) public servants from the MOL and 217 (75%) citizens). The demographic structure of the sample is shown in Table 1.

**Table 1:**  
Data research Sample

|                                  |          | Public servants from MOL |               | Citizens  |               |
|----------------------------------|----------|--------------------------|---------------|-----------|---------------|
|                                  |          | Frequency                | Valid Percent | Frequency | Valid Percent |
| Gender                           | male     | 20                       | 28.17         | 95        | 45.67         |
|                                  | female   | 51                       | 71.83         | 113       | 54.33         |
| Age                              | under 31 | 6                        | 8.22          | 18        | 8.33          |
|                                  | 31 - 40  | 21                       | 28.77         | 50        | 23.15         |
|                                  | 41 - 50  | 28                       | 38.36         | 56        | 25.93         |
|                                  | 51 - 60  | 15                       | 20.55         | 52        | 24.07         |
|                                  | over 60  | 3                        | 4.11          | 40        | 18.52         |
| Total (including missing values) |          | 73                       |               | 217       |               |

Source: Authors' own, 2024.

The participant samples in the survey, which encompasses both public servants and citizens, exhibit a demographic composition mirroring that of the broader population regarding gender and age. The gender and age distributions in both survey cohorts closely resemble the corresponding proportions within the adult population of Ljubljana, albeit with a slight underrepresentation observed among the elderly demographic (over 60 years old). This age group, characterised by less frequent utilisation of initiatives, constitutes 30% of the sample. In comparison, 20% are younger

than 31, 16% fall between the ages of 31 and 40, 18% range from 41 to 50, and 16% are between 51 and 60. The gender breakdown indicates that 48% of participants identify as male and 52% as female (Republic of Slovenia Statistical Office, 2024).

## 4.2 Measures

The study was based on a quantitative methodology – a survey. Two questionnaires were created, one for the citizens and one for the MOL public servants. Both questionnaires first included some demographic questions (e.g. gender and age, length of employment for public servants), followed by questions on communication between the MOL and citizens, accessibility of the MOL to citizens' initiatives and frequency of use of various information sources by citizens. The questions were addressed to both groups and formulated according to the target group of respondents (public servants rated the communication of citizens, and citizens rated the MOL public servants).

The study analysed the satisfaction of MOL's citizens and public servants with the various communication channels between citizens and the municipality, namely the municipal press, the local newspaper, the municipal websites, social networks, communication (relatives, friends, acquaintances) and contact with municipal public servants. These variables were developed based on previous research (Svidroňová et al., 2018; Bhatia & Mabillard, 2021; Vitálišová et al., 2022; Demirci & Güler Bildik, 2023; Zumofen et al., 2023). In addition, it was investigated whether the submission of initiatives via MOL's citizen relationship management tool, 'Citizen Initiatives' is easy, whether the responses to initiatives are fast and of high quality, whether the response time in processing initiatives is short and whether the initiative submission system works well. Moreover, the responses to initiatives, namely whether the MOL responds to all citizens' initiatives, understands citizens' wishes and suggestions, endeavours to listen to citizens, respects and satisfies them, and fulfils citizens' wishes as much as possible. These variables were developed based on Demirci & Güler Bildik (2023) and Staranowicz & Giżyńska (2020). The study also examined whether submitting initiatives via the MOL tool 'Citizens' Initiatives' is straightforward, whether the responses to initiatives are fast and of high quality, whether the response time in processing initiatives is short and whether the system for submitting initiatives works well. In addition, the responses to initiatives were also analysed, namely whether the MOL responds to all citizens' initiatives, understands citizens' wishes and suggestions, makes efforts to listen to, respect and satisfy citizens, and fulfils citizens' wishes as much as possible. These variables were developed following the research conducted by Akgül (2012) and Lameiras et al (2022). The questions were rated on a 5-point Likert scale.

The data collection and survey of employees and citizens was done using the online questionnaire. It was ensured that the link only reached the participants (public servants and citizens) actively involved in citizen initiatives. The link to the questionnaire was distributed to the MOL employees who deal with citizens' initiatives in their work and, therefore, communicate with them. In the case of citizens, the link to the questionnaire was sent to the e-mail addresses of those citizens who had already submitted an initiative

to the MOL. Therefore, only those citizens who had already communicated with the MOL about the initiative were included in the sample. Several research methods were used for the analysis, namely the Kolmogorov-Smirnov test to analyse the normal distribution of the variables, the non-parametric Mann-Whitney test to compare two groups, the Bonferroni correction due to the different research questions, the logistic regression to predict the values of a dependent binary variable.

The following section will compare the differences between the two groups (a group of MOL public servants and a group of citizens). First, it shows the proportion of respondents in both groups who answered the survey question with the highest or second highest level of agreement/frequency (top two boxes). The results are compared graphically with the line chart. Next, it is checked whether there are differences between the groups in terms of agreement with the statements. The normality analysis has shown that none of the measured variables can be considered normally distributed; therefore, the non-parametric Mann-Whitney test was used to compare the two groups. Finally, the logistic regression model was used to classify the respondents, i.e., to determine if it is possible to predict whether a respondent is a public servant or a citizen based on the respondents' answers about the analysed aspects.

## **5. Results**

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To answer the first research question: in what aspects of communication do MOL's public servants and citizens differ? Figure 1 was prepared. The figure shows the proportion of respondents who answered the survey questions with the highest values, i.e. with 5 or 4 (complete agreement and agreement or very often and often). These proportions are calculated separately for both groups. The proportions calculated for the citizens are presented on the left and for public servants on the right. The proportions corresponding to the same survey question are connected, so it is easy to see whether the proportion is higher in the group of public servants (descending line) or citizens (ascending line).

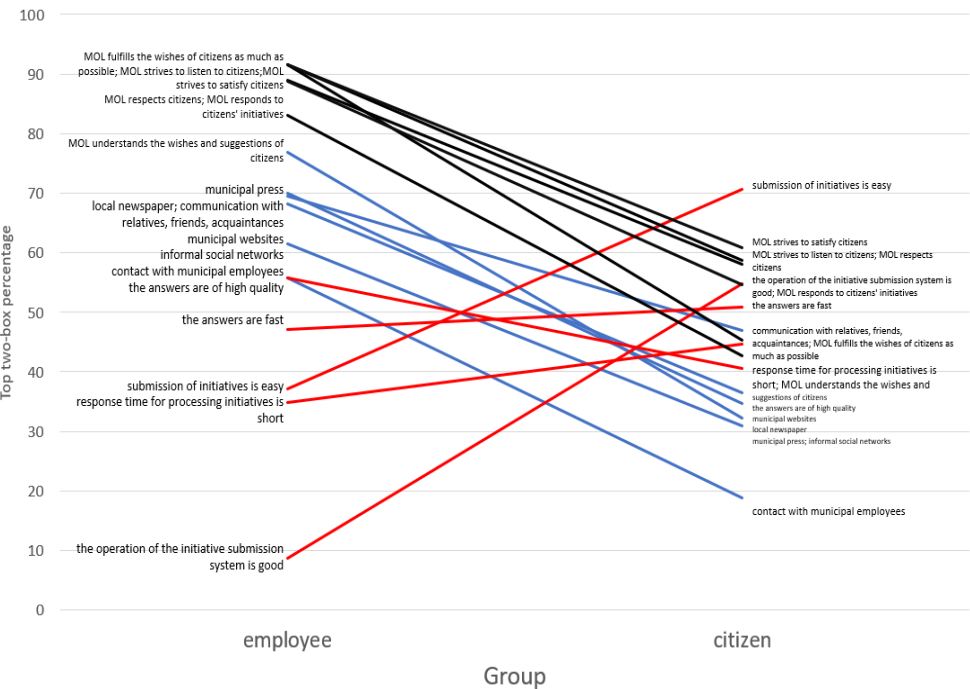
Figure 1 indicates that for most statements, the share of the highest two answers is higher in the group of public servants (13 out of the 17 analysed aspects). The most significant difference (46 pp [1]) is in the statement that the MOL fulfils citizens' wishes as much as possible. Among public servants, the % of those who agree or strongly agree with the statement is 92%, and among citizens, 46%. There is a similar difference in understanding citizens' wishes and proposals (difference of 40 pp) and frequency of use of the municipal press (difference of 45 pp).

Statements where citizens expressed a higher degree of agreement (higher share of the top two answers), include agreeing with the statement that the operation of the system for submitting initiatives is good (difference 46 pp: public servants 9%, citizens 55%), the ease of submitting initiatives (difference 34 pp: public servants 37%, citizens

71%) and the response time for considering initiatives (a difference of 10 pp: public servants 35%, citizens 45%).

Figure 1:

The proportion of respondents who answered the survey questions with the highest values



Legend: red line-questions group Q4;  
blue line-questions group Q3;  
black line-questions group Q5

Source: Authors' own, 2024.

Table 2 includes the analysis results of whether there are significant differences between the answers of the two groups or not. The Kolmogorov-Smirnov test verified that none of the analysed variables could be considered normally distributed (all P-values were <0.01). Therefore, the non-parametric Mann-Whitney test was used to compare the two groups. Table 1 shows the mean ranks for both groups, Z-value and P-value. In addition, a group with a higher average rank is shown, indicating that a response distribution tends towards higher values. Due to several tested hypotheses, the Bonferroni correction was used. Those statements marked by characteristic differences after the applied correction are marked with an \*.

**Table 2**

The mean ranks for groups of citizens and public servants, Z-value and P-value

| Group |                                                           | N              | Mean Rank | Z       | P      |          |                    |
|-------|-----------------------------------------------------------|----------------|-----------|---------|--------|----------|--------------------|
| Q3    | Municipal press                                           | citizen        | 211       | 121,576 | -7,017 | 2.27E-09 | public servant *** |
|       |                                                           | public servant | 69        | 198,370 |        |          |                    |
|       | Local newspaper                                           | citizen        | 208       | 123,925 | -5,704 | 1.17E-05 | public servant *** |
|       |                                                           | public servant | 70        | 185,779 |        |          |                    |
|       | Municipal websites                                        | citizen        | 211       | 127,318 | -4,909 | 9.16E-04 | public servant *** |
|       |                                                           | public servant | 69        | 180,812 |        |          |                    |
|       | Informal social networks                                  | citizen        | 210       | 126,033 | -5,335 | 9.57E-05 | public servant *** |
|       |                                                           | public servant | 70        | 183.9   |        |          |                    |
|       | Communication (relatives, friends, acquaintances)         | citizen        | 213       | 133,096 | -3,163 | 0.002    | public servant *   |
|       |                                                           | public servant | 69        | 167,442 |        |          |                    |
|       | Contact with municipal employees                          | citizen        | 213       | 120,288 | -7,987 | 1.39E-12 | public servant *** |
|       |                                                           | public servant | 70        | 208,064 |        |          |                    |
| Q4    | Submission of initiatives is easy                         | citizen        | 215       | 156,312 | -5,048 | 4.47E-04 | citizen ***        |
|       |                                                           | public servant | 70        | 102,114 |        |          |                    |
|       | The answers are fast                                      | citizen        | 214       | 146,839 | -1,610 | 0.107    | citizen            |
|       |                                                           | public servant | 70        | 129,236 |        |          |                    |
|       | The answers are of high quality                           | citizen        | 212       | 136,184 | -1,976 | 0.048    | public servant     |
|       |                                                           | public servant | 70        | 157.6   |        |          |                    |
|       | The response time of processing initiatives is short      | citizen        | 213       | 147,542 | -2,278 | 0.023    | citizen            |
|       |                                                           | public servant | 69        | 122,848 |        |          |                    |
|       | The operation of the initiative submission system is good | citizen        | 212       | 164,472 | -8,790 | 1.49E-15 | citizen ***        |
|       |                                                           | public servant | 69        | 68,884  |        |          |                    |
| Q5    | MOL respects citizens                                     | citizen        | 212       | 125,502 | -6.268 | 3.66E-07 | public servant *** |
|       |                                                           | public servant | 72        | 192,549 |        |          |                    |
|       | MOL strives to listen to citizens                         | citizen        | 213       | 125,613 | -6,277 | 3.45E-07 | public servant *** |
|       |                                                           | public servant | 71        | 193,162 |        |          |                    |
|       | MOL fulfills the wishes of citizens as much as possible   | citizen        | 212       | 122,599 | -7,144 | 9.09E-10 | public servant *** |
|       |                                                           | public servant | 71        | 199,930 |        |          |                    |
|       | MOL strives to satisfy citizens                           | citizen        | 212       | 126,054 | -5,972 | 2.35E-06 | public servant *** |
|       |                                                           | public servant | 71        | 189,613 |        |          |                    |
|       | MOL Responds to citizens' Initiatives                     | citizen        | 214       | 126,411 | -6,195 | 5.84E-07 | public servant *** |
|       |                                                           | public servant | 71        | 193     |        |          |                    |
|       | MOL understands the wishes and suggestions of citizens    | citizen        | 211       | 124,855 | -6,129 | 8.85E-07 | public servant *** |
|       |                                                           | public servant | 71        | 190,965 |        |          |                    |

Note: After Bonferroni correction: \*\*\* &lt;0,001; \*\*&lt;0,01; \*&lt;0,05.

Source: Authors' own, 2024.

Table 2 shows results that are consistent with that shown in Figure 1. For most of the analysed aspects, a higher level of agreement is expressed in the group of public servants, and among the stated statements, there is only one statement that the difference is not statistically significant at a 5% level of significance (quality of answers, average rank 136.18 and 157.6;  $p=0.05$ ). Except for one statement (communication with relatives, friends, acquaintances), all other differences are statistically significant at a 0.1% level. Similar to Figure 1, the smallest P-values, which indicate the most significant differences between the groups, are for claims that the MOL fulfils citizens' wishes as much as possible, contact with MOL public servants and frequency of the use of the municipal press.

Among the statements with higher degrees of agreement or frequency expressed by citizens, the differences are not significant in two of the four (processing time and speed of responses), while in the other two (the operation of the initiative submission system is good, submission of initiatives is easy) the difference is statistically significant ( $p<5\%$ ).

With this part of the statistical analysis, the first research question was answered: In what aspects of communication do MOL's public servants and citizens differ? It was found that there are differences in most of the analysed aspects (14 out of 17). The most significant difference is in the perception of whether the MOL fulfils citizens' wishes, where the share of a high level of agreement is significantly higher among the group of public servants. Furthermore, primarily, public servants tended to give higher grades than citizens (significantly higher for 12 out of 17 statements). Statistically significant differences in the direction of higher grades by citizens were detected only for two statements.

Furthermore, a logistic regression model was used to predict the values of a dependent binary variable (in this case, group membership: public servants/citizens) based on the values of the independent variables (in this case, the analysed aspects from the questionnaire).

Table 3:

The fitted parameters of an analysed logistic regression model

| The frequency of use: |                                                      | B      | S.E.  | Wald   | df | Sig.   | Exp(B) |
|-----------------------|------------------------------------------------------|--------|-------|--------|----|--------|--------|
| Step 1a               | Municipal press                                      | 0.743  | 0.187 | 15.838 | 1  | <0.001 | 2.102  |
|                       | Local newspaper                                      | 0.037  | 0.181 | 0.042  | 1  | 0.837  | 1.038  |
|                       | Municipal websites                                   | 0.110  | 0.175 | 0.398  | 1  | 0.528  | 1.117  |
|                       | Social networks                                      | 0.423  | 0.166 | 6.449  | 1  | 0.011  | 1.526  |
|                       | Communication with relatives, friends, acquaintances | 0.087  | 0.161 | 0.292  | 1  | 0.589  | 1.091  |
|                       | Constant                                             | -5.760 | 0.833 | 47.801 | 1  | <0.001 | 0.003  |

Note: a. Variable(s) entered in step 1.

Source: Authors' own, 2024.

Table 3 summarises the fitted parameters of a fitted logistic regression model. The results indicate that two independent variables, namely the frequency of using the municipal press (OR=2.102,  $p<0.001$ ) and interaction on social media (OR=1.526,  $p=0.011$ ), have a significant impact on the group membership. That means that the increase of usage of the municipal press by 1 point on the ordinal scale (from never to rarely ... from frequently to very frequently) increases the odds of being a public servant by a factor of 2.102. Similarly, the increase of interaction on social media by 1 unit on the same ordinal scale increases the odds of being a public servant by a factor of 1.526. The impacts of these two aspects are significant.

Several performance indicators (classification accuracy (CA), area under the ROC curve (AUC), precision, recall) were calculated using 5-fold cross-validation to estimate the performance of logistic regression on unseen data instances. The calculations were performed using the Orange open-source software (see Demšar et al., 2013).

**Table 4:**  
5-fold cross-validation, using the open-source software Orange

| Model               | AUC   | CA    | F1    | Precision | Recall |
|---------------------|-------|-------|-------|-----------|--------|
| Logistic Regression | 0.818 | 0.766 | 0.754 | 0.749     | 0.766  |

Source: Authors' own, 2024.

The AUC measure (Table 4) indicates that the logistic regression model can distinguish between a citizen and a public servant in 81.8% of cases and correctly classify 76.6% of the respondents. The above indicates a very good predictive accuracy since the AUC measure exceeds the standard threshold of 0.75 (see Murphy-Filkins et al., 1996). The precision indicates that if a respondent is classified as a public servant, the probability of being a public servant is 74.9%. At the same time, recall (sensitivity) tells us that 76.6% of public servants are classified as public servants. All the performance indicators, primarily the AUC measure, confirm the ability of the logistic regression model to separate the two groups based on the frequency of using different media.

With the next part of the statistical analysis, the second research question was answered, namely, How do citizens and public servants differ in (a) perceived satisfaction with communication practices between the municipality and citizens, (b) the evaluation of the municipality's accessibility to citizens' initiatives and problem-solving between citizens and public servants? Table 5 presents an overview of the survey results, examining the perceived satisfaction with communication and accessibility to initiatives within the municipality, as reported by citizens and public servants. The Mann-Whitney U-test was employed for statistical analysis, assessing the significance of differences between citizens and public servants. Therefore, the table shows mean ranks for each group with additional information about the mean and standard deviation for descriptive purposes. Together with sample sizes, the Mann-Whitney U

statistics and corresponding p-value are shown. Notice that lower mean ranks and lower means indicate a higher level of satisfaction for each variable.

**Table 5:**

The perceived satisfaction with communication and accessibility to initiatives within the municipality

| Satisfaction with                                   | group          | Mean Rank | Mean  | Standard deviation | N   | U      | p      |
|-----------------------------------------------------|----------------|-----------|-------|--------------------|-----|--------|--------|
| Communication between the municipality and citizens | Citizen        | 118.711   | 2.324 | 0.991              | 216 | 2205.5 | <0.001 |
|                                                     | public servant | 221.868   | 3.875 | 0.918              | 72  |        |        |
| Accessibility to initiatives                        | citizen        | 145.970   | 2.363 | 2.301              | 215 | 7531.5 | 0.591  |
|                                                     | public servant | 140.171   | 1.063 | 1.050              | 73  |        |        |

Source: Authors’ own, 2024.

The analysis of the survey results provides valuable insights into the perceived communication and accessibility of the municipality, as assessed by citizens and public servants. For the satisfaction with communication between the municipality and citizens, the Mann-Whitney U test revealed a significant difference between citizens and public servants ( $U=2205.5$ ,  $p<0.001$ ). The mean rank for citizens (118.71) was substantially lower than that for public servants (221.87), suggesting that citizens generally reported higher satisfaction with the communication practices of the municipality than public servants.

In contrast, when evaluating the satisfaction between the municipality’s accessibility to initiatives and problem-solving in the MOL, the Mann-Whitney U test did not reveal a significant difference between citizens and public servants ( $U=7531.5$ ,  $p=0.591$ ). The mean ranks for citizens (145.97) and public servants (140.17) were comparable, indicating that both groups perceive the municipality’s accessibility to initiatives and problem-solving similarly. These findings highlight the nuanced nature of satisfaction within the municipality, with citizens expressing higher contentment with communication practices than public servants. At the same time, both groups share a relatively similar perspective on accessibility to initiatives and problem-solving.

## 6. Discussion

A municipality’s process of ensuring the satisfaction of its citizens and cultivating a positive experience increasingly depends on the active engagement of its citizens. The growing importance of the ‘citizens’ voice allows them to express their opinions, wishes,

ideas and suggestions through initiatives and thus contribute to the municipality's development. Effective communication between citizens and local authorities is therefore becoming increasingly important. It is in all parties' interest to ensure that these communication channels function optimally. Local authorities are responsible for encouraging and facilitating such constructive interaction. Previous studies (e.g. Sachs & Schossböck, 2019; Bhatia & Mabillard, 2021; Jurásek & Wawrosz, 2021; Demirci & Güler Bildik, 2023) show that communication between local authorities and citizens aims to maximise citizen participation and engagement in the life of the local community. The above includes initiatives to foster integration and trust and increase individual responsibility for community development and action. In fulfilling their duties, local authorities must consider the different needs of citizens, ensure confidentiality and provide high-quality services. Given the needs of the stakeholders, effective communication plays a crucial role in understanding these requirements and coordinating the necessary actions. Mutual trust enables the improvement, reorganisation and adaptation of municipal services to the evolving needs of citizens and social change. Co-operation between local government and citizens is essential for local and social development. However, such co-operation is only possible with adequate communication between local authorities and citizens.

Specific approaches are required to attract the attention of citizens effectively. Use both direct and indirect communication through various channels or integrated multi-channel platforms, as also noted by Bhatia & Mabillard (2021) and Demirci & Güler Bildik (2023). Municipalities use a variety of communication channels to engage with citizens. These channels include official websites, newsletters, email alerts, public TV channels, radio stations, notice boards, and other public platforms. Municipalities provide comprehensive information about services, events, activities, reports, achievements, initiatives, strategies, legal notices, projects and contact details through these channels. In addition, municipalities facilitate citizen participation through mechanisms such as citizens' meetings and online forums. They also provide telephone lines and service centres where citizens can contact officials, ask questions, raise concerns and seek help with enquiries and problems. The municipality also actively promotes citizen participation by organising festivals, workshops and meetings. In line with current trends, some municipalities use online platforms to improve citizen participation. These platforms allow citizens to propose ideas, participate in project votes and contribute to decision-making processes.

Existing studies on citizen communication at the local level have primarily focussed on the frequency of use, particularly of social media, and the level of civic engagement. These studies have also analysed the tools and methods of e-participation in the context of local government. However, satisfaction with the communication process between public servants and citizens has rarely been analysed. Currently, more and more emphasis is being placed on comprehensively analysing the various aspects of communication between local authorities and citizens. The focus is on areas such as accessibility to citizens' initiatives and primary sources of information. In order to gain

a deeper understanding, a research initiative was conducted in the Municipality of Ljubljana, Slovenia. The number of initiatives in the MOL is constantly increasing, which impacts the MOL's work processes. With greater citizen participation, the MOL has introduced a tool called 'Citizen Initiatives' that involves various stakeholders within the MOL. As Borge et al. (2009) stated, with websites and interactive communication channels more widespread than participatory initiatives, local citizens influence public decisions and affect the reality of municipalities.

The survey aims to analyse different aspects of communication between the MOL and the citizens. In general, the survey results show that citizens are satisfied with the communication with the MOL. The results show that for most statements, the proportion of the two highest answers is higher in the group of public servants. There are differences in the statements that the MOL fulfils citizens' wishes as much as possible, understands citizens' wishes and suggestions, and the municipal press frequently uses the MOL. These results could be the consequence of national and municipal regulations to be considered by public servants. Statements, where citizens expressed a higher level of agreement, include the statement that the system for submitting initiatives works well, the ease of submitting initiatives and the response time in considering initiatives. Thus, the results show that citizens who were involved in the initiative submission process are satisfied with the MOL tool because, as Cegarra-Navarro et al. (2012) argued, it provides access to a broader range of information and services and, as Schellong & Langenberg (2007) stated, it fulfils citizens' needs.

The analysis of the survey results shows clear patterns in the perceived satisfaction with communication as perceived by citizens and public servants. In particular, there is a significant discrepancy between these two groups regarding satisfaction with communication. Citizens are generally more satisfied with the municipality's communication practices than public servants. In contrast, no significant difference was found between citizens and public servants when assessing satisfaction with the evaluation of the citizens' initiatives access to the municipality and problem-solving. The comparable mean values for both groups indicate that the municipality's accessibility in these areas is perceived equally by both groups. The above indicates that despite the differences in communication satisfaction, citizens and civil servants rate the municipality's effectiveness in accessing initiatives and facilitating problem-solving relatively similarly.

The empirical results on various aspects of communication between the municipality and the citizens, the accessibility of the municipality for citizens' initiatives and the most important sources of information contribute to the expertise. The results may lead to more satisfactory practical solutions for citizen participation to make municipalities more transparent. The results emphasise the nuanced nature of satisfaction within the municipality. While citizens express higher satisfaction with communication practices, indicating room for improvement in public servants' eyes, both groups consistently agree on the accessibility of initiatives and problem-solving. These results can serve as a valuable basis for targeted interventions to improve

communication channels and address specific concerns of public servants, ultimately leading to a more harmonious relationship between the municipality and its various stakeholders.

As citizens were very satisfied with the tool, other Slovenian municipalities could consider following the example of the municipality of Ljubljana and introducing a similar tool for citizens' initiatives. This implementation would strengthen efficient and user-friendly communication channels, focus on understanding citizens' suggestions and promote continuous improvement; as such, a citizen relations management tool can help solve the problem of declining citizen participation and improve access to quality services. It can also manage citizen initiatives, communication with citizens and stakeholder management. This research aims to understand which aspects of communication between public servants and citizens differ, which is vital for improving, redesigning and adapting municipal services to citizens' needs and social change. Satisfaction can strengthen citizens' participation in public decision-making as they perceive and report on what is happening in the city. Further research in other Central and Eastern European municipalities is recommended to explore possible differences and improve understanding in this area.

## **7. Conclusion**

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The research presented in this article emphasises the critical role of effective communication between the MOL and citizens in promoting civic engagement and satisfaction. The active participation of citizens in community development and the accountability of local authorities are necessary to enable constructive interaction. Strong communication channels increase citizen participation and trust, leading to better municipal services. The findings highlight opportunities to improve communication channels and address public servants' concerns. It is also important to understand the different perspectives of citizens and civil servants to adapt municipal services to societal needs. Satisfaction is important to promote citizen engagement and transparent administration. Other Slovenian municipalities could adopt the success of the citizens' initiative tool in the MOL to promote efficient communication and citizen participation. Further research could be conducted in Central and Eastern European municipalities to explore communication dynamics and improve understanding, ultimately leading to better citizen participation and service delivery.

## **Acknowledgment**

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The authors acknowledge the financial support from the Slovenian Research Agency (research core funding No. P5-0093).

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