Does population size matter? Political participation of citizens through mobile instant messaging services depending on the place of residence

Alonso-Muñoz, Laura: lalonso@uji.es
Casero-Ripollés, Andreu: casero@uji.es
Universitat Jaume I de Castelló

Abstract
The use of mobile instant messaging services is increasing among citizens. Applications like WhatsApp, with more than 2 billion users around the world, have changed the way we communicate. The objective of this research is to know how citizens make use of the WhatsApp service launched by the town hall of their municipality of residence. To do so, an online survey was carried out on 1,202 citizens residing in Spain. The sample has been stratified considering the size of the municipality of residence of the respondents. The results show that the City Council's WhatsApp service has greater penetration in smaller municipalities (up to 10,000 inhabitants). Therefore, these citizens would show more serious concern for local politics than the rest. Regarding its use, it stands out how residents in small municipalities use it more for informational purposes, while residents in medium municipalities (from 10,001 to 100,000 inhabitants) and large municipalities (more than 100,001 inhabitants) participate more and use it more frequently to register for the services offered by the City Council, as well as to raise doubts about the management run by the municipal corporation.

Keywords
Political Communication, political participation, mobile instant messaging services, WhatsApp, local arena, e-government

1. Introduction[1]
In recent years, political communication has been impacted by the consolidation of digital technologies. The use of social media such as Twitter, Facebook or Instagram, and mobile instant messaging services such as WhatsApp or Telegram has increased notably during the last decade (Elishar-Malka, Ariel & Weimann 2020, Vacari & Valeriani, 2018). 81.5% of the world's population is a user of social media and messaging applications. This percentage is even higher in the case of Spain, where 86% of the population frequently uses these services (Statista, 2020). With more than two billion active users per month, WhatsApp has become the most popular mobile instant messaging service among citizens, ahead of platforms such as Facebook Messenger (1.3 billion) or WeChat (1.2 billion) (Newman et al., 2020).

The flexibility to access and share information with other users has made platforms such as WhatsApp one of the most important dissemination channels for people's daily lives, due to the

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social and political implications they have (Kalogeropoulos, 2021; Treré, 2020; Valenzuela, Bachmann & Bargsted, 2021). These platforms have become a forum where citizens can participate while generating and developing political conversation. Also, citizens can consume news through a more intimate, closed and controlled environment compared to other types of platforms (Gil de Zúñiga, Ardèvol-Abreu & Casero-Ripollés, 2021; Rossini, Stromer-Galley, Baptista & Veiga de Oliveira, 2020; Valeriani & Vaccari, 2018), thus improving their knowledge and political engagement. In addition, they become citizens' primary sources of information, generating hybrid communication spaces where content and news representative of conventional media get distributed through WhatsApp (Casero-Ripollés, 2018). Therefore, citizens create the perception that the news finds them, as they believe they are informed even if they do not actively follow the news (Gil de Zúñiga & Diehl, 2019). These technologies extend the benefits of other platforms as provide a flexible environment for discussing politics and public affairs connecting users virtually anytime, anywhere (Vanden Abeele, De Wolf & Ling, 2018; Campbell & Kwak, 2011).

On the other hand, the creation and development of mobile instant messaging services have influenced how political actors and administrations connect with citizens, especially at the local level (Yang, 2017). The use of services such as WhatsApp as a channel for interaction between administrations and citizens encourages electronic government, increasing the connection with citizens who feel part of everything that happens in their municipality (Osah & Pade-Khene, 2020). This fact has led to more and more institutions that include these tools among their multiple channels of relationship with users, thus allowing a closer communication channel with them (Aupal & Oleja, 2017).

The objective of this research is twofold. First, to analyze the use made by citizens of the WhatsApp service launched by the town hall of their municipality of residence. Second, to know the level of satisfaction and usefulness of this service according to users.

2. Political participation in mobile instant messaging services
The controlled environment that WhatsApp delivers makes it an essential tool for citizen political participation, although being different to other social media (Boczkowski, Matassi & Mitchelstein 2018; Karapanos, Teixeira & Gouveia, 2016). While in social media such as Twitter or Facebook the interaction is performed publicly, WhatsApp enables exchanging information privately, from one individual to another or through closed groups (Kantar Media, 2018). This aspect makes this platform much more conversational and multimodal than others (Matassi, Boczkowski & Mitchelstein, 2019). In addition to the dissemination of multimedia content, such as images or videos, the multimodality and private environment of WhatsApp favours the exchange of personal comments on matters of political interest (Yamamoto, Kushin & Dalisay 2018). In this context, users feel safer and express their opinion more openly as they already know the people, thus avoiding the discomfort and possible criticism present on other social media such as Facebook or Twitter (Karapanos, Teixeira & Gouveia, 2016).

The use of mobile instant messaging platforms is a determining factor in the involvement of citizens in political activities (Lee, Kwak, Campbell & Ling, 2014). Some authors argue that the political discussion generated through these services helps citizens to become aware of the social problems affecting them while promoting participation and political mobilization, generating interrelationships between offline and online participation (Rodríguez-Estrada, Muñiz & Echeverría, 2020; Gil de Zúñiga, Barnidge & Diehl, 2018; Weeks, Ardèvol-Abreu & Gil de Zúñiga, 2017). Furthermore, some studies conclude that a higher level of political

discussion fosters political interest and engagement among citizens (Kwak, Williams, Wang & Lee, 2005).

Among the factors that influence political participation, some authors point out that the size of the municipality is highly relevant. In particular, it is important in terms of local or municipal political participation (Cancela & Geys, 2016; van Houwelingen, 2017). Thus, for example, according to Frandsen (2002), the relationship between the population size and the local political participation is particularly significant in the Netherlands. This country has experienced the consolidation of municipalities in recent decades. In this sense, the larger the size of the population, the more difficult becomes for the public to stay informed and interested about essential issues in their municipality. On the other hand, municipalities with larger populations are less likely to contact a particular politician, and their political participation is less likely to have real influence (van Houwelingen, 2017). This last aspect is relevant as citizens, rather than being heard, essentially want to exert real political influence (Ulbig, 2008). Based on the previous research, the following research question is proposed:

> RQ1: Are there any differences between the uses those residents of large, medium, and small municipalities give to WhatsApp?

2.1. Adoption of mobile instant messaging services by public institutions

Mobile phones are the primary devices to access internet. According to data from 2020, 96% of users connect to the internet through these devices (Fundación Telefónica, 2020). This fact has led to incorporating these tools in the communication strategy of political actors and public administrations, especially at the local level (Yang, 2017). The use of services such as WhatsApp as a channel for interaction between administrations and citizens encourages electronic government, increasing the connection with citizens, who feel part of everything that happens in their municipality (Osah & Pade-Khene, 2020). This fact has led to more and more institutions that include these tools among their multiple channels of relationship with users, thus allowing a closer communication channel with them (Aupal & Oleja, 2017). The degree of interaction that characterizes these platforms enables governments and administrations to disseminate a more significant degree of information, thus reaching a larger audience and increasing transparency. In addition, this interaction enables responding to possible problems that may arise during their management (Mergel, 2014).

The potentialities they present have caused local governments around the world to employ social media and instant messaging applications in their communication strategies to improve transparency, services, and interaction with citizens while maintaining public legitimacy (Sobaci, 2016). The use of these platforms does not replace traditional forms of communication, but rather complements them (Aupal & Oleja, 2017). Thus, communication becomes more effective and comprehensive (Hong, Huang & Chang, 2012). In this context, WhatsApp is a cheap and effective form of two-way communication for institutions given how easily it spreads information and makes it possible to maintain close and continuous contact with citizens (Boczek & Koppers, 2020). In this sense, some research has shown that using applications such as WhatsApp or Telegram by local governments helps to improve the provision of services as citizens send their comments and express their preferences through these channels (Aupal & Oleja, 2017). Using these platforms also enables accountability. Thus, users can mobilize to demand improvement actions from the representatives of their municipalities (Mahmood & Weerakkody, 2016).

The use of these platforms in the administration sphere is still in an initial stage, internationally speaking (Babeiya & Masabo, 2017; Mukhsin, Rizky & Anggreni, 2018). Although its use is becoming more frequent, its full potential has not been exploited yet (Feeney & Welch, 2016; Kwaku-Kyem, 2016). In the case of Spain, more and more public administrations include instant mobile messaging services as a communication channel. The mobility, speed, multimodality and reliability of WhatsApp, among other characteristics, have led Spanish institutions to turn it into a central communication channel to reach a larger number of citizens (Treré, 2020). However, the expansion of these platforms in the Spanish local governments is still at an early stage, as occurs in the rest of the countries. Therefore, the strategies and the actions they carry out are not properly defined or implemented in many cases. (Criado & Rojas-Martín, 2016).

In this context, the size of the municipality is a decisive variable in the management of digital technologies by public administrations. On the one hand, several studies indicate that larger municipalities tend to manage these platforms more professionally while using a more positive tone than the rest (Criado & Villodre, 2018). On the other hand, some authors argue that contacting citizens through social media and mobile messaging applications employed by administrations is closer and more personal in smaller municipalities (Català Oltra & Penalva Verdú, 2020). Conversely, these authors point out how closeness and familiarity may hinder citizens' critical actions or proposals for improvement. In this sense, it is interesting to see how the size of the municipality influences the political participation of citizens through the municipal WhatsApp service. Based on these findings, the following research questions are posed:

> RQ2. What is the penetration of the City Council's WhatsApp service among citizens based on the size of the municipality of residence of the respondents?

> RQ3. Are there any differences between the uses that residents of large, medium and small municipalities give to the municipal WhatsApp service?

> RQ4. Will citizens value the City Council's WhatsApp service differently depending on the size of the municipality where they reside?

3. Materials and methods

This research is based on an exploratory approach to address the use of the municipal WhatsApp service by citizens, considering the size of the municipality in which they reside. To answer the Research Questions, this research uses a quantitative approach based on an online survey technique answered by 1,202 citizens residents in the Valencian Community (Spain). The survey is a research technique based on the non-direct observation of the facts that obtains information provided by the subject himself (Cea D'Ancona, 1998). In this sense, the data is collected through the statements made by the respondents themselves and not from the observation of their behavior (Sierra Bravo, 1995).

The anonymous online survey was conducted by the MDK Market Research company which specialized in these topics. Respondents were informed at the beginning of the survey and knew that their responses would serve academic purposes. The field survey was conducted in March 2020.

The sample has been divided considering the size of the municipality of residence of the participants. In this sense, the respondents have been divided into three groups: residents in

large municipalities (more than 100,001 inhabitants) such as Castelló de la Plana, València, Alacant or Elx; medium municipalities (from 10,001 to 100,000 inhabitants) such as Vila-real, Almassora, Torrent, Paterna, Calp or Cocentaina; and small municipalities (up to 10,000 inhabitants) such as Morella, Zucaina, Almussafes, Albaida, Biar or Beneixama. The number of respondents for each classification was calculated proportionally based on the number of municipalities of each size existing in the three provinces (Castelló, València and Alacant) of the Valencian Community. Table 1 shows the distribution of the respondents according to this stratification.

Table 1. Distribution of the study sample

Size of the municipality	N	%
Large (more than 100,001 inhabitants)	422	35.10
Medium (between 10,001 and 100,000 inhabitants)	480	39.90
Small (up to 10,000 inhabitants)	300	25.00
Total	1.202	100

The questionnaire has been designed based on three blocks of questions. The first block, comprising of thirteen statements, seeks to know the opinion of the respondents on their use of WhatsApp. The second block contains eight dichotomous response statements. It seeks to know whether or not users use the WhatsApp service launched by the City Council of their municipality of residence to develop political or social actions based on what the Previous literature has detected on political participation in the digital environment (Gil de Zúñiga, Ardèvol-Abreu & Casero Ripollés, 2021; Koc-Michalska & Lilleker, 2017). In this sense, actions related to three functions are distinguished: information, participation and engagement. The information function includes those actions related to receiving information (eg, receiving information, requesting information...). The participatory function refers to those activities requiring direct action from users (eg, publish or share ideas, file a complaint, propose an initiative…). Finally, the engagement includes actions that imply obligation from users (eg, join groups, sign up for service ...).

The third block consists of two types of questions. The first type contains four dichotomous response statements whose objective is to know the level of user satisfaction with the City Council's WhatsApp service. In the second type, six statements aim to know how users value the possible utilities of this service. In this case, each value is measured using a five-point Likert scale that ranges from (1) "totally disagree" to (5) "totally agree". The data processing was generated with the statistical software SPSS (v.26).

4. Results
4.1. Uses of WhatsApp made by citizens
Of the 1202 subjects surveyed, 98.7% (n = 1186) declared that they regularly use the WhatsApp application. This shows how high is the penetration of this mobile instant messaging service among the sample studied. At a general level, we find three interesting trends regarding the use of WhatsApp. First, the actions "Post or share photos, videos, memes or gifs about current

events" (77.07%) and "Post or share ideas about current events" (64.17%) stand out as the users' preferred actions (Table 2). Users comment on the news through this platform, while adding multimedia elements to complete the message. Second, participation in actions related to current politics emerges at a certain distance (Table 2). On the one hand, users create or share videos or images, some in a humorous tone, about things that occur at the political level (40.05%) and, on the other, they redistribute messages about politics written by others (30.10%), sometimes as a form of protest, and others as a way to show support. Although in a lower percentage, users also use WhatsApp to share their political opinion with their contacts (27.99%). In a third stage, users use this messaging platform to attend events promoted through social media (24.11%) and to obtain information in a broad sense (17.51%) (Table 2).

Table 2. WhatsApp uses made by citizens

Function	Action	Size of the municipality			
		Large	**Medium**	**Small**	**Total**
Information	Receive information about politicians or political parties	18.15%	17.64%	21.21%	18.72%
Information	Change your point of view on political events based on information or interactions made on social media	18.64%	11.34%	19.52%	15.94%
Information	Reconsider your political opinion based on information or interactions made on social media	20.82%	15.12%	18.18%	17.88%
Participation	Publish personal experiences related to the political field	17.43%	14.70%	19.19%	16.78%
Participation	Post or share ideas about current events	67.31%	61.97%	63.29%	64.17%
Participation	Post or share ideas about political events	33.65%	23.10%	27.94%	27.99%
Participation	Post or share photos, videos, memes or gifs about current events	77.48%	76.26%	77.77%	77.07%
Participation	Post or share photos, videos, memes or gifs about political events	41.88%	39.28%	38.72%	40.05%
Participation	Share political comments written by others	31.71%	26.47%	33.67%	30.10%

Engagement	Create groups dedicated to themes or political causes	4.60%	4.20%	7.74%	5.23%
Engagement	Join groups dedicated to political issues or political causes	8.23%	7.14%	9.76%	8.18%
Engagement	Follow or request friendship to the profile of a politician or a political option	6.05%	7.35%	8.41%	7.17%
Engagement	Attend events that have been promoted through social media	25.90%	22.26%	24.57%	24.11%

If we analyze the WhatsApp uses made by citizens attending to the size of the municipality where they reside, we can observed that residents of small municipalities use WhatsApp more than residents of large or medium municipalities (Table 2). Thus, out of the most recurrent actions in all cases, the inhabitants of small municipalities use WhatsApp to receive information (21.21%), being the most likely to change their political point of view (19.52%). They also use it to publish personal experiences related to the political field (19.19%), to create groups dedicated to political causes (7.74%) or to follow or request friendship to the profile of a politician or political party (8.41%). On the other hand, the high percentage of users residing in large municipalities who claim to have reconsidered their political opinion based on information or interaction made on social media (20.82%) and those who affirm to post or share ideas about political events (33.65%) is also noteworthy (Table 2).

In this sense, the results obtained allow us to verify how citizens residing in small municipalities are those who are most involved in the political sphere at the informational level and at the level of political commitment. However, this trend changes when we talk about actions related to political participation. In these cases, close relationships between residents can make participating more directly difficult.

4.2. Uses and functions of the WhatsApp service of the City Councils
The creation of municipal WhatsApp services created by public administrations to keep citizens informed is increasingly common. Of the 542 municipalities containing the study sample, 200 have active WhatsApp services. This means that 36.90% of the municipalities have this service. In general terms, the WhatsApp service offered by the City Council still has a moderate penetration among users since only 23.69% of those surveyed acknowledge having subscribed to this channel.

If we analyze those municipalities where residents use this service, we can observe how citizens living in large municipalities make a residual use, while 45.1% of users living in small towns are subscribed. When asked, most of not subscribed alleged lack of knowledge since they did not know that the City Council of their municipality of residence offered this service. This provides an opportunity for municipal corporations to launch promotional campaigns to spread their WhatsApp service among residents to achieve a larger number of users.

In general terms, we observe how the actions related to the information function are the most frequent, given that, on average, 70.1% of those surveyed affirm that they use the City Council's WhatsApp service for this purpose. Actions related to participation (25.7%) and engagement (43.25%) are less frequent. In this sense, we can establish that users choose to perform passive

actions, which do not imply great efforts on their part. Therefore, they prefer to use this channel in a unidirectional way simply to receive information, though they do not consider it helpful to carry out other types of actions.

If we analyze the data in detail, we find that Table 3 indicates a comparison in the use of the City Council's WhatsApp service by citizens, taking into account the size of the municipality of residence. The Chi-square test shows that there is no dependency relationship between the size of the municipality and the use of the City Council's WhatsApp service in all actions related to information and participation. In other words, the size of the municipality of residence does not influence whether citizens request information, file a complaint or promote an action to improve the municipality's services through the City Council's WhatsApp service.

Table 3. Uses and functions of the municipal WhatsApp service

Function	Action	Size of the municipality			Test Chi^2
		Large	Medium	Small	
Information	Receive information about the activities carried out in your municipality of residence.	88.89%	93.02%	91.04%	$X^2(2) = .561$; $p = .755$
Information	Request information or clarifications from the town hall of your municipality of residence.	61.11%	52.71%	42.54%	$X^2(2) = 3.970$; $p = .137$
Information	File a complaint about aspects related to the deterioration of your municipality of residence.	38.89%	37.98%	30.60%	$X^2(2) = 1.749$; $p = .417$
Participation	File a complaint about aspects related to the political management of your municipality of residence.	22.22%	21.71%	14.93%	$X^2(2) = 2.180$; $p = .336$
Participation	Propose an initiative to improve your municipality of residence.	22.22%	34.11%	28.36%	$X^2(2) = 1.660$; $p = .436$
Participation	Propose an initiative to improve the political management of your municipality of residence.	11.11%	21.71%	17.91%	$X^2(2) = 1.424$; $p = .491$
Engagement	Enrol in a service offered by the City Council of your municipality of residence.	72.22%	44.19%	49.25%	$X^2(2) = 5.047$; $p = .080$

		Large	Medium	Small	
Engagement	Raise queries about the City Council of your municipality of residence.	38.89%	46.51%	29.85%	$X^2(2) = 7.743$; $p = .021$*

*p<0.05

We find significant differences in actions related to engagement, where users who reside in medium-sized (46.51%) or large (38.89%) municipalities are more likely to raise inquiries or questions with the city council of the town where they live. Also, it should be noted that citizens of large cities (72.22%) usually use this service to register for the services offered by the City Council of their municipality.

Regarding actions related to participation, we observe that users residing in medium or large municipalities perform them more frequently, although the differences are not statistically significant (Table3). The data is noteworthy when failing a complaint about aspects related to the deterioration of the municipality and the political management run by the party in government. It also happens when offering improvement initiatives. This may be caused by the fact that politics in large and medium-sized municipalities is considerably impersonal as opposed to small towns where interaction between government and citizens is much more direct (Català Oltra & Penalva Verdú, 2020). Also, critical actions are unlikely to arise in small towns.

Finally, we see how the actions related to the information function occur in a generalized way, regardless of the size of the municipality of residence of the respondents (Table 3).

4.3. What do citizens think of the WhatsApp service of their municipalities?

To answer RQ4, the respondents were asked two types of questions. The first type, comprised of four dichotomous answer questions, sought to know the level of user satisfaction with the City Council's WhatsApp service. The second type attempted to know the utility that users gave to this service considering six statements presented and evaluated with a 5-point Likert scale in which the number 1 is "totally disagree" and the number 5 is "totally agree".

The data show no statistically significant relationship between the size of the respondents' municipality of residence and their perception of the City Council's WhatsApp service (Table 4). Thus, concerning the general assessment of this service, 77.78% of residents in large municipalities, 83.72% of residents in medium-sized towns, and 87.31% of residents in small ones responded that they were satisfied. We observe, therefore, how the population residing in small municipalities makes a more positive assessment than the rest. These data agree with the fact that precisely those citizens in small municipalities subscribe with more regularity to these services using them more often.

Table 4. User satisfaction level

Statement	Size of the municipality			Test Chi^2
	Large	**Medium**	**Small**	
Are you generally satisfied with the WhatsApp service offered by the city council of the municipality in which you reside?	77.78%	83.72%	87.31%	$X^2(2) = 1.468$; $p = .480$

In the event that you have raised a complaint, suggestion, complaint or suggested an initiative through the WhatsApp service, have you received a response from the city council of the municipality in which you reside?	57.14%	75.00%	82.35%	$X^2(2) = 2.518$; $p = .284$
Do you consider the information disseminated by the city council of the municipality in which you reside through this service sufficient?	72.22%	75.97%	83.58%	$X^2(2) = 2.924$; $p = .232$
Do you consider the information disseminated by the city council of the municipality in which you reside to be useful?	88.89%	92.25%	94.78%	$X^2(2) = 1.243$; $p = .537$

On the other hand, the data also show how residents of the smallest municipalities present the highest percentages (83.58% and 94.78% respectively). However, all respondents consider the information provided through this channel sufficient and helpful (Table 4). Likewise, these users acknowledge having received a response from the administration to the comments made through the municipal WhatsApp channel. Therefore, the size of the municipality is decisive given the fact that 82.35% of the respondents from small municipalities received a response to their demands through WhatsApp, while in large towns the percentage decreases to 57.14% (Table 4).

Regarding whether citizens find the City Council's WhatsApp service useful, the data shows how the global perception is positive, since, on average, the values acquired oscillate between 3.13 and 3.76 for all statements (Table 5) despite acknowledging room for improvement. In this sense, the respondents believe that this service can help citizens to have a greater knowledge of local politics (M = 3.59; SD = 1.007), promote the transparency of public administration (M = 3.44; SD = 1.117) and improve the perception of the local administration and its representatives (M = 3.76; SD = 0.913).

Table 5. Utilities of the municipality's WhatsApp service

Statement	General	Large	Medium	Small
	Average (SD)	Average (SD)	Average (SD)	Average (SD)
I believe that the WhatsApp service of the municipalities fosters the political interest of citizens in local politics.	3.40 (.996)	3.67 (.970)	3.40 (.923)	3.37 (1.066)
I believe that the use of the WhatsApp service of the municipalities improves the level of knowledge of the citizens about local politics.	3.59 (1.007)	3.56 (.856)	3.60 (.955)	3.59 (1.078)

I think that using the WhatsApp service promoted by the municipality promotes the transparency of public administration.	3.44 (1.117)	3.33 (1.188)	3.46 (1.097)	3.43 (1.134)
I believe that the use of the WhatsApp service by municipalities encourages the political participation of citizens.	3.41 (1.117)	3.50 (.857)	3.43 (1.037)	3.38 (1.061)
I believe that the use of the WhatsApp service of the municipalities allows regulating the management of the political representatives at the local level.	3.13 (1.031)	3.11 (1.183)	3.13 (1.003)	3.13 (1.044)

If we analyze the data depending on the size of the municipality, we see how results are very similar in all of them. However, it is striking to see that respondents living in small municipalities notice more benefits in the City Council's WhatsApp service than those who live in large towns (Table 5). For those surveyed residing in small towns, it is an interesting service. In particular, it helps improving the level of citizens knowledge about local politics (M = 3.59; SD = 1.078) and the image of the local administration and its representatives (M = 3.78; SD = 0.939). In addition, it should be noted that the respondents do not consider that this service allows controlling the management of political representatives at the local level (values between 3.11 and 3.13). In other words, they do not consider it a useful tool for accountability or the control of power.

However, the data analyzed also indicates room for improvement, as none of the statements made to respondents receives high ratings. This could be because there is still much ignorance about this service and its penetration among users still has room for improvement.

5. Conclusions and discussion
This study analyzes the purposes of use WhatsApp made by citizens and the political use of the WhatsApp service offered by the City Council of their municipality of residence. Thus, this research enables knowing if the size of the municipality of residence of the respondents is a determining variable in the form of user participation is. In this sense, the results obtained permit identifying various relevant contributions.

Regarding citizens' purpose of using WhatsApp (RQ1), the results show that users mostly use it for participatory purposes. It is primarily used to publish or share content related to current news. In line with the results previously obtained (Boczek & Koppers, 2020), WhatsApp is used similarly to other social media, such as Twitter and Facebook, in which citizens feel free to comment on the news with other users. Therefore, in line with what is argued by Casero-Ripollés (2018), WhatsApp is becoming a primary source for information and news, in which users receive information about current affairs and share it among contacts. Therefore, users do not need to search for information. Instead, information finds users, activating the perception "news find me" (Gil de Zúñiga & Diehl, 2019).

The results obtained according to the size of the municipality of residence of the respondents indicate that the people who live in small municipalities carry out a larger number of actions than those who lives in large and medium municipalities, especially highlighting actions related to information and engagement. The results obtained according to the size of the municipality of residence of the respondents indicate that people who live in small municipalities carry out a greater number of actions than those who live in large and medium-sized municipalities, especially highlighting actions related to information and engagement. On the other hand, in actions related to participation, users residing in large municipalities stand out. These findings are in line with the previous literature (Cancela & Geys, 2016; van Houwelingen, 2017) that indicated that the larger the size of the population, the more difficult becomes for the public to stay informed and interested about essential issues in their municipality (Frandsen, 2002) and that the municipalities with larger populations are less likely to contact a particular politician (van Houwelingen, 2017). In this sense, although we have not detected a statistically significant relationship between the size of the municipality and the uses of WhatsApp, we observe how the study of this variable is relevant.

Although previous literature (Aupal & Oleja, 2017; Yang, 2017) has detected how increasingly common is to establish contact channels with citizens through mobile instant messaging services and social media for the City Council, the WhatsApp service of the City Council still has little penetration among Valencian citizens (RQ2). Those surveyed not registered in the service admitted ignorance as to the reason. This leads us to consider that the City Council has done an unsatisfactory job promoting this service among residents.

Regarding the purpose of using the WhatsApp service of the City Council (RQ3), in general terms, the informative function prevails. Users use it to learn first-hand what is happening in their municipality. It is, therefore, a suitable mechanism to obtain information related to the local sphere.

Consistent with this finding is the fact that actions related to engagement have high citizen adherence such as registering for a service offered by the city council of a town. Thus, citizens receive information from the City Council through this channel while almost half of the users sign up for one of the services offered. Therefore, it seems that the municipal WhatsApp service is effective in connecting and involving citizens in the closest political sphere (Yang, 2017). In addition, the use of this tool promotes transparency and electronic government (Mergel, 2014).

In analyzing the data on the size of the municipality, the Chi-Square test reveals no dependency relationship between the size of the municipality and the use of the City Council's WhatsApp service in all actions related to information and participation. In other words, the size of the municipality of residence does not influence whether citizens request information, file a complaint or promote an action to improve the municipality's services through the City Council's WhatsApp service. However, we find that engagement-related actions are more frequent in medium-sized or large municipalities, where residents are more likely to raise doubts or questions with their City Council.

Finally, the data indicate that users value the WhatsApp service of the City Council (RQ4) very positively and find it valuable. In particular, this occurs when smaller the municipality is. In general, users and respondents believe that this service can help citizens acquire a better knowledge of local politics while promoting transparency in public administration and improving the image of local administration and its representatives.

The data concerning the size of the municipality of residence highlight the fact that those users of the smallest municipalities find the highest utility in the service. Thus, they point out that it is such an interesting service to increase the level of knowledge of the citizens about local politics while improving the image of the local administration and its representatives. These findings are consistent with another detected in previous research, which stated that political participation decreases in larger populations (van Houwelingen, 2017). It is also noteworthy that respondents do not consider the service helpful for accountability or restraining power. This aspect is relevant given that electronic government favours precisely this aspect (Mahmood & Weerakkody, 2016).

This study aims to broaden citizens' knowledge about the uses and functions of WhatsApp, in particular about the WhatsApp service offered by municipalities, taking into account the size of the municipality of residence, a fundamental variable according to some authors (Català Oltra & Penalva Verdú, 2020; Criado & Villodre, 2018). However, although the sample is large enough, it would be interesting to add a comparative approach to contrast the results obtained in this research with those obtained in other countries.

Despite the limitations, this is the first investigation to analyze the use made by citizens of the WhatsApp service offered by municipal corporations, which provides interesting data for local governments to improve the management of this communication tool, having great potential to manage local politics.

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