Local government under stress: How a small village community has reacted to the COVID-19 emergency

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ABSTRACT: Most studies on the management of COVID-19 have analyzed the issue from the perspective of the central government, while only a small portion have focused on local institutions, especially in countries such as Italy that are characterized by a multilevel governance system. Our study focuses on Peccioli, which is a municipality of under 5,000 inhabitants in Tuscany. We will investigate the citizens' perceptions of the various actions that were put in place by the local government of Peccioli to manage the emergency. We aim to understand the ranking of the priorities that municipalities are required to accomplish for their citizens. A survey of a representative sample of the local population has found that citizens' evaluations of municipal initiatives are overall positive, but that culture (defined here as cultural initiatives and events) and funding (and culture before funding) are considered to be more important than services. In particular, cultural events played an important role in the citizens' perceptions because they strengthened community resilience during the emergency. This result can inform public administrators, who in times of crisis tend to make the first investment cuts in culture. This study underscores the importance of understanding how to effectively reach all citizens.

KEYWORDS: local government, public survey, services, culture, funds, emergency, COVID-19

BACKGROUND

The large majority of papers that have been published on the management of COV-ID-19 have analysed this topic from the perspective of a central government (e.g., Smith, 2021; Sanfelici, 2020). This perspective has nourished an intense debate on the role of national and international governments. For example, Sanfelici (2020) examines how the government has responded to the pandemic and identifies some of the major lessons that were learned during its management. In particular, her analysis shows how the Italian government—like other governments such those of China, New Zealand and so on (Ren, 2020; van Zyl, 2021)—responded with rapid measures such as the lockdown (Alfano & Ercolano, 2020a, 2021) to tackle the health crisis (Djalante et al., 2020). Other scholars have argued that the Italian government was unable to provide robust plans in the mitigation stage of COVID-19 pandemic and had failed to involve the citizens, organized groups, associations and communities. Pisano et al. (2020) noted that an effective response to the virus should have been organized as a coordinated system of actions that were taken simultaneously at national and local level, which did not happen in Italy. On the contrary, Malandrino and Demichelis (2020) show that there have been tensions in multilevel governance systems, such as Italy. Although centralization is what normally occurs during an emergency, in particular in the initial phase of the management of COVID-19, the government's action was too biased towards the central government, to the detriment of a necessary coordination with regional and local institutions (Mandato, 2020).

If we shift our view from the role of national governments to face the pandemic to the international level, we discover that the policy choices at this level are much more similar to those that we would expect to find: the main difference among countries (with a few exceptions) is the timing of the implementation of the anti-COVID-19 policies (e.g., Alfano, Ercolano, & Pinto, 2022). Nabin, Chowdhury, and Bhattacharya (2021) used a sample of 185 countries and documented the presence, at cross-cultural level, of a strong systemic association between the quality of governance and pandemic control, where the quality of government is defined with the following indicators: "government effectiveness, political stability, the rule of law, regulatory quality, the control of corruption, and voice and accountability" (p. 3). In contrast, Ferraresi et al. (2020) analysed the implementations of the lockdowns, which was one of the most crucial measures taken by governments to control the spread of the virus, and documented that countries with a high level of governance quality were less responsive to the implementation of this measure than those with low quality governments. This may suggest that all of the factors that are considered to be very effective for a quality government to manage ordinary situations are insufficient to handle extraordinary contexts, such as the COVID-19 pandemic. Similarly, Bunyavejchewin and Sirichuanjun (2021) showed that the effectiveness of quality governance had moderate impacts on how well national policies were implemented to address COVID-19. Meanwhile, Mansoor (2021) found that quality government has a positive impact on promoting trust in public institutions.

This debate seems to include contrasting evidence on the relationship between the

type of government and effective national policies. In particular, the microlevel of analysis that we introduce here by investigating what happened at the local level in a small village could represent an important added value, especially considering that (as pointed out by many voices in the debate we discussed above) it is not possible to identify a specific pattern (of intervention) among countries. Unlike the majority of the papers that have been published on the management of this pandemic, we aimed to investigate and reflect on how the local government has managed this emergency. Although the range of initiatives and interventions carried out by local policies is limited, the decentralization of administrative law and policy gives the local government a certain capacity to build appropriate juridical instruments to overcome an emergency in their territory. Even during the pandemic crisis, the response could be performed faster, in certain contexts, by the local government. However, according to Trimarchi (2020), in Italy the overall response to COVID-19 by the local government system has been fragmented and inadequate, starting from the production of municipal ordinances of doubtful compatibility with constitutional lawfulness. Examining the municipal ordinances which were adopted by local governments before the intervention of the state enables us to see the advantages of local autonomy in terms of proximity to the specific needs of the territory and readiness to respond to these. It also enables us to see its limitations, given that these ordinances ended up producing different legal regimes within a very few square kilometres, which did not help in the initial management of the emergency. The political, social and economic differences between the regions in Italy are another reason behind the fragmentation of local government management. Alfano and Ercolano (2020b) documented that the emergency did not have the same costs in the various regions in Italy, according the prevailing dimension of social capital that characterizes them. Drawing on Putnam (2000), they showed that regions that are characterized by a strong bonding social capital (based on strong links between families) performed better under lockdown than those characterized by a strong bridging capital (nourished by a strong and trustful connection between people and institutions).

In this political and administrative framework, during COVID-19 the municipalities had the authority to manage funds received from the central government according to their specific needs (Smith, 2021). As Sanfelice (2020) pointed out, in Italy on 29 March 2020, the National Civil Protection allocated €400 million to the municipalities to enable them to purchase food vouchers and/or to meet the citizens' basic food necessities (without unfortunately allocating additional resources to the social work sector in the municipalities). The local governments were free to decide how to spend these financial resources and how to select potential beneficiaries. Consequently, several strategies were implemented: some municipalities gave the money directly to the residents, while others decided to activate social workers to evaluate the applicant's needs and their disposable income. During the first phase of the pandemic in Italy, the local governments were mainly focused on providing services and interventions. However, as Pyles (2007) argues, while healing and service provisions are usually fundamental in the context of disasters, these activities may be unable to address social change or the changing needs of the citizens.

Two main concerns have emerged in the scientific literature regarding how local government faced COVID-19. The first regards the capacity of local government to actually listen to communities and involve them in the design of the policies for the next stages to avoid groups with less power being unheard and left behind. As Carlini (2020) stresses, the emergency did not have the same costs for everybody: physical distancing and its consequences on daily life, such as the decrease of mobility (Gupta et al., 2020), have deepened social inequalities. Many women had to take care of their family at home, while also smart working or continuing to work in essential services such as health system or supermarkets. This intensified their working day and increased their stress. Children and young people had to stay at home and follow lessons online without knowing when they would return to school and see their peers in presence. In this context, thousands of children who could not count on the availability of a computer at home have also been excluded from a proper educational activity (OECD, 2021). Finally, older people and people with disabilities did not know when local services would re-open, social assistance at home would restart, and thus when their isolation would end.

Sanfelici (2020) reports several experiments that have been carried out in Milano, Bologna, and other cities during the pandemic to contrast this incapacity to involve the public and the communities. For example, the municipality of Milan had a platform to collected the citizens' ideas and suggestions about different topics, such as the reallocation of street space to cycling and walking, the reorganization of public spaces and public transport, and so on. In Bologna and other cities, entrepreneurs, unions and workers pooled their forces to understand (in relation to the specific characteristics of their territories) how they could organize them for a safe restart. The *Forum on Inequalities and Diversity*, which was born for grouping civil society organizations, trade unions and researchers from different disciplines to work together for finding solutions to fight inequalities involved in the pandemic, contributed to making proposals of public policies and collective actions. However, Sanfelici underlines that despite these efforts, local and national governments have been unable to include and systematise these proposals to build new possibilities for community resilience. Although several authors argue that disasters can also provide new opportunities (even for economic revitalization), in the first phase of COVID-19 this was not evident (e.g., Ozerdem, 2003).

The second main concern that is raised by the literature regards communication. Gollust, Nagler and Fowler (2020) argue that although information played a central role in supporting the pandemic response (Van Bavel et al., 2020), the COVID-19 crisis has also been defined as a communication crisis. In particular, Castriota, Del Mastro and Tonin (2020, p. 2) have shown that "demand for both national and, more surprisingly, local TV news is responsive to national conditions, but not to local ones". Others have underlined the limits that the institutional communication has shown at this juncture. On the one hand, on a communicative level, a scenario of uncertainty and confusion has caught on due to the lack of coordination between political and scientific levels, and between institutional claim-makers and the media, as Ruiu (2021) argues. The mismanagement of the crisis during the first phases of the pandemic gave

rise "to a cacophony of voices, in which institutional communication was often mis-aligned with media coverage and with an indistinguishable mix of misinformation, unverified rumours and intentionally manipulated disinformation" (Lovari, 2020, p. 459). On the other hand, the chronic insufficiency and the partial inefficiency of the institutional communication by local municipalities was short-circuited by physical distancing between the citizens that was imposed during the pandemic, this further aggravated the traditional limits of public communication addressed to the public. In light of the new needs of communication that the pandemic imposed, local municipalities tried to react by strengthening the online tools at their disposal. For example, a recent study by Mori et al. (2020) has shown that in the first months of the COVID-19 emergency, there was a notable increase of the presence of local administrations on social media.

In this article, we present a study of how the municipality and the community of a small village of 4,000 citizens in Tuscany reacted to the COVID-19 pandemic. Much of Italy is constituted by a myriad of small municipalities that around the same size as Peccioli. Therefore, our study constitutes a much-needed exploration of a reality that is often overlooked, despite representing more than half of local governments. Our perspective was to take Peccioli and the COVID-19 as two lenses through which to study what happens when there is an emergency of any kind in a small town, considering that local governance in Peccioli faces the same financial constraints and organizational problems that are experienced by the myriad of small villages in Europe. In particular, our aim was to understand the ranking of the things that these municipalities have to do for their citizens. To respond to an emergency such as COVID-19, local governments need (of course) to offer services and funding, but there is also a need to understand which are the most essential.

The illustration of this specific case study can be emblematic for two reasons. The first reason is that it enables us to understand how Italian municipalities of under 5,000 inhabitants, and in general how the small European municipalities, have reacted to this emergency. In Italy, the municipalities under 5,000 inhabitants represent 69.9% of the total number of Italian municipalities (N=5,521) (TuttaItalia, 2023) (see Table 1).

In Europe, this percentage is lower at 53.8%, as shown in Table 2. However, the point is that more than half of Europeans (and even more Italians) live in small villages that are similar to Peccioli.

Living in a small village with less than 5,000 inhabitants does not represent a residual experience but it is the key condition that is experienced by the backbone of the European population. Presumably, studying how Peccioli has faced this emergency reveals how many other small villages in Europe, with similar administrative structures, personnel and financial resources, have faced COVID-19.

Region	Municipalities			Percentages of municipalities with < 5.000 inhabitants	
	with < 5,000 inhab.	with ≥ 5,000 inhab.	Total	% on the total of the municipalities of the region	% on the total of municipalities with < 5000 inhabitants
Abruzzo	252	53	305	82.62%	4.56%
Basilicata	106	25	131	80.92%	1.92%
Calabria	323	81	404	79.95%	5.85%
Campania	341	209	550	62.00%	6.18%
Emilia-Romagna	135	195	330	40.91%	2.45%
Friuli Venezia Giulia	153	62	215	71.16%	2.77%
Latium	255	123	378	67.46%	4.62%
Liguria	183	51	234	78.21%	3.31%
Lombardy	1,004	466	1,506	69.06%	18.84%
Marches	160	65	225	71.11%	2.90%
Molise	127	9	136	93.38%	2.30%
Piedmont	1,047	134	1,181	88.65%	18.96%
Apulia	85	172	257	33.07%	1.54%
Sardinia	316	61	377	83.82%	5.72%
Sicily	211	180	391	53.96%	3.82%
Trentino-Alto Adige	241	41	282	85.46%	4.37%
Tuscany	119	154	273	43.59%	2.16%
Umbria	63	29	92	68.48%	1.14%
Aosta Valley	73	1	74	98.65%	1.32%
Veneto	291	272	563	51.69%	5.27%
Total	**5,521**	**2,383**	**7,904**	**69.85%**	100.00%

Table 1. Number of Italian municipalities with less than 5,000 inhabitants in the Italian regions
Source: tuttitalia.it

Population class	Number of cities/ municipalities		Population	
	absolute	in %	absolute	in %
5,000 – 10,000	10,367	53.8	71,842,291	19.6
10,000 – 20,000	5,390	28.0	72,903,934	19.9
20,000 – 50,000	2,421	12.6	72,735,991	19.8
50,000 – 100,000	679	3.5	46,206,932	12.6
> 100,000	407	2.1	103,124,225	28.1
Total	**19,264**	**100.0**	**366,813,373**	**100.0**

Table 2. Population share of municipalities by size groups in Europe
Source: ESPON (2006, p. 32)

The second reason is that it enables us to use the recent emergency of COVID-19 as a paradigmatic example of many kinds of emergency. The effects of climate change along with multiple hazards (e.g., technological, biological and environmental) describe the complex world of emergencies. The literature on disasters suggests that public institutions should be ready and well prepared to react to emergencies because the probability of an ominous event has increased (WHO, 2019). The WHO's Health Emergency Disaster Risk Management (Health EDRM) framework, which proposes a systematic analysis of health risks management, and the Sendai Framework for Disaster Risk Reduction (SFDRR), which explicitly includes pandemics among biological hazards (UNISDR, 2015), are available to governments who wish to organize their response to disaster risks. The Health EDRM model suggests a combination of actions capable of prevent or mitigate risks in different stages of the crisis management cycle by intervening with recovery measures (WHO, 2019). Both of these frameworks stress that the disaster management should be risk-based, proactive (instead of reactive) and community centred. The COVID-19 crisis has shown that that these suggestions should be implemented rapidly.

Starting from these considerations, we have approached the COVID-19 pandemic as a type of emergency that is going to be more common in the future. According to Sasangohar et al. (2020), the COVID-19 outbreak has had an unprecedented scale, magnitude, and propagation rate, when compared to other disasters and previous pandemics. Disaster managers and public health practitioners have been faced by complex and unique challenges, and are preparing effective countermeasures (Simpson et al., 2020), among which is developing an international vaccine diplomacy (Hotez, 2021).

Our study should be considered as a useful tool to explore what happens when there is an emergency of any kind in a municipality such as Peccioli. Moreover, drawing on Putnam's (2000), Alfano's and Ercolano's (2020b), and other studies (Borgonovi & Andrieu, 2020; Pitas & Ehmer, 2020; Wu, 2021), we investigated Peccioli in the hope that our data could shed light on how the different dimensions of social capital in ru-

ral and urban contexts may affect the effectiveness of local government when faced with an emergency such as COVID-19.

At the operational level we explored some of the initiatives that the local government has promoted. Usually, there are three different typologies of goods that are provided by municipalities: direct funding, social services and cultural events and initiatives. In Peccioli, these are numerous and make the town an important location for the promotion of art and culture. Among these, we can mention the Peccioli Museum Pole; several museum and exhibition activities; urban arts initiatives; various literary, musical and theatrical initiatives; and events such as conferences, book presentations, public debates with important journalists and authors, tourism training courses, local feasts, food and wine tours, and archaeological excavations. Over the years, the local government in Peccioli has also invested a great deal of energy and resources in the education and training of young people, presenting itself as a point of reference for education in art knowledge.

Our first research question was: How did Peccioli's citizens evaluate these initiatives? The second research question was: During an emergency of any kind, which types of goods are considered most important by the citizens and why? The third research question was: To what extent has the public communication related to the municipality's initiatives been effective?

This article is organized as follows. In the next section, we describe the methodology that we applied. We also describe the participants, procedures, measures and data analysis. We then describe the main results. In the final discussion, we propose some conclusions and offer some final remarks. We also acknowledge the strengths and weakness of the present study; we also make several recommendations for future research.

METHODS

To answer our research questions, this study adopted a survey that was carried out with a representative sample of Peccioli's population to investigate the citizens' evaluation of the main initiatives that were proposed by the municipality, the ranking of these initiatives and the assessment of the communication that the local government provided to the population (for more details on this case study, see also Farinosi, Cirulli, & Fortunati, 2022).

Participants

In this study, we carried out a probabilistic stratified sampling by randomly extracting participants from the municipal registry on the basis of a proportional allocation that was based on three sociodemographic variables: age, gender and place of residence. Given the low response rate that we had in a previous public survey and the current low response rate that surveys generally receive, we decided to extract in a first moment almost double the sample and then added another one hundred people. In total, eight hundred people were contacted and eventually 268 people were interviewed,

obtaining a response rate of 72.5% of the original sample (N=356). However, after a quality check of the collected questionnaires, two were eliminated due to a high rate of missing data. Therefore, our final sample included 266 respondents.

Variable	n	%	n	%	n	%
Gender						
Female	153	57.5%	1698429	52.0%	27018252	51.6%
Male	113	42.5%	1568221	48.0%	25342019	48.4%
Age categories (years)						
Adolescent (14-18)	11	4.1%	163893	5.0%	2846183	5.4%
Young people (19-24)	10	3.8%	197880	6.1%	3546632	6.8%
Young adult (25-44)	54	20.3%	834114	25.5%	14170590	27.1%
Adult (45-64)	106	39.8%	1129754	34.6%	18057310	34.5%
Older adult (>65)	85	32.0%	941009	28.8%	13739556	26.2%
Marital status						
Single	48	18.0%	1118915	34.3%	18237509	34.8%
Married/registered partnership	191	71.8%	1724867	52.8%	28012183	53.4%
Divorced	9	3.4%	139421	4.3%	1849889	3.5%
Widowed	18	6.8%	283447	8.7%	4379601	8.3%
Education						
Primary or less	54	20.3%	554000	17.1%	8263000	16.7%
Lower Secondary	63	23.7%	1134000	35.0%	17017000	34.4%
Upper Secondary	106	38.0%	1042000	32.1%	16197000	32.8%
University Degree or higher	43	16.2%	512000	15.8%	7944000	16.1%
Activity						
Employed	124	46.6%	1546000	43.3%	22554000	40.4%
Unemployed	23	8.6%	126000	3.5%	2367000	4.2%
House-wife or -husband	18	6.8%	353000	9.9%	7338000	13.1%
Pensioner	83	31.2%	1363913	38.2%	20638121	36.9%
Student	18	6.8%	185079	5.2%	2980087	5.3%

Table 3. Social and demographic characteristics of the participants

Despite our efforts, the final sample, not unexpectedly, was affected by some representation bias regarding both the small presence of adolescents and youth in respect to the forecast and (as often happens in surveys) a larger participation by women than by men (e.g., Smith, 2008). However, despite these limitations, we were quite satisfied with the response rate, knowing that increased response rates would "only slightly

decrease the presence of the response bias" (Hendra & Hill, 2018, p. 6). Table 3 shows the main sociodemographic characteristics of the participants compared, when reasonable, with those of the population in Tuscany and Italy. In particular, the percentage of older people living in Peccioli, 32%, is higher than in Tuscany (28.8) and in Italy (26.2%) (ISTAT, 2023). Meanwhile, the percentage of adolescent/young people living in Peccioli (7.9%) is lower both in Tuscany (11.1%) and in Italy (12.2%) (ISTAT, 2023), which was expected for small municipalities (Fondazione IFEL, 2011). Looking at the other characteristics (e.g., marital status, education and activity) that are reported in the table for our sample, similarities (e.g. percentage of divorced and of people with a university degree or higher) and differences (e.g. percentage of singles, people married/registered partnership and employed/unemployed) can be seen in respect to the regional and national populations, probably due to their specific age structure. In addition to the sociodemographic characteristics of our sample, it is worth adding that 164 (61.7%) participants live in the administrative centre, while 102 (38.3%) live in hamlets. A large majority of the respondents (235, 88.3%) own their home, while a small minority (31 respondents, 11.7%) live in a rented home. For their household composition, 110 (43.1%) live in a family constituted by a couple with children, 70 (27.5%) live in a family constituted by a couple without children, 42 (16.5%) live in a mixed family, 6 (2.4%) live in a mono-parental family and 27 (10.6%) are single. In total, 78 (29.3%) respondents live in a family with self-sufficient older adults, 4 (1.5%) live in a family with non-self-sufficient older adults, and 23 (8.6%) live with disabled.

Procedure

Given that to address the pandemic the national government imposed the lockdown, we opted for a mobile survey (Boase & Humphreys, 2018). After extracting the sample, the mayor sent a letter to all of the members of the sample, which was hand-delivered by a municipal messenger, asking them to call the researcher's mobile number to fix a date for the administration of the questionnaire. The collection of the questionnaires via mobile phone started on 7 July 2020 and continued until 20 October 2020. However, in September, given that the number of persons with COVID-19 was quite low, we began to give the citizens (following their request) the possibility of choosing between a mobile phone and a face-to-face interview. The integration of mobile and face-to-face surveys according to the respondent's preference brought us to implement a mixed-mode questionnaire administration. Face-to-face interviews took place in a public place that was made available to researchers by the municipality, in compliance with the official guidelines regarding COVID-19. We also went directly to the hamlets to facilitate the filling of the questionnaires. The collection of the questionnaires was supported by three reminder letters, which were sent to those who had not answered yet the mayor's invitation.

Even if some scholars continue to stress the need to maintain the integrity of the mode of survey administration to get comparable data (Bowyer & Rogowski, 2017; Klausch & Schouten, 2017), others are likely to be more flexible (e.g., Wolf et al., 2016). In any case, the constraints of the pandemic made the adoption of a mixed-mode sur-

vey design inevitable, which usually are effective at reaching certain sub-populations that are difficult to be contacted and, as a consequence, can improve the overall response rate. Unsurprisingly, mixed-mode survey designs are gaining popularity in the field, especially in crisis circumstances.

Measures

We asked each participant for their evaluation of the initiatives and services that were carried out by the municipality, including three areas: services to the citizens, support for cultural and recreational activities, and the allocation and management of funds to the neediest citizens. For each initiative, we report the code that will be used in the further analysis in brackets.

Regarding the first area of the services, we investigated:

1) *Free distribution of masks to the citizens (Mask)*. The municipality and Belvedere (the municipality's joint stock company, with mixed public-private capital) entered into an agreement with two local companies for the overall production of about fifty thousand face masks which were distributed free of charge to all of the families in the area.

2) *Home delivery of groceries and medicines (Delivery)*. The municipality, in collaboration with the "Misericordie of Peccioli" and "Fabbrica", two voluntary associations in charge of guaranteeing medical transport through ambulances and aiding those in need and suffering, activated a free service for the delivery of groceries and medicines at home.

3) *Telephone listening service "Tell us about your day" (Phone)*. The municipality activated a telephone service with a psychologist "Tell us about your day" for remote listening and psychological support during the quarantine. From the end of April 2020, a toll-free number for psychological support was activated at the national level. This was addressed to those who were suffering from anxiety, fears, stress related to the loneliness due to the social distance imposed by the pandemic and in general to the psychological distress caused by the sudden change of daily habits, included mourning and economic difficulties (Sanfelici, 2020).

Regarding the second area, we explored the following initiatives:

1) *"Pensavo Peccioli" Festival (Festival 1)*. Due to the COVID-19 emergency, this festival (which is a cultural event where popular journalists publicly discuss current political and social affairs), was redesigned in online mode and renamed "Cosa sarà" ("What Will Be").

2) *"11 Lune" Festival (Festival 2)*. This festival (a famous event with live performances, such as concerts, plays, musicals, that in summer hosts usually prominent artists in the evocative setting of the Fonte Mazzola amphitheatre) was resized by involving local artists and limiting the number of attendees, following the COVID-19 restrictions.

3) *"Le Serre" green space (Space)*. At the end of April 2020, with the fall in the number of infections and the relaxation of the containment measures, the municipality issued an ordinance that allowed the citizens to walk in complete safety in the green space of "Le Serre", setting up an ad hoc function on the municipality app ('Peccioli System' app) for managing access bookings in four daily time slots.

In respect to the third area of funding allocation, we analysed:

1) *Advance of dividend to Belvedere's stakeholders (Dividend)*. Belvedere decided to anticipate the payment of the corporate dividend to all its small shareholders, most of whom are citizens of Peccioli.

2) *Local business fund (Local)*. The municipality, in agreement with Belvedere and Banca Popolare of Lajatico, deliberated to allocate a fund of € 1,000,000 to support local businesses.

3) *Shopping vouchers (Vouchers)*. The municipality dedicated economic resources to support financially fragile families by distributing shopping vouchers to them.

4) *Contribution to young people's education (Young)*. The municipality prepared and increased a contribution for the training activities (e.g., sports, music courses, etc.) of the youngest.

5) *Municipality's budget modification (Budget)*. To activate all of the initiatives that we have talked about so far, the municipality modified its budget and allocated € 500,000 for the COVID-19 emergency.

In respect to the activation of services to citizens, for each initiative the questions were as follows:

1) Did you know about the initiative?

2) If yes, how did you come to know about this initiative?

3) From 1 to 5, how do you rate this initiative (where 1 is very negatively, 2 is negatively, 3 is neither negatively nor positively, 4 is positively and 5 is very positively)?

4) If the answer is from 1 to 3, why did you rate the initiative in this way?

5) Did you benefit from that particular service?

Finally, we asked two questions in the whole evaluation regarding the management of the emergency by the municipality:

a) Overall, on a scale of 1 to 5, how do you rate the policies of the municipality (where 1 is very negatively, 2 is negatively, 3 is neither negatively nor positively, 4 is positively and 5 is very positively)?

b) Overall, on a scale of 1 to 5, how do you rate the institutional communication by the municipality during the quarantine (where 1 is very negatively, 2 is negatively, 3 is neither negatively nor positively, 4 is positively and 5 is very posi-

tively)?

In addition to these questions regarding their assessment of the local administration, we investigated two other topics: 1) How has their financial situation changed because of the pandemic. We specifically asked: Following the COVID-19 emergency, did your economic situation improve, worsen or remain unchanged? 2) Changes in everyday life regarding the sphere of online communication and information. This question was articulated in the following way: Compared to before and during the COVID-19 emergency, a) did you inform yourself? b) Did you communicate with relatives, friends, or acquaintances? c) Did you use social platforms (Facebook, Instagram...)? d) Did you watch TV programs? e) Did you watch streaming content (movies, TV series, video courses, etc.)? f) Did you chat with friends or relatives (via phone calls, video calls and/or messaging services)? g) Did you go to shopping/online shopping and/or use delivery services? The following categories of answer were available: more, less, in a different way, or without variations.

Data analysis

1) The first step of the data analysis examined the evaluations of the various initiatives by means of a descriptive analysis of the frequency distribution of the mean scores (M), and their variability through standard deviation (SD) and coefficient of variation (CV)[1]. The aim was to rank the assessments of the local governments' initiatives.

2) The second step further investigated these evaluations in three different ways, as follows:

a) We have pooled the evaluations of the 11 initiatives by building three dimensions: *Services,* in which three initiatives converged; *Culture,* in which three initiatives were included; and *Funds,* in which five initiatives were grouped. We calculated the mean scores for every single dimension and an overall score.

b) For each respondent, we calculated the factor scores obtained by means of an exploratory factor analysis of the evaluations on the 11 initiatives. We tried different extraction and rotation methods. The final choice was principal component analysis and Varimax, due to the better interpretability of its final results.

c) We also calculated the respondents' score transformations comparing their evaluations with the extreme satisfaction profile (Arboretti Giancristofaro et al., 2007) with the purpose of obtaining a new set of scores. We opted for this choice because this method is the most suitable to take into account the ordinal nature of our variables. We then used the composite indicator approach for the three dimensions and for the overall score. We recall that a composite indicator is the result of a synthesis of a set of variables called elementary indicators that con-

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[1] The coefficient of variation (CV), which is the ratio between standard deviation and the average multiplied by 100, is a relative measure of variation used to compare the variability of a set of variables.

tribute to define it (Saisana & Tarantola, 2002; Nardo et al., 2005; OECD, 2008).

3) The third step consisted in running a regression analysis to investigate the sociodemographic predictors of the evaluations received by every single dimension (services, culture and funds) and the overall score, using each indicator obtained in the previous step as a dependent variable. The aim was to compare the scores of each respondent's evaluations to capture the characteristics of the respondents influencing these evaluations.

These analyses were performed with the R language, version 4.1.1 and the software package IBM SPSS Statistics, version 28.0.0 (Field, 2013). We will give the results of the analyses in the next section.

FINDINGS

In the first step, we summarise the participants' evaluations of the 11 initiatives undertaken by the local government. The specific respondent's assessment of each initiative in terms of descriptive statistics are illustrated in Table 4 and Figure 1.

Initiative code	Evaluation						Summary statistics						
	1	2	3	4	5	Totals	Mean	Median	SD	CV	Min	Max	Range
Mask	0.0%	0.0%	2.6%	13.2%	84.2%	100.0%	4.82	5	0.45	9.37	3	5	2
Delivery*	0.0%	0.0%	2.7%	14.1%	83.1%	100.0%	4.80	5	0.46	9.62	3	5	2
Phone	0.8%	0.4%	12.0%	39.8%	47.0%	100.0%	4.32	4	0.76	17.52	1	5	4
Festival 1	1.9%	9.4%	28.2%	30.5%	30.1%	100.0%	3.77	4	1.04	27.55	1	5	4
Festival 2	1.5%	3.4%	16.5%	28.6%	50.0%	100.0%	4.22	4.5	0.94	22.35	1	5	4
Space	1.5%	3.8%	14.7%	20.7%	59.4%	100.0%	4.33	5	0.96	22.20	1	5	4
Dividend*	0.4%	1.2%	25.1%	34.9%	38.4%	100.0%	4.10	4	0.84	20.57	1	5	4
Local*	0.4%	0.8%	28.2%	38.0%	32.5%	100.0%	4.02	4	0.82	20.49	1	5	4
Vouchers*	1.2%	1.2%	16.9%	23.5%	57.3%	100.0%	4.35	5	0.88	20.30	1	5	4
Young	0.0%	0.0%	7.5%	27.4%	65.0%	100.0%	4.58	5	0.63	13.76	3	5	2
Budget*	0.0%	0.0%	2.0%	30.6%	67.5%	100.0%	4.65	5	0.52	11.09	3	5	2

* Initiatives not addressed to the adolescents, and so the number of respondents was 255.

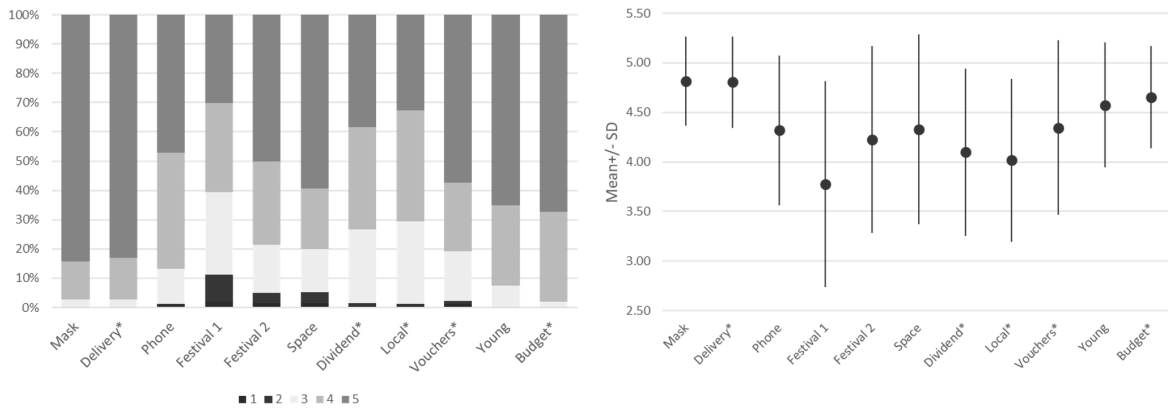Table 4. Frequency distribution and summary statistics of the 11 initiatives

Figure 1. Distribution and error bar graph of the 11 initiatives.

Table 4 and Figure 1 show that the judgements are overall positive. The initiatives that have obtained the highest scores are the masks, the home delivery of groceries and medicines, the budget modification of municipality and the contribution to young people's education. The lowest scores—although still positive—have been obtained by "Pensavo Peccioli" Festival, the local business funds, the advance of dividend and the "11 Lune" Festival. The CV, which indicates the relative variability of the answers (while the SD indicates the absolute variability of the answers), shows that its value is lower for the highest mean scores. This means that when very positive evaluations are expressed, there is a high agreement among participants. On the contrary, it is higher when the evaluations are less positive, which means that in these cases the judgement is controversial.

In the second step we applied three different methods to group the information related to the 11 initiatives into three dimensions. The first method was simply to compute the average scores of the three dimensions together with the overall average score. To further deepen the analysis of the judgements, we summarise them in three different dimensions: *Services* (three initiatives), *Culture* (three initiatives) and *Funds* (five initiatives). The mean scores for every single dimension and for the overall score, the SD and CV, the median, the minimum and maximum, the range and the Interquartile Range (IQR) of each dimension are reported in Table 5.

Dimension	Mean	SD	CV	First Quartile	Median	Third Quartile	Min	Max	Range	IQR
Services	4.63	0.42	9.06	4.33	4.67	5	3.33	5	1.67	0.67
Funding	4.22	0.49	18.69	4	4.40	4.8	3.27	5	1.73	0.8
Culture	4.09	0.77	11.31	3.67	4.33	4.67	2.33	5	2.67	1
Overall	4.36	0.44	10.13	4.09	4.36	4.63	3.27	5	1.73	0.54

Table 5. Mean scores of services, culture and funds and the overall score

This table shows that the initiatives related to *Services* reach the highest average and median, as well as the lowest variability. This means that the consensus of the

citizens is not only the most positive but is also homogenous. *Funds* and *Culture* follow with lowest but positive averages and medians but with higher variability, which denote that the judgement is positive but more controversial.

Given that this data is not normally distributed, to compare the judgements of these three dimensions and the overall, we used the post hoc Friedman's test (Table 6). This test enables us to show that there is a significant difference between the average scores of the judgements of each dimension ($p < 0.0001$), whereby these three dimensions are significantly different.

Contrasts						
	Services vs Funds	Services vs Culture	Funds vs Culture	Services vs Overall	Funds vs Overall	Culture vs Overall
p value	0.0000	0.0000	0.0021	0.000	0.9586	0.0003

Table 6. Post hoc analysis of Friedman's test for the three dimensions and the overall

The post hoc analysis shows that the differences in the average scores between the couples of the dimensions are all significant ($p<0.05$), except for the couple "Funds" and "Overall" ($p=0.9586$).

The second method applied an exploratory factor analysis (EFA) to the 11 initiatives, which aimed to verify if the initial structure of the three dimensions we have identified in the first step was confirmed or if different factors emerged. EFA is a statistical multivariate technique whose main purpose is to describe the relationships among a set of variables, expressed thought the correlation matrix, with few unobservable new variables called factors. Basically, if it is possible to group variables that are highly correlated among themselves but which show low correlations with the other variables, then it is possible to summarize them in a new construct called factor. EFA can be viewed both as an extension of Principal Component Analysis and an attempt to approximate the correlation matrix of the observed variables. To take into account the ordinal categories of the variables involved in the analysis, their relationship structure is evaluated with the polychoric correlation instead of the usual Pearson correlation. Moreover, to assess if the data were consistent with the specified structure some preliminary analyses were performed. The overall value of Cronbach's Alpha, for internal consistency, is 0.79. This value is considered to be acceptable. The minimum amount of data for factor analysis was satisfied, with a final sample size of 255 participants, providing a ratio of over 23>10 units per initiatives. Several of the usual criteria for the factorability of the correlation matrix were used. First, the Kaiser-Meyer-Olkin measure of sampling adequacy was 0.85, which is above the commonly recommended value of 0.6. Bartlett's test of sphericity was also significant ($\chi^2= 553.47$, df=55, $p < 0.0001$). Second, the diagonals of the antiimage correlation matrix were also all over 0.5. Finally, the commonalities were all above 0.3 (see Table 7), which further confirms that each item shared some common variance with other items. Given all of these elements, factor analysis was considered to be suitable for the 11 initiatives.

Starting from this point, and after some attempts, we decided to adopt the principal component extraction method with Varimax rotation[2] to make the original loadings more interpretable. We then analysed both the eigenvalues (Table 7) that represent the contribution of the factors to the total variability and the screeplot (Figure 2) applying the Kaiser criterion, which suggests that we should only consider factors with an eigenvalue larger than 1. At the end of this procedure, we decided to retain two factors named "Funds and Culture" and "Services". Examining the loadings that express the correlation between the factor and the corresponding variable, we opted to eliminate the initiative regarding the telephone help to citizens (Phone) because this was not suitable to be factorized. Following this elimination, Cronbach's Alpha became 0.77.
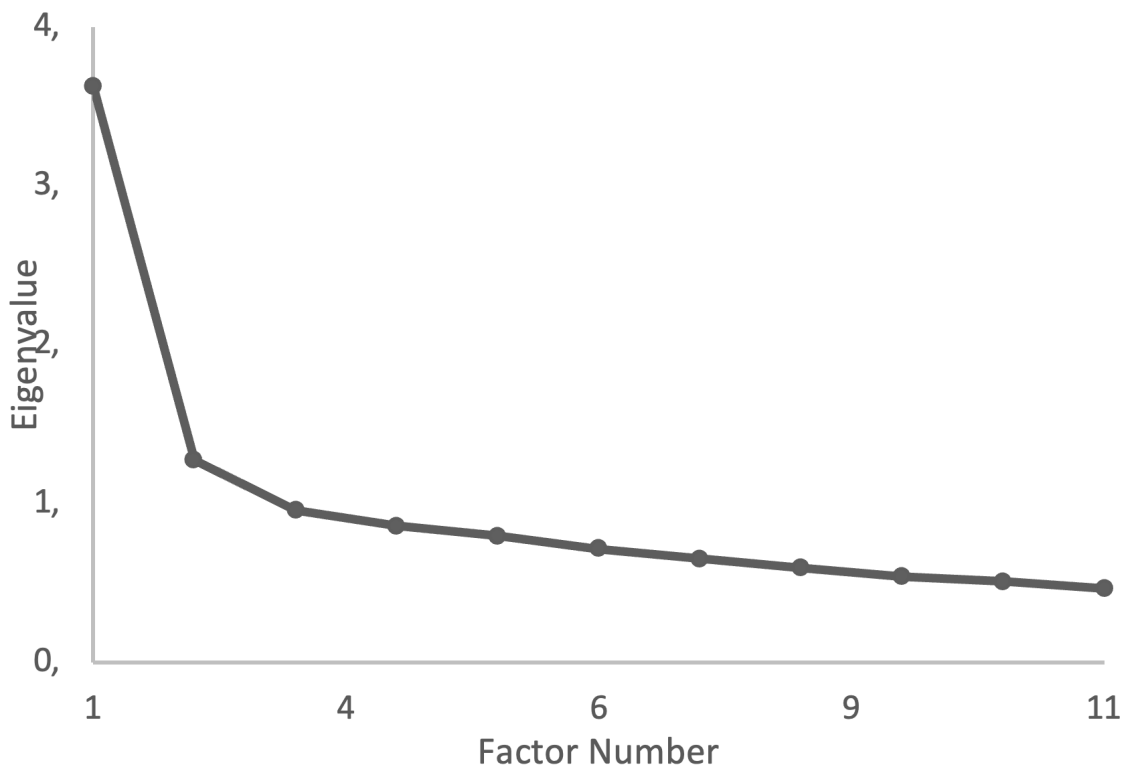

Figure 2. Screeplot and factor number

Table 8 shows us that all of the commonality values are over 0.30, except for the initiative corresponding to the financial contribution to youth (0.258). The results highlight two factors: the first includes *Culture* and *Funds* and explains 33.0% of the total variability of the evaluations; while the second includes the essential services mask distribution and home delivery, and explains 11.6% of the variability. These two factors together explain 44.6% of the overall variability.

The third method that we applied in the second step was an application of the theory of composite indicators (CI) to the judgements of the 11 initiatives. The steps that we followed to obtain the final composite indicator are:

a) Choice of the elementary indicators. In our case, these are the 11 initiatives.

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[2] With varimax rotation, the squares of the loadings on each factor are spread out as much as possible with the aim to assign loadings with high values to a factor and with negligible values to the other factors.

Factor Number	Eigenvalue
1	3.627
2	1.275
3	0.959
4	0.861
5	0.796
6	0.715
7	0.653
8	0.597
9	0.541
10	0.51
11	0.465

Table 7. Eigenvalues of the Factor analysis

b) Pre-treatment of the elementary indicators to make them comparable. Following Arboretti Giancristofaro, Bonnini and Salmaso (2007) we transformed the initiatives' original values (expressing the level of satisfaction) into a new system of scoring that takes into account the observed distribution of responses to the initiatives, favouring high levels of judgement and penalizing low levels of judgment. In particular, high values of scores were augmented in proportion to their relative frequencies, while low values of scores were penalized proportionally to their relative frequencies. In our case, we have considered 4 and 5 as high score values and 1, 2, and 3 as low score values. After these transformations, we used the min-max method to rescale the values of the 11 initiatives to an interval from 0 to 100.

c) choice of a system of weights. In order to reward initiatives that received the highest evaluations, we decided to weight each initiative with the reciprocal of the difference between the highest scores (5) and the average score.

d) Choice of an aggregation function of the transformed elementary indicators. We decided to use an additive function that was a weighted average of the transformed elementary indicators.

Initiative	Factor		Communality
	Culture and Funds	Services	
Mask	0.022	**0.846**	0.716
Delivery	0.165	**0.776**	0.630
Festival 1	**0.708**	0.140	0.521
Festival 2	**0.683**	0.122	0.482
Space	**0.591**	0.073	0.354
Dividend	**0.641**	0.097	0.420
Local	**0.622**	0.039	0.388
Vouchers	**0.629**	0.015	0.396
Young	**0.471**	0.191	0.258
Budget	**0.542**	0.311	0.390

Table 8. Factor loadings and commonalities based on principal components extraction with Varimax rotation for 10 items

Unfortunately, this procedure did not lead us to a satisfactory result in the sense that the composite indicators that we obtained were unable to discriminate these evaluations.

Taking into account the pros and the cons of the three scoring methods, we decided to use the factor scores obtained from the first and second methods for the following regression analysis applied in the second step because these factor scores allowed obtaining the most suitable regression models.

The third step consisted in a regression analysis that we ran in order to investigate the predictors of the judgements in the two dimensions identified by the two factors "*Culture* and *Funds*" and "*Services*". The independent variables that we considered are: Gender, Age, Marital status, Education, Place of residence, Family composition, House property, Family with children, Family with self-sufficient elderly, Family with non-self-sufficient elderly, Economic situation during the pandemic (improved, the same as before, worsened) and finally the Percentage of the initiatives known. To se-

lect the final models, we applied a backward regression that started by including all of the independent variables, and then, according to a stepwise procedure, continued by dropping at each step the variable that caused the minimum decrease in the F-value and by stopping when the decrease was not significant.

The results of the estimated OLS (Ordinary Least Squares) parameters of the two final regression models and of the goodness of fit statistics are shown in Tables 9 and 10, where we report only the significant values.

Variable	Factor 1: Culture and Funds		
	Estimate	Std. Error	p-value
Intercept	1.122	0.220	**0.000**
Gender (reference category: Female)			
Male	-0.294	0.110	**0.008**
Place of residence (reference category: Hamlet)			
Administrative centre	0.223	0.114	*0.052*
Age	-0.008	0.003	**0.017**
Proportion of unknown initiatives	-1.854	0.262	**0.000**
N	255		
Goodness of fit			
Adjusted R- squared	0.267		
F-Statistic	22.750		0.000
Breush Pagan test	2.0663		0.7236

Table 9. Estimated regression parameters for the first final regression model

The results in Table 9 show that there are four main predictors of a respondent's evaluations of the local government initiatives: Gender, Place of residence, Age, and the Proportion of unknown initiatives. Regarding the factor –*Culture* and *Funds*– constituted by the initiatives supplied by the local government during the pandemic around these objectives, the males' evaluations were lower than those expressed by females. Meanwhile, the evaluations of the initiatives decreases if the proportion of respondents who did not know the initiatives increases. Those who live in Peccioli gave on average a higher evaluation than those living in the hamlets. Finally, when the age increases the judgement decreases.

The results in Table 10 show that there is only one predictor of a respondent's evaluations of the local government initiatives regarding the *Services* factor because the only significant predictor is the proportion of respondents who did not know the initiatives. If this proportion increases, then the respondent's evaluation of the services provided by the municipality is lower. This result shows that the evaluations of the

services do not depend on the respondent's sociodemographic characteristics but depend instead on the information at their disposal. These evaluations were the highest and with the lowest variability in respect to the evaluations of the other typologies of municipality's initiatives (*Culture* and *Funds*) (see Table 5), entailing thereby that these judgements regarding services were homogeneous.

Variable	Factor 2: Services		
	Estimate	Std. Error	p-value
Intercept	0.067	0.215	0.755
Proportion of unknown initiatives	-0.762	0.299	**0.011**
N	255		
Goodness of fit			
Adjusted R- squared	0.055		
F-Statistic	3.974		0.002
Breush Pagan test	8.8895		0.1136

Table 10. Estimated regression parameters for the second final regression model

In these models of regression, one of the predictors that explains the evaluations of the local government initiatives (i.e., the proportion of unknown initiatives) has a significant and negative impact on a respondent's judgements. This means that an inhabitant who is less informed on some initiatives tends to give a lower evaluation. Consequently, we decided to deepen this aspect by analysing their sociodemographic predictors. Thus, we ran a linear regression analysis with the proportion of unknown initiatives as dependent variable and all of the sociodemographic variables as independent variables (Table 11).

Note that only significant results are reported in Table 11.

We found that the respondents who live in Peccioli are more likely to be informed about the local government initiatives than those living in the hamlets. In contrast, families with a self-sufficient elderly and families with disabled are less likely to be informed about the municipality's initiatives.

DISCUSSION AND FINAL REMARKS

When answering our first research question—How did Peccioli's citizens evaluate the initiatives undertaken by the local government?—this study highlights that Peccioli's local administration, in spite of the limitation of financial and administrative resources (against which all small municipalities fight daily all over Europe) and the constraints brought by the pandemic, was able to understand its citizens' expectations. The proof

is given by the fact that citizens' assessments were positive. The ability expressed by the local government to listen the citizens in a small village like Peccioli was probably due to the spatial proximity and relational familiarity between local government and citizens, as well as to the strong ties between citizens. Here, the interaction between physical presence, civic cultures, associations engagement, sense of community and social cohesion constituted the factors that have strengthened the social capital in both its bridging and bonding dimensions. Consequently, while at an international level the decisive factors in national governments' ability to manage COVID-19 are still unclear, in the Peccioli case (but probably at the level of small villages, in general) the most important factor behind the efficient and shared management of the pandemic by the local government was precisely the mixing of social capital at the level of bonding and bridging (to borrow Putnam's definitions).

Variable	Estimate	Std. Error	p-value
Intercept	0.489	0.107	0.000
Place of residence (reference category: Hamlet)			
Administrative centre	-0.101	0.026	0.000
Family living with self-sufficient elderly (reference category: No)			
Yes	0.092	0.040	0.023
Family living with disabled (reference category: No)			
Yes	0.125	0.047	0.008
N	255		
Goodness of fit			
Adjusted R- squared	0.195		
F-Statistic	4.069		0.000
Breush Pagan test	6.648		0.084

Table 11. Estimated regression parameters for the variable "proportion of unknown initiatives"

When answering our second research question—During an emergency of any kind, which types of goods are considered most important by the citizens—this study illustrates that in the citizens' evaluations, culture and funding (and culture before the funding) are seen as the primary element to build the resilience of Peccioli's community because these were considered more important than services (which were the second factor). The prominence of culture was unexpected given that we hypothesized finding a ranking like this: funding, services and culture, where funding was in first place, to counteract how the economic crisis intervened with the pandemics; services were in second place as they are indispensable to survive in the emergency and

also to organize the resilience in the community; and culture in third place, because it was less urgent to provide cultural events in such a situation.

In reality, there are latent but fundamental elements through which culture affects the resilience in a local community and which are connected to the intimate relationship between culture and society. Culture provides society with a set of values, beliefs, knowledge, norms, language, behaviours and shared material objects that society needs to function (Gallino, 2014). At the same time, cultural practices are performed socially and in the physical presence of other people, and thus they reinforce social relationships, social identity, and social cohesion. When a community is struck by an emergency such the COVID-19 pandemic, culture is the multidimensional glue that keeps it together and make it resilient. This result has much to say to public administrators who in crisis times tend to cut the investment in culture first.

In general, local governments can do a lot, not only taking special measures to warn their citizens about emergency, facilitating safety measures at the workplace, assisting enforcement of physical distancing and confinement, and closing public venues through the local policy, as well as by providing transport land and environmental management, but also ensuring continuation of vital municipal services (which often include health, education, culture and cultural heritage, social care, especially for vulnerable groups) and working with local businesses, including trade and tourism, to mitigate the impact of the pandemic on citizens' jobs and income. The main competences that are attributed to municipalities on the basis of the normative prescriptions of classic public finance contributions might be used as a strategical tool to face potential emergencies. We argue that the allocation of specific fundings to the local government to enable it to operate quickly within their framework of its competences (e.g., purchasing food vouchers and/or meeting the citizens' basic necessities) represents a good example of emergency policy without particular spill-over effects. Consequently, the municipal level could represent a key location for the management of any emergency.

When answering the third research question—To what extent was the public communication related to the municipality's initiatives effective?—this study underlines once again the importance of institutional communication. In the regression analyses, the proportion of initiatives not known by a respondent indicates that the less they know, the worse they judge. Thus, the communication problem should be considered without delay by any public institution as a fundamental premise for the success of their initiatives. A time of emergency makes this longstanding problem no longer postponable and requires a supplementary effort to understand how to reach all the citizens in an effective way. It must also be kept in mind that citizens tend to learn more about municipal services that concern their needs and requirements, and not about services in general. It is therefore not surprising that this selective interest corresponds to a differentiated evaluation, which tends to decline on those services that are not of direct interest to the inhabitant.

The strong point of this study is that we succeeded in administering the survey in spite of the limitations imposed by the pandemic and that in the end we could count on a representative sample of Peccioli's population. The weak point is that the lock-

down prevented us from complementing this quantitative study with a more qualitative study of the citizens' opinions by means of semi-structured interviews and focus groups, which would have allowed us to better clarify the sense of some of the results and to go more deeply into the motivations of the citizens' opinions.

Regarding future strands of research, keeping a good circularity between quantitative and qualitative methods would help in tailoring the management of the public good according to the real dynamic needs and desires of the people.

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