E-GOVERNMENT IN LOCAL GOVERNMENTS' WEBSITES: FROM VISIBLE TO INVISIBLE

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ABSTRACT

The literature perceives governments' websites as an effective tool for increasing information delivery, user interaction, and the government services' supply, being the most visible aspects of citizens concerning public management. However, the interaction of citizens with governments is still unclear. The practical implications of conducting e-government, capable of expanding this relationship, are still invisible. This study aims to provide an understanding of how governments' websites are used as an e-government tool in local governments, highlighting how e-government concepts have been empirically employed. The study takes a qualitative approach, examining five municipalities in a microregion in the Brazilian state of Bahia. We gathered the data using a triangulation process that included semi-structured interviews, analysis of the websites, and opinion questionnaires to the citizens. Our research shows that governments lack compelling actions and coordinated internal procedures, resulting in a gap between practice and digital governance policies, resulting in low citizens' participation, and unfamiliarity with government communication channels. The study contributes to the e-government literature by offering further insight into how people and organizations influence technology use, providing elements that can guide motivated public managers to increase relationships and communication with society. We highlight the need to investigate the phenomenon of digital transformation in governments at the organizational level.

Keywords: Electronic Government. Governments' websites. Municipalities.

1 INTRODUCTION

Providing public services through digital platforms is a growing trend (Hautamäki & Oksanen, 2018). These platforms, also known as public portals, are websites where a municipal, state or federal public organization makes information or services available to citizens. The intention with their use is that these public portals (hereafter governments' websites or just websites) become communication spaces, enabling interaction with their users at a click away.

The impact of technologies on information access, government service transformation, and citizens' attitudes toward governments have been a recurring theme in the field of public administration since the 1960s (Osborne, 2020). However, the literature on websites' using by governments has been devoted to assessing information provision initiatives by the central government (Martin, Rosario & Pérez, 2016), by states (Drehmer & Raupp, 2020, 2019, 2018), and by large cities (Tavares, Cerquinho & Paula, 2018; Raupp, Abreu & Abreu, 2015), with few studies dedicated to examining small governments (see, for example, Baraldi, Borgert & Fabre, 2019; Fraga, Medeiros, Vieira & Filho, 2019). Despite the relevance of these studies, which seek to observe how well the websites' prerequisites meet legal aspects, a fundamental aspect is left aside: the interaction between the social actors that are part of the government-citizen relationship.

The use of information and communication technology (ICT) to deliver information, interact with users, and provide government services in a digital format is known as electronic government - or e-government (Al-Shbail & Aman, 2018; Gauld, 2006). Furthermore, governments' websites enable relationships and transactions between interested parties (citizens, businesses, internal civil servants, NGOs, and others) and governments, which could lead to public management with greater transparency and participation, being more efficient and effective, responsive to social needs (OECD, 2020).

Despite the diffusion of ICT-based innovation and some apparent "visibility" of the changes underway, little is known about the effectiveness of these interactions (Osborne, 2020; Al-Shbail, & Aman, 2018; Tavares, Cerquinho, & Paula, 2018). Although there are positive outcomes projected by the availability of government information in a digital or online format, much of the literature on e-government revolves around the effectiveness, efficiency, and transparency measurement of electronic platforms (Araújo, Kronbauer, Carvalho, & Cirne, 2020; Dias, Aquino, Silva, & Albuquerque, 2020).

The literature calls for studies to examine the link between public managers' attitudes and citizen participation, including at the local government level (Migchelbrink & Van de Walle, 2021; Dias, 2019). Some recent studies have highlighted the difficulties of researching individuals' interactions with governments, either directly or indirectly (Strokosch & Osborne, 2020; Azfar Nisar, 2020) and how this lack of interaction can compromise the management of e-government projects (Choi & Chandler, 2020). Thus, given the different forms of organization of public agents in their local context and the challenges highlighted, the following research question stands out: **How are governments' websites used as e-government tools in local governments?**

This study aims to understand how governments' websites are used as e-government tools, highlighting how e-government concepts have been employed. This is a relevant perspective because the way governments respond to different situations might influence the service delivery process and the perception of government accountability and legitimacy in its relationship with citizens. Aside from the visible criteria of the websites, it is also essential to consider the context's invisible aspects, as governments' websites are more than just "objective" technologies, as both organizational characteristics and the design and use of technologies are the results of these interactions (Stohl, Stohl & Leonardi, 2016; Flyverbom, Leonardi, Stohl & Stohl, 2016; Fountain, 2016; Bobbio, 2015).

Empirically, the study is justified by the need to understand the experiences of Brazilian municipalities to stimulate the development of e-governance systems in other localities.

Furthermore, our study can assist public managers to develop internal e-government initiatives or increase their attitudes towards societal communication.

We analyzed five local governments in the Sertao Produtivo Identity Territory, in the state of Bahia, and interviewed municipal Secretaries and other public agents to understand whether the governments' activities would be aligned with the conceptual idea of e-government. To provide a counterpoint to the public managers' point of view, we applied opinion questionnaires to a hundred citizens in each area to understand citizens' use and knowledge of governments' websites. In addition, we submitted requests through the Citizen Information Service System (e-SIC) to simulate the service provided to citizens by the governments.

We used an institutional perspective to understand how governments interact with citizens through their websites. The study of e-government from an institutional perspective is an opportunity to observe the intersection of stable practices and traditions in the field. This perspective helps us understand the complex nature of the relationships among technology, organizational models, institutional arrangements, and the context in which they are embedded (Luna-Reyes & Gil-Garcia, 2014, 2011; Fountain, 2001).

The evidence suggests that managers' perceptions of e-portals do not reflect citizens' practices. On one side, public officials believe that websites alone lead to transparency. Citizens, on the other hand, are unaware of the websites' existence. As a result, the practical impacts of conducting e-government will not be witnessed or felt, causing e-government implementation to be invisible in some locations.

This study is organized as follows: in the following section, we present previous debates on e-government and the use of governments' websites, then we discuss the e-government practice from a theoretical perspective, describe our methodology, and present our findings and the analysis of the two groups' participants. We conclude with considerations and main implications.

2 THEORETICAL FRAMEWORK

The e-government concept refers to how a government employs communication and information technology and the Internet as tools to redesign its administrative functions and services offered to the public, improving the connections between its citizens, businesses, and government agencies (Al-Shbail & Aman, 2018). Initially, the e-government phenomenon relied on existing political structures to enable public sector transparency. It then focused on leveraging digital technologies to enforce citizens' right to access information (Osborne, 2020; Gauld, 2006).

Governments' websites are understood as important tools for e-government development (Fountain, 2016). As the Internet grows, governments' websites are increasingly used to present public sector information (Cunha, Coelho & Przeybilovicz, 2017). Furthermore, the emergence of e-government platforms has enabled governments to develop and implement environments where diverse interested parties can obtain and request information, conduct operations, and access government services (OECD, 2020).

Governments' understanding of best practices in the use of digital technologies and data for public sector transparency has pushed them to be increasingly open, encouraging the proactive use of digital technologies to communicate, inform, and collaborate with citizens both inside and outside of government (Filgueiras & Almeida, 2021; Migchelbrink & Van de Walle, 2021).

However, research on governments' websites points to low quality of the information made available to society (Zuccolotto & Teixeira, 2019; Martin et al., 2016), identifying poor performance or failing to meet the required deadlines for the requested demands among the causes (Raupp, 2016), with failures in passive transparency (when the government makes public

information available by society's specific demands) (Mendes, 2019; Michener, Contreras & Niskier, 2018) or low active transparency (Andrade, Raupp & Pinho, 2017).

Other studies have emphasized the need for improvements in governments' websites to suppress problems such as internal information organization and legal devices (Araújo et al., 2020; Mendes, 2019) and the deployment of non-functional request systems (Michener et al., 2018), even when government website maintenance is outsourced (Dias et al., 2020). These findings eventually generate the misleading impression that the deployment of technologies alone will solve the gaps in communication, outreach, and digital public service provision (Castro, Dobrovoski, & Freire, 2019; Silva & Guimarães, 2016). Instead, the idea of e-government is conceived as a more profound transformation that encompasses improving the technical structures and changing organizational culture and governing methods (Fountain, 2016).

Improvement actions for the identified flaws may aid in the establishment of a more proactive and responsive government, decreasing bureaucratic practices in public administration, as well as increasing the population's trust in the government (Dias et al., 2020; Piotrowski, Grimmelikhuijsen & Deat, 2019; Athmay, Fantazy & Kumar, 2016). Piotrowski (2010), for example, claims that there are five distinct ways of obtaining government information: (i) proactive information dissemination; (ii) demands access to information; (iii) open meetings; (iv) whistleblowing; and (v) leaked information. When acting proactively, governments would become more visible through newsletters, radio broadcasts, TV networks, websites, and even social media, generating impacts on society.

Increased action in this direction may pique citizens' interest in government actions. Welch (2012) demonstrated that social participation is positively associated with government transparency, but transparency alone does not necessarily lead to participation. However, Piotrowski et al. (2019) showed that citizens respond more favorably to transformational (related to citizens' emotions) government messages than informational (based solely on facts), indicating that the link between transparency, participation, and local government requires further investigation (Dias, 2019; Przeybilovicz, Cunha & Meirelles, 2018).

Even though some studies show that citizens have little interest in the information disclosed by governments due to the lack of participation incentives (Mendes, 2019; Souza, Curi & Nuintin, 2019) for being unfamiliar with governments' websites or information (Rodrigues, Dias & Vargas, 2021; Araújo, Reinhard & Cunha, 2018), they are essential for building a more democratic public governance and the concept of e-government itself, because the meaning of transparency goes beyond mere access to information. It is not enough to have information available; it must also be understandable to the many interested parties (Castro et al., 2019). Although it is seen as essential, popular participation is a current discussion that presents several challenges that must be overcome and require further investigation (Strokosch & Osborne, 2020; Dias, 2019).

A wide range of technologies may help to the development of e-government, with governmental websites being one of the most visible aspects and direct interaction of citizens with state authorities. When technology allows information about public managers' actions and decisions visible to interested parties, actors and organizations are compelled to perform more responsibly (Flyverbom et al., 2016). Nevertheless, increasing the visibility of information can sometimes render transparency (Stohl et al., 2016), and even in democratic regimes, it is possible to identify practices that take place in a "more or less thick invisibility mesh" (Bobbio, 2015, p. 23).

Organizational transformation involving information technology is a phenomenon that has received a lot of attention in the literature, and, despite the diversity, we can assume that e-government studies are concerned with the research of governments' use of technology in many but complementary and interrelated domains (e.g., in its technical, managerial, and political aspects). Thus, e-government is a field of applied research with connections to various disciplines and theoretical approaches (Dias, 2019; Cunha et al., 2017; Bannister & Connolly, 2015).

Because e-government is a multidisciplinary phenomenon originating from two other multidisciplinary domains (such as Information Systems and Public Administration), more significant efforts are required to comprehend the ICT influence on government settings. (Bannister & Connolly, 2015). Among the many perspectives that have already been adopted, some researchers have employed the institutional perspective to establish the extent to which the e-government institutionalization has occurred in the contexts in which it has been studied (Luna-Reyes & Gil-Garcia, 2011; Azad & Faraj, 2009; Heeks & Stanforth, 2007; Ciborra & Navarra, 2005; Fountain, 2004, 2001). Altogether, these researchers identified certain aspects that affected institutionalization. However, academics have rarely linked the mechanisms associated with these features to institutionalization outcomes.

The advantage of this method – when compared to other models often utilized in the e-government literature such as the Technology Acceptance Model (TAM) and Unified Theory of Acceptance and Use of Technology (UTAUT) – is that it offers a framework for understanding digital government applications, such as governments' websites, by considering not only the technology, but also the context, organizational forms, and institutional arrangements (e.g., laws, regulations, and other socio-structural constraints) in which they are embedded (Cunha et al., 2017; Fountain 2016; Bannister & Connolly, 2015).

Because each context is distinct, the institutionalization process of governmental websites may vary from one setting to another. Institutionalization (or its lack) is how social structures, made up of symbolic elements, social activities, and material resources, are sustained and reproduced. These structures are modified toward isomorphism (to present similar structures), not only for economic motivations but often to seek social, cultural, or political legitimacy (Scott, 2010).

Institutional theory has multiple roots and variants, and it is applied in a wide range of research fields (Glynn et al., 2016). First, when focusing on technological studies, it investigates the development, implementation, and application of technologies related to establishing and reproducing social order. Second, when studying technologies, the emphasis is on the interaction between humans and the digital artifact (material or immaterial object), capturing historical processes as social practices evolve through time (Fountain, 2004, 2001). Finally, when applied to e-government, institutional theory can assist in identifying the obstacles associated with its implementation and use.

Fountain (2004, 2001) demonstrates the impact of ICT on e-government projects in your studies. Despite criticism, her seminal work revealed the complex set of actions and actors that influenced technology implementation in the US public sector. She highlights how political agendas, organizational models, and institutional arrangements shape the ICT implementation process.

Fountain's framework concept (Figure 1) is that "objective technologies" (hardware, software, Internet, networks, etc.) are shaped by organizational models and institutional arrangements that eventually become "adopted technologies" (Fountain, 2001). Likewise, organizational models and institutional arrangements are affected by the selection, design, and use of technologies, in a bidirectional relationship between technologies and social structures in a sociotechnical perspective (Orlikowski, 2000; Orlikowski & Iacono, 2001). Therefore, the technology implementation framework recognizes the recursive nature of the relationships that exist between organizations, institutions, and information technology. However, the studies do not address public organizations' internal theorizing processes on e-government or how it could be disseminated both within the organization and interested parties.
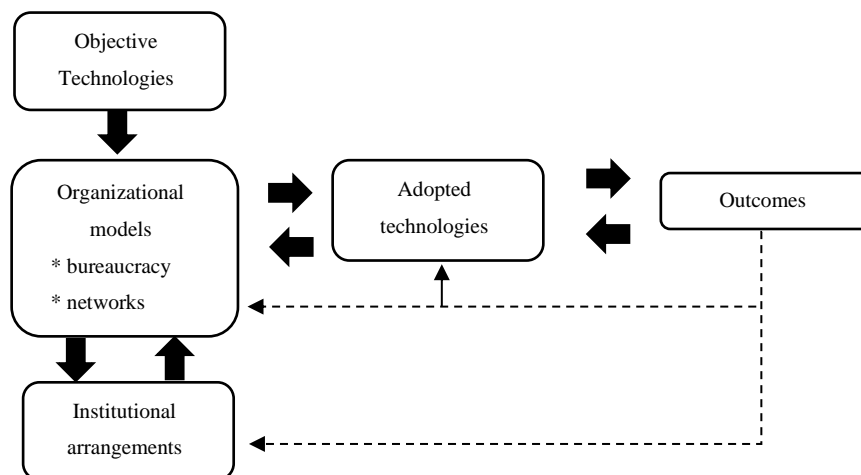
Figure 1. Fountain's (2001) technology implementation framework

In small municipalities, one of the leading causes of low population adoption of e-government practices is a lack of theorization. When there is a shortage of theorization, the diffusion of new technologies is hindered (Neves, Silva & Carvalho, 2019). Another barrier to the use of governments' websites would be citizens' lack of ability, time, or energy to evaluate government data (Etzioni, 2018), as "transparency measures provide users with the illusion of disclosure while actually serving to obfuscate" (Etzioni, 2018, p. 190). As such, e-government assumptions would occur when its functionalities are spread across a user community (internal and external), ensuring simplicity, and lowering complexity (Choi & Chandler, 2020).

Without neglecting the significant role of the external environment in explaining the institutional context, we can pay attention to the organizations' internal managers, such as the municipal Secretaries or local public managers, or those who have the resources and skills to lead a change process. Because of their social position, these actors can mobilize activities adopting norms (such as the enforcement of laws intended to ensure the right of access to information and transparency of government acts), shaping individuals' perceptions and preferences, whether internal or external to the organization (Battilana, Leca & Boxembaum, 2009).

Through the effective practices, known as institutional work, performed by these actors, the institutional change tends to become significant for several individuals (other civil servants and citizens), improving the likelihood of new values and practices being internalized and disseminated. As a result, we believe that their behaviors, motivations, and relationships should be taken into account (Hampel, Lawrence, & Tracey, 2017; Mena & Suddaby, 2016).

3 METHODOLOGY

To analyze how e-government concepts have been employed in local governments, we examined how governments' websites are used as e-government support tools. The city hall was the unit of analysis; however, we made the observations at the organizational level.

The case selection is based on the small sample logic, and multiple evidence sources are used, such as opinion questionnaires, interviews, and the examination of the local governments' websites, focusing on the relationship between governments and citizens (Harding & Seefeldt, 2013; Crouch & Mckenzie, 2006). As a result, the comparative case technique enables researchers to address these issues in depth. Furthermore, this sampling strategy does not assume generalization but allows us to analyze units whose characteristics contribute to the discussion (Patton, 2014).

The location choice was theoretically oriented (Eisenhardt, 1989), and we chose a region far from the state capital. The municipalities under consideration are part of the Sertao Produtivo Identity Territory[i], comprised of 19 municipalities located in the semi-arid macro-region of Bahia. The microregion borders the northern portion of the state of Minas Gerais, and the largest municipality examined (Table 1) is approximately 700 km away from the state capital. Access was granted at the convenience of one of the researchers for conducting the interviews and applying the questionnaires.

We took some steps to assure the findings' reliability and transferability to better understand the e-government phenomena in municipalities and check how it presents itself in the everyday activities, procedures, and interactions of social actors (Ashworth, McDermott & Currie, 2018, Patton, 2014). First, we triangulated sources and methods and discussed them with other scholars to ensure reliability, presenting preliminary findings at national conferences (Flick, 2013). Second, to ensure transferability (the extent to which the interpretation can also be employed in other contexts), we triangulated the findings using purposive sampling, looking for significant patterns and differences among the cases to gain a better understanding. Finally, we pre-tested the applied questionnaire and the interview protocol, addressing semantic issues to improve understanding and increase responses. The processes for each item of evidence are detailed below.

3.1 Analysis of governments' websites

To examine the timing and content of governments responses, we mimicked a request that any citizen can submit using the e-SIC, a web-based electronic platform for receiving and responding to information requests. Objective technologies (such as the e-SIC platform itself) are essential for the Fountain (2001, 2004) model to developing an e-government project. After registering in the platform, we requested: (i) the number of accesses to the e-SIC platform since its implementation and (ii) the number of visits to websites throughout the same time period. When we could not register into the e-SIC platform or send the request via the website, we looked for a valid e-mail account on the municipality's website and sent the same request through it. The message was simple: "I would like to know the number of requests that were registered via the e-SIC platform since its creation to the current day, as well as the number of times the municipality's website has been accessed over the same period". We considered the number of days it took each municipality to reply to us. It helped us in determining how governments would respond to simple requests from citizens.

3.2 Field Study

a) Interviews

We developed a semi-structured interview protocol (Easterby-Smith, Thorpe & Jackson, 2008), which we used with the main actors involved in the e-government and transparency processes in the municipalities, in general, with administrative Secretaries and, whenever feasible, with staff. The protocol covered the following aspects: (i) municipalities' website diffusion initiatives; (ii) agencies or departments responsible for making the information available on the websites; (iii) maintenance and updating of the governments' websites; (iv) websites' accessibility; (v) provision of public services; and (vi) e-service training for civil servants (such as the establishment of a specific ombudsman).

We explained the research goal to the secretaries in previous in-person or phone contacts with the five municipalities, and three of these confirmed dates and times for the interviews. The interviews focused on participants' reflections on the use of websites as a tool to communicate with citizens and their understanding of e-government (Wu & Savić, 2010). The interviews took place in October 2018 and lasted an average of 20 minutes, while the website assessments were

conducted between October 2018 and January 2019. We interviewed three local government representatives, one by phone and two others in person. Unfortunately, two representatives did not reply to the invitation to the interview, even after further contact. Due to their social position, access, and hierarchical position in organizations, these government representatives are considered elite professionals in their field, ultimately limiting researchers' access to them (Eckert, 2020; Empson, 2017; Wu & Savić, 2010).

To ensure the anonymity of the participants and their respective municipalities, the interviews and cases were coded (Table 1).

Table 1
Interviews and coding of research cases

Case	M1	M2	M3	M4	M5
Number of inhabitants (i)	14,000	47,500	79,000	16,500	10,300
Interview time	00:20:48	-	00:27:37	00:20:31	-
Date of interview	10/27/2018	-	10/24/2018	10/26/2018	-
Nature of the interview	Face to face	-	Face to face	Phone	-
Access to e-SIC and websites' assessment (ii)	Unable to register	Response after the legal deadline	Unable to register	Response after the legal deadline	Response after the legal deadline

Source: Research data.
Note. (i) rounded number of inhabitants, according to data census from 2010;
(ii) Ease of access to the e-SIC and response time to requests made on the e-SIC platform.

b) Questionnaire

In addition, we conduct an opinion questionnaire to conduct a field survey with the region's population (Fonseca, 2002) between July and October 2018, using the non-probability sampling method (Sarstedt, Bengart, Shaltoni & Lehmannm, 2017). We applied the questionnaires to 500 residents (100 from each municipality) in public places of great movements, such as urban fairs and the downtown, considering the convenience of holding the meetings and the time for individuals to answer the questions. They consisted of 11 short answer questions, lasting an average of five minutes per questionnaire. We collected the responses on printed forms and collated them on a spreadsheet for analysis.

The researcher's goal in using an opinion questionnaire to examine attitudes, opinions, awareness, and preferences is to establish relative rather than absolute metrics (Fonseca, 2002). We wanted to collect responses from randomly selected persons who were accessible and willing to participate, and we are unconcerned about the proportionate representativeness of the sample (Malhortra, 2010). As a result, the findings cannot be generalized. However, they are low in cost and time spent, allowing us to conduct data surveys to understand the reality (Gil, 2008) minimally. This questionnaire aimed to compare people' and public administrators' perceptions of government websites, with the majority of respondents (89%) living in urban areas and pursuing completed high school (35%).

4 FINDINGS AND DISCUSSIONS

4.1 Websites' Restrictions

We used the e-SIC platform to request information from the five municipalities, but two did not respond (M1 and M3). Municipality M2 responded by e-mail, stating that:
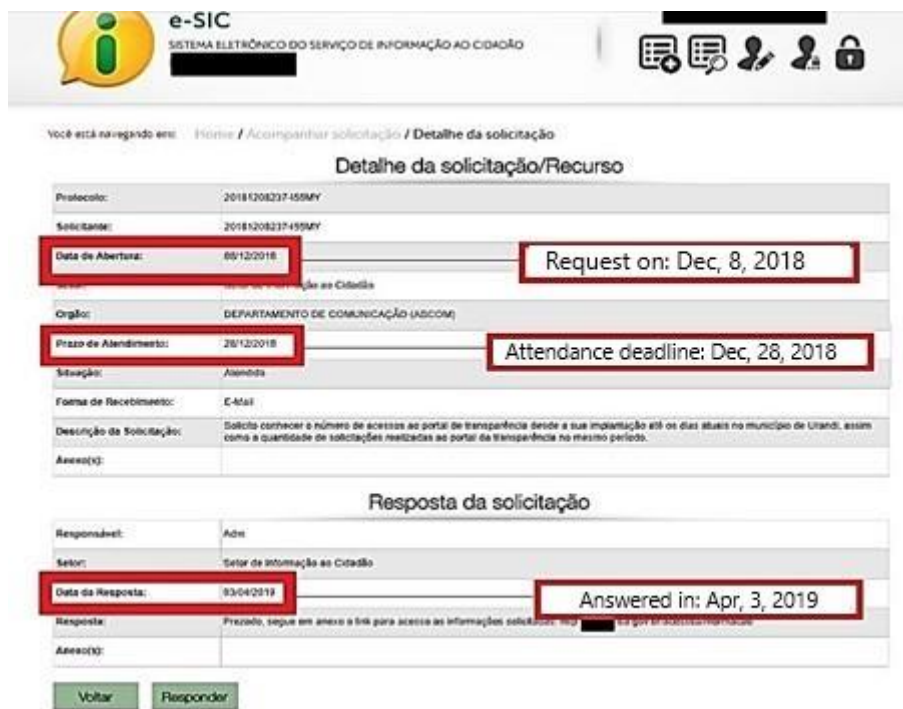
[The municipality] *clarifies that it is not possible to serve the respondent at this time because the system does not have such a link. Nevertheless, this tool is already being made viable to monitor the website views/accesses (...) It is worth mentioning that during the implementation period, 14 requests were answered through the e-SIC.*

We requested M2 on November 11, 2018 and received a reply on December 18, 2018 (28 days later), even though the law requires a 20-day response time. Still, unfortunately, they did not inform us when the municipality started implementing *e-government* actions. M3 replied, after requesting via e-mail, with a link to a website page including a report on citizens' requests for information. We noticed that 86 requests have been made since its implementation, with no information on the starting date, and that 82 of these have been responded. Unfortunately, the reasons for the non-response to four requests were not provided.

M5 replied through the e-SIC platform without any e-mail notification, representing a failure in communication with the citizen's request. We just found out about the response after logging in to the platform. Since the platform's launch in late 2017, the municipality has received seven requests for information.

Nonetheless, following deadlines and response procedures, M4 replied to our request six months later via the e-SIC platform, providing us with a link to access the answer. However, the link took us to the municipality's main home page, which prevented us from knowing about the desired information. Furthermore, M4's response time was 116 days, exceeding the legal timeframe, as shown in Figure 2.


Figure 2. Screenshot - Time lapse between request and reply from M4.
Source: Research data.

During the research, we attempted to analyze the aspect of objective technologies presented by Fountain (2001, 2004). Therefore, interacting with governments' websites is an essential part of the e-government concept. During this interaction, we noticed that the M3 interface was working properly. However, when we attempted to enter information to starting a request registration in the e-SIC platform, we found that the municipality's name was not among the alternatives (Figure 3), making the information request challenging to test. Another issue was that we were unable to submit the request after registering on the e-SIC platform since the department to which the request should be directed did not exist. (Figure 4), even though this is mandatory information for registration.
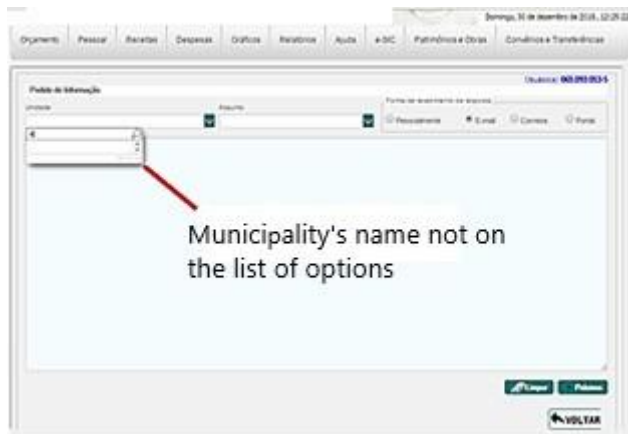
Figure 3. Screen Shot - No-Choice List - City Name.
Source: Research data.
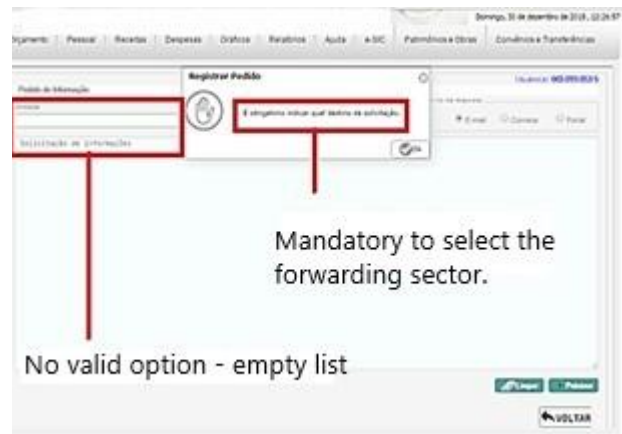
Figure 4. Screen Shot - No-Choice List - Departments.
Source: Research data.

A similar scenario occurred with the M1 e-SIC platform, making access to information difficult and preventing any type of information request from being made. When filing a request in the e-SIC platform, one must specify which department will receive the request. Consequently, the citizen must have a minimum knowledge of the local administration's structure. To overcome the situation, we formalized the request through the e-mail available on the website —however, with no reply. We requested municipalities M1 and M4 on November 11, 2018, and made another attempt on December 8, 2018, both without a timely response. Under these conditions, the technological aspects make it difficult for users to request the information or services they need.

When analyzing governments' websites, we identified a diversity of companies providing hosting and maintenance services for the municipalities. For example, regarding the e-SIC platforms, the same supplier was responsible for providing hosting to all five municipalities (exemplified in figures 3 and 4). Furthermore, we found that municipalities outsource at least four main categories of services in general, not always with the same companies, namely: institutional government website, a website where official acts are published (electronic municipal official journal), a platform for issuing electronic invoices, as well as a platform for municipal transparency. Due to this diversity, the websites present distinct structures, sometimes making them difficult to use.

These services are interrelated. One website is generally contained on the main (institutional) page. To some extent, this layer of diversity can be counterproductive to the e-government concept because when switching companies, due to the termination of the contract with the local government, part of the website's structure and informational content is lost, and the service is discontinued. Dias et al. (2020) pointed out a similar situation, which could hinder updating data preservation in the websites.

Despite their similarities, the technologies have different program contents, which alter each organization's operation logic (for example, their layout and specific database), which requires new training for the civil servants in case of provider replacement. It also can limit the action of the citizen not used to the new website. Service provider duties are an essential part of organizational models (Figure 1) since contractual obligations and the provider's technological and organizational capacity, to the detriment of internal development or from a combination of the two, influence the characteristics of governments' websites. For example, an interviewee from M3 described that "the site must follow basic accessibility standards," even if, for that moment, the company that maintains the website has not updated it.

In general, local governments have civil servants stationed within the organization to handle transparency information, but there is no internal training to institutionalize transparency and e-government procedures for civil servants and citizens. There are no protocols for sending

information to the website. The civil servants responsible for each department send official documents directly to the website, which does not receive any treatment, because, if this occurred (as stated by the managers), it could characterize an attempt to alter governmental data. However, if this information is not adequately processed to make it more understandable to citizens, it will remain in the realm of ignorance, as noted by Michener et al. (2018) and Etzioni (2018).

4.2 E-government from the visible to the invisible

Citizens and public managers have different perspectives on e-government regarding information diffusion, interaction with users, and the provision of online government services. 65% of those who responded to the questionnaire said they did not know the local government's website, and a quarter (24%) claimed a lack of interest in accessing the website. Those who are aware of the existence of the governments' websites, do not access them. However, when asked why they do not visit the websites, the majority (38%) chose not to respond.

According to the results of the questionnaires, the majority of participants (59%) regard governments' websites to be a useful tool for monitoring public spending and, likewise, assume that the Internet boosts social control, as highlighted by Araújo et al. (2018). Despite this, most respondents stated that they were unaware of the municipalities' websites, which contradicts the preceding response.

This dichotomy of understandings, along with a lack of proficiency in the use of websites, and citizens' time or energy to actively participate in issues linked to public management in general, can be understood as a barrier to implementing the practice of digital and open governments (Strokosch & Osborne, 2020; Etzioni, 2018).

Transparency, on the other hand, is more related to the scope of legal compliance, or compliance with parameters determined by external control bodies, such as the Brazil Transparency Scale (Escala Brasil Transparente), issued by the Brazilian Office of the Comptroller General, or regulations, for municipal secretaries participating in the study. This might lead to the incorrect belief that compliance with transparency requirements is attained when the legislation is followed, resulting in the sense of transparency delusion (Etzioni, 2018).

Two participants mentioned that they have civil servants that just deal with municipal transparency. In contrast, one of the municipals' secretaries stated that they have problems finding skilled workers, even tying this lack of qualification to the municipality's low rating on the Brazil Transparency Scale[ii]. According to one administrative secretary, the municipality is transparent due to its position at 'Brazil Transparency Index' ranking and for complying with the legislative requirements, while, comparatively, the municipalities present different answers and understandings on the subject.

> *Q: What is interesting is that [the municipality] is ahead in the Brazil Transparency Index. Does it demonstrate you are being transparent?*
> *M3: Have no doubt! Here we excel at this. We know our responsibility to the municipality.*
>
> *Q: Does the Public Administration have any difficulty keeping the website up to date?*
> *M1: Quite a bit. We have a lack of municipal councils, a lack of qualified people, a lot of difficulty (...) [the municipality] is almost at the bottom of the index ... it seems that only 13 municipalities are worse than us. If we had a qualified team, we could solve this transparency ranking issue...*

The search for legitimization of this type of answer (to be in a particular position in the ranking) is disconnected from reality. The literature has shown that this understanding can be framed as a strategic response that adopts a practice in a superficial way to be seen as adhering to a specific demand (Dias et al., 2020; Oliver, 1991). The existence of the Brazil Transparency Scale

is an example of an institutional arrangement (see Figure 1) highlighted by Fountain (2001, 2004), which would influence organizational models, requiring the implementation of objective technologies (such as a network structure), since one of the characteristics of this instrument is to assess public transparency through government information dissemination on the Internet.

It may reveal a misunderstanding of what is considered transparency and the minimum or basic information provided by local governments (Michener et al., 2018). This point is highlighted by Stohl et al. (2016) as opaque transparency. The result is an organizational model focused on the short term and lacking answers to current challenges.

The practice of e-government results in the availability of information about government actions (Etzioni, 2018). However, if the citizen's feeling of participation or control is not theorized, the practical effects will not be observed or felt. The development of an easy communication channel through governments' websites, the availability of information to citizens, and the awareness of public managers are aspects that must be addressed to build an environment where these practices become commonplace. Digital services must be broadly aligned to processes and integrated with the various departments of the public service. Any initiative outside this scope is outside the very e-government concept. The administrative secretary of one of the municipalities mentioned the following:

> Q: What should the citizen do if the public administration denies any request, he/she makes?

> M1: They should go to the Public Prosecutor's Office. Today, with this law [about the transparency law], thank God, all public information must be available to everyone. In the previous administration, I needed information that was not answered, I didn't get a reply, and I went to the Public Prosecutor's Office. So, if today a citizen seeks information and it is not provided here, he or she has to go to the Public Prosecutor's Office because the public agency has an obligation to make all the information available. Except when it is something secret, but we don't have it.

When the information is released by a legal obligation, and not in a voluntary way, it prevents a proactive information action by the local government, which puts the government-citizen relationship in check. It is one aspect of the invisibility mesh that also permeates digital democratic innovations, in the words of Bobbio (2015). Only the largest municipality has a Public Prosecutor's Office for the state and federal prosecutors in the microregion. The need to seek information from other agencies creates a greater distance between municipal authorities and local citizens, preventing a more direct relationship, which may be more common in smaller municipalities, particularly those located far from large urban centers, with smaller structures, and without direct access to external control agencies.

In other words, technology is designed, implemented, perceived, and used under pre-existing institutional arrangements (social, cultural, legal, and formal) that give a sense of stability to existing organizational structures. Thus, the validity of laws and norms (such as the Fiscal Responsibility Law, the Access to Information Law, and the Brazil Transparency Scale) do not influence an automatic change in organizational structures and processes.

The information available on governments' websites is not visually appealing to the user. The use of graphs or figures could facilitate citizens' understanding, most of whom do not understand the information in the format provided. This hindered viewing may influence the lack of access by citizens. For example, from 2016 to the time of the interview, the amount of information requests made by citizens was almost non-existent:

> M4: Let me tell you something important: there are only 38 requests for information so far. From 2016 until now, only 38 citizens... no, not citizens - 38 requests from **only 3 citizens**, which is absurd. For example, depending on the person you talk to here in the municipality, they say they don't have access, but it's because they don't look for it... and we divulge it, we tell people to have access to the transparency portal, but most of them are not interested, you know? (our emphasis)

Social control would entail the participation of civil society in public management, steering state actions and expenditures toward the collectivity's interests. However, the evidence shows citizens' lack of knowledge or interest in accessing governments' websites to request information, make complaints, or even know how they work. Therefore, we do not believe that the greater the citizen's experience with the Internet, the more likely it is that the citizen will prefer to use digital public services without an incentive to do so, as Migchelbrink and Van de Walle (2021) point out. This finding is consistent with Mendes (2019), who found that the regular SIC and e-SIC platforms were neglected by the population of Juiz de Fora, a municipality with roughly 516 thousand inhabitants, which is three times greater than the microregion examined.

Although electronic government represents significant potential, with positive effects on transparency and accountability, it depends on institutional mechanisms for its effectiveness. It reinforces the thoughts of Azfar Nisar (2020) and Strokosch and Osborne (2020), who argue that public administration scholars need to consider a citizen's perspective rather than focusing on a particular issue.

Although participants acknowledge that developing a government website does not ensure transparency and communication with citizens, one clear point is the lack of support for a more open and collaborative internal culture. None of the websites examined appears to have resulted in meaningful organizational transformation.

E-government does not refer to the simple digitization of government in the strict sense - this is also a strategic issue as a precondition for the execution of e-government programs - but mainly to the implementation of ICT to achieve better functioning, production, and delivery of products and services for various government interested parties: individuals, families, businesses, and other public organizations. The lack of theorization regarding governments' websites by public authorities can be attributed to the population's low use. As a result, these services do not meet their goal of public information disclosure.

5 CONCLUDING REMARKS

This study aimed to learn how municipalities in a microregion use electronic government concepts as a form of communication and interaction with their citizens. Although the literature contains studies that demonstrate the use of ICT to provide information and government services, empirical studies seek to investigate how the citizen-government interaction occurs, and the role of public managers who use technologies as e-government tools are scarce. We aim to fill the gap about the interconnection between citizens and local governments.

We highlight the importance of organizational structures and processes, such as the size of the administrative organization, internal development, and outsourcing, in the development of more functional governments' websites based on interviews with municipal secretaries and other managers, analysis of the governments' websites, and opinion questionnaires with residents of each location. The research reference model we adopted is based on the approach developed by Fountain (2001) to analyze the impact of ICT on e-government projects.

The scenario in the region is of a lack of convincing actions, explanation of the reasons, and aligned internal processes. Local governments do not justify adopting an e-government project. They are driven by the institutional arrangements to deliver what is demanded, even without perceiving the usefulness. The typical response turned out to be the detachment between everyday practice and the execution of a set of digital governance policies delivered only in a ceremonial way, leading to the belief that the website's existence alone leads to transparency. As a result, the public is unaware of government communication channels.

The flaws we identified highlight the necessity of examining the environment in which technologies are used. Citizens' poor participation and awareness of websites appear to be of little or no relevance to public managers, highlighting how the expectations of these different groups point in opposite directions and how there is a clear communication gap between governments and citizens in the region conducting e-government. Public managers and policymakers in governments that want to improve their relationships and communication with society might utilize the findings of this study to develop guidelines for e-government policies.

One of the initiatives would be to strengthen the government's communication capabilities through internal training, the practice of certain management principles, and orientation to government actions, focusing on the citizen and emphasizing performance improvement. Fountain (2001) acknowledges that e-government is at the center of the contemporary debate on modernizing public administration. Her framework is an essential contribution to research on information technology in public administration. Nevertheless, it focused on how technology affects organizations rather than how people and organizations affect the use of technology. It did not demonstrate how public managers, technology providers, and citizens can work together to overcome institutional obstacles.

We believe that strategic use of communication channels through the mediation of ICT in public administration, institutional work fulfilled by public managers, and more visible government actions can all help to increase citizen engagement.

There are some limitations to this study, such as the inability to interview the Secretaries of two municipalities. We also did not consider the evolution of the municipalities' websites, as the political aspect, when governments change, can affect the websites' design and lead to changes in the service delivery to citizens. In addition, we only considered online communication regarding e-government. We recognize that local government managers may choose different ways to communicate with citizens, such as conventional meetings in person and filling out forms or even social media. We suggest that these aspects should be further explored.

Finally, following the call for citizen interaction with governments in building and shaping a more participatory and digital society (Migchelbrink & Van de Walle, 2021; Strokosch & Osborne, 2020; Dias, 2019), future studies can build on the communication effects already detected (Rodrigues et al, 2021; Piotrowski et al., 2019) and investigate, at the organizational level, the digital transformation phenomena, investigating the roles of key public actors in digital transformation, especially when society fails to recognize the benefits of the mandatory digital reforms that have been undertaken.

A government website is a tool for enhancing government-citizen interaction. Indeed, the e-government transformation is not a linear process. The growing variety of technologies - such as new apps, social media, open government initiatives, big data, and artificial intelligence - used to produce and distribute visual information can increase managers' accountability and public agenda-setting. Following the open government and open data logic, governments' websites can become a key tool in promoting transparency, participation, and interaction between government and citizens.

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[i] Data on the Territory can be accessed through the link:
http://www.portalsdr.ba.gov.br/intranetsdr/model_territorio/Arquivos_pdf/Perfil_Sert%C3%A3o%20Produtivo.pdf
[ii] The Brazil Transparency Scale can be accessed through the link: https://mbt.cgu.gov.br/publico/home