Chapter 3
Policymakers' Perceptions on the Citizen Participation and Knowledge Sharing in Public Sector Delivery

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Abstract Public agencies are being pressured for innovation, driving service delivery towards a more personalized, outcome-driven, participative, efficient, and collaborative model. In this regard, social media has been told to be a potential powerful tool to support public engagement, intended as the improvement of public services and the establishment of relationships between government and citizens based on information sharing and dialogue. This chapter captures the perception of policymakers responsible of strategies for e-government in local governments with the aim at analyzing the following research questions: (a) Do policymakers think that Web 2.0 technologies promote the effective involvement of citizens in the improvement of public sector services? (b) Do policymakers think that Web 2.0 technologies promote the technological innovation in public services? and (c) Do policymakers think that Web 2.0 technologies promote the sharing knowledge needed to improve public sector services? To answer these research questions, an e-survey was sent to policymakers responsible of strategies for e-government in large Spanish local governments. Findings indicate that policymakers are prone for using Web 2.0 technologies to engage citizens in the process of public services delivery, but only making suggestions through consultations. No co-production or technological innovation is expected from citizens because they are expected to play a passive role more than an active one.

3.1 Introduction

Public agencies are now moving to scenarios in which citizens use public e-services to perform complex transactions with government authorities (Asgarkhani 2005) and in which the performance and the efforts of the government to deliver public services should be more efficiently (El-Haddadeh et al. 2013) with the aim at raising levels of accountability.

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To achieve this aim governments have incorporated social media technologies into the governmental workplace, which have been seen as effective tools to promote public goals (Rowe and Frewer 2005). The implementation of these technologies are changing the roles played by citizens, who will no longer be mere "end-users," but will become partners and co-creators of information and services (Johnston and Hansen 2011; Huijboom et al. 2009), which promotes to put citizens into the heart of the value chain (Tuomi 2002), and expecting them to provide insight and knowledge and thus improve public services. In fact, in the Web 2.0 era, users have become important actors in almost all aspects of online services (Huijboom et al. 2009) and are expected to provide insight and intelligence that will improve public services.

Nonetheless, despite the great significance of the future implementation of Web 2.0 technologies in public agencies and calls for studies to analyze the impact of legal, institutional, and political challenges regarding the use of IT in local governance (Sandoval-Almazan and Gil-Garcia 2012; Criado et al. 2013), little research has been conducted in the field of public administration to examine the use of these technologies to reform public service delivery.

Therefore, this chapter seeks to investigate three main research questions related to the implementation of Web 2.0 technologies in the process of public services delivery: (a) Do policymakers think that Web 2.0 technologies promote the effective involvement of citizens in the improvement of public sector services? (b) Do policymakers think that Web 2.0 technologies promote the technological innovation in public services? and (c) Do policymakers think that Web 2.0 technologies promote the sharing knowledge needed to improve public sector services? To answer these research questions, a questionnaire has been designed and sent to policymakers responsible of strategies for e-government in local governments in order to collect their opinions about the research questions mentioned before.

This analysis is especially relevant in local governments because they are mostly concerned with the daily life of people (Cegarra Navarro et al. 2012), provide a wide variety of services (Saiz 2011), and they are an important subject for the study of social media and interactivity because of traditions of citizen participation at the local level (Berry et al. 1993; Oakerson 1999). In addition, the study is focused on the Spanish local governments' context due to the managerial devolution process implemented in Spain in the 1990s (Bastida and Benito 2006; Gallego and Barzelay 2010) and the rapid introduction of new technologies by these local governments, which has been fostered with the promulgation of e-services legislation in Spain in the last decade. Finally, policymakers have been selected because they are considered key actors in the introduction of Web 2.0 technologies in public agencies taking into account not only their significant role in the policymaking process within local government, but also their direct involvement in the possible implementation of Web 2.0 technologies in public sector delivery.

The remainder of this chapter is structured as follows. Section 3.2 discusses the opportunities that Web 2.0 and social media tools offer for the co-production of

public services in local governments. Section 3.3 describes the methodology of our study and the results of the research. Finally, the discussion and conclusions bring the chapter to an end.

3.2 Web 2.0 Technologies and the Co-production of Public Services

Public agencies have implemented reforms to enhance information transparency and management (Schillemans et al. 2013; Relly and Sabharwal 2009). These governmental reforms were initially focused on automating internal, often manual, routines, using only a government perspective in mind (Holgersson and Karlsson 2014). Nonetheless, a recent demand-side survey performed by the European Commission (2013) has put emphasis on the need to address the needs and concerns of citizens as well as on the need of more communicative actions to inform those that are unaware of what public services are available on line.

Indeed, most local governments are urged to provide efficient and effective e-government information and services, for the sake of increased accountability and performance management (Shackleton et al. 2004). Nonetheless, e-government initiatives over the past decade have been based mainly on first-generation web-based resources (including web sites, pages, and services), which were based on HTML, a relatively primitive, static page markup technology that simply outlines what a page should look like onscreen.

The advent of social media using Web 2.0 technologies has opened up unprecedented new possibilities for engaging the public in government work and has changed public expectations about how government work should be done (Chun et al. 2010; Lathrop and Ruma 2010; McDermott 2010). With the help of the advance in information technology, e-government should customize services based on personal preferences and needs (Ho 2002), which would largely enable users' needs to be met (Bonham et al. 2001). This way, knowledge of citizens' needs and skills is seen as essential for successful public e-service development (Verdegem and Verleye 2009).

In addition, the growing participation in social networking sites is altering the nature of social relations (Christofides et al. 2009) and changing the nature of political and public dialogue (Osimo 2008). These new developments put pressure on government organizations to innovate in their dealings with citizens, introducing new competition for "nodality" in social and informational networks (Escher et al. 2006; Hood and Margetts 2007) and offering the potential for "co-production" and even "co-creation" of government services (Margetts and Dunleavy 2013). Therefore, governments must now strengthen their capacity to assess the needs of users and involve user groups through the use of second generation web technologies in order to listen, to engage users in the design of services and in the production of policies, and to forge collective initiatives and interaction (OECD 2010).

Accordingly, local governments are increasingly embracing Web 2.0 technologies to encourage the use of means of bidirectional communication to change how they interact with stakeholders and to become more efficient in their response to stakeholders' demands, thus providing the greater accountability demanded (Redell and Woolcock 2004; Leighninger 2011). Nonetheless, having a social media icon on a webpage does not demonstrate usage and recent research has indicated that city managers are nowadays using social media mainly for disseminating information (Oliveira and Welch 2013; Mergel 2013; Mossberger et al. 2013).

But social media applications provide channels not just for mass dissemination but also for mass production and collaboration (Benkler 2006), playing an important role in implementing open government and in rendering online public services (Noveck 2009). The use of Web 2.0 technologies for the delivery of public sector services has the potential to change the roles played by citizens, who will no longer be mere "end-users," but will become partners and co-creators of information and services (Huijboom et al. 2009), which promotes to put citizens into the heart of the value chain (Tuomi 2002), and expecting them to provide insight and knowledge and thus improve public services.

Such potential should be welcome to policymakers looking for public service cuts and could lead to new interest in Digital Era Government type models (Margetts and Dunleavy 2013). In fact, with public spending reductions squeezing public services at all levels, the strategies adopted by public agencies have been aimed at achieving higher levels of online service uptake and at developing public e-services (Queensland State Archives 2010; Reggi and Scicchitano 2011), as well as obtaining the anticipated cost efficiencies (Taylor 2012).

In this regards, a push towards government co-production of services with citizens has been very clear in behavioral public policy fields, the "nudge" territory of changing life choices (Thaler and Sunstein 2009), where even more interventionist European governments acknowledge that government-only interventions are unlikely to be successful (Margetts and Dunleavy 2013). Indeed, the implementation of Web 2.0 tools by government is about recognizing that conventional governments are unable to address society's challenges alone.

Thus, while the potential impact of social media technologies on the functioning of government is expected to be "profound," it will come with "challenges in the areas of policy development, governance, process design, and conceptions of democratic engagement" (Bertot et al. 2010c). Nonetheless, whether or not citizens actually participate online, a municipal presence on social networks may convey the message that government is more responsive, open, and democratic, by allowing citizens to express their views via this channel (Hibbing and Theiss-Morse 2002).

In addition, according to the second eGovernment Action Plan (2011–2015), governments will use eGovernment to increase their efficiency and effectiveness and to constantly improve public services in a way that caters for users' different needs and maximizes public value, thus supporting the transition of Europe to a leading knowledge-based economy (European Commission 2010). In this regard, Web 2.0 technologies have the potential to share knowledge and experiences in

delivering public sector services that could help governments to improve their internal productivity and interoperability.

Various popular Web 2.0 technologies, such as social networking (Facebook, MySpace), wikis, blogs, microblogs (Twitter), mashup, and multimedia sharing (YouTube, Flickr), facilitate interactive information sharing, interoperability, and collaboration (United Nations 2010) and can promote open, user-driven governance (Bertot et al. 2010a, b, c; Millard 2009). Furthermore, social media technologies, such as Twitter and Facebook, enable two-way communication and rich data exchange among members for purposes of communication to the network, knowledge exchange, and problem solving (Welch 2012).

Despite previous comments, little is known about the use of Web 2.0 technologies by government for technological innovation purposes in public services (improvement of services quality, design of public services, etc.), and, also, little is known about how Web 2.0 technologies can affect knowledge sharing purposes. Therefore, it would be interesting to know if policymakers think that Web 2.0 technologies could be a relevant tool for improving innovation in public services and in sharing knowledge. Investigating these issues through a survey of local government policymakers, we ask several questions about the use of social media:

RQ1: Do policymakers think that Web 2.0 technologies promote the effective involvement of citizens in the improvement of public sector services?
RQ2: Do policymakers think that Web 2.0 technologies promote the technological innovation in public services?
RQ3: Do policymakers think that Web 2.0 technologies promote the sharing knowledge needed to improve public sector services?

3.3 Policymakers' Perceptions on Web 2.0 Implementations and its Potential for Citizen Engagement, Improvement of Technological Innovation and Knowledge Sharing in Public Sector Services Delivery

3.3.1 Sample Selection

Local government is an important subject for the study of social media and interactivity because of traditions of citizen participation at the local level (Berry et al. 1993; Norman 2010) and the tradition of these governments to use more mechanisms that permit direct citizen involvement, in part because they are more manageable at that scale (Peters 2001) as well as they provide a wide variety of services (Russell and Bobko 1992). It has made social networks to become relevant in the local government context (Gibson 2010), especially in the largest cities because they have generally been at the forefront in the adoption of e-government innovations (Moon 2002; Ho 2002; Scott 2006).

This chapter focuses on Spanish local governments in view of the managerial devolution process implemented in Spain in the 1990s (Bastida and Benito 2006; Gallego and Barzelay 2010) and the rapid introduction of new technologies by these local governments, which has been fostered with the promulgation of e-services legislation in Spain in the last decade. In addition, according to recent studies, the e-services provided by local administrations in Spain account for 66 % of all public services (Orange Foundation 2014) and the 79 % of Internet users in Spain use some type of social network (IAB Spain Research 2014) mainly as a means to chat with friends or organizations as well as to generate content—this figure is over the mean of European Union (57 %)—(Orange Foundation 2014).

Municipalities with relatively large populations are examined in this chapter because they are usually among the first to adopt new technologies (Bonsón et al. 2012) with the aim at providing efficient services to the public (Cegarra Navarro et al. 2012) and their delivery of services is more complex (Torres et al. 2005) and comparable. Under this rationale, a sample of large Spanish municipalities has been selected (those with a population of over 50,000 inhabitants). In total, 148 Spanish municipalities meet these conditions, and account for over 50 % of the total population of Spain (Spanish National Statistics Institute (SNSI) 2014).

Data were obtained by sending a link to perform an e-survey and it was sent to the policymakers of all the local authorities studied, via email. The contact details were obtained from the Spanish central government's website. Of the 148 municipalities that comprised the survey sample, seven of them stated that the municipality had not yet introduced communication channels such as social networks, and thus neither had experience of Web 2.0 nor dedicated human resources to this area. Therefore, the questionnaire was sent to 141 local governments and 46 complete replies were received from policymakers (thus there were 107 incomplete responses to the questionnaire). To date, therefore, the minimum response rate is 32.62 %. Nonetheless, some policymakers of local governments have responded some items without finishing the full e-survey. In consequence, for some questionnaire items, the response rate exceeded the above-mentioned minimum (see Tables 3.2, 3.3 and 3.4 in Appendix). This sample size is reasonable; according to Roscoe (1975), a sample size between 30 and 500 is considered satisfactory. Data were compiled over the research period utilizing an appropriate sampling technique.

3.3.2 Methodology of Research

A questionnaire was designed and sent to all policymakers responsible of e-government of sample municipalities in order to capture their perceptions on the issues that are analyzed in this chapter. The questionnaire was made up of 15 questions covering the role that implementation of Web 2.0 technologies can play in local governments regarding citizen engagement, technological innovation, and knowledge sharing in public sector services (see Table 3.1 in Appendix).

Policymakers responsible of strategies for e-government of sample municipalities were addressed in this survey taking into account not only their significant role in the policymaking process within local government, but also their direct involvement in the possible implementation of Web 2.0 technologies in public sector delivery. Before the e-survey was sent out, every policymaker in the sample population was contacted and asked to participate in the study, after being informed of the study goals and of what was required by the questionnaire. They were also assured of its strictly scientific and confidential nature, and of the global, anonymous treatment of the data to be obtained.

A two-phase process was followed to design and pretest the questionnaire items of our study. First, the research team drafted a preliminary version based on the conclusions of previous work in the field of Web 2.0 technologies (Oxley 2011; Picazo-Vela et al. 2012; Gomes and Sousa 2012; Smith 2004; Dunleavy and Margetts 2010; Linders 2012). Based on this analysis, 15 items have been selected to analyze the role of Web 2.0 technologies in improving citizen engagement, technological innovation, and knowledge sharing for public services delivery (5 items for each one of the issues) (see Table 3.1 in Appendix). Second, the initial text was presented to two specialists on Web 2.0 technologies and to ten policymakers, to ascertain their opinions on (a) the understandability of the questionnaire; (b) the clarity of the questions posed and possible ambiguities; and (c) the possible inclusion of other questions relevant to the study aims. The comments and suggestions made were analyzed and, when considered appropriate, incorporated into the text of the questionnaire.

Then, the link to the second version of the questionnaire was provided to the policymakers of each local government in our sample. Policymakers were offered the possibility of clarifying any remaining doubts before completing the questionnaire. Thus, some e-mails were received concerning the exact meaning of some items; these questions were answered, and thus we may be reasonably sure that the questions measured the intended constructs.

Based on prior studies on attitude analysis (Collison et al. 2003; Emerson et al. 2007), the questionnaire was designed in which respondents were asked to describe their degree of agreement with each statement on a five-point Likert scale (ranging from strongly disagree, "1" to strongly agree, "5").[1] After the questionnaire was completed, each item was analyzed separately. Unlike in other methods, in Likert scaling, data obtained from responses could not be analyzed using the mean to comparing results between questions due to scale problems (Bertram 2007). By contrast, the analysis of the central tendency summarized by median and the

[1] Although the Likert scale has some limitations for research (Russell and Bobko 1992; Hodge and Gillespie 2003; Orvik 1972), these limitations do not invalidate conclusions about the numbers (Norman 2010) and Likert scale is suitable for attitude studies—measures simple to administer, quantify and code (Spector 1992), reliable and valid results (Matell and Jacoby 1971; Li 2013) and statistical inference is "robust" when used for parametric statistics (Norman 2010).

mode of the responses has been proved to be useful in order to analyze data obtained using Likert scale (Bertram 2007).

3.3.3 Analysis of Results

RQ1: *Do policymakers think that Web 2.0 technologies promote the effective involvement of citizens in the improvement of public sector services*?

According to our results, policymakers think that Web 2.0 technologies could foster the collaboration of citizens in delivering public sector services. In fact, they think that these technologies can stimulate the creation of communities (see item 1.1. in Appendix, Table 3.2) and can facilitate citizens to be involved in the delivery of public services through the co-production of these services as well as the generation of content and information about them (see items 1.2. and 1.5. in Appendix, Table 3.2).

Nonetheless, policymakers generally think that Web 2.0 technologies can improve citizen engagement in public sector delivery, but they think that the involvement of citizens must be more passive than active, because only consultation seems to be a main outlet for the implementation of Web 2.0 technologies to improve citizen engagement (see items 1.3 and 1.4 in Appendix, Table 3.2). Indeed, the co-production of services or the generation of content and information about public services, although relevant, do not achieve a high score and the standard deviation is high (see items 1.2 and 1.5 in Appendix, Table 3.2).

In addition, results indicate that the involvement of citizens in the generation of content and information about public services is the lowest score of our survey in this section of the study (median score: 3; mode score: 4), although responses have not been very homogeneous (this item presents the highest standard deviation). This result could indicate that policymakers could have expressed concern about the possible inappropriate use of Web 2.0 technologies by citizens, because comments or content uploaded onto social networks by stakeholders could damage the image of the politicians and local governments responsible for delivering public services.

Also, the involvement of citizens in the co-production of services is an item that has obtained a low score and high standard deviation (see item 1.2. in Appendix, Table 3.2). Perhaps this result could mean the fear that policymakers could feel when they give up significant control over public services or over the way in which communications and relationships with stakeholders are handled. Up to now, local governments have not had any experiences, or only a few of them, in the co-production of public services. This result could also indicate that policymakers in Spain believe local governments should play the role of commissioner (executor) rather than that of co-producer or facilitator.

Finally, results seem to indicate that Web 2.0 technologies could be a main tool for communication between citizens and government. According to the results, Web 2.0 technologies can stimulate the creation of communities and can improve the communication and collaboration of citizens in the public service delivery (see items 1.1, 1.2 and 1.4 in Appendix, Table 3.2). Nonetheless, previous comments regarding the perception of policymakers about the possibility of citizens to be involved in the generation of content and information about public services seem to indicate that Web 2.0 technologies could be only used by governments as communication channels for broadcasting public services with the information provided by them.

RQ2: *Do policymakers think that Web 2.0 technologies promote the technological innovation in public services*?

Table 3.3 in Appendix presents the results regarding the role of Web 2.0 technologies in the promotion technological innovation in public services. The results indicate that, in accordance with the perceptions of sample policymakers, the mashups or wikis technologies are not relevant for technological innovation in public services (see items 2.3 and 2.5 in Appendix, Table 3.3). Indeed, although these Web 2.0 applications are popular between young people for communication and participation (Orange Foundation 2014), policymakers seem not to be prone to use them into the field of public services.

The first one (mashups) are applications that take data and combine it either with other data or other web services to create something new and it is being used by government to take data about the location of government services (Bonsón et al. 2012). The second one (wikis) are large-scale knowledge-sharing projects that seek a communal pooling of knowledge (McNutt 2012), which has made these applications to be used by governments to engage citizens to contribute with ideas and suggestions in public services (Nam and Sayogo 2011). In any case, as noted previously, up to now, policymakers do not seem to associate great relevance to these technologies in delivering public services.

On the other hand, policymakers think that Web 2.0 technologies are not appropriated as a space where users can test new public services online before they are made available to the public (see item 2.1 in Appendix, Table 3.3). This result could indicate that governments think that other different forms should be used for testing public services (if any). Else, policymakers could be prone to implement new services and to collect feedback from users and, then, to improve that service.

By contrast, policymakers think that Web 2.0 technologies could be a relevant tool for gathering suggestions from users regarding the quality of public services and for making public services more user centered (see items 2.2 and 2.4 in Appendix, Table 3.3). Thus, this result confirms the comment noted previously in the first research question of our empirical research. It means that policymakers seem to think only in using Web 2.0 technologies for collecting information from citizens, but not for their involvement in the delivery process of public services.

RQ3: *Do policymakers think that Web 2.0 technologies promote the sharing knowledge needed to improve public sector services*?

Regarding this section of our study, results indicate that policymakers are aware of the potential of Web 2.0 technologies in creating a benchmark process to improve public sector services (see item 3.3 in Appendix, Table 3.4), in sharing knowledge of government, infrastructure, and other public goods (see item 3.5 in Appendix, Table 3.4) and, mainly, in creating a network for discussion of local public services in a continuous way (see item 3.4 in Appendix, Table 3.4).

Therefore, policymakers seem to be prone for using Web 2.0 technologies to achieve best practices between public agencies more than for increasing the engagement of citizens in the delivery of public services. In fact, although Web 2.0 technologies could foster effective collaboration between citizens and the government (see median for item 1.4 in Appendix, Table 3.2), policymakers recognize that local governments are not taking advantage of the skills, talents, and knowledge of citizens to solve problems in the implementation of public services (see median for item 3.1 in Appendix, Table 3.4). This finding could be a result of that previously mentioned in RQ1, because policymakers do not think relevant the involvement of citizens in the generation of content and information about public services (see median for item 1.5 in Appendix, Table 3.2).

Also, results indicate that policymakers think that standards for interoperability of public documents should be debated in other different means to those proposed by the Web 2.0 technologies (see median for item 3.2 in Appendix, Table 3.4). Perhaps this finding is produced by the public administration style in Spain, which is characterized by administrative law (Rodríguez Bolívar et al. 2006). In this regards, policymakers could think that it is better that interoperability matters must be regulated by law and not leaving this issue to be debated into digital spaces with citizens.

3.4 Discussions

As noted previously, results indicate that sample policymakers are interested in implementing Web 2.0 technologies for consultation purposes but not for participatory decision-making or co-production purposes. These results confirm prior research which demonstrated that local government still represents the Achilles heel of Spanish society as regards the advancement of e-government (Cegarra Navarro et al. 2012) due to the possible resistance of policymakers to maintain a parallel structure of working simultaneously with old-fashioned practices and with digital structures in public services delivery (Criado et al. 2013) and citizen engagement (Blank and Reisdorf 2012).

In addition, this result is produced by the public administration style in Spain, which is based on the "Weberian/Bureaucratic Model" of production characterized by administrative law which decisively influences the content, logic, and institutional

autonomy of the public administration (Kickert 1997; Rouban 1997). Under the "Bureaucratic Model" of governance, the interaction among public agencies is facilitated and local governments are placed in the leading role for public services delivery under the Web 2.0 technologies framework.

Public administrators emphasize internal productive efficiency, functional rationality and departmentalization, hierarchical control and rule-based management (Bozeman 2000). In fact, our results indicate that policymakers seem to have a wish to retain a predominant role in the implementation of Web 2.0 technologies for the delivery of public services, monitoring and managing directly the Web 2.0 technologies, and they are less favorable to the inclusion of citizens in the generation of content and information. This model of Web involvement could also indicate that social media services are by no means immune to government censorship or government-sponsored censorship (MacKinnon 2008, 2009).

On the other hand, prior research has indicated that not everything written in wikis is accurate, vandalism is not uncommon, and copyrighted materials may be used in an unauthorized manner (Boulos et al. 2006). Also, the Web 2.0 technologies are new tools to be used for delivering public services which is something not controlled completely by governments. These risks related to the use of these tools could have made sample policymakers to express that Web 2.0 technologies such as mashups and wikis are not relevant for technological innovation. Perhaps, with the experience of using these new technologies in the future, policymakers will be more prone to involve citizens in the collaboration to deliver public services and they will be more prone for a more active role to be played by citizens. Indeed, some governments are increasingly using Web 2.0 technologies for that purpose (for example, security forces in countries like The Netherlands).

3.5 Conclusions

Our study is focused on the perception of policymakers regarding the influence of Web 2.0 technologies on the participation and involvement of stakeholders in the co-creation of public services, and on the knowledge sharing and technological innovation in the public service delivery. To achieve this aim, a questionnaire has been designed and sent to policymakers of local governments in order to collect their opinions about the citizen participation in public service and in the technological innovation and knowledge sharing produced in public services under the Web 2.0 era.

As noted previously, a main finding of the empirical study indicates that policymakers think that citizens must play a more passive role in the co-production of public services than an active one. Sample policymakers think that citizens must be involved in the process of public sector delivery, but only making suggestions through consultations made from local governments, but no active roles must be played by citizens in the execution of public sector services. Indeed, results indicate

that the involvement of citizens in the generation of content and information about public services and the promotion of the co-production of services are not well scored by policymakers in our survey.

This finding is interesting because it could mean that policymakers seek to manage and monitor the implementation of Web 2.0 technologies in providing public services. The existence of a clear regulatory framework for the activities related to social networks or the establishment of a process to combat unauthorized or fraudulent postings could mitigate this risk and could make policymakers to be more prone to the effective involvement of citizens in the co-production of public services in the future. So, future research could test differences between countries regarding the use of Web 2.0 technologies for public services delivery according to the level of development of regulatory frameworks.

Regarding the role of Web 2.0 technologies in technological innovation in public services delivery, our findings indicate that policymakers only think that Web 2.0 technologies could be a relevant tool for gathering suggestions from users regarding the quality of public services and for making public services more user centered. This result confirms the previous one and it indicates the relevance in the use of Web 2.0 technologies, but only as a means to collect information from citizens but not to add knowledge for the innovation of public services. Indeed, tools for creating knowledge for the improvement of public services, such as wikis, are not considered relevant perhaps due to the risks involved in the use of these technologies. Regulation about the use of these technologies and training for employees to use and monitor Web 2.0 technologies could be relevant aspects to solve these problems. Therefore, future research could analyze different levels of training in public employees and the level and content of the use of Web 2.0 technologies for public sector delivery.

Finally, findings seem to indicate that policymakers are prone for using Web 2.0 technologies to achieve best practices between public agencies more than for increasing the involvement of citizens in the delivery of public services. This result could indicate the bureaucratic model of governance existent in Spanish local governments. Future research could collect the perception of other policymakers in different contexts and countries. Perhaps the administrative culture of the country could be a factor to explain possible differences regarding the opinion of this group of key stakeholders.

In brief, policymakers think that Web 2.0 can improve collaboration of citizens in delivering public sector services, but they have shown their intention to manage and to monitor them. Therefore, future research should analyze if policymakers have taken advantages of these technologies or they have been doomed to be only another channel of communication. The latter should be the death of Web 2.0 technologies in its application to public sector services and it would only serve as an innovative channel for government online representation and for broadcasting of government information about public services via social media sites (The White House 2009).

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3.6 Appendix

Table 3.1 Questionnaire

Questionnaire	
RQ1. Citizen engagement in the improvement of public sector services	
1.1.	Web 2.0 technologies stimulate the creation of public/private communities
1.2.	Web 2.0 technologies improve communication between government and stakeholders to promote the co-production of public services
1.3.	Web 2.0 technologies facilitate consultation on implementation or transformation of public services to the community
1.4.	Web 2.0 technologies foster effective collaboration between citizens and the government in public service delivery
1.5.	Web 2.0 technologies promote the involvement of citizens in the generation of content and information about public services
RQ2. Role of Web 2.0 technologies in technological innovation in public services delivery	
2.1.	Allows the development and promotion of tools and spaces where users can test new public services online before they are made available to the public
2.2.	Allows the gathering of suggestions from the users to enhance public services quality and the information disclosed about them
2.3.	Wikis allow knowledge in several areas and the creation of knowledge for the improvement of public services
2.4.	Allows the design of public services directly aimed at satisfying citizens
2.5.	Mashups allow the creation of new public services and improving technological innovation in public services
RQ3. Role of Web 2.0 technologies in knowledge sharing in public services delivery	
3.1.	The local government is taking advantage of the skills, talents, and knowledge of citizens to solve problems in the implementation of public services
3.2.	Web 2.0 technologies provide digital spaces for consultation and exchange in order to develop standards for interoperability of public documents
3.3.	Web 2.0 technologies create a network that allows the transfer of best practice between public agencies is provided
3.4.	Web 2.0 technologies facilitate discussion of local public services in a continuous way
3.5.	Web 2.0 technologies allow openly share knowledge of government, infrastructure, and other public goods

Source: Own elaboration

Table 3.2 Results for items related to citizen engagement using Web 2.0 technologies in providing public services

Questionnaire	Frequency	Response rate	Median	Mean	Mode	Standard deviation	Maximum	Minimum
RQ1. Citizen engagement in the improvement of public sector services								
1.1. Web 2.0 technologies stimulate the creation of public/private communities	53	37.59 %	4	3.58	4	0.97	5	1
1.2. Web 2.0 technologies improve communication between government and stakeholders to promote the co-production of public services	53	37.59 %	4	3.38	4	1.06	5	1
1.3. Web 2.0 technologies facilitate consultation on implementation or transformation of public services to the community	54	38.30 %	4	3.98	4	0.92	5	2
1.4. Web 2.0 technologies foster effective collaboration between citizens and the government in public service delivery	54	38.30 %	4	3.67	4	0.95	5	1
1.5. Web 2.0 technologies promote the involvement of citizens in the generation of content and information about public services	53	37.59 %	3	3.15	4	1.20	5	1

Source: Own elaboration

Table 3.3 Results for items related to role of Web 2.0 technologies in technological innovation in public services delivery

Questionnaire		Frequency	Response rate	Median	Mean	Mode	Standard deviation	Maximum	Minimum
RQ2. Role of Web 2.0 technologies in technological innovation in public services delivery									
2.1.	Allows the development and promotion of tools and spaces where users can test new public services online before they are made available to the public	52	36.88 %	3	2.75	3	1.10	5	1
2.2.	Allows the gathering of suggestions from the users to enhance public services quality and the information disclosed about them	53	37.59 %	4	3.96	5	1.14	5	1
2.3.	Wikis allow knowledge in several areas and the creation of knowledge for the improvement of public services	51	36.17 %	3	3.24	4	1.07	5	1
2.4.	Allows the design of public services directly aimed at satisfying citizens	49	34.75 %	4	3.71	4	1.08	5	1
2.5.	Mashups allow the creation of new public services and improving technological innovation in public services	46	32.62 %	3	3.09	3	1.03	5	1

Source: Own elaboration

Table 3.4 Results for items related to role of Web 2.0 technologies in knowledge sharing for public services delivery

Questionnaire	Frequency	Response rate	Median	Mean	Mode	Standard deviation	Maximum	Minimum
RQ3. Role of Web 2.0 technologies in knowledge sharing in public services delivery								
3.1. The local government is taking advantage of the skills, talents, and knowledge of citizens to solve problems in the implementation of public services	54	38.30 %	3	3.13	4	1.20	5	1
3.2. Web 2.0 technologies provide digital spaces for consultation and exchange in order to develop standards for interoperability of public documents	49	34.75 %	3	3.16	4	1.05	5	1
3.3. Web 2.0 technologies create a network that allows the transfer of best practice between public agencies is provided	50	35.46 %	4	3.70	4	0.99	5	1
3.4. Web 2.0 technologies facilitate discussion of local public services in a continuous way	54	38.30 %	4	3.72	5	1.12	5	1
3.5. Web 2.0 technologies allow openly share knowledge of government, infrastructure, and other public goods	55	39.01 %	4	4.20	4	0.85	5	2

Source: Own elaboration

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