Decentralized mechanisms for coordinating citizen participation

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Decentralized Mechanisms for Coordinating Citizen Participation

By

Cesar Renteria

A Dissertation submitted to the University at Albany, State University of New York in Partial Fulfillment of requirements for the Degree of Doctor of Philosophy

Rockefeller College of Public Affairs & Policy

Department of Public Administration & Policy

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Abstract

Decentralization has been an alternative mechanism of coordination to bureaucratic control. Although decentralization is a very old idea, we do not have enough clarity about how decentralization works and how this alternative can effectively help to overcome some of the problems attributed to traditional bureaucracies. In this dissertation, I bring further insights into the decentralization of decisions through two angles. First, by studying how and for what purposes crowdsourcing, a novel technology-based practice used to decentralize decisions and tasks towards citizens, has been used in government (Chapters 2 and 3). Second, by studying the process of decentralization of decisions within an organization through a horizontal structure (Chapter 4). The overall findings of this dissertation contribute to the literature on decentralization by describing processes, purposes, traps, and dysfunctions in the complicated endeavor of decentralizing decisions and fostering citizen participation.
Acknowledgements

Thank you mom and dad for bringing me to life and guarding me on my journey. Thank you Ramon, Mila, and Matthew for guiding me through this process with generosity, patience, and goodwill. Shawn and Matthew, you certainly laid some significant and fixed effects on my professional formation. I hope I find the opportunity to pass along that knowledge and way of seeing to next generations.

This dissertation is the place where the end of a journey meets with the beginning of another, like two ends of a ribbon tied. Martha, Nim, Fernando, Gloria, Mauricio, Gris (y toda la familia Cineteca), Dr. Feng, Yinzhi, Audrey, Jason, David, Stephanie, Jinhee, Felix, Lina, Yongjin, Heasun, and Sungyoon all of you, with your shining eyes and sparkling smiles, were the pearls of this ribbon. When Albanian winter days become cold and gloomy, remember that Mexican beaches will relieve you.

I wish I did not name anybody on this page because it is unfair to all professors, students, people from the Rockefeller College community, and many Albanians who showed me their great heart, and from whom I learned a lot. To every one of you, rather than saying “thank you,” I wish to share with you these words:

A dream, all a dream, that ends in nothing, and leaves the sleeper where he lay down, but I wish you to know that you inspired it.

— Charles Dickens
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1. Introduction

Governments have traditionally operated through centralized forms of organization, under the well-established bureaucratic model (Hales, 2002). Once a novelty, the bureaucratic form of organization has been touted in recent decades as the main source of anything going wrong in organizations (Courpasson & Clegg, 2006; Olsen, 2006; D. Osborne & Gaebler, 1992; Kettl, 2015). Several alternatives have appeared along with this criticism, for example, the New Public Management and New Public Governance paradigms (T. Christensen & Lægreid, 2001; S. P. Osborne, 2006) and the variations from the bureaucratic model collectively known as post-bureaucratic organizations (Heckscher, 1994). These strategies have revolved around finding alternative modes of coordination to the bureaucratic model (Olsen, 2006; Kamensky, 2018; Kettl, 2011, 2015).

In this dissertation, I seek to shed light on the decentralization of the decisions, as this mechanism has been considered by some as a way to solve some of the problems found in traditional bureaucracies (T. Christensen & Lægreid, 2001; D. Osborne & Gaebler, 1992; Hales, 2002). Decentralization of decisions can be found in several forms. For example, organizations can decentralize decisions by allowing more discretionary power on managers or first-line employees, by contracting out organizational functions, or by engaging citizens.

Decentralization narrows the distance between governments and citizens, allows governments to access more and better information for making decisions, especially at the local level, and increases the government’s accountability (Treisman, 2007; Frederickson, Smith, Larimer, & Licari, 2011; Kettl, 2011). Markets and networks share the emphasis on decentralized coordination. For example, supporters of the New Public Management have advocated for a private management approach and market mechanisms as the foundations for coordinating governments action (Frederickson et al., 2011; Kettl, 2011). On the other hand, supporters of networks, collaboration, and participatory values (e.g., representativeness, responsiveness, and accountability), have suggested solutions based on models of collaboration (and interdependence) to incorporate stakeholders (e.g., private sector, non-profits, or cit-
izens) into the decision-making process and the delivery of public services (S. P. Osborne, 2006; McGuire, 2006; Fung, 2015; Bingham, Nabatchi, & O’Leary, 2005).

The literature has extensively discussed mechanisms of decentralization through markets (P. S. Adler, 2001), but we still do not have enough clarity about how other forms of decentralization operate, particularly the forms of decentralization grounded on trust and collaboration (Hill & Lynn, 2004; Bouckaert, Peters, & Verhoest, 2016; T. Christensen & Lægreid, 2008; Kettl, 2003). Literature in public administration has extensively studied some manifestations of decentralization (as defined in this dissertation), such as citizen participation, co-production, co-creation, network governance, and contracting out (Fung, 2015; Voorberg, Bekkers, & Tummers, 2015; Provan & Kenis, 2008; Margetts & Dunleavy, 2013; Milward & Provan, 2000). Nevertheless, we do not have enough clarity about the linking mechanism between these organizational practices and decentralization. We do not have enough clarity, for example, which are the core principles of coordination in some of these instances, how these principles perform in the government, or what organizational or managerial needs stem from these approaches.

In this dissertation, I seek to provide further insights about decentralization through two lines of inquiry. In the first line of inquiry, I study the process of decentralizing decisions and tasks towards citizens through crowdsourcing platforms, a novel mechanism to promote citizen participation. Crowdsourcing is an Internet-based sourcing model that organizations use to capitalize intelligence valuable for organizations that exist outside of it (Saxton, Oh, & Kishore, 2013; Kietzmann, 2017). Crowdsourcing is a valuable tool, as it can be used as an instrument for recruiting and coordinating together a large group of citizens to interact with the government. Crowdsourcing is a novel promising tool for decentralizing some government’s decisions or tasks, but several questions remain about its use in government: how to recruit citizens, how to coordinate the debates, polls, or the data collection from citizens to better capitalize the value of crowdsourcing in government.

Extant literature in crowdsourcing has focused primarily on understanding what is crowd-
sourcing, as well as exploring the diverse forms that each constitutive element can take (e.g., Brabham, 2008; Nam, 2012; Malone, Laubacher, & Dellarocas, 2010; Schenk & Guittard, 2011; Geiger, Seedorf, Schulze, Nickerson, & Schader, 2011). However, we know little about why governments use crowdsourcing. For example, we do not have enough clarity about what purposes can crowdsourcing serve in government or how and why crowdsourcing is expected to benefit these goals. To use to good advantage the previous works of conceptualization, it is important to further study the expected benefits from crowdsourcing in government. In Chapter 2 I map and integrate the scholars’ and public managers’ perspectives about the expected benefits from crowdsourcing in government.

In Chapter 3 I follow up on this conversation by studying how the crowdsourcing platforms are designed to foster citizen participation. Crowdsourcing platforms are characterized by the wide array of alternatives to define, for example, what decision, insight, or task will be asked from citizens, how participation will be structured, or how contributions will be collected. However, it is not clear which design decisions are most effective to foster citizen participation. Seeking to bring more clarity about this, In Chapter 3, I explore how the crowdsourcing initiatives are designed to foster citizen participation. From this exploration, I identified several patterns of design choices on how the platform functions, which were associated with specific citizen participation goals. Upon these findings, in Chapter 3, I propose several crowdsourcing strategies suitable to foster different citizen participation goals. The findings of Chapter 2, followed by those of Chapter 3 move the literature one step forward on one of the main expectations of crowdsourcing: to get the best of crowds.

In the second line of inquiry, I studied a different type of decentralization; that is, the decentralization associated with network organizations, and in particular horizontality as one of its distinctive features. Network organizations stand out for their capacity to sustain a horizontal structure; to coordinate efforts through negotiation and collaboration; as well as to coordinate autonomous work units (Powell, 2003; Podolny & Page, 1998). Among its features, horizontality (i.e., the lowering of hierarchical layers), a distinctive feature of this type
of post-bureaucracy, is intriguing as it may yield several consequences in the organizations. Although the study of network organizations has progressed over the last decades, we still do not know enough details of how horizontality works within organizations (Bouckaert et al., 2016; Okhuysen & Bechky, 2009), particularly about the process that a horizontal approach implies. In Chapter 4, I explored the process through which a network organization seeks to reach and sustain a horizontal structure and workflow. To do so, I studied how Wikipolitica, a network organization for political participation that developed institutional, managerial, and symbolic tools to create and sustain a horizontal approach. Based on my findings, in this Chapter, I propose a process model describing how horizontality occurs in a network organization, including its intended and unintended consequences.

Decentralization is advancing in governments. Coordination stemming from networks is becoming more common (B. G. Peters & Pierre, 2016; Bouckaert et al., 2016; Kettl, 2015, 2011; Cejudo & Michel, 2017), the boundaries between governments and citizens are blurring (Okhuysen & Bechky, 2009), and the values and preferences of younger generations are tilting towards networking and collaborative work (Bimber, 2017; Hooghe, Marien, & Oser, 2017; Milkman, 2017; R. J. Dalton & Shin, 2014). This dissertation seeks to broaden the public managers’ toolbox to manage effectively under this changing environment. Specifically, this dissertation contributes to the literature in public administration by broadening our understanding of decentralization from two angles: decentralizing decisions and functions towards a large group of citizens and decentralizing decisions within the organization through horizontality. From a broader perspective, this dissertation provides evidence about some advantages and disadvantages of decentralization over its counterpart, the bureaucratic model.
2. Expected Outcomes from Government Crowdsourcing: Identifying and Explaining some of the Mechanisms

Abstract
Literature in crowdsourcing has focused primarily on understanding what is crowdsourcing and how it is composed, but we still do not have enough clarity about how and why crowdsourcing is expected to benefit governments. This is, why use crowdsourcing? To clarify this question, in this article I map and integrate the scholars’ and public managers’ perspectives about the expected benefits from crowdsourcing in government. I find thirteen explanations about how and why crowdsourcing benefits governments. Besides clarifying the areas of opportunity from government crowdsourcing, the findings provide insights for future research on these propositions.

2.1 Introduction
In recent years, public and private sector organizations have been looking for ways of using crowdsourcing, an Internet-based sourcing model, to capitalize on valuable intelligence located outside organizations (Kietzmann, 2017). For the public sector, crowdsourcing represents an opportunity for government action; an explanatory variable to improve the performance in organizational goals or tasks. Partially because of that, crowdsourcing has received increasing attention in the public administration scholarship (H. K. Liu, 2017c; Chen & Aitamurto, 2019; Ranchordás & Voermans, 2017; Guth & Brabham, 2017; Prpic, Taeihagh, & Melton, 2017).
Crowdsourcing is a flexible tool for government action, with several possibilities in its design. To “get the best out of the crowds,” we need to understand which design can be more successful under different circumstances or for different goals. The success of an intervention (this is, the degree in which an expected goal or benefit is attained) is an elusive concept when we lack clarity about the expected benefits (Gregor, 2006; Benbasat & Zmud, 2003). To assess the degree of success of a crowdsourcing platform, we must first clarify how is an organizational goal, the outcome, expected to benefit from crowdsourcing. Therefore, effective use of crowdsourcing as a tool for government action needs a clear understanding of what organizational tasks or projects are expected to be improved, as well as how and why the intervention contributes to achieving the expected outcomes.

Literature about crowdsourcing in government has primarily grown in the direction of understanding the explanatory variable. Several studies, for example, have focused on defining and characterizing the concept of crowdsourcing (e.g., Brabham, 2008; Nam, 2012; Estellés-Arolas & González-Ladrón-De-Guevara, 2012; Kietzmann, 2017; Malone et al., 2010; Buetner, 2015), developing typologies and taxonomies of crowdsourcing attributes (e.g., Schenk & Guittard, 2011; Vukovic, 2009; Rouse, 2010; Quinn & Bederson, 2011; Geiger et al., 2011; Doan, Ramakrishnan, & Halevy, 2011), or describing its operation (e.g., Nam, 2012; Nakatsu, Grossman, & Iacovou, 2014; Hosseini, Shahri, Phalp, Taylor, & Ali, 2015).

We know plenty about what is crowdsourcing, but very little about what are its consequences? or what are its desired impacts or effects? That is, why use crowdsourcing? Literature associating crowdsourcing with improvements in organizational goals or tasks is scarce and scattered. Some scholars have suggested some expected benefits of crowdsourcing, for example, on civic engagement (e.g., Hosio, Goncalves, Kostakos, & Riekki, 2015), co-production (e.g., Moon, 2018), problem-solving (e.g., Afuah & Tucci, 2012), or legitimacy (e.g., H. S. Christensen, Karjalainen, & Nurminen, 2015). These propositions vary in their level of completeness or formality. For example, some studies may lack a description of the mechanisms or the rationale behind the proposed association.
Instrumenting crowdsourcing for government action remains unclear, as we do not have clarity about which benefits are expected from crowdsourcing, why and how crowdsourcing generates those benefits. The *how* and *why* are building blocks for developing and testing hypotheses (Bacharach, 1989), and therefore clarity about them is of paramount importance to move research forward. Therefore, my research question is what are the desired or expected benefits of crowdsourcing for the government?

This article maps and integrates diverse perspectives on the expected benefits from instrumenting crowdsourcing in government. To do so, I investigated the scholars’ and public managers’ descriptions about what was the purpose of using crowdsourcing or what were the expected benefits of crowdsourcing in government over organizational goals or tasks, as well as their rationale and mechanisms to operate those benefits. I collected qualitative data from research articles and government crowdsourcing websites to interpret, and subsequently compare, the scholars’ and public managers’ conceptualization of the outcomes, their explanatory propositions, as well as their understanding about what crowdsourcing is intended for, being used for, or should be used for.

This article is composed of seven sections, including the foregoing introduction. In Section 2.2, I review the main lines of inquiry in the literature on crowdsourcing. I describe the methodology used in this study in Section 2.3. Then, in Section 2.4, I present the findings. In Section 2.5, I discuss the main findings, whereas in Section 2.6 I lay down some implications to the broader literature in crowdsourcing in government. Finally, in Section 2.7 I give my concluding remarks.

### 2.2 Literature

Soon after Howe (2006)’s formulation of the term *crowdsourcing*, the studies about crowdsourcing emerged rapidly, and since then this topic has enjoyed wide academic interest. So far, most of the studies have focused primarily on conceptualizations and understanding
crowdsourcing’s functionalities. For example, the early studies focused on defining crowd-
sourcing (e.g., Estellés-Arolas & González-Ladrón-De-Guevara, 2012; Brabham, 2008; Howe, 2006; Pedersen et al., 2013), as well as on conceptualizing and organizing its attributes into
typologies and taxonomies (e.g., Schenk & Guittard, 2011; Vukovic, 2009; Rouse, 2010; Geiger et al., 2011; Doan et al., 2011; Aris & Din, 2016; Aris, 2017; Ali-Hassan & Allam, 2016; AlShehry & Ferguson, 2015; Haas, Blohm, & Leimeister, 2014). Then, a body of literature sought to characterize in detail how crowdsourcing operates from three different angles: (1) the crowds, (2) the organization, and (3) the task. Some scholars, for example, were interested in describing who participates in crowdsourcing, why people participate, how they do it, and what types of tasks they are expected to perform (e.g., Malone et al., 2010; H. K. Liu, 2017b; Rouse, 2010; Corney, Torres-Sánchez, Jagadeesan, Regli, & Lynn, 2009; Quinn & Bederson, 2011; Zhao & Zhu, 2012; Feng, Ye, Yu, Yang, & Cui, 2018). Organizational studies have addressed the type of intelligence needed by the organization or the strategy to get contributions from the crowd (e.g., Hosseini et al., 2015; Nam, 2012; Brabham, 2013a; Geiger et al., 2011; Zwass, 2010), whereas scholars analyzing the tasks have characterized the types of tasks that can be crowdsourced and their attributes (e.g., Nakatsu et al., 2014; Zhao & Zhu, 2016; Alabduljabbar & Al-Dossari, 2017).

However, literature—especially empirical studies—about crowdsourcing’ outcomes or ex-
pected benefits have been mostly absent. By outcome or expected benefit, I mean the factor (or factors) upon which crowdsourcing may have a positive impact. A line of inquiry that discusses, indirectly some expected benefits have been the studies about crowdsourc-
ing’ competitive advantages. For example, some scholars have argued that the advantage of crowdsourcing lies in its capacity to access a larger pool of contributors (e.g., Haltofova, 2018; Brabham, 2008; Royo & Yetano, 2015; Chen & Aitamurto, 2019), to operate within a low budget (e.g., Schenk & Guittard, 2011), or by enabling asynchronous, distributed and depersonalized interactions (e.g., Aitamurto & Landemore, 2016). Others have looked to the other side; that is, to the competitive disadvantages of crowdsourcing (e.g., Q. B. Liu
& Karahanna, 2017; Burghardt, Alsina, Girvan, Rand, & Lerman, 2017); but generally speaking, the perceived competitive advantages concentrate around efficiency in collecting ideas from the crowds (Lampel, Jha, & Bhalla, 2012; Whitla, 2009; Ye & Kankanhalli, 2015). Thus, these studies provide insights to hypothesize that some expected benefits are efficiency and a wider pool of citizen participation.

Much of the interest in crowdsourcing, however, has emerged from the *wisdom-of-crowd* hypothesis. This widely disseminated hypothesis, formulated by Surowiecki (2005), states that the aggregate of crowd’s judgments will outperform individual experts; in other words, the crowd is wiser than the wisest individual. This hypothesis is especially relevant for governments because it implies that two conflicting values, pluralism and rational bureaucracy, can coexist. The tension emerges because opening the decision-making process to citizen participation can undermine the quality, effectiveness, or timeliness of expert bureaucrats’ decisions (King, Feltey, & Susel, 1998), but if the crowds turn out to be wiser than the wisest expert, then this tension dissipates. Regrettably, current evidence supporting the wisdom-of-crowd hypothesis is mostly anecdotal, and scant empirical evidence does not support this hypothesis (e.g., Simmons, Nelson, Galak, & Frederick, 2011). However, this hypothesis supports the notion that better decisions may be an expected benefit.

More related literature has discussed expected outputs from a crowdsourcing platform. Outputs are the aggregate of contributions or tasks being completed (e.g., Brabham, 2013a; Hetmank, 2013; Ghezzi, Gabelloni, Martini, & Natalicchio, 2018). For example, Ghezzi et al. (2018) conceives an innovative idea or the completion of a microtask as the main outputs provided by any crowdsourcing initiative. Outputs, however, do not describe the expected benefits from crowdsourcing. Few scholars have looked at the outcomes of crowdsourcing; that is, the factors being benefited from crowdsourcing. Most of this literature, however, has been speculative rather than empirical. For example some studies have conceived crowdsourcing as an instrument to foster civic engagement (e.g., Hosio et al., 2015), co-production (e.g., Moon, 2018), and problem-solving (e.g., Afuah & Tucci, 2012), to optimize operations
(e.g., Prpic, Taeihagh, & Melton, 2015), or to strengthen legitimacy (e.g., H. S. Christensen et al., 2015). These vary in their level of the speculation’s completeness or formality. For example, some studies may lack a description of the mechanisms or the rationale behind the proposed association. However, this body of literature, collectively, does provide a clear description and argumentation of these outcomes.

The works on competitive advantages, outputs, and outcomes lay a good basis to understand what are the expected benefits of crowdsourcing. However, further empirical studies are needed to complement these conceptualizations or speculations. Upon these antecedents, in this empirical study, I will further investigate the variety of crowdsourcing’s expected benefits.

2.3 Methodology

To map what are the expected benefits of crowdsourcing in government, I used a qualitative interpretative approach (Miles, Huberman, & Saldana, 2014). In this study, I seek to understand these expected benefits in the academic discussions as well as in the practitioners’ discussion. As will be described below, there are reasons to believe that these may have some differences. Therefore, my empirical analysis was based on data from scholarly and practitioner sources (which will be described below). Upon these sources, I sought to uncover systematic patterns associated with the expected benefits of crowdsourcing in government.

2.3.1 Data collection

To conduct my empirical analysis, I collected two sets of qualitative data. The first set of data was composed of peer-reviewed academic articles about crowdsourcing in government. I compiled the peer-reviewed research articles that matched the keywords “crowdsourcing” and “government” (or the alternatives “public sector,” and “public administration”). Then, after scanning their abstract, I kept the articles that indeed discussed the overarching theme
of crowdsourcing in government, which amounted to 126 articles.

Although I used all these articles as a basis for my analysis, not all of them were useful. Naturally, this base of articles comprised a wide variety of topics and research interests revolving around the overarching theme of “crowdsourcing government,” for example, the “dark side” of crowdsourcing, or “definitions,” “determinants,” “frameworks,” “motivation,” “outcomes,” and “taxonomies” among others. Therefore, several articles focused on aspects of crowdsourcing different than a direct or indirect discussion about the goals or expected benefits.

As discussed in the literature review, the expected benefits of crowdsourcing in government is a research gap. Although several articles have discussed this topic directly and—mostly—indirectly, the list of expected benefits may be broader than what is currently discussed in the literature. Further, most of the research articles are conceptual rather than empirical. Few articles have drawn their propositions based on case studies or comparative case analysis. As government crowdsourcing platforms have exploded worldwide during the last years, and some efforts have compiled them for comparative analysis, expanding the qualitative analysis beyond the scholarly discussion may improve the findings in this article. To fill this gap, I incorporated a second set of qualitative data, through which I seek to observe the practitioners’ point of view with regards to crowdsourcing’s expected benefits.

The second set of data was composed of website contents from government crowdsourcing initiatives, which I selected from CrowdLaw, a specialized archive of crowdsourcing initiatives in governments around the world. Then, I used the definition crafted by Estellés-Arolas and González-Ladrón-De-Guevara (2012)\(^1\) as my primary inclusion criteria, along with two additional criteria: (1) government was the only crowdsourcer, and (2) the website was operating at the moment of the study (in either ongoing or concluded initiatives).

From these websites, I collected the pages in which the public managers provided information  

\(^1\)Estellés-Arolas and González-Ladrón-De-Guevara (2012)’s definition of crowdsourcing comprises the following criteria: there is a clearly defined (1) crowd, (2) task with a goal, (3) recompense received by the crowd, (4) crowdsourcer, (5) compensation received by the crowdsourcer; (6) it occurs on the Internet, and (5) it uses an open call.
mation about the initiative. For example, I collected the website’s page named “about us,” blogs, guides, and similar documents available on the website. I selected these pieces of data because they provide perspectives that come from within the organization. Several of these pages were signed with the name of the public manager responsible for the crowdsourcing initiative or represent official communications from the managing team. I also collected complementary data from contents outside the platform’s website in which the public managers’ perspective was obtained by direct communication. For example, news’ articles where the public managers are interviewed (or quoted) or case studies referencing information from the managers. In total, I collected 93 documents from 34 initiatives, averaging 2.5 documents per case —which I preserved in digital format for research reproducibility.

2.3.2 Data analysis

I based my empirical analysis on grounded theory (Glaser & Strauss, 1967), which I conducted in two stages. In the first stage, I reviewed the two sets of data to identify emergent themes about the expected benefits of crowdsourcing, as well as the rationale and mechanism of the association. During the first stage, I iterated between the literature and the emerging open codes from the qualitative data.

In the second stage, I used focus coding and constant comparative analysis to refine and narrow down the preliminary open codes into a set of expected benefits (Emmerson, Fretz, & Shaw, 1995). The constant comparative method helps to refine the emergent concepts through a continuous comparison of ongoing and previous coded indicators (i.e. words, sentences, or passages) (Baturina, 2015).

The coding strategy remained open to find multiple expected benefits in each data unit (i.e. in each peer-reviewed article or platform’s document). The majority of the sources showed multiple expected benefits. For example, a single peer-reviewed article may suggest that crowdsourcing contributes to ‘participatory democracy’ and ‘problem-solving’ in the government. In Section 2.4, I will use the term “expected benefits” to refer to the themes
that emerged during coding, although they are the crowdsourcing’s outcomes, that is, not the expected benefits, but the recipients of the expected benefits. For example, crowdsourcing was expected to benefit the ‘lawmaking’ process in government.

2.4 Findings

Fourteen themes emerged after open coding the two data sets. Each theme represents a topic where which scholars and public managers expect crowdsourcing to bring benefits. Five expected benefits were only observed in the scholarly discussion, four only in the data associated with public managers, whereas five were found in both cases. Table 2.1 summarizes each expected benefit, its description, and whether it was found in the literature, in the platforms, or both. In the next paragraphs, I will describe and discuss every expected benefit.
<table>
<thead>
<tr>
<th>Expected benefit</th>
<th>Description</th>
<th>Scholar</th>
<th>Manager</th>
</tr>
</thead>
<tbody>
<tr>
<td>Citizen participation</td>
<td>Crowdsourcing expands the organizational capabilities, expands the citizen capabilities, or improves the government-citizen relationship.</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Participatory democracy</td>
<td>Crowdsourcing contributes to a fairer delivery of public services and a more inclusive decision-making process.</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Lawmaking</td>
<td>Crowdsourcing democratizes legislation.</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Co-creation &amp; co-production</td>
<td>Crowdsourcing widens the pool of external human capital to design policies or deliver public services.</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Open innovation</td>
<td>Crowdsourcing is a new learning paradigm that captures the diversity of knowledge and ideas residing outside the organization.</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Prototyping</td>
<td>Through crowdsourcing, citizens can provide feedback on public service prototypes or can develop prototypes themselves</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Problem-solving</td>
<td>Crowdsourcing bridges the access to valuable, but distant knowledge residing outside the organization.</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Policy design</td>
<td>Crowdsourcing speeds the acquisition of data and judgments from future beneficiaries of policies.</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Legitimacy</td>
<td>Crowdsourcing increases the quantity and diversity of citizens contributing to the decision-making processes and promotes deliberation.</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Urban planning</td>
<td>By expanding the pool of contributors, governments can produce better policies and can boost citizens’ interest in the urban agenda.</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Bureaucratic performance</td>
<td>By creating a channel of communication to receive feedback from citizens, bureaucracies can improve the availability and quality of public services.</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Evidence checks</td>
<td>Crowdsourcing increases the capability to reach experts and conform committees to provide, discuss, or validate scientific evidence supporting policies.</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Participatory budgeting</td>
<td>Crowdsourcing lowers the barriers and costs for government and citizens to implement participatory budgeting.</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Sensing the city</td>
<td>Crowdsourcing contributes to decentralize the collection of relevant information about the city and improves its timeliness and accuracy.</td>
<td>X</td>
<td></td>
</tr>
</tbody>
</table>

Table 2.1: Summary of expected crowdsourcing’s benefits
Citizen Participation. This concept was the most associated with crowdsourcing. I identified in the literature three competing explanations about how crowdsourcing fosters civic engagement: (1) expanding organizational capabilities, (2) expanding citizen capabilities, and (3) improving the relationship between government and citizens (see, Hosio et al., 2015; Brabham, 2008; Nam, 2012; Palacios, Martinez-Corral, Nisar, & Grijalvo, 2016; Royo & Yetano, 2015). In the next paragraphs, I will describe each explanation.

Expanding organizational capabilities. Crowdsourcing can expand the organizations’ capabilities by integrating external sources of knowledge into the administrative processes (Royo & Yetano, 2015). Governments can obtain valuable assets from the crowds to improve their functioning (Palacios et al., 2016). For example, governments can access ideas, solutions, information, capital, or feedback from citizens. This is possible because crowdsourcing enables the transfer of interdisciplinary expert knowledge, but also because it simply expands the knowledge base available to the organization—regardless of the crowd’s expertise level (Royo & Yetano, 2015; Marjanovic, Fry, & Chataway, 2012; Chen & Aitamurto, 2019). In other words, through crowdsourcing governments access the knowledge of either experts or outsiders. Royo and Yetano (2015) and Brabham (2013b) suggest, for example, that in crowdsourcing contributors are likely to be citizens with specialized skills, knowledge, or professional training that the organization may lack. Lakhani and Panetta (2007), on the other hand, explain that crowdsourcing’s added value does not come only from experts, but also from outsiders. Outsiders, regardless of their training, can bring fresh eyes to traditional problems and, therefore, can expand the horizon of solutions. In Royo and Yetano (2015)'s words, this proposition is summarized as “the more minds addressing a problem, the greater the chances of finding a solution.”

Expanded organizational capabilities are expected to improve the decision-making process (Palacios et al., 2016; H. K. Liu, 2017b; Epstein & Leshed, 2016; Nam, 2012; Obstfeld, 2005), which in turn is expected to make the government more efficient, more accountable or more user-centered, to increase the quality of public services, as well as to improve quality

*Expanding citizen capabilities.* A competing explanation states that citizen participation is benefited because crowdsourcing expands the citizens’ capabilities through three mechanisms: (1) nurturing online communities, (2) activating social learning, and (3) empowering citizens. For some scholars, crowdsourcing platforms are online communities, in which the interaction among participants produces an exchange of information and, consequently, increases the participants’ knowledge and awareness (H. K. Liu, 2017a). Crowdsourcing is a social activity in which social ties are strengthened through sustained cooperative interactions among the participants. Therefore, the sustained interaction in online communities can also develop a personal identification and a sense of belonging among participants, which fosters social capital and community identity (Royo & Yetano, 2015; H. K. Liu, 2017a).

The participants learn through their interaction with others; they can acquire new knowledge, hone their skills, they can fortify their ideas or arguments, or even change their ideas (Jayanti & Singh, 2010; Bandura, 2001; Steils & Hanine, 2016). Based on deliberative democracy theory (see, Pateman, 2012), Nam (2012) suggests that this process of social learning empowers citizens because they become more informed about the concerns of their community and may strengthen their civic skills.

Activating social learning and nurturing online communities are explanations grounded in the assumption of cooperative social interactions. In contrast, the explanation of empowered citizens focuses on individuals. Crowdsourcing empowers citizens because it equips them with better information and with a channel through which they can make their voice heard (Aitamurto, 2012; Aitamurto & Landemore, 2016; Prpic et al., 2015; H. K. Liu, 2017b). Scholars suggest that the sources of empowerment are Mobile communications and Web 2.0 technologies, which have equipped citizens with better communications capabilities to interact and organize themselves (Hosio et al., 2015), but also have changed the role of users, who have become active consumers and producers of information—rather than just

16
passive receivers of information (Nam, 2012; Hosio et al., 2015). With these tools at hand, citizens potentiate their capacity for seeking information, expanding their knowledge, honing their skills (Thomas & Streib, 2005), lowering the cost of mobilizing (Vragov & Kumar, 2013). Therefore, now, information production can be distributed and collaborative, and this mindset spills over the citizens’ expectations about their interaction with governments.

**Improving Relationships.** A third explanation about why crowdsourcing contributes to citizen participation states that crowdsourcing improves the relationship between citizens and government (Nam, 2012; Royo & Yetano, 2015). Contrasted with traditional channels of communication, scholars argue that crowdsourcing enables governments to interact with massive audiences and eases synchronous and asynchronous dialogue between citizens and governments (Hossain & Kauranen, 2015).

What makes this explanation distinctive is the treatment of alienation. Tapping on the literature on trust in government (see, Verba, Schlozman, & Brady, 1995; Nye, Zelikow, & King, 1997), Nam (2012) suggests that when citizens’ opinions and ideas are crowdsourced, this makes citizens feel less alienated from the decision-making processes. Therefore, an effective crowdsourcing initiative helps governments transforming the relationship between government and citizens, from a contentious relationship in which government is perceived as the antagonist to a collaborative environment in which government is perceived as an ally (Nam, 2012). Ultimately, these conditions may contribute to strengthening trust in government (Nam, 2012).

**Participatory Democracy.** Crowdsourcing is expected to contribute to participatory democracy by sourcing insights from citizens or distributing decisions to citizens (Chen & Aitamurto, 2019; H. S. Christensen et al., 2015; Haltofova, 2018; Gellers, 2016; Guth & Brabham, 2017; Brabham, 2013a; Chen & Aitamurto, 2019).\(^2\) The main rationale supporting this proposition is that crowdsourcing fosters inclusiveness by scaling the size and diversity of contributors (Aitamurto & Landemore, 2016; Gellers, 2016); this idea is succinctly captured

\(^2\) Other terms were found referring to roughly the same idea: participatory policy design (Taeihagh, 2017), and participatory management (Chiu, Liang, & Turban, 2014).
in Gellers’ words (Gellers, 2016): “greater inclusiveness may yield more input, better ideas, and a greater sense of ownership over the outcomes resulting from participation.” Complementary arguments point out that crowdsourcing expands citizens’ opportunities to engage in deliberation, idea generation, or micro-tasking (Aitamurto & Landemore, 2016).

Other explanations also highlight the capacity of crowdsourcing to promote diverse democratic values. For example, Chen and Aitamurto (2019) suggests that crowdsourcing contributes to a fairer delivery of public services and a more inclusive, transparent, and collaborative policy-making process. They also suggest that crowdsourcing opens the policy-making process to citizens in all its cycle: defining the problem, constructing alternatives, deciding and designing the policy, implementing the policy, and evaluating it, which make crowdsourcing a suitable alternative for participatory governance.

The authors supporting this proposition emphasize the democratic values promoted by crowdsourcing (e.g., transparency, accountability, inclusiveness, deliberateness, or civic empowerment) while acknowledging that crowdsourcing does not necessarily contribute to a high-quality decision or optimized solutions to a certain problem, not it necessarily foster deliberation (Aitamurto, 2012).

Lawmaking. Using crowdsourcing for lawmaking—an activity also termed as crowdsourcing legislation—is conceived as an innovative way to democratize legislation (Aitamurto & Landemore, 2016; Chen & Aitamurto, 2019; H. S. Christensen et al., 2015; Taeihagh, 2017; Aitamurto, 2012; Brabham, 2013a). Crowdsourcing helps either to collect knowledge and ideas from citizens or to foster deliberation among citizens. Aitamurto and Landemore (2016), for example, observed that crowdsourcing stimulates the exchange of arguments among participants in a setting characterized by freedom, equality, and inclusiveness of voices. Despite the natural lack of representativeness caused by the digital divide, these authors found diversity in viewpoints and opinions (Aitamurto & Landemore, 2016). A classic example of crowdsourcing legislation is Iceland, where the constitution-writing process was crowdsourced in 2011 (Landemore, 2015).
Co-creation and co-production. Crowdsourcing is expected to widen the pool of external human resources available to contribute to the design or delivery of public services (Ghezzi et al., 2018; Moon, 2018; Greer & Lei, 2012). Wider access to external knowledge and skills increases the chances to find better solutions for challenges during policy design. In terms of co-creation, crowdsourcing represents a channel of interaction that allows citizens to take a bigger and more proactive role in the design of public services (Clark, Brudney, & Jang, 2013; Moon, 2018). In terms of co-production, crowdsourcing represents a mechanism through which governments can transfer tasks to citizens (Prpic et al., 2015).

Open innovation. Crowdsourcing is expected to foster open innovation (Palacios et al., 2016; Prpic et al., 2015; Hossain & Kauranen, 2015; Marjanovic et al., 2012). This proposition is grounded in two main rationales. The first rationale conceives crowdsourcing as a “new learning paradigm” that captures the diversity of knowledge and ideas existing outside the organization and effectively combines it with internal ideas and knowledge (Palacios et al., 2016; Hossain & Kauranen, 2015; Albors, Ramos, & Hervas, 2008; Jeppesen & Lakhani, 2010; Schlagwein & Bjorn-Andersen, 2014).

The second rationale states that crowdsourcing has competitive advantages in problems requiring innovation (Surowiecki, 2005; H. S. Christensen et al., 2015). Surowiecki (2005), for example, argues that “when innovations are created, predictions anticipated or decisions made, a collective effort of a large number of individuals is often better than reliance on a few experts.”

Scholars disagree on the mechanism bearing competitive advantages. Some scholars argue that the competitive advantages are obtained through collaboration, while others attribute it to the competition. The collaboration explanation suggests that crowdsourcing strengthens the processes of sharing, reusing, and recombining knowledge stemming from the crowd’s contributions (Palacios et al., 2016). The competition argument, on the other hand, is primarily rooted in the wisdom-of-crowd hypothesis and the notion of tournaments, suggesting that, when organizations seek to produce novel ideas or respond to new challenges,
the outcome from crowd competitions outperforms that of experts or professionals (Poetz & Schreier, 2012).

**Prototyping.** Crowdsourcing is also expected to improve the prototyping of new public goods, services, or organizational processes (Palacios et al., 2016). Through crowdsourcing, citizens can contribute to the development of innovations by imprinting their views, needs, or ideas to prototypes created by governments or by developing prototypes themselves. The usefulness of crowdsourcing for this purpose stems from its capacity to strengthen collaboration between the parts involved—which is a key factor for a good prototyping (Mladenow, Bauer, & Strauss, 2014).

**Problem-Solving.** Crowdsourcing is also conceived as a mechanism for solving problems in organizations (Brabham, 2008; Afuah & Tucci, 2012; Ghezzi et al., 2018; Jeppesen & Lakhani, 2010). Some scholars conceive crowdsourcing as especially promising to address the so-called “wicked problems” (Palacios et al., 2016; Ghezzi et al., 2018; Chiu et al., 2014). Knowledge residing outside and distant from the organizations is often key to solving problems. By improving the capacity to collect this type of knowledge, crowdsourcing bridges the access to such knowledge—a process known as distant search—within a relatively low investment from the organizations (Afuah & Tucci, 2012). Therefore, organizations can improve their performance of finding solutions for the challenges at stake (Palacios et al., 2016; Afuah & Tucci, 2012; Kietzmann, 2017).

**Policy Design.** Crowdsourcing is expected to contribute to policy design by scaling the number of participants, empowering external contributors, and speeding the acquisition of data and judgments from participants (Palacios et al., 2016; Radu, Zingales, & Calandro, 2015; Taeihagh, 2017). Combined, all these mechanisms help mitigate uncertainties about the future citizens’ acceptance, stakeholders’ adoption, or overall performance of the policy designed (Taeihagh, 2017).

**Legitimacy.** Crowdsourcing is expected to strengthen democratic legitimacy (H. S. Chris-

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3Wicked problems are class of problems difficult to solve because they are ill-formulated, value conflicting, or with confusing information (Buchanan, 1992).
tensen et al., 2015; Royo & Yetano, 2015; Gellers, 2016). The main rationale supporting this proposition is that crowdsourcing increases the number and diversity of citizens contributing to decision-making processes (Gellers, 2016; H. S. Christensen et al., 2015), and promotes deliberation (Royo & Yetano, 2015).

As the incorporation of citizens’ contributions into the decision-making process improves the perceived quality of the decision-making, the outcome is more likely to be perceived as fair, transparent, and inclusive. Legitimacy is reinforced through this perceived procedural fairness (Haltofova, 2018; Chen & Aitamurto, 2019; Esaiasson, Gilljam, & Persson, 2012; Carman, 2010). H. S. Christensen et al. (2015) suggest that crowdsourcing also promotes legitimacy by providing a more cooperative environment for interactions between public managers and citizens.

Citizens may grant legitimacy for different reasons, and governance processes may be key to understand how crowdsourcing operates legitimacy changes (H. S. Christensen et al., 2015). For example, some citizens may grant legitimacy as a response to satisfaction with the policy outcomes, whereas others as a response to satisfaction with the fairness of the decision-making process—this quality also shapes the citizens’ willingness of engaging in the process (H. S. Christensen et al., 2015).

Some authors argue that even if the government does not incorporate all citizens’ contributions, participants will positively evaluate the openness of the decision-making process (Tyler, 2006, 2003). Consequently, they caution against the possibility that crowdsourcing may be used just for symbolic participation rather than for a transformation of the decision-making process.

**Urban Planning.** Crowdsourcing is also perceived as a valuable instrument for urban planning (Haltofova, 2018; Taeihagh, 2017). By expanding the pool of contributors to the planning process, governments can produce better policies and can boost citizens’ interest in public issues (Lehdonvirta & Bright, 2015). Scholars also consider that, by enabling direct communication between citizens and government, crowdsourcing can provide inclusiveness.
(Brabham, 2008), can improve the citizens’ ability to effectively influence the urban planning agenda (Royo & Yetano, 2015), can empower neighborhoods by strengthening the social capital and the sense of identity in neighborhoods (Haltofova, 2018), and can expand the government’s ability to collect information from neighborhoods (Brabham, 2008). This factor is closely associated with the factor “policy design,” although in this case, the city is the center focus of attention.

**Bureaucratic Performance.** Crowdsourcing can be used to improve the bureaucratic performance; this is, to reduce the bureaucratic burden. The main idea is creating a channel of communication to receive feedback from citizens and using them to improve bureaucracy and, consequently, improving the availability and quality of public services. The main idea is to reduce the bureaucratic burden and hassle when citizens receive public services.

An exemplar of this purpose is Mazinam Slogu, where citizens can rate and comment on their experience at a government office and can suggest changes to bureaucratic procedures. Officials are tasked to process the suggestions, explaining to citizens the impediments when the suggestions are not feasible or submitting to the agencies of concern to work on improvements; the State Chancellery has the authority to order the institutions to whom the problem pertains to work on changes to legislation or other solutions.

Latvia’s platform Futbols illustrates the application of technology to change the bureaucratic culture. This platform is named after Latvia’s public service culture, where the citizens are routinely footballed by public service officials from one office to another. The platform seeks to break this culture by allowing citizens to rate the service received, to report if the user is being footballed by an officer, or to praise the positive experience with a particular public officer.

**Evidence Checks.** This strategy seeks to reach experts and conform several committees of experts willing to discuss scientific evidence supporting policy actions. The strategy looks after the ideal of evidence-based decision-making, where the crowd plays a key role in their professional assessment. In the case of the United Kingdom’s Evidence Checks, for example,
the managing team of the crowdsourcing platform argues that this appraisal has been a useful resource of knowledge for policy-making; these expert committees work better when they are formed around a narrow policy issue and ground rules are set to govern the debate.

**Participatory Budgeting.** Several crowdsourcing initiatives were devoted to participatory budgeting. This was a missing concept from the conceptual framework, but not entirely overlooked, as participatory budgeting is the foundation of the concept of participatory democracy. Therefore, some might consider participatory budgeting as a special case of participatory democracy. A good example of participatory budgeting is the platform Lisboa Participa, which incorporates the geo-referencing of the proposals, an innovation that allows citizens to engage with budgeting based on their geographic proximity.

**Sensing the City.** Governments can also crowdsource and document information from the city. Information is collected on the conditions of the citizens’ surroundings, such as environmental degradation, public infrastructure malfunction, or infringements of regulations. This type of decentralization of the collection of relevant information about the city gives the city managers a big eye to micro-manage the city. Mapping technologies and mobile devices are typically fundamental since the subject of information collection is the material dimension of the city. The fact that the crowdsourcing platforms publicize every contribution fertilizes the public awareness of the city’s conditions and the government’s responsive capacity to address the reports.

### 2.5 Discussion

Overall, these results help in understanding the qualitative variation that crowdsourcing as an explanatory variable. Table 2.2 displays the frequency in which all the expected benefits were observed and coded from each of the sources. For example, ‘citizen participation’ was an expected benefit observed in 24% of the data units of the scholars’ perspective (i.e. peer-reviewed articles), and 38% of the data units of the public managers’ perspective (i.e.
platforms’ documents). Except for citizen participation, all of the concepts have a relatively low frequency. These results help to uncover the wide range of possibilities or qualitative variation that this explanatory variable can take, and which expected benefits are less likely to be observed either in academic discussion or in platforms.

<table>
<thead>
<tr>
<th>Expected benefit</th>
<th>Scholar</th>
<th>Manager</th>
</tr>
</thead>
<tbody>
<tr>
<td>Citizen Participation</td>
<td>24%</td>
<td>38%</td>
</tr>
<tr>
<td>Participatory Democracy</td>
<td>14%</td>
<td>20%</td>
</tr>
<tr>
<td>Lawmaking</td>
<td>8%</td>
<td>11%</td>
</tr>
<tr>
<td>Co-creation &amp; co-production</td>
<td>8%</td>
<td>0%</td>
</tr>
<tr>
<td>Open innovation</td>
<td>8%</td>
<td>0%</td>
</tr>
<tr>
<td>Prototyping</td>
<td>3%</td>
<td>0%</td>
</tr>
<tr>
<td>Problem-solving</td>
<td>11%</td>
<td>0%</td>
</tr>
<tr>
<td>Policy Design</td>
<td>8%</td>
<td>3%</td>
</tr>
<tr>
<td>Legitimacy</td>
<td>8%</td>
<td>0%</td>
</tr>
<tr>
<td>Urban Planning</td>
<td>5%</td>
<td>12%</td>
</tr>
<tr>
<td>Bureaucratic Performance</td>
<td>0%</td>
<td>6%</td>
</tr>
<tr>
<td>Evidence Checks</td>
<td>0%</td>
<td>3%</td>
</tr>
<tr>
<td>Participatory Budgeting</td>
<td>0%</td>
<td>3%</td>
</tr>
<tr>
<td>Sensing the City</td>
<td>0%</td>
<td>3%</td>
</tr>
</tbody>
</table>

Table 2.2: Percentage of sources covering each expected benefit

The main expected benefits on the public manager side were associated with democratic ideals. For example, the most frequent theme was ‘citizen participation,’ which was discussed in 38% of the data sources. This theme was followed by ‘participatory democracy,’ present in 20% of the sources. Upon a close qualitative inspection of this trend, I found that the prevailing narrative among public managers was that crowdsourcing expands citizens’ capabilities and, through granting the right to participate and providing the means to do so, crowdsourcing promotes participatory democracy.

I also found that in the majority of the platforms where crowdsourcing was expected to benefit or promote the ‘participatory democracy,’ the initiative was implemented by the legislative (in particular, by the legislative bodies in parliamentary democracies), not the executive branch of governments. Therefore, a major user of crowdsourcing to connect with citizens is the legislative, especially European crowdsourcing initiatives—where a bigger share
of countries are parliamentary democracies.

On the scholars’ side, the themes found were more evenly distributed, however, ‘citizen participation’ and ‘participatory democracy’ were the most discussed expected benefits. Notably ‘problem-solving’ and ‘legitimacy’ were two expected benefits fairly discussed by the scholars, but not found in the public managers’ sources. On the other direction, ‘urban planning’ and ‘bureaucratic performance’ seem to be public managers’ preoccupations which found little room on the academic side.

These results suggest that both scholars and public managers perceive crowdsourcing primarily as a tool to bridge the gap between citizens and governments. However, this perspective differs in some aspects. For example, Table 2.2 shows that I did not find discussions about problem-solving from the public managers’ perspective. Upon a qualitative inspection of that perspective, I found that public managers showed little to no interest in the wisdom-of-crowd hypothesis. I also found limited descriptions of concepts associated with this hypothesis, such as efficiency, innovation, or organizational learning. For managers, the main value of crowdsourcing was not helping to find optimal solutions, but contributing to improving the dialogue with citizens. This was a contrasting perspective with the scholars’ discussion, where the wisdom-of-crowd hypothesis—as described in Section 2.2—was one of the core arguments in favor of the use of crowdsourcing in government.

The expected benefits can be grouped into three big categories: tactical, strategic, and normative. Some expected benefits had a tactical connotation. For example, collecting votes or ideas were actions being used as instruments for other purposes. Other expected benefits had a strategic connotation; that is, they pointed out to a set of actions directed towards a clearly defined purpose. Some strategies were, for example, drafting an urban plan, proposing or endorsing a legislative bill, or building public infrastructure. In some cases, strategies were presented as the only goal of the crowdsourcing initiative, but in other cases strategies were linked to a broader sphere of action, which I refer to as the normative category.
Normative values—such as legitimacy, efficacy, or equity—were portrayed as the ultimate consequences after a sustained crowdsourcing initiative. For example, the government may seek to strengthen their legitimacy and citizens' trust through crowdsourcing the drafting of urban plans. Among these normative values, legitimacy was the only expected benefit observed explicitly in the scholars' data. However, other normative values in government, some related to performance (i.e. efficacy, efficiency, and organizational learning), whereas others related to democracy (i.e. equity, social justice, and the plurality of voices), should be taken into consideration. The expected benefits seemingly related to government performance were problem-solving, policy design, open innovation, and appraisal of evidence. Other expected benefits seemed to be associated with organizational learning (i.e. prototyping and open innovation) or the organizational capacity to adapt to changes in the environment (i.e. sensing the city).

For some readers, some concepts may appear to touch on the same notion. For example, citizen participation and participatory democracy were expected benefits used sometimes interchangeably in both peer-reviewed articles and platform documents. However, I followed a methodological strategy of not merging themes that would be perceived as different by some scholars. Citizen participation and participatory democracy exemplify this point: while citizen participation is often a non-binding mechanism, in participatory democracy citizens are granted the right to participate in decisions along with government authorities (Pateman, 2012).

In some cases, I found some closely related expected benefits coexisting within the same sources, suggesting that we might conceive a relationship among them. For example, ‘urban planning’ was often portrayed as a mechanism of ‘citizen participation,’ which in turn, was a strategy to cultivate ‘legitimacy.’ Within that context, ‘urban planning’ may be conceived by some scholars as a type of ‘citizen participation,’ whereas the latter may be conceived as linked, sequentially, with ‘legitimacy’—or as a mediating factor.

The categorization of tactics, strategies, and normative values may help to make sense of
how some of this wide variety of expected benefits may be connected. For example, urban planning and customer feedback may be tactics perceived as forms of citizen participation; in turn, citizen participation may be a strategy strongly associated with the normative value of legitimacy. Participatory budgeting and lawmaking could be tactics strongly associated with participatory democracy by managers of crowdsourcing initiatives. Exploring the connections among these expected benefits, however, lies beyond the reach of this article. Future research may contribute by making sense of this constellation of expected benefits.

2.6 Implications

The findings from this study help moving the research forward by providing empirical evidence about the expected benefits of using crowdsourcing in public organizations. Previous literature had speculated over some possible benefits (Moon, 2018; Hosio et al., 2015; Prpic et al., 2015; H. S. Christensen et al., 2015), and some competitive advantages brought by the use of crowdsourcing (Haltfova, 2018; Schenk & Guittard, 2011; Aitamurto & Landemore, 2016; Lampel et al., 2012). Individually, these works were scattered and limited in their explanation of how and why crowdsourcing was expected to bring benefits, but collectively these works provided a good sense about the mechanisms. By reviewing a broader array of academic works in government crowdsourcing and analyzing the perspective of public managers, this study suggests 14 possible expected benefits from crowdsourcing. This study also provides a sense of which of them are being implemented more frequently by public managers.

Besides clarifying the expected benefits, and reviewing how and why crowdsourcing is associated with them, I identified five assumptions about the way these connections are established: (1) crowdsourcing fosters plurality of ideas, (2) experts will come to the platform, (3) organizations have enough capabilities to process information, (4) online communities will emerge naturally in the platforms and citizens will be motivated to interact collaboratively,
and (5) public managers are interested in interacting with citizens. Assumptions are very important when we are talking about theories of change, as the former live implicitly in the later (Weiss & Others, 1995; Rogers & Weiss, 2007). These assumptions are relevant to the broader literature because they may unveil the conditions upon which certain expected benefits may take an effect. I will discuss each of them below.

First, crowdsourcing was often assumed to foster the plurality of ideas. However, as any Internet-based medium, crowdsourcing cannot escape being exposed to the digital divide, which jeopardizes plurality (Van Dijk, 2006; Barzilai-Nahon, 2006). The digital divide biases the citizen participation, not only through the divide between those who have Internet access and those who do not have but also by the variation among the population of the digital skills needed to effectively use a crowdsourcing platform. The platform does not guarantee that peripheral voices would speak out or would be heard through the platform.

The perils of the digital divide combine with the fact that people participating in crowdsourcing platforms are self-selected or with the possibility that public managers may not be keen to include or hear all voices (Gellers, 2016). Recent evidence has shown that crowdsourcing can render a diversity of voices that seems to overcome the limitations caused by the digital divide (Chen & Aitamurto, 2019). However, a biased or unrepresentative collection of contributions hurdles plurality in crowdsourcing platforms.

The normative value of plurality resides in providing a forum for deliberation in which everybody has the chance to say something, but the quality of the outcomes is of lesser importance. Plurality may clash with the normative values of efficacy or efficiency, posing a difficult choice to public managers: whether to choose a diversity of voices or quality of decision outcomes. The wisdom-of-crowds hypothesis is appealing precisely because it renders the possibility of having both, plurality and quality in decisions. Regrettably, this hypothesis has not yet been proven. Understanding the circumstances in which these two normative values converge or contrast is a fruitful research seam.

In some cases, a fruitful deliberation is expected to come out of a crowdsourcing plat-
Deliberation, Chambers (2003, p. 309) argues, entails “debate and discussion aimed at producing reasonable, well-informed opinions in which participants are willing to revise preferences in light of the discussion, new information, and claims made by fellow participants.” Deliberation, however, will not necessarily happen in a crowdsourcing platform. Even if deliberation does happen, governments do not necessarily profit from it. For example, more participation may bring more noise for the people involved (Aitamurto & Landemore, 2016), since there is no evidence that all contributions are necessarily reasonable and well-informed (Gellers, 2016).

A second assumption in the literature estimates that experts will come to the platform, that they will find enough motivation to contribute, and that managers will have the capacity to distinguish between experts and laymen. A filial assumption targets complex or wicked problems; through the combination of multidisciplinary crowdsourced knowledge, organizations may be better equipped to tackle complex or wicked problems (Royo & Yetano, 2015). Although these statements may be plausible, they are unproven hypotheses. Clarifying when and how experts will come to the platform will greatly benefit from further research.

A third assumption observed was that organizations are assumed to have enough capacities to effectively process the information produced in the crowdsourcing platforms. Organizations use crowdsourcing to obtain more information, but more information requires more attention, which is the scarcest resource in organizations (Simon, 1965). Given that any organization has limited capabilities for information processing (Galbraith, 1974), when data overpasses these capabilities, then, is no longer possible for the organization to effectively use the data (Eppler & Mengis, 2004; Edmunds & Morris, 2000). These circumstances, known in the literature as information overload may even undermine the effectiveness of the decision-making. More irrelevant information diminishes the decision-makers’ ability to identify relevant information and therefore reduces decision-making performance (O’Reilly III, 1980; Hodge & Reid, 1971).

Upon these bounded capabilities, more information may discourage decision-makers from
using it (Walgrave & Dejaeghere, 2017). Elite politicians, for example, prefer better use of information over more information (Walgrave & Dejaeghere, 2017); on average, decision-makers using reduced data (i.e. summary statistics) make faster and higher quality decisions, although they remain less confident about their decisions (Chervany & Dickson, 1974). Provided this background literature on information processing, one of the main challenges of organizations is seeking strategies to expand their information processing capabilities or adopting data reduction techniques. Data reduction is key to optimize the added value of crowdsourced tasks because it helps to reduce the amount of data while mitigating the loss of information. A bad data reduction technique may come at the cost of vanishing all the knowledge mined from thousands of minds.

In the fourth assumption, online communities are assumed to naturally emerge in crowdsourcing platforms, and citizens are assumed to be motivated to collaborate and exchange knowledge with each other. However, this behavior may not necessarily happen. Studies about online communities suggest that sharing a common interest (Rheingold, 2000), getting a personal benefit from sharing individual knowledge (Faraj, Jarvenpaa, & Majchrzak, 2011), and perceiving collective value on individual contributions (Li, 2011) are necessary conditions to build sustainable online communities. All these conditions should be taken into consideration when launching a crowdsourcing initiative if online communities are expected to emerge.

Finally, scholars also assumed that public managers are interested in interacting with citizens to shape their decisions or their administrative actions. Nevertheless, public managers may not always be open to citizen participation. The literature on public management has shown that the public managers’ decision to adopt, resist or ignore citizen participation is a function of their personal belief in the value of participation, their assessment of the citizens’ added value to the task at hand, and their assessment of the additional efforts they have to undertake to incorporate the citizens’ contributions (Yang & Callahan, 2007; Berner, Amos, & Morse, 2011; Irvin & Stansbury, 2004; Zhang & Feeney, 2019; King et al., 1998).
In crowdsourcing initiatives this tension is born out of the possibility that the democratization of decision-making can undermine the effectiveness and timeliness of bureaucratic decisions (King et al., 1998). Some bureaucrats, for example, could be dealing with complex problems in which specialized knowledge or skills are needed (Berner et al., 2011; King et al., 1998). When the public managers do not perceive high-quality insights from the crowd, then the latter will be likely to be ignored by the managers.

Opening a decision to a broader set of actors will likely require more time and effort from the manager to prepare the open call, broadcast it, wait for a reasonable window period to receive contributions, process the information, and subsequently report the outcomes to the stakeholders. Opening a decision may also open the door to public managers to deal with citizens’ hostility, raising unrealistic—and subsequently unmet—expectations, increased public scrutiny, or getting poor contributions (Berner et al., 2011; Irvin & Stansbury, 2004). All these factors may drive public managers to be wary of opening to participation through crowdsourcing platforms.

2.7 Conclusions

In this article, I sought to clarify what purposes can crowdsourcing serve in government, as well as how and why crowdsourcing is expected to benefit these goals. To do so, I analyzed the scholars’ and public managers’ perspectives on expected benefits. The results of this study show fourteen different explanations about how and why crowdsourcing benefits government action. Among these, crowdsourcing platforms were mostly associated with democratic purposes, such as citizen participation, participatory democracy, lawmaking, and urban planning; few associations were made with values such as efficacy, efficiency, or organizational learning.

A key observation was that crowdsourcing potential is underused in practice. Approximately 80% of the platforms analyzed focused on fostering democratic ideals (e.g., promoting
citizen participation, participatory democracy, or lawmaking); a small number of platforms were devoted to problem-solving, organizational learning, or to expand the information available for decision-making and management.

Even though one of the main benefits discussed in the literature was the opportunity to access valuable expert knowledge available outside the organization, in practice, few platforms targeted this type of crowd. There was no evidence in the platforms analyzed that governments are leveraging virtual labor markets. In other words, public managers are also missing the opportunity to source organizational tasks to workers outside the organization. There also is a great area of opportunity in using crowdsourcing to improve bureaucratic performance. The platform Mazinam Slogu illustrates the benefits of crowdsourcing information for performance management, such as citizens’ ratings of their experience in government offices.

Weaving together all concepts, I observed on repeated occasions the coexistence of two or more concepts into a single case, suggesting a possible relationship among them. Therefore, the purposes observed can be tactical, strategic, or values, having these three groups a hierarchical relationship among them.

By comparing and contrasting different concepts and rationales, I also found five main assumptions supporting the idea of crowdsourcing as a valuable participatory innovation. For example, crowdsourcing is assumed to foster a plurality of ideas. These assumptions play a major role in the expectations about the value of crowdsourcing in government. However, as discussed in Section 2.6, in several circumstances these assumptions are not viable. Therefore, the expectations about the benefits of crowdsourcing should be reassessed; but most importantly, future research on the conditions on which these assumed factors occur (or cease) is a promising venue to move forward the literature in government crowdsourcing.

This study integrates and unveils the associations between crowdsourcing, as an explanatory variable, and several organizational factors as outcomes. This article also articulates the explanations about how and why that association may occur. Several of these propositions,
however, are not proven yet; the yet unproven wisdom-of-crowd hypothesis is of special interest, as it has heightened the expectations surrounding crowdsourcing in government. Following up on this line of research by further refining and testing these propositions is key to advance this promising sourcing model into a mature tool for government action.
3. Government Strategies to “Get the Best Out of the Crowds.”

A Typology of Crowdsourcing Platforms for Citizen Participation

Abstract

The flexibility of the platform’s design is one of the virtues of crowdsourcing when used for citizen participation. There is no clarity, however, about which designs work better for different types of citizen participation. In this article, I explore how crowdsourcing platforms for citizen participation have been designed to better capitalize on different types of citizen participation. I found three major crowdsourcing strategies for citizen participation: ideas for the city, debates and decision-making, and collaborative mapping. The findings show a detailed picture of how crowdsourcing has been used to foster citizen participation.

3.1 Introduction

To organizations, accessing information and knowledge from their environments has been an essential task of organizations to survive and thrive (Aldrich, 2008). But accessing information and knowledge, especially that residing distant from the organizations remains a puzzle (Levinthal, 1997; Afuah & Tucci, 2012). Partially for this reason, crowdsourcing has caught the attention in organizational studies due to its capacity to source this type of intelligence efficiently and inexpensively (Saxton et al., 2013; Guth & Brabham, 2017; Prpic et al., 2017). But crowdsourcing has also attracted interest because some scholars suggest that accessing information and knowledge from the crowds can even outperform even the best experts in a given subject matter (Surowiecki, 2005; Simmons et al., 2011).
Scholars in public administration have suggested that this technology-based practice is especially profitable to foster citizen participation, because it allows public managers to reach a very large group of citizens within a relatively low budget and a low period, and a seemingly easier coordination (H. K. Liu, 2017c; Chen & Aitamurto, 2019; Ranchordás & Voermans, 2017). In the last decade, several governments have launched crowdsourcing platforms to engage more efficiently with citizens. For example, the project CrowdLaw lists over 100 crowdsourcing initiatives in government worldwide.

All of these government platforms are seeking to “get the best of the crowds,” motivated by the possibility of accessing resources and intelligence outside the organization, the wisdom of the crowds, or improving their engagement with constituents. Not all platforms, however, have lived up to the expectations. Whereas some platforms have managed to engage dozens—sometimes even hundreds—of citizens through these platforms, others have received just a couple of contributions, which is far from getting a crowd.

I believe that these differences in performance are partially explained by the remarkable variety of how crowdsourcing platforms can operate. When a government sets up a platform, it must make choices about the type of citizen participation sought (e.g., bringing ideas for policy-making, or giving feedback), the type of citizens targeted (e.g., experts, neighbors of a particular zone, or anyone), the mode of engagement (e.g., a tournament, or a collaborative document), and the type of information that will be collected, among others.

Literature has copiously described, through typologies and taxonomies of the crowdsourcing features, the wide variety of design choices that a government must face when setting up a crowdsourcing platform (e.g., Schenk & Guittard, 2011; Vukovic, 2009; Rouse, 2010; Quinn & Bederson, 2011; Geiger et al., 2011; Doan et al., 2011). For example, Aris (2017) compiled 23 different taxonomies describing the range of options for each crowdsourcing component (e.g., a typology of the tasks to be handed out, or of the crowd’s motivation to contribute). However, we do not know enough about the government strategies to set up a crowdsourcing platform; that is, the choices made about the the design of relevant crowdsourcing compo-
ments to attain certain type of participation, or the organizational capabilities and resources available.

A crowdsourcing platform is just another resource to access information and knowledge residing outside the organization, but it does not guarantee the actual access to the crowd’s information or knowledge, nor the possibility to get the best out of that. The government strategies play an important role in the effectiveness of this novel technology-based practice. Therefore, understanding how governments decide to set up their crowdsourcing strategies is key to better understand “how to get the best out of the crowd.”

This study makes a step forward towards filling this gap by exploring the design choices behind government crowdsourcing platforms. The research question guiding this research is: How are the crowdsourcing platforms designed to foster citizen participation? To do so, I conducted a multi-stage study. In the first stage, I developed a conceptual framework to use as a basis to assess the design choices on several features of the government crowdsourcing platform. In the second stage, I used the conceptual framework as the coding scheme to assess the citizen participation goal motivating the use of crowdsourcing as well as the design choices of 107 government crowdsourcing platforms worldwide. In the third stage, I used cluster analysis to find patterns in the design choices in the data set and their possible association with specific citizen participation goals. Upon the identification and interpretation of these cluster patterns, I developed a typology of government crowdsourcing strategies.

This article is composed of seven sections, including the foregoing introduction. In Section 3.2, I discuss what we know about government strategies in using crowdsourcing for citizen participation. In Section 3.3, I describe the research design and methodology for the empirical analysis. In Section 3.4, I provide an analytical framework of the crowdsourcing process that guided the analysis. In Section 3.5, I present a qualitative interpretation of the potentially meaningful clusters and propose a typology of government crowdsourcing strategies. In Section 3.6 I discuss the implications of the proposed analytical framework and government crowdsourcing strategies in the broader literature about crowdsourcing in
government. Finally, in Section 3.7 I summarize the main findings and contributions of this article and lay venues for future research.

3.2 Literature Review

Literature in crowdsourcing has grown considerably in quantity and diversity of research fields (Ali-Hassan & Allam, 2016; Zhao & Zhu, 2014). Early studies in crowdsourcing focused on conceptualizing crowdsourcing or describing the varieties of features composing crowdsourcing (e.g., Brabham, 2008; Nam, 2012; Estellés-Arolas & González-Ladrón-De-Guevara, 2012; Kietzmann, 2017; Malone et al., 2010).

Subsequent studies have discussed the success factors (H. K. Liu, 2017c), potential benefits (Hosio et al., 2015; Moon, 2018; Afuah & Tucci, 2012; Prpic et al., 2015), competitive advantages (Haltofova, 2018; Royo & Yetano, 2015; Chen & Aitamurto, 2019; Lampel et al., 2012), and expected outputs from crowdsourcing (Brabham, 2013a; Hetmank, 2013; Ghezzi et al., 2018). These studies have primarily discussed the competitive advantages of crowdsourcing for certain goals or in certain circumstances, which are—generally speaking—its efficiency to collect ideas from a wide and diverse (and sometimes hard to reach) pool of people (Lampel et al., 2012; Whitla, 2009; Ye & Kankanhalli, 2015). Some scholars have argued that the advantage of crowdsourcing lies in its capacity to access a larger pool of contributors (e.g., Haltofova, 2018; Brabham, 2008; Royo & Yetano, 2015; Chen & Aitamurto, 2019), to operate within a low budget (e.g., Schenk & Guittard, 2011), or by enabling asynchronous, distributed, and depersonalized interactions (e.g., Aitamurto & Landemore, 2016). Other studies have discussed expected outputs from a crowdsourcing platform. For example, Ghezzi et al. (2018) conceives the submission of an innovative idea or the completion of a microtask as the main outputs provided by any crowdsourcing platform.

These streams of literature are characterized by grounding the components of crowdsourcing and the expected benefits when governments use crowdsourcing, yet they are two
relatively unrelated streams of literature. Government strategies on crowdsourcing (i.e., choices about the platform design) represent the bridge between the range of choices and the benefits or purposes motivating the launch of platforms. Something interesting about crowdsourcing is that there is not a single way to crowdsource citizens’ contributions. Citizens can be reached out to engage in different stages of the governance process (e.g., in policy-making, in implementation, or in evaluation), but also that process can be done in different ways (Pierre & Peters, 2000). Each stage may require different types of contributions from citizens and different forms of engagement. Thus, governments may choose a different strategy in different circumstances.

The characterization of the relevant components of crowdsourcing has attracted much attention in recent years (Schenk & Guittard, 2011; Vukovic, 2009; Rouse, 2010; Quinn & Bederson, 2011; Geiger et al., 2011; Doan et al., 2011). These characterizations, however, have looked into three different directions. Some studies have focused on understanding the types of crowds reachable. These studies have uncovered a wide categorization of types of participants, their motivations to participate, the way the exchange of information or knowledge can be set up, and what types of contributions they prefer to submit (Malone et al., 2010; H. K. Liu, 2017b; Rouse, 2010; Corney et al., 2009; Quinn & Bederson, 2011; Doan et al., 2011). From these studies, we know, for example, different types of motivators triggering the crowds’ participation (e.g., rewards, professional marketing, etc.), or different types of contributors (e.g., experts, citizens, gig workers, etc.).

A second direction in the literature has focused on understanding the types of tasks that can be handed out through crowdsourcing (Nakatsu et al., 2014; Zhao & Zhu, 2016; Alabduljabbar & Al-Dossari, 2017; Aris & Din, 2016; Aris, 2017). Several studies have addressed the study of crowdsourcing from the point of view of the task, generating a wide variety of classifications of tasks and criteria about which types of task can be effectively handed out through crowdsourcing. The task is perhaps the most important component of crowdsourcing because it embodies the definitions of the crowdsourcing purpose, the crowd’s
activity, and the resulting benefit for the organization (e.g., Nakatsu et al., 2014; Zhao & Zhu, 2016).

A complementary set of studies have complemented these characterizations by mapping other aspects of a crowdsourcing process (Hosseini et al., 2015; Nam, 2012; Brabham, 2013a; Geiger et al., 2011). For example, Nam (2012) explored the crowdsourcing process from an organizational point of view, proposing a typology of “wisdom sought,” by the governments, and a categorization of mechanisms of interaction (e.g., tournaments, voting, or collaborations).

This literature has expanded our understanding about the components of crowdsourcing and their competitive advantages, so we can have a broad idea on how to use crowdsourcing to foster citizen participation. To study how governments are capitalizing crowdsourcing, however, we need an integrative understanding of the relevant components in the crowdsourcing process and their association with the competitive advantages or expected benefits. Yet, we still do not know enough about which strategies have been implemented by governments when they launch crowdsourcing platforms. This study seeks to broaden our understanding in that direction.

3.3 Methodology

To identify patterns in choices on crowdsourcing features for setting up a crowdsourcing platform for citizen participation, I conducted a multi-stage study. In the first stage, I developed a conceptual framework to identify the main components of the crowdsourcing process, where the public managers can make different choices at the moment of designing a crowdsourcing platform. I detail this conceptual framework in Section 3.4. Those components and their design choices were the conceptual basis (i.e., the coding schemes) to empirically explore how the crowdsourcing platforms were designed.

To conduct this empirical exploration, in the second stage I created a data set of plat-
forms’ components and design choices. First, I selected these cases from CrowdLaw, a listing of 107 government crowdsourcing platforms worldwide.\(^1\) Every platform represents a unit of analysis.\(^2\) However, not all listed platforms were available during the period of study, or were not government initiatives. Therefore, upon this initial list, I further reduced the cases analyzed based on the following inclusion criteria: (1) it is a government crowdsourcing platform, (2) the crowds’ contributions were or are submitted online, (3) the website was running during the study period (with either an ongoing or concluded crowdsourcing platform).

Based on this source of cases, I used web content analysis to develop a data set about crowdsourcing components and their corresponding design choices from these platforms. Web content analysis is an adaptation of the content analysis to study contents from the Internet or digital sources (Krippendorff, 2018). Content analysis is an interpretive qualitative technique to assess and structuring the content from any communication (Kim & Kuljis, 2010); Berelson (1952, p. 243) defines content analysis as “an observational research method that is used to systematically evaluate the symbolic content of all forms of recorded communication. These communications can also be analyzed at many levels (image, word, roles, etc.), thereby creating a realm of research opportunities”. Web content analysis, on the other hand, is a systematic technique for coding symbols or themes from content communication in Internet research (Herring, 2009). According to Krippendorff (2018), besides selecting a sample for study, a content analysis requires a predefined coding scheme, a set of two or more independent coders (along with measures of agreement among coders), and a further qualitative interpretation of the coded data.

A coding scheme is a set of categories that help to structure the interpretation of the content observed in the qualitative data (Kim & Kuljis, 2010). In this study, each category

\(^1\)Data last accessed on 9/10/2019.
\(^2\)Some crowdsourcing initiatives, however, are composed of two or more platforms. For example, the initiative Decide Madrid has three different platforms or dynamics of interaction. In these few cases, I separated the initiatives into several platforms. For example, I separated the initiative Decide Madrid into three: (1) Decide Madrid, Procesos, (2) Decide Madrid, Votaciones, and (3) Decide Madrid, Debates. All other initiatives with multiple platforms are listed in Appendix A.
in the coding scheme represents a design choice for every component of the crowdsourcing process (see Figure 3.1). As detailed in Section 3.4, I developed this coding scheme based on a synthesis of descriptions and classifications of the relevant features in a crowdsourcing platform.

Given that the interpretive nature of the coding process, the researcher’s subjectivity is an important influence on the final outcome in this data collection process. Therefore, to convey a reliable (i.e. a relatively “objective”) content analysis, at least two researchers should code, independently, the data (Lombard, Snyder-Duch, & Bracken, 2002; Neuendorf, 2016; Herring, 2009). To comply with this requirement, the web content analysis was performed independently by two researchers specialized in public administration and digital government literature. The measures of intercoder reliability showed a high level of agreement among the two coders that constructed the resulting data set (see Appendix D). For example, the percent agreement scored above 80% for all except three categories. The Krippendorff’s $\alpha$ scored high ($\alpha \geq 0.70$) in all or most of the categories in the variables task, interaction, and crowd, but low in the variables motivation, intelligence sought, and contents.

This resulting data set captures all forms that any crowdsourcing component can take, as summarized in Table 3.1, each component being a variable, and the design choice list its corresponding range of values—thus, each component represents a nominal variable. Nevertheless, these measurements help to understand the structure of the platforms but do not inform about the government strategies or the purpose they may be serving. This information is fundamental to find meaningful patterns with regard to government strategies when using crowdsourcing. Therefore, the data set is complemented by a set of five continuous variables, each representing a type of citizen participation. These variables measure, through

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3Intercoder reliability is a numerical index or coefficient measuring the degree of agreement among two or more researchers as they seek to assign a rating or coding to qualitative data (Lombard et al., 2002). A high level of intercoder reliability indicates that the content analysis is a relatively objective—or inter-subjective—identification of the content analyzed (Lombard et al., 2002; Neuendorf, 2016; Krippendorff, 2018).

4I operationalized the types of citizen participation looking at their goals, rather than their components or functions. To do so, I adapted the B. G. Peters and Pierre (2016)’s framework of governance functions, which from a perspective of participatory governance, propose five types of involvement in policy-making:
a Likert-type scale from one to ten, the researcher’s subjective assessment of the extent to which each platform contributes to each type of citizen participation. Both sets of variables help weaving information about the choices available and the goals in terms of participation, thus, improving the capacity of the cluster analysis to find meaningful patterns.

In the third stage, I used cluster analysis to look for patterns about how the platforms were designed to foster citizen participation. Cluster analysis is an umbrella term encompassing several clustering methods, and each of these group together, through calculations, observations that are similar to each other (Romesburg, 2004). Cluster analysis is an appropriate method for exploring the presence of conceptual schemes, as well as building taxonomies (Aldenderfer & Blashfield, 1984; Romesburg, 2004), and therefore is a useful method for this article.

The main challenge of using cluster analysis is that this is a structure-imposing technique, rather than a structure-seeking (Kassambara, 2017). This means that any of the clustering algorithms will yield clusters, even though the data does not have real groups. Therefore, the key starting point for cluster analysis is testing for clustering tendency, which helps to assess whether the data has real groups—this is, that the data has some grouping structure or pattern. I validated the presence of a non-random clustering structured in the data through the Hopkins statistic and the Visual Assessment of Cluster Tendency (VAT), which are detailed in Appendix B. The Hopkins statistic measures the probability that the process of generating the data is random (Bezdek & Hathaway, 2002). The VAT analysis computes a dissimilarity matrix between observations and seeks for patterns (Bezdek & Hathaway, 2002). The combined results show that there is evidence of a clustering structure within the data.

To conduct the analysis, I selected hierarchical clustering—one of the two types of cluster analysis. Hierarchical clustering clusters the data by matching, one by one, the most resembling pairs of observations in the data. The algorithm keeps this iterative process until goal-selection, decision-making, resource mobilization, implementation, and feedback.
all pairs are matched and agglomerated into several groups and each observation lies within its own cluster. The height on the y-axis indicates dissimilarity. The higher the height, the less similar the objects are (Kassambara, 2017). The resulting representation is a tree-based hierarchical agglomeration (also known as dendrogram). Hierarchical clustering is a more suitable technique for exploring clusters, compared with partitioning clustering, because it does not need a predefined number of clusters.

There is not a definitive solution to identify the number of relevant and meaningful clusters that a data set has; this is a blended process of quantitative insights with qualitative analysis of the observations. Therefore, an appropriate strategy for setting the number of clusters is a combination of objective and subjective insights; this is, combining validation statistics with the researcher’s expertise and educated guess to identify the meaningful clusters in the data (Romesburg, 2004). I used the Elbow Method and the Average Silhouette Width to aid my decision on defining how many and which clusters were relevant for the research question (see Appendix B).

Finally, a cluster analysis requires a resemblance computation method, which is the way in which the similarity (or dissimilarity) among observations is computed. I selected the Euclidean distance to compute the resemblance coefficient because this technique is the most appropriate when the distribution of distance among the observations is normally distributed (Romesburg, 2004; Aldenderfer & Blashfield, 1984).

### 3.4 Crowdsourcing Process Model

As part of the first stage, I developed a conceptual framework to capture the main crowdsourcing features. To do so, I synthesized the wide literature about crowdsourcing taxonomies and typologies and organized them by adapting the core four concepts from Berlo’s communication process model (sender, receiver, channel, and message) (Berlo, 1960). Figure 3.1 conveys the mechanism through which crowdsourcing platforms usually operate. Apart
from the crowdsourcer and crowd, each of the elements displayed in Figure 3.1 constitutes a platform’s feature that can take several forms, which I will detail below.

Figure 3.1: Flow Diagram of the Crowdsourcing Process

The *crowdsourcer*, which is analogous to the communication source, represents the initiator of an interaction. The crowdsourcer seeks contributions from the crowd to fulfill certain tasks. In a non-government platform, crowdsourcers compete among each other for the attention and resources from the crowds. For example, two or more artists may compete for the crowd’s funds. However, governments are the only crowdsourcers in their platforms, and therefore, do not need to compete for attention or resources—not, at least, through the platform.

The *crowd*, which is analogous to the communication receiver, represents the target of the initiation of the interaction. Although the crowd is a loose community of people, from the government perspective, we can classify the crowd into citizens, expert citizens (e.g., an expert in urban planning), neighbors (e.g., a resident of a relevant zone for the crowdsourcing initiative), “customers” of public services, or by direct invitation from the crowdsourcer for other reasons.

Although in principle anyone can be part of the crowd, this term usually represents a pool of people beholding some skills or knowledge sought by the crowdsourcer—and, naturally, the
skills to access and use an online platform (Malone et al., 2010). In some cases, access to the platform is restricted through authentication credentials (for example, to comply with the residence or adulthood criteria), or through different levels of engagement (e.g., permissions to watch, submit a contribution, modify other’s contributions, or vote).

Thus, the crowdsourcer and the crowd meet at the platform, which is analogous to the communication channel because it carries the information between the sender and the receiver. The literature has described different ways in which the crowdsourcer and the crowd interact. Thus, the first source of variation in a crowdsourcing platform’s design lies in its model of interaction. The descriptions of interaction can be minimally expressed in two main interaction logic: independent and interdependent. Independent contributions are those where members of the crowd do not interact among them, and therefore each person submits a contribution without altering or being influenced by—even being aware of—others’ contributions. Typical examples of this type of interaction are polls or the citizens’ collection of data (i.e. reporting a malfunction). On the other hand, interdependent contributions are characterized because a person’s contribution can influence, being influenced by, or build on top of others’ contributions. Interdependent contributions can be competitive or collaborative. For example, in contests or tournaments, a contributor’s reward depends on the quality of others’ contributions. In collaborative platforms, members of the crowd are encouraged to use previous contributions as insights to hone their contributions; others’ contributions may represent the source to improve the quality of the contents by building on top of that.

The arrows in Figure 3.1 represent the flow of information between the crowdsourcer and the crowd. The crowdsourcer initiates the process by handing out a task to the crowd through an open call. The task varies in levels of complexity, interdependence among the members of the crowd, and effort required (Alabduljabbar & Al-Dossari, 2017; Zwass, 2010; Nakatsu et al., 2014; Zhao & Zhu, 2016; Rouse, 2010; Doan et al., 2011). The task is perhaps the most widely studied feature of the crowdsourcing platforms, and it has been classified in different forms (e.g., by type of operation, complexity, or solvability) (Hosseini et al., 2015).
Following instead a governance model (Pierre & Peters, 2000), I organized the tasks into four minimal categories: collecting data, submitting ideas, assessing information, and building artifacts.

Citizens can be asked to serve as human sensors for the government. Citizens can collect data about several aspects of their surroundings, for example, in Malaysia citizens report real state developers’ illegal hill clearing through the platform Penang Hills Watch. Citizens can also be asked to submit ideas or proposals to improve public policies or public services. For example, in the platform Future Melbourne, citizens could directly incorporate their ideas—or edit others’ ideas—into the drafting of the city’s strategic plan “Future Melbourne 2016.” This type of task, however, is complex for the citizens to produce and the managers to process (Nakatsu et al., 2014). Governments can also ask citizens to assess information. This task conveys the analysis of information previously collected or a proposal drafted by the government. Citizens can tag, classify, verify or validate data, as well as rate or discuss a proposal or idea. For example, through the platform Evidence Check Web forum, the United Kingdom’s Educational Committee invites experts to assess the strength of the Department of Education’s used evidence in its policy-making.

One of the critical issues in any citizen participation initiative is setting up in the platform a motivation strategy to mobilize citizens. The literature in crowdsourcing has laid out a series of motivations, such as rewards, sense of membership, passion for the subject matter, leisure, novelty, personal branding, caring for the community, or skill development (Nam, 2012; Aris, 2017; Geiger et al., 2011; Hosseini et al., 2015; Ghezzi et al., 2018; Brabham, 2008). However, these insights resemble a listing of illustrations rather than a systematized conceptualization. Therefore, to investigate this crucial component of a crowdsourcing platform, I used the Self-Determination Theory (SDT) for motivation (Ryan & Deci, 2002). The SDT categorizes motivation into three big tents: intrinsic motivation, extrinsic motivation, and absence of motivation.5

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5As an absence of motivation conveys no contributions in a crowdsourcing platform, I did not consider this category for my analysis.
Intrinsic motivation mobilizes people due to the inherent satisfaction of doing an activity (Ryan & Deci, 2000; Vallerand, Blais, Brière, & Pelletier, 1989). Intrinsic motivation exists because there is an innate psychological need in some individuals to feel competent and a feeling of self-determination towards success. I incorporated the three types of intrinsic motivation in my analysis. The first, motivation to know, represents the desire to know, learn, and understand something. In crowdsourcing, this motivation is often expressed in tasks that lead to self-improvement and personal skill development. The second intrinsic motivation is labeled as “accomplishment,” which is rooted in a persons’ desire to feel competent, to feel that something was accomplished (Ryan & Deci, 2000; Vallerand et al., 1989), or to promote personal branding and career advancement (Lakhani & Wolf, 2003). The third intrinsic motivation is to experience a stimulating sensation. Some crowdsourcing platforms, for example, may not offer other benefits than experiencing enjoyment, providing a space for leisure, experiencing pleasure by engaging in something new or providing virtual space for social contact.

The three extrinsic motivations, on the other hand, are motivations stemming from factors external to the person. First, the external regulation conveys any form of external inducement (either a reward or a penalty) (Ryan & Deci, 2000). The most common example of external regulation is a monetary payment. Second, the introjected regulation motivates people by funneling feelings of social recognition, reciprocity, or pressure (Ryan & Deci, 2000). It can be people interested in approval from others or interested in influencing something strategically relevant for them (e.g., their own neighborhood). This motivation often occurs in situations where the citizens do what they feel is “what citizens are supposed to do” or by seeking social recognition for their efforts. Finally, people can be externally motivated through a sense of identification. In this case, a person feels a strong affinity between the task’s mission and his values and principles, feels a passion for the subject matter, or participates by invitation (Ryan & Deci, 2000).

Once the crowd is properly motivated and mobilizes to contribute to the platform, the
next exchange stage is the *intelligence* sought from the crowd. Intelligence is an intangible asset that the organization seeks to obtain from the crowd; this knowledge may be of different types, for example, local knowledge (e.g., residents’ knowledge about their neighborhood), expert knowledge, professional skills, creativity (e.g., sharing ideas or solving problems) or customer feedback (e.g., complaints, ratings or opinions).

There might be a big difference between the intelligence sought and the content captured through the platform and stored in any form of digital data. Thus, *content* or data represents what any contributor writes down in the platform and is available to the public managers for information processing. Any contribution can be captured and stored into three general types of content: structured, unstructured, or mixed. I refer to structured data as any type of crowd contribution that can be, at some point, processed quantitatively or can be georeferenced, whereas unstructured data can be any form of text, dyadic data.

The collection of contents usually requires processing; this is, aggregating a massive amount of data into useful and condensed information to make effective interpretations of the information. The aggregation of data can occur at three different stages of the crowdsourcing process: before, during, and after citizens perform the crowdsourcing task. For example, complex intelligence sought can be aggregated through the task design, so that a highly structured task (e.g., a Yes/No question) does the job. Citizens can also be tasked to aggregate the data. For example, the members of the crowd can rate, rank, or vote for other’s contributions, so that a public manager can direct his attention towards the highest-rated, ranked, or voted contributions. Finally, once the contributions were received, data can be aggregated through several methods, such as heuristics, statistics (e.g., sample mean), artificial intelligence, or natural language processing.

Table 3.1 provides a summary of all components of the crowdsourcing model and their corresponding design choices.

Table 3.2 shows the distribution of the categories from the coding scheme after the data was collected by the two independent researchers. This table provides descriptive statistics of
### Table 3.1: Summary of design choices in the crowdsourcing process model

<table>
<thead>
<tr>
<th>Component</th>
<th>Design choices</th>
</tr>
</thead>
<tbody>
<tr>
<td>Crowdsourcer</td>
<td>(N.A.) Government.</td>
</tr>
<tr>
<td>Crowd</td>
<td>(1) Citizens, (2) experts, (3) neighbors, (4) customers, (5) by invitation.</td>
</tr>
<tr>
<td>Platform</td>
<td>(1) independent, or (2) interdependent.</td>
</tr>
<tr>
<td>Task</td>
<td>(1) Collecting data, (2) submitting ideas, (3) assessing information, or (4) building artifacts.</td>
</tr>
<tr>
<td>Motivation</td>
<td><em>Intrinsic Motivations.</em> (1) to know, (2) accomplishment, or (3) experiencing stimulation. <em>Extrinsic Motivations.</em> (4) external regulation, (5) introjected regulation, or (6) identification.</td>
</tr>
<tr>
<td>Intelligence</td>
<td>(1) local knowledge, (2) expert knowledge, (3) sharing ideas, (4) problem-solving, or (5) customer feedback.</td>
</tr>
<tr>
<td>Content</td>
<td>(1) Structured, (2) unstructured, or (3) mixed.</td>
</tr>
<tr>
<td>Access</td>
<td>(1) Restricted, or (2) open.</td>
</tr>
</tbody>
</table>

The main patterns about the design choices that governments make in their platforms. In this Table, we can see that creation (54%) is the main type of task handed out to citizens. The mode of interaction in the platform was relatively even between the categories independent (40%) and interdependent (60%).

Regarding the type of motivation coded from the data set, I found that the external motivators have a strong presence among the platforms. The three types of external motivation, combined, were found in 92% of the platforms. The introjected regulation was particularly spread, amounting to 65% of the platforms. The most common form of introjected regulation was citizens seeking to influence decision-making to improve their surroundings. On the other hand, internal motivators were practically absent in the data collected.

The crowd’s intelligence sought through the platforms was dominated by citizens sharing ideas (58%). Except for expert knowledge (4%), the rest of the categories of intelligence sought were relatively evenly spread (ranging from 10% to 13%). Finally, data were collected primarily through a combination of structured and unstructured data (63%). This combination of content was often a combination of text-based channels to write down opinions and techniques to collect, in parallel, votes, ranks, or rates.
## 3.5 Interpretation of Relevant Clusters

The clusters stemming from the hierarchical cluster analysis are groups of observations with a strong resemblance, but they lack meaning. To provide meaning to the results of the hierarchical cluster analysis, I revised and analyzed the platforms and the descriptive statistics from each cluster seeking patterns in the crowdsourcing design choices. Based on that work, I will propose a typology of government crowdsourcing strategies.

I began my analysis with six potential meaningful clusters stemmed from the hierarchical cluster analysis (see Figure B.2). After a close inspection of the potentially meaningful clusters, I identified three major government strategies in the crowdsourcing platforms: (1) Ideas for the City, (2) Debates and Decision-Making, and (3) Collaborative Mapping. Each one of these major strategies corresponds to a distinctive composition of interaction with

### Table 3.2: Distribution of design choices from web content analysis

<table>
<thead>
<tr>
<th>Component</th>
<th>Design choices</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Platform</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Independent</td>
<td>40%</td>
</tr>
<tr>
<td></td>
<td>Interdependent</td>
<td>60%</td>
</tr>
<tr>
<td>Task</td>
<td>Collecting data</td>
<td>17%</td>
</tr>
<tr>
<td></td>
<td>Submitting ideas</td>
<td>54%</td>
</tr>
<tr>
<td></td>
<td>Assessing information</td>
<td>29%</td>
</tr>
<tr>
<td></td>
<td>Building artifacts</td>
<td>0%</td>
</tr>
<tr>
<td>Motivation</td>
<td>To know</td>
<td>2%</td>
</tr>
<tr>
<td></td>
<td>Accomplishment</td>
<td>4%</td>
</tr>
<tr>
<td></td>
<td>Experiencing stimulation</td>
<td>2%</td>
</tr>
<tr>
<td></td>
<td>External regulation</td>
<td>6%</td>
</tr>
<tr>
<td></td>
<td>Introjected regulation</td>
<td>65%</td>
</tr>
<tr>
<td></td>
<td>Identification</td>
<td>21%</td>
</tr>
<tr>
<td>Intelligence</td>
<td>Local knowledge</td>
<td>15%</td>
</tr>
<tr>
<td></td>
<td>Expert knowledge</td>
<td>4%</td>
</tr>
<tr>
<td></td>
<td>Sharing ideas</td>
<td>58%</td>
</tr>
<tr>
<td></td>
<td>Problem-solving</td>
<td>10%</td>
</tr>
<tr>
<td></td>
<td>Customer feedback</td>
<td>13%</td>
</tr>
<tr>
<td>Content</td>
<td>Structured</td>
<td>17%</td>
</tr>
<tr>
<td></td>
<td>Unstructured</td>
<td>19%</td>
</tr>
<tr>
<td></td>
<td>Mixed</td>
<td>63%</td>
</tr>
</tbody>
</table>

---

Table 3.2: Distribution of design choices from web content analysis
citizens. For example, the first strategy is characterized by the openness for citizens to submit ideas and proposals for government action, whereas the second strategy is rooted in government handing out proposals and options of government action for citizens to debate or choose, and the third strategy is grounded on the notion of citizens as sensors to effectively monitoring the government’s environment.

I labeled the first major cluster as the *Ideas for the City* strategy. In this strategy, the government tasks citizens to create ideas for a variety of policy goals—often, for city planning. In these platforms, the interdependence of citizens’ contributions is promoted by allowing them to rate, rank, comment, edit, or vote for other citizens’ proposals. The primary source of motivation is identification (see Table C.3), which implies that this strategy privileges seeking crowds interested in topics of the city rather than a direct or indirect benefit for them. Therefore, ideas received are more likely to be associated with improving the urban policy, law-making, promoting health practices, or proposing educational programs, and less associated with reporting incidents, or with proposing ideas with an indirect benefit in the surrounding spaces.

A good example of the strategy *Ideas for the City* is the Icelandic platform *Better Reykjavik*, where citizens engage in topic-based virtual communities to submit ideas to the metropolitan government of Reykjavik. The ideas are also discussed and rated by the citizens, and every month, the top five ideas must be addressed by the City of Reykjavik Council. These ideas generally seek to influence the city council’s decisions or improve the citizens’ neighborhoods through city planning. The platform *Better Reykjavik* was developed by the Citizens Foundation—a non-profit organization—in collaboration with the City Council; the software built for this interactive platform was released as an open-source artifact and has subsequently been adopted by other cities worldwide.

The second major cluster, which I labeled as the *Debates and Decision-Making* strategy,\(^6\)

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\(^6\) Table A.1 shows the list of crowdsourcing platforms composing every cluster. This cluster is referenced as Cluster 3 in Table A.1.

\(^7\) This cluster is referenced as Cluster 5 in Table A.1.
shares several similarities with the strategy *Ideas for the City*. For example, in both strategies, the main task handed to the citizens is the creation of ideas in which they provide mixed contents (structured and unstructured) to the government. The main difference, however, lies in the direction of the ideas submitted. The strategy *Ideas for the City* tends to seek proposals for city planning or for discussing how to implement the government’s goals. In contrast, the strategy *Debates and Decision-Making* gravitates around benefiting from ideas issued by the government and discussed, assessed, or voted by citizens.

In this strategy, citizens tend to be allowed to rate, comment, or edit other citizens’ contributions. On the other hand, this strategy shows a narrower range of motivators, compared with the strategy *Ideas for the City*. While the latter presented a wider variety of external motivations (i.e., regulation, identification and introjected), the former only presented initiatives with introjected motivation. Finally, in terms of content, the strategy *Debates and Decision-Making* shows dominance of mixed contents. This is mostly a consequence of the promoted interdependence of citizens’ contributions, in which the main contributions are typically unstructured, and the citizens’ reactions to such contributions gravitate towards structured information (i.e., voting, ratings, or rankings).

The platform *Decide Madrid* is a good example of this strategy. Through its platform *Decide Madrid, Debates*, citizens can expose issues they feel concerned about and share points of view with other citizens. The goal is to promote the debate and exchange of points of view among citizens or with the public servants. Also, through its platform *Decide Madrid, Voting*, citizens can contribute to deciding over policy alternatives issued by the Municipality of Madrid.

The third major cluster, labeled as the *Collaborative Mapping* strategy, is considerably different from the two previous strategies because it heavily relies on maps and mobility. Almost all the crowdsourcing platforms in this strategy uses geographic data as a key component of the information sourced from the citizens. Therefore, mobile phones play a bigger

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8This cluster is referenced as Cluster 4 in Table A.1.
role to enable citizens’ contributions, which is reflected in the fact that several of these platforms are based on apps. As shown in Table C.2, the only task handed to the citizens was the collection of information for the government. Contributions are primarily geo-referenced images evidencing infrastructure malfunctions or negative externalities affecting the public spaces. Therefore, this strategy is characterized by sourcing individualized and independent local knowledge from the citizens in the form of highly structured content. The only type of motivation found in this strategy was introjected, to a great degree because the citizens would directly benefit by improving their surroundings.

The Malayan platform Penang Hills Watch is a good reference for Collaborative Mapping. In this platform, citizens can report illegal hill clearing sites by submitting geo-referenced images as evidence. The information of all reports is open and is portrayed on a map on the website.
Cluster | Description | Design Choices | Exemplars
--- | --- | --- | ---
*Ideas for the City* | Citizens submit suggestions and ideas—often for city planning. These platforms foster creativity and freedom from the citizens to propose and are typically citizen-driven given that the citizens are in charge of rating, ranking, commenting, editing, or voting other citizen’s proposals. | Primarily for goal-selection and decision-making. Creation as the task, motivated by identification, ideas as the intelligence sought, and mixed data. | Better Reykjavik

* Debates and Decision-Making
  Residents debate, propose, and vote ideas or policy goals generally defined by the government to address public problems or allocate resources (i.e. online participatory budgeting). | Primarily for goal-selection and decision-making. Creation and assessment as the task, motivated by introjected regulation, ideas as the intelligence sought, and mixed data. | Decide Madrid
**Collaborative Mapping**

Citizens act as sensors of the city, individually and independently informing about local problems, public service malfunctions, or negative externalities in their neighbors or surrounding spaces. Primarily for goal-selection and decision-making. Collection as the task, motivated by introjected regulation, local knowledge as the intelligence sought, and structured data.

---

Table 3.3: Main clusters of government strategies
Upon the interpretation of the cluster analysis, I also observed that each major government strategy had variations. By “variation” I refer to any strategy, which has the distinctive feature of each major strategy (as described above) but with secondary differences. For example, I identified Petitions as a variation in the major strategy Ideas for the City, where the main variation lies in the fact that a proposal is created by a smaller group of citizens, and put into the platform, not for the crowds to debate it, but just for endorsing it.

I observed nine of such sub-clusters or variations for all three major strategies and assigned labels to each sub-cluster to aid the differentiation among them. I identified three variations in the strategy Ideas for the City: (1) Collaborative City Planning, (2) Petitions, and (3) Lab for the Neighborhood. I observed four variations in the strategy Debates and Decision-Making: (1) Thread of debates, (2) Crowdlawmaking, (3) Multi-stage Engagement, and (4) Online Participatory Budgeting. Finally, I noted two variations in the strategy Collaborative Mapping: (1) Georeferenced Engagement, and (2) Georeferenced Participatory Budgeting (see Table 3.4). In the next paragraphs, I will describe and illustrate all these variations.

The variation Collaborative City Planning is a highly interdependent model of interaction where citizens can directly edit drafts of city planning. A good example of this variation is the crowdsourcing platform Future Melbourne. The city of Melbourne, Australia sought to create a strategic 10-year plan for the decade of 2020. The City decided to write the strategic plan in collaboration with the citizens through a collaborative editing model of interaction through which residents contributed with suggestions for the strategic plan.

Petitions is a well-established form of political participation that has benefited from Internet and Web 2.0 technologies. Citizens hand petitions to governments through signed documents, following the rationale that the more number of endorsements, the higher the probability of being heard by politicians. The crowdsourcing variation of petitions reduces the individual cost of finding and signing a petition and bolsters the diffusion of them through social media. One of the most widely known instances is We the People, which established a
direct channel of communication between the Federal government of the United States and its constituents through a Petitions platform. Other platforms are oriented towards specific purposes. For example, the Chilean Vota Inteligente collects citizens’ policy proposals as petitions during electoral campaigns, so they can be endorsed and subsequently adopted by political candidates.

Lab for the Neighborhood—the third variation of the strategy Ideas for the City—collects the crowd’s intelligence through local networks or communities of residents. This variation emphasizes both the collective action on- and off-line as well as the deliberation. Both principles are the motors to stimulate collective goals and plans to be implemented by the same citizens. The interactions are highly interdependent as the ideas emerge through meetings of committees of neighbors; the platform serves primarily a function of storing and organizing the outputs from the meetings. The Italian platform Laboratori di Quartiere is a good example of the Neighborhood Labs. In this platform, every community has a communication channel (maybe open or with restricted access) in which the members of the community organize all their interactions.

The variations of the strategy Debates and Decision-Making begin with the Thread of debates in which governments or citizens hand a dichotomous question (i.e. citizens must stand either in favor or against a proposal or idea). For example, the platform Irekia uses this strategy to kick-start an open conversation about a topic in which citizens pose arguments and counterarguments. Arguments in favor and against are open for all visitors of the platforms, informing their decisions about whether to endorse or opposing other citizens’ positions and arguments. Overall, the goal of this variation is to democratically reach a majority of informed voters (where the information and opinions come from the crowd) either in favor or against the triggering question.

The variation Crowdlawmaking is composed of platforms in which legislative drafts, submitted by government or citizens, are open to the citizens’ scrutiny. The task of the citizens may vary; in some cases, citizens can comment or edit the proposed draft, while in others
they are asked to assess the draft’s contents and endorse it upon agreement. A benchmark in this variation is the *EU Citizens Initiative*, in which people can engage in proposing and endorsing legislation proposals; once an initiative has reached 1 million signatures, the European Commission must officially deliberate the initiative.

The variation *Multi-stage Engagement*, follows a sequence of participatory activities. For example, a platform may begin with an open call for contributions, followed by an official government’s response to the crowdsourced contributions, then a period given to the citizens to review the responses, and finally voting or endorsement of the government’s decision. A good example of this variation is *Barcelona Decidim, Processes*, in which citizens follow this participatory sequence: they must respond to a poll, then submit proposals, then debate citizens’ submitted proposals, and finally rank them.

*Online Participatory Budgeting* is an online system that eases the traditional participatory budgeting. Through the platform, citizens can propose and/or vote on the proposals to receive funding from the participatory budgeting. Usually, the interaction among citizens is independent, and the motivation is highly driven by the possibility of benefiting by improving surrounding public spaces or services. The platform *Decide Madrid, Participatory Budgeting* is a good example of this type of strategies.

Finally, in the strategy *Collaborative Mapping* I identified two variations. The first variation, *Georeferenced Engagement* is a platform in which citizens can engage in public consultations or call for ideas occurring within a geographic radius or polygon (i. e. neighbor) surrounding the geo-location of each citizen. The platform *PlaceSpeak* stands out as the benchmark for *Georeferenced Engagement*. This platform provides spatial references to a variety of public problems through maps. Neighbors registered in the site receive notifications about reports, calls for action, or public consultations occurring in their proximity. The second variation is *Georeferenced Participatory Budgeting*, which is analogous to the previously discussed variation *Online Participatory Budgeting*. This variation, however, emphasizes the geo-location of the proposals competing for funding through participatory budgeting.
<table>
<thead>
<tr>
<th>Sub-cluster</th>
<th>Description</th>
<th>Exemplars</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Ideas for the City</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Collaborative City Planning</td>
<td>Citizens can produce content or edit other citizens’ content through a collaborative editing website.</td>
<td>Future Melbourne</td>
</tr>
<tr>
<td>Petitions</td>
<td>The online platform facilitate the publication of citizens’ petitions for government action on a variety of topics. The platform also functions as a mechanism to collect endorsements for the petitions.</td>
<td>We The People</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lab for the Neighborhood</td>
<td>Citizens use the platform—along with on-site meetings—to co-produce public services and organize collective action.</td>
<td>Laboratori di Quartiere</td>
</tr>
<tr>
<td><strong>Debates and Decision-Making</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Thread of debates</td>
<td>Governments or citizens hand a dichotomous question—with possible answers agree or disagree—to kickstart an open conversation in which citizens may create a string of opinions on top of each other’s opinion.</td>
<td>Kialo</td>
</tr>
<tr>
<td>Crowdlawmaking</td>
<td>Legislative drafts—submitted by governments or citizens—are open to the citizens’ scrutiny to either comment and edit the draft or to collect endorsements to the draft.</td>
<td>EU Citizen’s Initiative</td>
</tr>
</tbody>
</table>
Multi-stage Engagement

The platform is a mechanism to structure the participation process. Citizens are thoroughly informed of the requirements, timing, and steps to participate. The sequence is followed by a formal response from the responsible area from the government, and by a window for citizens’ follow-ups.

Online Participatory Budgeting

Citizens propose and/or vote on how to allocate a given government’s budget.

<table>
<thead>
<tr>
<th>Sub-cluster</th>
<th>Description</th>
<th>Tool</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Collaborative Mapping</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Georeferenced Engagement</td>
<td>Citizens can engage in public consultations or call for ideas bounded to a range within their neighbors or a circumference relevant to them.</td>
<td>PlaceSpeak</td>
</tr>
<tr>
<td>Georeferenced Participatory Budgeting</td>
<td>Similarly to the Online Participatory Budgeting sub-cluster, although this variation emphasizes the geo-location of the proposals to be funded.</td>
<td>Lisboa Participa</td>
</tr>
</tbody>
</table>

Table 3.4: Subsidiary clusters of government strategies
Finally, Figure B.2 shows that the crowdsourcing platform *MyGov India, Do* falls within a very different branch of the hierarchical tree than the three strategies described above. This platform is considerably different because it is the only one that requires citizens to perform on-ground tasks (e.g., writing essays, designing logos, or creating songs) for the government. The tasks represent a hands-on approach requiring a higher degree of intrinsic motivation (i.e., to know, accomplishment, or experiencing a stimulation). Although these insights are meaningful to consider it a distinctive strategy, I did not find similar platforms, and thus it could not be grouped. Further research may consider this anomalous case to explore a potential fourth major strategy or tenth variation.

### 3.6 Implications

Literature in government crowdsourcing lies within a broader field of study seeking to harness networked collaborative technologies—also referred to as collective intelligence—to improve citizen participation. In this article, I provided two contributions to move forward the discussion about the ways government crowdsourcing platforms operate. My first contribution is a process model of crowdsourcing. Previous studies have proposed some frameworks before (e.g., Aris, 2017; Nam, 2012; H. K. Liu, 2017b; Brabham, 2008), but each of them focuses primarily on one aspect of crowdsourcing (i.e., the task, the crowd, or the crowdsourcer). In contrast, the process model of crowdsourcing presented in this article represents an effort to integrate the whole process within a parsimonious structure.

The second contribution emerged from the cluster analysis in the form of government strategies to set up crowdsourcing platforms to interact with citizens. Through a dedicated iterative analysis of the qualitative contents from the platforms grouped into clusters, I identified relevant clusters by considering the resemblance structure and the meaning and interpreted them into three major government strategies with nine variations. The description of these crowdsourcing strategies bridges the research gap about how crowdsourcing
platforms can be designed (Schenk & Guittard, 2011; Vukovic, 2009; Rouse, 2010; Quinn & Bederson, 2011; H. K. Liu, 2017b; Geiger et al., 2011; Doan et al., 2011; Aris, 2017) and how crowdsourcing platforms are used to foster citizen participation.

Crowdsourcing platforms in government are a relatively new creature. The natural process of technological innovations like this is characterized by an initial stage of interpretive flexibility (Pinch & Bijker, 1984; Bijker, 1995; Pinch, 2008). This means that the modes of practice—or strategies—are not predefined, nor determined by the technologies, but socially constructed over time. Precisely the uncertainties about how these platforms should be designed—so that public managers can get the best of the crowds—could be the root of the diversity in the strategies or modes of practices found in this article.

We can expect that in the initial stages of this mode of practice, managers may rely on their communities of practice to shape a shared interpretation of what crowdsourcing does and how to address the design choices. But as the modes of practice evolve and mature, we may expect stabilization and “closure” of these technologies. The three government strategies seem to point in that direction. Upon the interpretative process of the potentially meaningful clusters, I observed that the widest variation of strategies tended to happen earlier, whereas more recent platforms were more likely to copy already established strategies than to create new strategies. For example, the platforms Barcelona Decidim (launched in 2017) and Decide Montevideo (launched in 2018) mimic the majority of the features—even the initiative’s name—from the platform Decide Madrid, launched in 2015.

The patterns observed suggest that open-source (along with investments in sunk costs, such as programming code) and language are two big facilitators of the adoption of certain strategies. For example, the platforms Decide Madrid and Better Reykjavik have a wider presence worldwide, and they share two distinguishable features. First, the organizations behind the platform invested enough resources to develop robust and richly featured platforms and, second, they are open-source software. The Better Reykjavik strategy has found expansion across other European countries, whereas the Decide Madrid strategy has found
an echo in other Spanish-speaking countries. Opposite examples are Penang Hills Watch, #CultureIsDigital, Have Your Say, and MyGov India Do, which were platforms not copied or adapted in other places. Future research may further explore whether these (and others) are critical factors enabling or constraining the diffusion of these strategies and to what extent this evolutionary process is reaching its “closure”—as expected by the theory of social construction of technologies.

The component of “motivation” in the crowdsourcing process stands out for its low levels of intercoder reliability (see Appendix D). Although the percentage agreement is high (averaging 87%), the three intercoder reliability coefficients (Krippendorff’s $\alpha$, Cohen’s $\kappa$, and Scott’s $\pi$) scored low. This implies a low degree of certainty on how the platform is motivating citizens. Part of the problem lies within a weakness of this research, as motivation is a factor inherent to the individuals (i.e., the crowds), thus, is difficult to observe it directly in the platform design choices. Although I used some proxy web content interpretations to record this information, a more precise measure should consider the crowds as the source of data on motivation.

Within these limitations, we learned, however, that some of the platforms’ design choices are important motivational triggers or blockers. For example, some platforms have displayed the real name of the persons along with their picture and a points-system (e.g., Bogota Abierta). In most of the platforms, the identity of the contributor remains anonymous, which slumps some types of intrinsic motivation (e.g., personal branding). Another example is the lack of a reward system, and subsequently a weaker external regulation driving engagement in crowdsourcing.

Recent scholars have studied the citizens’ motivations to engage in crowdsourcing platforms. Schmidthuber, Hilgers, Gegenhuber, and Etzelstorfer (2017), for example, found that the main two reasons a citizen has to engage in crowdsourcing platforms are his interest in the community (an expression of introjected regulation) and an appeal to the idea of promoting open government (an instance of identification). These insights are consistent
with the findings. For example, Table C.3 shows that the main motivators found in the platforms were introjected regulation and identification (in 65% and 21% of the platforms, respectively). Other studies about the factors explaining variance in task effort have found mixed results. For example, Zheng, Li, and Hou (2011) found a crowd-out effect between intrinsic and extrinsic motivation, but Rogstadius et al. (2011) found a synergic interaction.

The literature is growing on the motivations of engagement from the point of view of the citizen, but there is still a weak spot on understanding how the platforms may trigger, convey, or nudge those motivations. In this sense, there is still a weak theoretical foundation about the conceptualization and operationalization of crowdsourcing motivation. Further, the evidence suggests that public managers do not explicitly leverage a variety of motivators. Public managers should embrace a wider variety of motivations when designing crowdsourcing platforms.

### 3.7 Conclusions

One of the distinctive features of crowdsourcing is its clay-like flexibility, which brings some uncertainty about which choices work better for different goals. To clarify this uncertainty, this article provides a typology of government strategies to set up crowdsourcing platforms to foster citizen participation. Based on a multi-stage study, I identified three major strategies (ideas for the city, debates and decision-making, as well as collaborative mapping), along with several variations of these. This typology seeks to map and explain the current modes of practice around government crowdsourcing, but it also serves as a basis for practitioners to make decisions during the planning and development of crowdsourcing platforms.

Besides the typology of government strategies, this article contributes to the literature by proposing a process model of crowdsourcing. Previous studies have suggested some frameworks about the crowdsourcing process in government, although the majority of them focus primarily on one aspect of crowdsourcing (i.e., the task, the crowd, or the crowdsourcer). The
proposed process model in this article focuses instead on a comprehensive, yet parsimonious process that considers all the crowdsourcing constitutive parts and their interactions. Both contributions move forward the literature on government crowdsourcing by bridging the research gap about how crowdsourcing can be designed, and how crowdsourcing platforms are used to foster citizen participation.

These contributions, however, still face some uncertainties. For example, the component of “motivation” in the process model is still vague. The ability to mobilize the crowds through platform design choices is the key to foster citizen participation through this innovative mechanism. However, we know very little about what triggers are out there and how they work. We also do not know enough about the process of diffusion of this—and similar—technology-based practice. Some patterns stemming from this study suggest that new platforms are more likely to adopt already established crowdsourcing strategies than creating new ones. Further, this process of adoption and “closure” of crowdsourcing seems to be influenced by available open-source code from some strategies and the language. Future research may tap into these two uncertainties to move forward the literature on government crowdsourcing.
4. Ups and Downs of Horizontality in a Political Participation Organization

Abstract
Post-bureaucratic organizations are said to convey alternatives to the traditional means for bureaucratic control, horizontality among them. Yet, more details are needed in terms of how horizontality operates in an organization and whether it is sustainable in the long term. In a qualitative study of a horizontal political participation organization, I found that members developed a shared basis of legitimacy by consensus-making, sustained autonomous work units, and minimal layers of hierarchy by replacing individualized formal authority with mechanisms of governance. Horizontality was, however, oscillating. Unintended consequences of horizontality generated informal forms of authority. In this article, I propose a process model showing how horizontality may lead to manifestations of authority and elites.

4.1 Introduction

Once an emerging organizational form, the bureaucratic model has become the dominant form of organization in contemporary societies (Courpasson & Clegg, 2006), while some variations have also emerged over time. Post-bureaucratic organizations—as these variations may be better known, are characterized by implementing alternatives to hierarchy and rules as main mechanisms of coordination, or by varying the shape and size of the organization (Heckscher, 1994; Hales, 2002; Johnson, Wood, Brewster, & Brookes, 2009; Grey & Garsten, 2001; Anderson & Brown, 2010; P. S. Adler, 2001).

In recent history, bureaucracy has been widely criticized as the main source of any-
thing going wrong in organizations, which had led to growing ‘anti-bureaucratic’ sentiments (Courpasson & Clegg, 2006). For some, bureaucracy ‘must be banished’ (D. Osborne & Plastrik, 1997); for others, governments should ‘be rediscovered’ or ‘reinvented’ (Olsen, 2006; D. Osborne & Gaebler, 1992). Some critics deem bureaucracies as inefficient (Du Gay, 2000), whereas others believe that, in contemporary societies, efficiency is not a value as important as democracy (Diefenbach, 2020; Olsen, 2006). Thus, alternative organizational forms to the bureaucratic model have intrigued scholars, who have studied the competitive advantages that post-bureaucratic variations may have over the traditional bureaucratic model (P. S. Adler, 2001; Powell, 2003; Sørensen & Torfing, 2016), or whether they are dissolving bureaucracy’s so-called ‘iron cage’ (Courpasson & Clegg, 2006).

Several conceptual models or ‘ideal types’ have been identified as variations of the bureaucratic model, ‘adhocracy’ (Mintzberg, 1979), ‘holographic’ (Morgan, 1998), and ‘network’ (Podolny & Page, 1998) are examples of these variations. Among these, network organizations have gained attention, especially in the public sector, due to their ability to maintain fluid and flexible operations (Olsen, 2006; Provan & Kenis, 2008; Podolny & Page, 1998). Network organizations stand out for their capacity to sustain a horizontal structure; to coordinate efforts through negotiation and collaboration; and to coordinate autonomous work units (Powell, 2003; Podolny & Page, 1998).

Among these features, horizontality (i.e., the lowering of hierarchical layers), a distinctive feature of this type of post-bureaucracy, is intriguing as it may yield several consequences in the organizations. For example, as middle management tends to disappear, the traditional ‘chain of command’ weakens (Hales, 2002); the flow of other units’ inputs that another unit needs to work may slow (Van de Ven, Delbecq, & Koenig Jr, 1976). Perhaps one of the main questions is whether organizations can effectively generate binding decisions and commitment without exercising rules thorough a hierarchical authority (Heckscher, 1994; Courpasson & Clegg, 2006).

The study of network organizations has progressed over the last decades, but we still
do not know enough details of how horizontality works within organizations (Bouckaert et al., 2016; Okhuysen & Bechky, 2009). Most of the scholarly work on this type of post-bureaucratic organizations has been conceptual and has focused on the features of network organization (Diefenbach & Todnem, 2012; Powell, 2003). However, a blind spot remains about the process that a horizontal approach implies.

This research takes a step towards filling this gap by exploring the process through with a network organization seeks to reach and sustain a horizontal structure and workflow. To do so, I studied how Wikipolitica, a network organization for political participation that developed institutional, managerial, and symbolic tools to create and sustain a horizontal approach. This article is structured in seven sections, including the foregoing introduction. In the second section, I present a literature review about coordination mechanisms under network organizations. In the third section, I present the methodology adopted in the empirical study. In the fourth section, I describe the findings, whereas in the fifth and sixth sections I present a discussion and the implications of the study, respectively. Finally, I present my conclusions and lay down some insights for future research. Overall, this study contributes to a better understanding of the process in which horizontality, a typical feature in post-bureaucratic organizations, occurs. The findings show that the process of horizontality implies an oscillating process between horizontality and emerging forms of hierarchy or power, which sheds light on emergent elites as perhaps the key problem that may arise with horizontality.

4.2 Literature Review

Weber’s pioneering studies of bureaucracy occurred when bureaucracy was an emergent form of organization. Back then, its newness was grounded in the fact that legitimacy of authority was grounded in rules and rationality, thus considered as more efficient than its then-contemporary pre-bureaucratic forms (Du Gay, 2000). As bureaucracies established
themselves as the dominant form of organization, in recent history they have found critics, which label them as inflexible and inefficient (Hales, 2002; Olsen, 2006; Powell, 2003; P. S. Adler, 2001).

In the traditional bureaucratic model, the main mechanisms of coordination have been rules and hierarchy (Hales, 2002). Workers are controlled and coordinated by a hierarchical ‘chain of command’ through managers vested with the authority to assign and enforce tasks and responsibilities (Anderson & Brown, 2010; Courpasson & Clegg, 2006). Workers are expected to obediently follow these rule-based commands as if it was an ‘iron cage’ they cannot escape.

The bureaucratic model enforces leadership through authority, which facilitates coordination and conflict resolution within the organizations (Okhuysen & Bechky, 2009). Hierarchies, however, play a different role in other types of organizations. In professional, horizontal, and networked organizations, for example, the use of authority is inter-weaved with decentralized mechanisms of coordination (Olsen, 2006). Mechanisms of coordination are what makes organizations to carry on their activities (Van de Ven et al., 1976; Powell, 2003; P. S. Adler, 2001), and these can vary among organizations. The three main coordination mechanisms acknowledged in the literature are markets, hierarchy and trust (see Table 4.1) (Van de Ven et al., 1976; Anderson & Brown, 2010). Whether any organization chooses one or another has important consequences in the organization, for example, in the organizational structure, the routines, the dynamics of collaboration, the types of tension, and leadership, or the potential dysfunctions.

Several post-bureaucratic forms of organization are characterized by this mixture of mechanisms of coordination (Powell, 2003; Courpasson & Clegg, 2006; Hales, 2002). Among these, network organizations show a distinctive capacity to maintain fluid and flexible operations while coordinating with alternatives to hierarchies (Olsen, 2006; Provan & Kenis, 2008; Podolny & Page, 1998; Powell, 2003). One of the distinctive features of network organizations (and other forms of organization) is its horizontality. As these tend to operate as
Hierarchy Coordination is based on centralized decisions and rules, which are imposed in the organization through vertical reporting relationships and accountability.

Market Coordination is based on the price mechanisms, which aligns interests and disciplines agents through competition.

Trust Coordinating efforts are eased when members of an organization trust a person, an impersonal system, or a collective.

<table>
<thead>
<tr>
<th>Mechanism</th>
<th>Description</th>
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</thead>
<tbody>
<tr>
<td>Hierarchy</td>
<td>Coordination is based on centralized decisions and rules, which are imposed in the organization through vertical reporting relationships and accountability.</td>
</tr>
<tr>
<td>Market</td>
<td>Coordination is based on the price mechanisms, which aligns interests and disciplines agents through competition.</td>
</tr>
<tr>
<td>Trust</td>
<td>Coordinating efforts are eased when members of an organization trust a person, an impersonal system, or a collective.</td>
</tr>
</tbody>
</table>

Table 4.1: Summary of mechanisms of coordination (Hales, 2002; P. S. Adler, 2001)

a network of interdependent work units, hierarchical layers are deemed as either not efficient or not legitimate to coordinate or supervise the work of the whole (Podolny & Page, 1998). However, scholars agree that coordination under a horizontal or flat structure is hard (Okhuysen & Bechky, 2009; Olsen, 2006; P. S. Adler, 2001; Powell, 2003; Bouckaert et al., 2016; T. J. Peters & Peters, 1987; Kettl, 2003). The difficulty stems from its complex operating scheme. In horizontal organizations, decisions are made at all levels, but working units tend to be autonomous, and therefore they are barely accountable to any middle manager or other stakeholders (Okhuysen & Bechky, 2009).

This setting for coordination is further complicated in organizations where horizontality is grounded in a certain cultural identity. For example, empirical studies have shown that decisions over the dominant mechanism of an organization are taken to satisfy a common cultural background of their members or as a result of their founders’ personal beliefs (Lakhani & Wolf, 2003; O’Mahony & Ferraro, 2007; Safari, Salehzadeh, & Ghaziasgar, 2018). Other studies have shown that in this type of organizations democratic processes are regarded as equally or more important than performance; in other words, how decisions are made are as important as the decisions themselves (Michelsen, 1994; Reedy, King, & Coupland, 2016). Therefore, these cultural backgrounds, associated with an impetus to move forward an egalitarian worldview can be found in other areas of the organization beyond the structure, for example, in routines, rituals, and functions. In some cases, horizontality penetrates the or-
ganization’s structure and processes, not by adapting to an environment, but to adapt to an internal demand of cultural symbolisms (Michelsen, 1994; Reedy et al., 2016; Maeckelbergh, 2012).

In some sectors, especially in the knowledge-based economic sectors, a horizontal structure provides competitive advantages in the form of flexibility, decentralized decision-making, and adaptability to rapid changes in the environment (P. S. Adler, 2001). However, when (seemingly) no competitive advantages motivate this choice of organizational structure, horizontality is primarily grounded on a strong sense of communal identity, which lowers the levels of disagreement and cements shared goals among the members (Powell, 2003; Ouchi, 1980), as well as solid and cohesive personal relationships among the members (Pickard, 2006; Haug, 2013). For example, some studies have shown that assemblies and meetings are the main mechanisms through which these organizations develop the needed collective identity (comprising not only principles for action and behavior, but also expected roles) (Maeckelbergh, 2012; Reedy et al., 2016; Bimber, 2017; Murray, 2010; Davies, 2012; Chatterton & Pickerill, 2010).

So far, the literature has explored some driving motivations behind a horizontal structure and has provided a spotlight on some parts that contribute to understanding how the process of horizontality operates in an organization. However, the process of generating and maintaining horizontality in organizations remains uncertain. These blind spots are even more relevant considering some that some empirical studies have found that, despite the de-layering efforts in organizations, ‘power finds its way back’ into the organization (Diefenbach & Sillince, 2011; O’Mahony & Ferraro, 2007). Yet, is uncertain how formal or informal hierarchies may emerge within a horizontal organization and what consequences they may cause in the organization.
4.3 Research Design and Methods

To map the process through which a network organization generates and maintains a horizontal approach, I conducted a single-case study, which I selected under a theoretical sampling strategy (Glaser & Strauss, 1967). The rich empirical descriptions that case studies provide strengthen the theoretical contribution of empirical studies (Yin, 2017; Eisenhardt, 1989). I collected the data by recruiting interviewing members of Wikipolitica and analyzed the data using grounded theory. In the next subsection, I will detail this process.

4.3.1 Case Selection

Conceptually, my theoretical sampling pool was organizations dedicated to some form of citizen participation. From this pool, I looked for a “deviant” case in the organizational form (Gerring, 2006; Seawright & Gerring, 2008); a case showing strong signs of horizontality in their structure. Upon these considerations, I selected the case of Wikipolitica for study. Wikipolitica is a citizen participation organization that operates under a horizontal structure, was founded, and is run by young people. In its context, Wikipolitica is not only rare but interesting due to its unique vision about how this type of organization should be run. In the next subsection, I will detail the context and features of Wikipolitica.

Wikipolitica

Wikipolitica is a political organization based in Guadalajara, Mexico. Founded in 2014 by 14 young students, Wikipolitica is dedicated to diverse forms of citizen participation (i.e. political pedagogy, and monitoring government’s actions and performance) and political participation. Wikipolitica emerged as a formal organization out of the social movement #YoSoy132, a students’ mobilization against the then political and media regimes. Then,

1Theoretical sampling means that the case is selected because is an unusual and revelatory example of the phenomenon of interest (Yin, 2017).
in 2014 formally Wikipolitica was founded to seek out to continue the initial movement’s agenda through a variety of participation mechanisms. A key milestone of the organization was running an independent candidate in 2014 for a seat in the State Congress—which would eventually win, against all odds. Their victory in elections, along with their style of communication and operation, as well as wide media coverage appealed to a broader audience, making the organization grow from 14 members in 2014 to approximately 120 members plus approximately 300 supporters by 2018.

Wikipolitica meets the description of a network organization. It is a flat organization with only two layers of hierarchy, where all work units are independent. The top hierarchical tier in the organization is an Assembly composed of approximately 100 members—which also comprises the vast majority of the total membership. The next layer of hierarchy, more closely associated with middle management, is a wide set of autonomous work units. Some participants portrayed this organizational structure as concentric circles, where the outer circles represent the ones holding more authority (see Figure 4.1). A former member\(^2\) described the structure as “a radically horizontal organization, its main organ of organizing was an Assembly, which was composed by the totality of its members.” A current coordinator further detailed the structure: “it would be like a big circle which is the whole Wikipolitica and from there is like a Venn diagram with some concentric circles within this.” Other members choose to portray the organization as an “archipelago” of work units. Both approaches, however, coincide with the defining structure of a network organization.

The work units are divided primarily into projects and campaigns. Projects are all units associated with citizen participation, for example, Presupuesto Bajo la Lupa (*Budget Under the Magnifying Glass*) is an independent team dedicated to tracking the budget execution. Although guidelines and rules exist, they play a lesser role, being mostly substituted by collective, reciprocal, and informal codes of conduct. No formal leaders nor any form of individualized authority exist throughout the organization. The middle management layer

\(^2\)To anonymize the quotations, I will refer to the participant’s status (i.e. current or former membership) and job positions (i.e. candidate, coordinator, or line-level members).
of authority is, most of the times, filled with a co-ordination (i.e., at least two persons in charge of a team), and sometimes this task is handed out to a committee or council (i.e., a group between five or seven persons), especially for tasks such as overseeing, enforcing agreements and rules, as well as solving conflicts.

4.3.2 Data Collection

I recruited participants by contacting them through their publicly available social media profiles, by attending events organized by Wikipolitica, and by asking the respondents for suggestions of potential participants.\(^3\) Looking for variation in the points of view (Corbin & Strauss, 1990), I sought to balance my selection of participants, based on organizational roles, gender, and professional background (see Table 4.2). I collected 10 semi-structured interviews in person and 10 via videoconferencing, up to the point when I exhausted the emergence of new themes—signaling that I have reached theoretical saturation (Glaser & Strauss, 1967). The length of the interviews varied from 41 to 123 minutes, were tape-recorded—with permission—and were transcribed verbatim.

\(^3\)IRB Protocol #19X231 approved on October 16\(^{th}\), 2019 under category Exempt 2.
### Table 4.2: Descriptive statistics of participants

<table>
<thead>
<tr>
<th>Attribute</th>
<th>Statistic</th>
</tr>
</thead>
<tbody>
<tr>
<td>Average age (when interviewed)</td>
<td>27</td>
</tr>
<tr>
<td>Average age (when joined the org.)</td>
<td>23</td>
</tr>
<tr>
<td>Percentage Female</td>
<td>25%</td>
</tr>
<tr>
<td><strong>Professional background</strong></td>
<td></td>
</tr>
<tr>
<td>Arts &amp; Humanities</td>
<td>40%</td>
</tr>
<tr>
<td>Social Sciences</td>
<td>40%</td>
</tr>
<tr>
<td>Natural &amp; Applied Sciences</td>
<td>20%</td>
</tr>
<tr>
<td>Vocational</td>
<td>20%</td>
</tr>
<tr>
<td><strong>Main job position</strong></td>
<td></td>
</tr>
<tr>
<td>Candidate</td>
<td>6%</td>
</tr>
<tr>
<td>Co-coordinator</td>
<td>50%</td>
</tr>
<tr>
<td>First-line</td>
<td>40%</td>
</tr>
</tbody>
</table>

During the interviews, I asked grand tour and structural questions to identify themes and semantic relationships that could be associated with a horizontal organization. As the study progressed, I refined the questionnaire by adding contrasting and in-depth questions to improve my understanding of the emerging themes (Spradley, 1979). The topics covered in the interviews were: organizational structure (Hales, 2002; P. S. Adler, 2001; D. R. Dalton, Todor, Spendolini, Fielding, & Porter, 1980; James & Jones, 1976), mechanisms of coordination (P. S. Adler, 2001; Van de Ven et al., 1976; Powell, 2003), mechanisms for conflict resolution (Okhuysen & Bechky, 2009), division of labor (Van de Ven et al., 1976), organizational identity (O’Mahony & Ferraro, 2007; Lakhani & Panetta, 2007; Michelsen, 1994), styles of leadership (O’Mahony & Ferraro, 2007), and sources of legitimacy (Reedy et al., 2016; Maeckelbergh, 2012).

### 4.3.3 Data Analysis

I based my analysis on grounded theory (Glaser & Strauss, 1967), which I conducted in two stages. In the first stage, I used the interviews to identify emergent themes about the meanings, causes, processes, and implications of running a horizontal organization. During the first stage I iterated between the literature and the emerging open codes; this process implied...
several rounds of reading of the transcripts. The data available in this stage corresponded to the aforementioned grand tour and structural questions.

The second stage began after my 10th interview, when I developed a preliminary set of focused codes and reformulated my interview protocol looking to explore emerging themes and relationships (Emmerson et al., 1995). Through the subsequent interviews, I gained depth and structure in the semantic relationship of the themes that emerged through coding (Spradley, 1979; Glaser & Strauss, 1967).

4.4 Findings

I integrated my findings into a process model of horizontality, which is summarized in Figure 4.2. The process model represents a continuity that horizontality entails in an organization. As will be detailed below, the process is characterized as a cycle in which the organization establishes strategies to operate horizontally, which then triggers some intended and unintended consequences pulling the organization away from horizontality; in turn, the organization would reintroduce horizontal features to keep maintaining this approach.

These stages are presented into four subsections below: (1) horizontality, (2) horizontality towards traps, (3) traps towards solutions, and (4) solutions towards horizontality. The first subsection describes the strategies adopted by the organization to implement a horizontal approach. The second subsection describes the mechanisms through which the horizontal strategies lead to some organizational ‘traps’ (this is, some undesired effects that complicate management). The third subsection describes the mechanisms through which the organization seeks to address these organizational ‘traps,’ and how these adaptations are associated with subsequent undesired effects. The final subsection describes how that last stage of the undesired effects is addressed through the re-enactment of horizontality in the organization.

As a prelude to the process model, in the next lines, I briefly review the participant’s
thoughts about horizontality. Most of the participants manifested that horizontality was explicitly sought by the organization, thoroughly discussed in meetings. A member acknowledged that “[we] always, always tried to do it [being horizontal]. Always as a structure and as an organization, we tried to make it [...]” A coordinator also stressed that “it was always sought after [horizontality], yes, there was the compromise and obligation to try to be as horizontal as possible.” A former member, on the other hand, while highlighting the horizontal approach, remarked the bare possibilities of escalating hierarchies within the organization: “we work in a very horizontal system, I mean, if you really want to stand out, it does not make sense because you will not surpass anybody.”
Horizontality

The first, the most evident, and distinctive portrayal of horizontality described by the participants was the structure. Although there were some layers of hierarchy in the organization, these were kept to a minimum. As described in Section 4.3, Wikipolitica meets the key attributes of a network organization and designed and maintained a horizontal approach throughout the entirety of the organization. Beyond the expected flat structure of a network organization, Wikipolitica materialized horizontality through three additional organizational features:

1. Institutions

2. Managerial practices

3. Symbolic actions

One of the most outstanding features of Wikipolitica was its vast array of institutions (i.e. collegiate bodies). Institutions were used as mechanisms for a wide variety of purposes, for example, to establish counterbalances, to solve conflicts, to guide deliberations, and to supervise other people’s work. Institutions were primarily designed to avoid individualized middle management, as briefly explained by a former coordinator, “there were not necessarily bosses, there were representative organs.” The legitimacy of these institutions was based on the requirement of being collegiate (often with a minimum of five members) and its members to being voted.

A second organizational feature associated with horizontality was the managerial practices or working methods used by middle management to reinforce the horizontal approach within the organization. For example, no decision-making responsibility was handed out to a single person. Whenever a collegiate institution was not possible or not practical, Wikipolitica adopted the formula of co-coordinators for middle management. This formula simply means that at least two persons should be responsible for working units, both being held
accountable to a relevant collegiate institution or each other. A former line-level member described it with more detail:

“We always tried to promote dynamics for horizontality, where any person could postulate to any job position, where we could work in a collective way. There was never a single job position that had a single bearer.”

Managerial practices were also cementing behaviors through a sense of collective identity associated with horizontality. An example of the collective identity is found in the phrase ‘being Wiki’ or ‘doing it Wiki.’ As described by a former line-level member, “‘doing things Wiki’ is giving everybody the opportunity to participate.” This set of practices would be composed of small actions sought to foster certain values, especially for regulating behavior. For example, during meetings, any intervention was limited to the same amount of time, not only to give voice to everybody but also to countervail protagonism. Other more complex practices were developed, for example, the Aula Abierta (open classroom), which was a mechanism for brainstorming and innovation. A former member describes a typical process of Aula Abierta:

“We would place five chairs at the front [of a meeting or the Assembly] and it was not necessary to follow a logic like ‘everybody please go sit at the front to participate,’ instead there were the five seats, anyone who feels like going to the front and sit to say whatever they had to say, well you just go, say it, and then go back to your place so others can go the front as well.”

The set of practices associated with ‘doing it Wiki’ would play an important role to cement an organizational culture around the notion of horizontality, as well as the values of democracy, deliberation, and egalitarianism. A current coordinator succinctly conveys how these practices instilled a mindset among the members of Wikipolitica: “I think that [‘being wiki’] was part of what it was understood as Wikipolitica, it was like these informal practices that you end up adopting and somehow begin to make sense to the people.”
Managerial practices also helped to empower workers. A former member illustrates how the culture ‘doing it Wiki’ sought to empower any worker in the organization:

“We also noted that, for example, other persons felt like ‘oh gosh! I know nothing about this!’; and often they would say ‘I am not a politician,’ ‘I did not study political science,’ or ‘I did not study Law, is better if you do it.’ And it was like ‘no, no, no... That, exactly what you are saying, is what we are trying to avoid’ [Because] that [participation] would be narrowed to a single guild, participation would be for the privileged with a degree. No, is not about that... That’s why we tried to do it even more Wiki.”

Finally, a third strategy for approaching horizontality was through symbolic actions. A recurring example of symbolic actions was their self-imposed rules for funding. To receive donations, Wikipolitica itself imposed a ceiling close to what any ordinary citizen would be able to hand out. The reason behind this funding ceiling was associated with the goal of circumventing the accumulation of influence by any actor. A current coordinator further details the rationale: “the goal [of the budget ceiling] [...] was that no person could flaunt that [they were] the owner [...] so that it can be a project belonging to many persons.”

All these four approaches to operate horizontally (the organizational structure, the institutions, the managerial practices, and the symbolic actions) had, however, unintended consequences, which I will review in the next section.

**From Horizontality towards Traps**

Several processes through which the mechanisms to materialize horizontality led to organizational ‘traps.’ By this, I refer to processes that contribute to the organization’s desired horizontality, but at the same time affect the overall functionality and performance of the organization. These ‘traps’ may vary depending on how the case was analyzed; I focused primarily on analyzing the decision-making processes, as well as the roles and expectations of middle management. Based on these insights, I identified four organizational ‘traps:’
1. Delay. Having every voice heard slowed down decisions.

2. Disarray. The alternatives (i.e. co-coordinations) to individualized middle management led to weak leadership.

3. Deadlock. Deliberation under plurality (i.e. every voice heard) failed to smooth out differences, leading to indecision or inaction.

4. Disorder. Inclusiveness in ideology led to an all-encompassing sense of mission.

The first organizational ‘trap,’ delay, was associated with the plural and inclusive decision-making processes. As hierarchical decisions (especially those made by a single person) were not legitimate enough for most of the members, the majority of the decisions needed to take into consideration all voices and needed somehow to weight all contributions equally. One of the natural consequences of this approach, however, was the slowing down of decisions. A coordinator recalls that “always caught my attention the incredible slowness for discussing things, I mean, that time given to discuss to the maximum detail every single decision [...].”

Often, the pluralism and egalitarianism conveyed through the debates clashed with time constraints. As a former co-coordinator said: “there is nothing wrong about it if we did not live in a world where time exists and problems must be solved.” Then he diagnoses the problem: “if the Assembly was only a consultative organ, it would have been perfect [...], the problem is that we absolutely depend on their times, on their determinations.” Even though deep deliberation was perceived as positive and beneficial to the organization, “the problem was that on several occasions, the best decision arrived when it was already late,” said a current coordinator.

Amidst the chasm of, for example, electoral campaigns, it seemed reasonable to take more executive and agile approaches, but the strong organizational culture around pluralism back-lashed these attempts. An important situation that illustrates the potential incompatibility between timeliness, executive decisions, autonomous work units, and bottom-up accountability occurred during the electoral process of 2018. To fight negative propaganda,
a candidate’s team made on the fly and published a video entitled ‘I do not support abortion.’ The unit’s decision to skip the deliberative process produced unrest and tension in the organization. Paradoxically, the exercise of the autonomy that each unit is expected to hold led to a conflict. As a former member explains, “I think that it was very badly managed, but not because of the video itself, I think that the video was the symptom of the conditions in which we were operating because there nobody was able to give them feedback, they did not consult with the line-level members nor within the organization [...] what it generated was [internal] divisions.” A current coordinator also described the consequences of skipping a deliberation: “it was not discussed collectively and then it was perceived as a grievance [...] it does not matter the contents [of the video], but the fact that a complex topic would be addressed by an executive team generated a big organizational short circuit.”

It seems paradoxical that these strategies, although they were expected to promote flexibility, organizational learning, growth, and adaptation, often became sources of stasis and prevented organizational learning.

This wide openness for deliberations—where processes, roles, and performance were analyzed—promoted a stream of organizational modifications, and sometimes even radical changes. “Even there was a joke [...] that Wikipolitica lived in Beta version all the time, I mean, all the time it was an experiment,” reflected a current coordinator over the constant changes in the organization. Although this openness to change may be positive for organizations in some circumstances, participants were critical (more often than not) over its effects. A former coordinator succinctly summarized this ‘trap’ caused by the plurality in deliberation:

“There was no opportunity to let things work out or fail, I mean, there was so much deliberation about the way we worked that, for example, one day they [the Assembly] determined ‘we will not have a model of commissions\(^4\) anymore because it did not work.’”

\(^4\)This member refers to “model of commissions” to what I labeled as ‘institutions’.
The second organizational ‘trap,’ disarray, was the weakening of middle management. As explained before, when middle management was not in the hands of an institutional collegiate, it was carried on by, at least, a couple of persons—these were the co-coordinations. The rationale behind co-coordinations is portrayed by a member:

“I arrive in Wikipolitica and say ‘who is the head here, who is responsible when something happens,’ and they tell me that there is a co-coordination, supposedly [the co-coordination] is not above hierarchically because [any co-coordinator’s] determination weights the same than other members’ determinations, but supposedly it represents the face [of the organization].”

This schemed weakened the authority of the people in charge, but most importantly it diluted the responsibilities. Several participants pointed out the diluted responsibilities as the distinctive feature of this ‘trap.’ For example, a current coordinator deems this figure as “a failure because responsibilities were diluted between two, Wikipolitica’s bylaws did not give them clear attributions to solve internal problems or making decisions.” A former clerk illustrates the consequences of this type of management:

“So there were [Coordinator A] and [Coordinator B] in the coordination and it was not clear whom one should go, you would not know when it was with one or the other, at the end [Coordinator A] became the leader de facto [...]. [The co-coordination] was a failure figure because responsibilities were diluted, rules in Wikipolitica did not assign powers to solve problems, or to push forward, or to make decisions.”

The third type of organizational ‘trap,’ deadlock, was the stalled decisions due to ideological (even sometimes due to personal) differences. Naturally, factions emerge in organizations with some disagreements among them. This case shows that, although in some cases the plurality in deliberations and the managerial practices to empower workers led to
positive outcomes, when important ideological issues were at stake in a decision, the horizontal decision-making process collapsed. The ‘trap’ lies in the evidence that deliberation (the replacing mechanism of formal authority and rules) fails to smooth out differences when facing decisions over issues polarizing the organization into ‘factions.’ On the contrary, plural deliberations are more likely to uncover and escalate previously silent tensions over key issues.

Perhaps this ‘trap’ found its biggest manifestation in 2018 when 13 independent candidates of Wikipolitica were defeated in elections. Besides the natural vexation stemming from this outcome, these results triggered deliberations about whether the organization should focus its energies solely on citizen participation, political participation, or both. Wikipolitica followed its horizontal playbook to carry on this decision: a collegiate institution, Grupo de Reestructura (restructure group), was created to guide the deliberative process. The Grupo de Reestructura carried on the deliberations for seven months, producing dozens of memos and reports. A current line-level member describes this process:

“A team was formed, which was named Grupo de Reestructura, which had like a commission to carry on the decision process about what was going to happen with Wikipolitica, the one [the Grupo] which was going to lead the discussion, which was going to provide inputs so the whole Assembly could decide, because that was very important, in Wikipolitica all decisions are made by the Assembly.”

A fourth ‘trap’ was disorder, which led to factions within the organization and eventual conflict. Despite their efforts, the Grupo de Reestructura failed to land an agreed-upon decision. Instead, the process uncovered two ‘factions’ within the organization. A first faction identified activism or citizen participation as the core function of Wikipolitica, whereas a second faction identified with political participation. As an example, the view of a former line-level member was that “we were [the] opposition in civil society, we were a sensible voice, we were the critic voice, [I do not endorse political participation] because we at the very moment of becoming a political party, we get into the same bag as all of them [the
politicians].” This view highlights the understanding of Wikipolitica as a kind of citizen’s watchdog, whereas a partially contrasting view noted that “we were an organization postulating candidates but also we were acted as a citizens’ organ. It was a big contradiction, and there were people wanting to go back to that contradiction,” said a former coordinator. A member viewed the contrasting positions: “there were big ideological inconsistencies in the group, that’s what I wanted to be solved [...] because if we don’t agree on what to do, why are we hanging out?”

The deliberative process not only uncovered the ‘factions,’ but also escalated the tensions among them, concluding in the eventual disbandment of the former activist ‘faction’ from Wikipolitica. A member of the Grupo de Reestructura recalled:

“I think there were emerging like two clear poles of which they saw a Wikipolitica much more engaged in activism and who saw it like an organization that must transit towards being a political party [...] It was one of the biggest confrontations, beyond the ideology what divided us was [deciding] what we were going to do.”

This illustration brings two insights for the analysis. First, it emphasizes the ideological unity needed to ensure commitment and coordination. Second, the problem exposed a failure of producing a clear sense of mission and a failure in communicating it in the organization. Most of the participants had a different understanding of why they were in the organization and what the organization was expected to contribute. For example, a former member recalls that “Wikipolitica was very different for any person,” referring primarily that every person had different interests and priorities, and molded their expectations as a function of that. In the words of a current coordinator, “horizontality made this organization like a clay where you could, in a certain way, mold it into your expectations.” A member of the Grupo de Reestructura concluded “and debates began where we said ‘OK, Wikipolitica is whatever you believe and feel it is’ or whatever I believe and feel, and there were many proposals and different Wikipoliticas in the same organization.”
From Traps towards Solutions

As the organizational ‘traps’ emerged in the organization, members of Wikipolitica adopted solutions to address slow decisions, stalled decisions, ideological confrontation, weakened leaderships, and low quality in decision outcomes. Overall, I identified three efforts to address the ‘traps’:

1. More clarity in the organizational mission and on everybody’s responsibilities.

2. Strengthened coordination leaderships.


Upon the diagnosed problems described in the previous section, the organization tried to maneuver the lack of clarity, weakened leaderships, and the rationality in the deliberative processes. The organization sought informal ways to navigate these problems. holding on to the value of egalitarianism, strategies to strengthening leadership or delegation of authority were conditioned to be based on merit. Merit was a defining feature of emergent leaderships, as a current coordinator describes:

“I think that you will mostly see it [merit] in the sense that how much you participated within the organization, how much you were pushing agendas or joining others’ [agendas], [...] the way to climb was that you were attending meetings, that you participated, and that you were somebody showing your own judgment.”

Merit, however, was a result of inadvertent confounding factors and promoted unintended consequences that led, in summary, to the emergence of small elites within the organization (see Figure 4.2). Merit was gained primarily through two factors: street-work and professional inputs. Street-work was the work the people did in the streets, such as campaigning, joining manifestations, putting stickers on bumpers, attending meetings in public parks, etc.
Street-work provided legitimacy to potential leaderships because, as it required hard physical efforts, it represented commitment. Putting stickers on bumpers was, for example, a key symbolic metric to assess how hard teams were working. A former coordinator described the importance of street-work to gain legitimacy within the organization:

“the street [was very important], campaigning in the streets gives you a lot of legitimacy, a lot, because is very hard being under the sun, is very exhausting being under the sun, and talking with the people really give you a sense of what are the problems [...] we even had a rule, which was very unpopular, but during the campaign, we had a rule of minimum one street-work day for anybody.”

An interesting example of street-work as a source of merit was narrated by a former coordinator, about a newly arrived person “who over-performed in the street-work and gained legitimacy [finger snaps], like that. In three months [he] gained a legitimacy that overshadowed other people with five years working.”

Professionalism was a second major source of merit. By professionalism, I refer to the educational formation, expertise, and aptitudes in a specialized knowledge domain. Highly professional people helped to increase the quality of the work done and strengthened the rationality supporting the exchange of ideas in decision-making processes. A coordinator noted the importance of professional qualifications as a source of leadership in the organization: “the technical value from every single person that integrated the team was very high [...] They had their merit, full merit, I mean, they were extremely talented and brilliant people in their areas [of knowledge].”

Merit based on professionalism was especially visible in the rationality of the decisions and provision of ideas, thus providing, on average, a higher amount of work and quality in their discussions. A key preoccupation in Wikipolitica was to sustain every decision with strong rationality. A good example of the influence of professionalism on merit was during the elaboration of collaborative documents. The majority of documents were written
collaboratively in word processors, looking to make ‘every voice heard.’ A line-level member guides us through the way how this practice relied on professional elites:

“A given person in five minutes would leave 40 questions [in the document] and others did not even connect in two weeks because they had work, classes, a family [...] and the feeling would be like that person made all the decisions because they were who had more information, that he did read everything [...] and discussed his idea with five persons, that he was the better prepared.”

Most of the participants noticed that the driving force behind merit was a privilege, although mediated by street-work and professionalism. By privilege, I refer to the socio-economic possibilities in one people’s life to access better education, better professional opportunities, and fewer commitments in time, compared with the average citizen. But privilege may also be associated with other indirect effects of having a social safety net. As assessed by a coordinator, “the access to that level of deliberation found among these young people, which, to me, are outstanding and brilliant came out or the breeding ground was that [privileged] society.” Then, a member provided us this vivid profiling of what privilege is and its implications in the organization:

“[privilege is] those schools, those books, I mean, this people are all bilingual, trilingual, polyglots, I mean, is people with a strong preparation that, despite being super young, they have a very open worldview, because they travel, because they have access to the better schools, the better professors, many books, it’s all folks [who are] Twitter-native [...] They can actively participate in politics from a privilege [...] because you know if you throw punches with police and they give you two, three whacks, in half an hour you would be out because you know the uncle or you are from a given family, or you studied in a given school [...], and the school is going to help you out. And all that exists, I mean, it happens.”
Merit was a force inadvertently promoting the emergence of small elites within the organization. In turn, those small elites were slowly becoming an integral—and almost indivisible—part of the solutions adapted to address the organizational ‘traps.’ A member, for example, said that “often, you would hear that ‘there is an elite, there is an elite that makes the decisions,’ but in reality, this was growing because it was very difficult to have a leveled ground where everybody could participate.”

Being an integral part of the solutions, in the long term, these small elites exercised a higher degree of leadership over the organization, and evidence shows that they naturally tended to associate and bond with similar others—what could also be described as a process of homophily. The patterns of homophily observed through the interviews are complex. I did not see a conscious or purposeful effort to favor certain profiles, yet several participants observed it that way. For example, a former member noted that “I realized that I was sort of brainwashed about which was the ideal person to join [Wikipolitica], and you do realize that, for example, these were sort of people with certain purchasing power and almost always people from private schools.”

A person who joined decision-making processes somehow effortlessly said “those were people I knew from other contexts and they inspired my trust because I knew who they were and we were close [...] that’s why I joined.” In contrast, a person that did not have acquaintances in the organization before joining said “I was the only one that joined by knocking doors [...] I was the only one who during months I sent the messages in the website [...] In fact, when they accepted me, they gave impossible tasks to do, during moths.”

Perhaps one of the biggest drivers of this phenomenon was associated with trust. As said by a coordinator, “the close relationship and the personal trust existed among key factors that led the organization to develop circles that had more weight in decision-making.” There was a genuine concern of not letting in people who would undermine the efforts and achievements accomplished so far. But there was also an unspoken expectation on the performance from certain profiles regarding the amount of work, the quality of their inputs, and the capacity
to lead, which slowly and smoothly reinforced the emergence of a small elite group.

**From Solutions towards Horizontality**

Up to this point, I have described how the process through which Wikipolitica approached horizontality, and how this process unfolded into a steady growing leadership by a small elite. Participants, however, were completely aware of this unintended consequence. Paradoxically, upon their values of egalitarianism, democracy, and horizontality, this would be the least desired outcome. A former member explained that “[privileges] was something discussed all the time, and it was very common in each Assembly [...] we tried to minimized it [...] but honestly we also realized that it was very complicated.” A former coordinator diagnosed the problem of growing elites:

“Up to these days, the organization have not been able to guarantee that anybody who wants and is capable of committing to working with the organization can acquire that legitimacy [to become a leader] [...] because if [this problem is] not [solved] a bunch of privileged people acquires a bunch of legitimacy and merit because of their privilege.”

An intriguing finding regarding the awareness of the emerging elitism was that several participants were not only aware of this problem but also placed themselves, unenthusiastically, as being part and somehow beneficiaries of that elite. For example, a former member recognized that “I think that I was in that ‘power ceiling’,” and then went on describing what his privileges were about: “I had the privilege of being a lot of time there, inside [organization’s office], and because of that I was able to participate more actively [...] people later told me that they perceived that ‘certain people’ had a certain control over the rest or [had] a bigger influence” Overall, this is how in Wikipolitica ‘power found its way back’ into the organization. A coordinator, for example, describes that “I am well aware that is people conscious of their privilege and the issue with that word, ‘privilege,’ we debated it super
constantly, I mean, the privilege of being male, the privilege of being rich, the privilege of coming from a given school, however, nobody renounces their privileges because they are inalienable.”

The last stage of the process model, then, begins with the awareness of yet another problem to be solved, while few alternatives are still available in the managers’ toolkit. Overall, the reaction against the emergence of small elites was reinforcing the initial stage of horizontality. In other words, by incorporating more collegiate institutions, adding more checks and balances, as well as developing more managerial practices and symbolic actions. For example, based on the interviews, I counted eight institutions created during the period 2015-2018.

During the interviews, after walking me through the ups and downs of their organizational functioning, several participants concluded that horizontality was a “fetish.” Fetishism over horizontality speaks about the notion that although horizontality may have served some purposes, it also comes with dysfunction, and that members of Wikipolitica may be falling into the ‘trap’ of fighting fire with fire; this is, seeking to solve the horizontal dysfunctions with yet more horizontality. Through the following coordinator’s account, we can see how horizontality’s functions and dysfunctions were associated with the notion of fetishism:

“There are other institutional bodies that are being created and [are] piling up [in Wikipolitica], laws and rights that are keep being created, and even political dynamics that are still being created so that this horizontality can be functional. When the horizontality is not functional but is still being maintained with that [level of] dysfunction, I think we are in front of a fetish on horizontality.”

4.5 Discussion

This study characterizes a post-bureaucratic form of organization closely associated with the features attributed to network organizations. Network organizations are characterized by the
enduring relations among members where none has legitimate organizational authority over the others (Powell, 2003; Podolny & Page, 1998). From this view, Wikipolitica stands out as an organization that made big efforts to maintain a horizontal, egalitarian, and deliberative functionality. What sets this organization apart from the bureaucratic model and other variants is (1) deliberations and consensus as to the main sources of legitimacy for obedience and commitment, (2) the horizontal mechanisms of accountability, and (3) a shift of the role and expectations of middle managers. These core principles of organizing ramify into five key distinctions:

1. Avoiding the individualization of responsibilities
2. Regulating behavior upon agreements reached by consensus
3. A system of horizontal accountability
4. Employee empowerment
5. Democracy over efficiency

Upon these principles, it is understandable the bureaucratic model’s lack of appeal for the members of Wikipolitica, as it implies an archetypal command and control system based on hierarchies to enforce rules (Courpasson & Clegg, 2006). Some features represent a stark contrast with the bureaucratic model. For example, a key characteristic of this organizational form was avoiding the individualization of responsibilities. The organization relied primarily on group decision-making or management systems (e.g. committees, councils, or co-coordinations) to coordinate activities throughout all the working units of the organization. Wikipolitica also tended to substitute rules by group-based agreements.

Perhaps the main job role affected by this strategy was the middle manager, which was stripped of authority and relied on persuasion, negotiation, and consensus-making processes. In particular, the organizational design of co-coordination deluded the capacity of both co-coordinators to exercise leadership or make decisions.
A second key distinction was the regulation of organizational behaviors and commitments through exhaustive deliberative processes. The main source of legitimacy for decisions and the delegation of responsibilities was found in a deliberative process guaranteeing that every voice was heard, ideally through the Assembly (which was composed of approximately 100 persons). As the consensus-making processes developed the assimilation of principles and a strong awareness of desired and undesired behaviors, the organization reduced the reliance on rules to define responsibilities and managing through a ‘chain of command.’ As a consequence of their deliberative and professionalist style, the organization developed a wide range of guiding documents (e.g. guidelines, manifestos, and operating standard procedures), but they were barely used or consulted in practice; they resembled more of an organizational memoir than mechanisms to defined and enforce roles and expectations.

A third key distinction of Wikipolitica is its system of horizontal accountability. The working units were small and highly autonomous and the accountability was exercised through a set of independent collegiate institutions. Tensions among the interdependent parts were common but difficult to solve.

A fourth key distinction of Wikipolitica was its strong commitment to empowering workers. All members of the organization were expected to have a leveled ground to participate in equal conditions in decision-making. Not only the organizational structure reflected this, but also several of the managerial practices described. The goal of empowering employees was at the core of choosing a horizontal approach for operating.

Finally, the fifth distinction of Wikipolitica, compared with other organizations was their preference for democracy over efficiency. Democracy was observed, not only in the managerial composition (i.e. non-individualized and elected management) but also in the governance system throughout the organization. Management was grounded upon an array of checks and balances, as well as upon mechanisms for transparency and horizontal accountability. Several participants acknowledged that these strategies were not necessarily the most effective—especially with regards to middle management, but they recognized them as an integral part
of the organizational culture and members’ core identity.

The networked organizing form of Wikipolitica was a sustained effort rather than an accomplished stage of planning. The process model captures the cycle of sequences of intended and unintended consequences of this effort. Broadly speaking, the process model shows that the strategies that are taken to materialize the five key distinctions described above had a two-folded effect. For once, they provided legitimacy to decisions and strengthened the commitment of its members. However, several unexpected consequences were found in the form of ‘traps,’ for example, delays, factions, elites, etc.

Wikipolitica did several accommodations to circumvent the traps, while producing other unintended consequences on the way, including the emergence of elites and informal sources of authority. Upon these unintended consequences, the organization sought to circumvent the emergence of elites with more strategies to make the organization horizontal. The whole process was characterized by the awareness of the evident impossibility of working horizontally.

Dysfunctions of horizontality

Stemming from the characterization of this organizational form and the insights from the model process of horizontality, I sketched four possible dysfunctions in a networked organization:

1. Too much knowledge creation and information processing.
2. Too much flexibility
3. Too many stakeholders’ contributions
4. Too little leadership

The first dysfunction identified (‘too much knowledge creation’) stems from the pursuit of plurality in decision-making. Most participants agreed that the goal of plurality was to ensure
openness in knowledge creation and information processing (i.e. aggregating everybody’s contributions). This strategy allowed the organization to promote innovative ideas and being able to adapt the organization to serve unmet needs regarding citizenship and civic engagement in the city. Nevertheless, as described in the previous section, plurality in decision-making diminished the timeliness of decisions and the capacity to land agreements. Plurality was also associated with the strengthening of ‘factions’ within the organization and subsequently tensions about the proper organization’s identity or sense of mission.

The second dysfunction identified (‘too much flexibility’) stems from the pursuit of deep and thorough deliberations for decision-making. According to participants, this strategy contributed the organization to gain flexibility and adaptability to changes in the environment, as it made the organization more responsive to sudden changes in the organization’s environment. This strategy also, as described in the previous section, was a necessary condition for legitimate decisions. However, evidence shows that, paradoxically, this strategy diminished the possibilities for organizational learning and adaptation because, as most members of Wikipolitica were willing to take all events and circumstances into deliberation, there was little room for some strategies to mature over trial-and-error; any error or failure would be taken as a reason to change directions—or ‘repensarnos’ (rethink ourselves) in their lexicon.

The third dysfunction identified (‘too many stakeholders’ contributions’) emerges from the goal of having ‘every voice heard.’ From an ecological perspective, one of the biggest attractors of resources (i.e., human resources) to Wikipolitica was its willingness to open the organization to voices historically neglected in the context of citizen engagement in Mexico (e.g., students, LGBT community, and senior citizens). This diversity of profiles and ideas, combined with the openness for everybody to contribute produced a ‘fresh’ narrative and agenda outwards the organization, which in turn, attracted a wider audience. Thus, the promotion of diversity led to competitive advantages over other organizations. Nevertheless, as more people contributed, and more diverse (and sometimes contradictory) their ideas were, the more difficult was to handle such complexity. This complexity made the organization
rely even more on expert-based contributions. As a consequence, the dominance of experts or people with a strong professional background over the decisions emerged in the organization.

The fourth dysfunction identified (‘too little leadership’) stems from the goal of avoiding individualized middle management. As described in the previous section, this approach took several consequences in the performance of middle management. Overall, it diluted the responsibilities, as well as the capacity to lead and motivate workers. All these circumstances set the breeding ground for the emergence of elites, which is perhaps the biggest dysfunction in an organization that seeks to operate horizontally.

Limitations and research agenda

To the best of my knowledge, organizations associated with citizen participation have not been a source of study about organizational forms; other empirical studies have mostly concentrated on for-profit organizations (R. P. Adler & Goggin, 2005; Anderson & Brown, 2010) and social movements (Rao, Morrill, & Zald, 2000; Davies, 2012; Haug, 2013; Maeckelbergh, 2012), while some others have developed conceptual works about public organizations (Olsen, 2006; Bouckaert et al., 2016; Kettl, 2003). The main weakness may lie in the fact that the main findings may not be generalizable to other types of organizations. Wikipolitica is peculiar in many regards which should be taken into consideration to weight the generalizability of these findings. For example, Wikipolitica had only six years of life at the moment of the study; was founded and run by a group of young people (averaging 21 years in 2014); and although the organization is currently transitioning towards a fully professional organization, for most of its existence, the majority of the full-time job positions were filled with volunteers.

This string of limitations, however, may come along with a pearl, as it portrays a way of perceiving, interacting, and behaving, as well as a value system associated with a young generation. Several authors have suggested that younger generations are showing a different set of values and attitudes that may impact the workplace life and civic life (Milkman, 2017).
Taking these suggested trends at face value, accommodating the organizational structure, practices, and managerial styles may well bring an edge in the competition to attract talent to the organization.

The concept of horizontality had a broader set of meanings than I originally conceived. From a scholarly standpoint, horizontality is a term that describes the tendency to lower the layers of hierarchy within organizations (i.e. from tall to flat organizations) and to reduce the managerial span of control (Hales, 2002). The participants, however, brought a broader set of categories when they thought about horizontality, for example, horizontality can be thought of as making sure every voice is heard, no bosses, a comprehensive deliberation process, or just simply physically open spaces (i.e. parks, public squares or no walls within the office). A better understanding of these characterizations may contribute to observe the evolution of the so-called post-bureaucratic forms of organization and whether some of these variations may be a trend, a fad, or just idiosyncratic features of a particular case study.

4.6 Implications

Existing literature has long discussed whether the traditional bureaucratic model of organizations may be waning while radical alternatives may be entering the game (Hales, 2002; P. S. Adler, 2001; Olsen, 2006). Some authors argue that ‘decentralization’ alternatives to the bureaucratic model are viable (Olsen, 2006; Diefenbach, 2020; Safari et al., 2018), whereas many others argue that ongoing changes in managerial patterns do not represent paradigmatic changes, but just variations of the bureaucratic model (Johnson et al., 2009; Grey & Garsten, 2001; Courpasson & Clegg, 2006). This debate may not end soon, as empirical studies on the matter have been limited.

Weber’s pioneering work on the bureaucratic model stemmed from its comparison with pre-bureaucratic forms, with a view on key features: expertise as the basis of recruitment, and impersonal rules legitimated by their foundation in rationality (Hales, 2002; Courpasson &
Clegg, 2006). If we refocus the description of a bureaucratic model against post-bureaucratic forms—especially if we are to consider post-bureaucratic forms as variations of the former), we may be able to emphasize other features. For example, Hales (2002) suggests that, in comparison with post-bureaucratic forms of organization, the bureaucratic model is characterized by the use of hierarchies and rules as means to command and control workers, the division of labor of specialized roles, and vertical accountability of middle management. Thus, bureaucracy can be seen as “a ‘structure of control’ applied predominantly, though not exclusively, to the managerial/administrative component of an organization” (Hales, 2002, p. 52).

Upon this context, Heckscher (1994) suggests that the central problem of any variation on the bureaucratic model is whether it can successfully replace hierarchies and rules to coordinate collective efforts. This study contributes to this proposition by showing the process through which an organization seeks to replace hierarchies and rules, and their consequences. The findings suggest that middle management is the role most affected by the alternative approach. Wikipolitica set up middle management with alternative features than the traditional bureaucratic model’s individualized responsibility, vertical accountability (towards senior managers), and managing through routines and standardized procedures (Du Gay, 2000). The findings are not optimistic with regards to alternative middle management, as unintended consequences seemed to overshadow the intended ones. Despite its arduous efforts and strong conviction, Wikipolitica was not able to dissolve bureaucracy’s ‘iron cage,’ as informal forms of authority emerged out of the uncertainties and vacuum of responsibility.

Despite the efforts in some post-bureaucratic organizational forms to minimize authority as a mechanism of coordination, some authors have found that authority finds a way to emerge (O’Mahony & Ferraro, 2007; Rao et al., 2000). This study not only supports this proposition but also provides a detailed road map with the set of factors—and their interrelations—through which formal and informal sources of authority emerge in the organization. The findings show how, merit as a basis for legitimate informal leadership, along
with its confounding factor of privilege, led to the emergence of elites within the organization. Paradoxically, the unintended consequences of horizontally led to administrative elites.

This paradoxical sequence echoes Robert Michels’ classic postulation about the ‘iron law of oligarchies’ (Michels, 1915). According to Michels, groups tend to produce a smaller clique of leaders, despite the organizational attempts to make every member equal. In Wikipolitica, the professional and administrative elites were—reluctantly—the main beneficiaries from the process of horizontality. Thus this study serves as empirical evidence that Michels’ classic theory of political parties may also travel to network organizations.

Finally, this study contributes to the literature about post-bureaucracy by laying down some possible dysfunctions of flat organizations. Other studies have closely looked at the implications of flat organizations in performance (Parker, 2012), size (Blau, Falbe, McKinley, & Tracy, 1976) or flexibility (Van de Ven et al., 1976). The development of the five dysfunctions represents complementary hypotheses about how or why may succeed or fail in different organizational dimensions.

4.7 Conclusions

As anticipated by several scholars, operating without hierarchy and rules is hard. Although some advantages are gained, other problems arise. In this case, there is little evidence of competitive advantages achieved through horizontality. The most important perhaps was that their organizational structure and practiced egalitarianism improved their capacity to attract human capital. But several other problems emerged at the same time, as detailed in this article. Despite the ups and downs of horizontality, the participants seemed to be dissatisfied with horizontality, yet they kept it. Thus, this case may belong to the pool of organizations where horizontality has its roots in ideology or people’s backgrounds rather than a strategic choice to improve their competitiveness. Upon these considerations, this case seems to support the conceptual works suggesting that some post-bureaucratic organizations
do not necessarily make up a more efficient, effective, or flexible organization—compared with the bureaucratic model, but they represent a change in the hierarchy of organizational values, from efficiency to democracy.

It is noticeable that the organization was founded and primarily composed of young people, and that their capacity to attract human capital materialized in the attraction of, primarily, young people and persons from the LGBT community. Considering this notion, along with the conclusions about the shifting organizational values, I speculate that an association may exist between contemporary variations of the bureaucratic model with demographic changes affecting the interactions, roles, and expectations of young workers in workplaces. Findings of increasing employee churn in organizations, less tolerance to authority, and a new more self-expressive generation may be symptoms of the breeding ground for change in terms of forms of organizations.

Finally, this study contributes to a better understanding of the process in which horizontality, a typical feature in post-bureaucratic organizations, occurs. The findings bring a mixed perspective on horizontality, showing its ups and downs throughout a continuous process. Further, the study sheds light on the emergence of elites as perhaps the key problem that may arise with horizontality. The findings, however, do not provide a recipe for success. The complex web of confounding factors behind horizontal approaches conceals the possibility of finding robust strategies or solutions for adopting a flat structure. Future research may contribute to understanding which factors can help to mitigate the ups and downs of the horizontal processes.
5. Conclusion

Decentralization keeps being an integral part of government renovations (Kettl, 2015; Fung, 2015; Kettl, 2017; T. Christensen & Lægreid, 2005; Bouckaert et al., 2016; Pollitt & Bouckaert, 2017). The boundaries between governments and citizens are blurring, governments are getting used to cede control towards a network of organizations or stakeholders, while alternatives have emerged over the well-established bureaucratic form of organization.

Although decentralization is a very old idea, its functioning does not seem to perform as well as the binomial hierarchy-rules that characterize the bureaucratic model. As several authors coincide in the need for renovating contemporary governments (Pollitt, 2016; Kettl, 2015; Pollitt & Bouckaert, 2017; Fung, 2015), it is important to provide more insights about how decentralization works and how good decentralization can be attained.

In this dissertation, I sought to provide further insights about decentralization through two angles: decentralizing decisions and tasks from governments towards citizens, and decentralizing decisions within a citizen participation organization. Chapters 2 and 3 contributed to the first angle, whereas Chapter 4 did so for the second angle. From a broader perspective, this dissertation provides evidence about the thirst for change in the way governments interact with citizens and illustrates some advantages and disadvantages of decentralization over its counterpart, the bureaucratic model.

In Chapter 2, I mapped and integrated the scholars’ and public managers’ perspectives about the expected benefits from crowdsourcing in government. This study helped us to better understand: why use crowdsourcing in the public sector? The results show thirteen propositions explaining how and why crowdsourcing benefits government action. One of the main findings was that the majority of the crowdsourcing initiatives were used to strengthen democratic decision-making processes, so citizens can access more means to voice their opinions.

In Chapter 3, I explored how crowdsourcing initiatives are designed to foster citizen participation. The results showed three main general strategies of crowdsourcing interac-
tion: ideas for the city, debates, and decision-making, and collaborative mapping; each of them having some variations. This study fills a research gap in better understanding which alternatives, in terms of designing a crowdsourcing platform, are being used in government.

In Chapter 4, I conducted a qualitative study of a horizontal political participation organization to better understand how this type of decentralization operates and whether it is sustainable in the long term. My findings show that the organization managed to operate horizontally by replacing individualized formal authority with alternative mechanisms of governance and management. Horizontality was, however, oscillating. Unintended consequences of horizontality generated informal forms of authority. This study contributes to the literature by proposing a process model of the inherent tensions between horizontality, a strategy of decentralization, and effective management.

The three studies provide evidence of an overall goal of seeking new mechanisms to improve the way governments and citizens interact. Through these exploratory studies, we can see that, among the several goals behind strategies of decentralization, either within the organization or from governments towards citizens, strengthening the government-citizen relationship was more prevalent than other goals such as improving efficiency or effectiveness in management. For example, Chapter 2, showed that the main expected benefits of crowdsourcing in government were to foster citizen participation and participatory democracy. These results are interesting when considering that extant literature has widely highlighted the potential of crowdsourcing to improve the quality of decisions (i.e., the wisdom-of-crowd hypothesis), extend the capacity to find innovative solutions to decision or task problems, or hand out government challenges to experts (i.e. the ability to perform a distant search). Despite all these insights on the value of using crowdsourcing in government, most of the platforms analyzed sought a benefit associated with the citizen-government relationship, for example, for citizen participation, participatory democracy, participatory budgeting, or to get citizens involved in lawmaking or urban planning.

In this regard, Chapter 3 showed that 70% of the platforms sought ideas and citizens’
feedback. In contrast, few platforms sought citizens just as a form of “outsourcing.” For example, only 10% of the platforms aimed to hand out citizens to activities related to problem-solving. Despite the convincing argument of the wisdom-of-crowds hypothesis, few public managers’ narratives were associated with the core bureaucratic value of efficiency. These results illustrate the drive for incorporating citizens as an internal source for decisions and creation, rather than just contracting out labor. As Chapter 3 shows, government crowdsourcing is a vivid breeding ground for innovation in the way citizens are being taken into consideration into several stages of governing and for several key functions in decisions.

Finally, Chapter 4, from a different angle, also shows how new mechanisms are being sought to change the way governments and citizens interact. First, the mission and principles of Wikipolitica are testimony of a group of citizens seeking different forms, styles, and channels of interaction with governments. Also, members of Wikipolitica showed a strong narrative against the bureaucratic model—which echoes some criticisms from the literature. This organization, founded and composed by a young generation of workers, may represent a generational shift in terms of roles and expectations in government-citizen relations and workplace interactions. The findings suggest that this thirst for change in the way governments relate with citizens and the way bureaucracies are organized themselves do not necessarily revolve around the normative values of efficiency or effectiveness. Instead, this case suggests that the normative values surrounding government-citizen relations may be shifting from efficiency, effectiveness, predictability towards inclusiveness, and empowerment.

A second overall remark provided by the three studies is that decentralization, compared with the bureaucratic model, has no clear benefits in the outcomes. Some benefits may be associated with decentralization strategies, but some perils or dysfunctions may widen the gap between performance and expectations. Chapter 4 showed strong evidence about the difficulties of decentralizing decisions within a citizen participation organization, along with the relatively limited benefits ripped from this enterprise. The case of Wikipolitica suggests that horizontality may not bring clear advantages over organizations with a different
form of organization. Chapter 2 provides a broader picture about the expected benefits of decentralizing towards the citizens, where we observed that the majority of the expected benefits were associated with innovative forms of policy-making, but less concerned with organizational performance. Only 6% of the platforms were concerned with bureaucratic performance as an expected benefit, and only 4% of the platforms sought to access expert knowledge. Assessing the performance or survival rate of the crowdsourcing platform was out of the scope of this dissertation, but it was very noticeable that most of the platforms were short-lived, and some platforms did not have a good performance in terms of citizens contributing through the platform.

Decentralization, thus, is easier said than done. Overall, this dissertation shows, on the one hand, a variety of decentralization strategies and purposes, but on the other hand, a variety of perils and hardships emerged from decentralizing. Perhaps one of the key questions is: is it worth the effort? Further studies are needed to better understand the variation of decentralization strategies, their implications for public management, and performance. It is not clear to what extent decentralization helps improve government performance.

These intriguing doubts merit some future research. First, from the angle of decentralizing decisions and functions from governments towards citizens, an urgent agenda is assessing the performance of crowdsourcing strategies—as well as other mechanisms for citizen participation. This research agenda, however, cannot be dissociated from a normative discussion about upon which normative values—or parameters—performance should be measured (i.e., efficiency, effective management, inclusiveness, justice, legitimacy, trust in government, etc.). In turn, the differences among normative values may be a function of wider social and political contexts or administrative traditions. As described above, the findings in Chapter 2 show that citizen participation was the main expected benefit. We do not know, however, whether these patterns belong to a certain profile of administrative traditions, or whether there are systematic differences among levels of government. Thus, future research may seek to ground a conceptual basis, so subsequent studies could assess the performance of
From the angle of decentralizing decisions within organizations, future research should further explore, not only the functioning of network organizations but also the breeding ground upon which the network organizations or horizontal structures emerge. Along with the decentralization towards citizens, this type of decentralization may be associated with certain conditions in the form of governments, a deteriorating legitimacy of democratic institutions, a certain administrative tradition, or a generational change in the preferences of normative values (i.e. inclusiveness over effectiveness) in certain societies.

Despite the mix of possibilities that these types of decentralization may bring to the table, and despite the harsh criticism, bureaucracy, as we know it, is a fine-tuned and widely established apparatus with no signs of weakening. On the other hand, decentralization does not seem to be, in many cases, a suitable or satisfactory alternative to centralization. Perhaps—with a little pessimism—escaping the ‘iron cage’ of bureaucracy feels like Sisyphus’ damnation. In the ancient myth, Sisyphus was condemned by the gods to push a boulder up the hill, and once he reached the top of the hill, the boulder would roll down the other side, and he would begin to push the boulder up the hill again and watch it roll back down again and again, for all eternity. If decentralization is seen as a tool for effective management, perhaps decentralization may seem, as in the myth, a futile enterprise. But if we look at decentralization through other normative values, we may see the picture differently. A good or bad decentralization depends on the normative values being upheld, and perhaps we should look beyond efficiency and representativeness—the dominant normative values in public administration (Meier, 2015)—and look instead to values of engagement, participation, and connection. Even with all the hardships and failures that come with decentralization, it is worth trying. Perhaps, the process itself is the goal. If we may imagine Sisyphus bearing the boulder of decentralization, we shall embrace Albert Camus’ interpretation of the myth: the struggle itself to reach the heights is enough to fill a man’s heart. One must imagine Sisyphus happy.
References


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112


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## A. Crowdsourcing Platforms Selected

<table>
<thead>
<tr>
<th>Initiative</th>
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<td>Audiencias Interativas</td>
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<td>Decide Madrid, Procesos</td>
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<td>MyGov India, Poll</td>
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<td>Evidence Checks, Voting</td>
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<td>Urna de Cristal</td>
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<td>Evidence Checks, Petitions</td>
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<td>Idee Paris</td>
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<td>Crowd.mos.ru</td>
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<td>51</td>
<td>YourSay</td>
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<td>52</td>
<td>MyGov India, Do</td>
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Table A.1: Hierarchical Clustering of Crowdsourcing Initiatives

To conduct the analysis, I divided some crowdsourcing platforms into two or more platforms. The platform *Decide Madrid* was divided into (1) *Debates and Proposals*, (2) *Voting and Budgeting* and (3) *Processes*. *Barcelona Decidim* was split into (1) *Processes* and (2) *Initiatives*. *Mazinam Slogu* was divided into (1) *Proposals*, and (2) *Evaluations* (a site for reporting illegal construction sites). *Montevideo Decide* was separated into (1) *Debates and Ideas* and (2) *Voting and Budgeting*. *Parlement & Citoyens* was divided into (1) *Petitions*, and (2) *Consultations*. The UK Parliament Evidence Checks site was divided into (1) *Petitions and Contacting Legislators*, and (2) *Voting*. Finally, *MyGov India* was split into (1) *Discussions*, (2) *Polls*, and (3) *Do* (hand-on citizen participation).
B. Cluster Validation Techniques

In this appendix, I present the necessary cluster validation procedures to provide robust findings from the data set. By construction, both the hierarchical and partitioning clustering techniques will produce outputs with as many clusters as the researcher defines, even though not all of them are meaningful. Therefore, two of the main challenges in cluster analysis are identifying whether the data has a cluster structure (i.e. it is not a randomly drawn distribution of cases), and identifying a range of possible relevant and meaningful clusters within the data. In the next section, I present an assessment of cluster tendency, which provides statistical insights about whether the data set contains a cluster structure. Next, I present informative statistics to assess the possible number of relevant clusters existing in the data. Finally, I present the results of the Silhouette Analysis, which show the goodness of the number of clusters defined in the study.

B.1 Assessment of Cluster Tendency

I used two techniques of assessment of cluster tendency to verify whether the data structure contains meaningful and relevant clusters: the Hopkins Statistics and the Visual Assessment of Cluster Tendency (VAT). The Hopkins Statistic assesses the probability that a given data is generated by a random process (i.e. a non-structured process) (Kassambara, 2017). The Hopkins statistic estimation begins by first sampling \( n \) points from the data set. Afterwards, for each observation \( p_i \) a nearest neighbor \( p_j \) is found and the distance is computed \( x_i = \text{dist}(p_i, p_j) \). Then, a second data set is created through a simulation yielding a random distribution (i.e. without a pattern or structure); then, the same process is computed \( y_i = \text{dist}(q_i, q_j) \). The Hopkins statistic \( H \) is obtained by dividing the sum of nearest neighbors from \( y_i \) by the combined sum of nearest neighbors \( x_i + y_i \). An \( H \) value close to 0.5 indicates that \( \sum_{i=1}^{n} x_i \) is close to a random distribution, and therefore there is not a cluster structure within the data. An \( H \) value close to 0 or 1 indicates a meaningful and relevant cluster structure within the data.
\[ H = \frac{\sum_{i=1}^{n} y_i}{\sum_{i=1}^{n} x_i + \sum_{i=1}^{n} y_i} \]  

(B.1)

After conducting the equation shown above in the data set containing all the crowdsourcing initiatives, the resulting Hopkins Statistic was 0.38, indicating a weak cluster structure within the data.

The VAT analysis uses the dissimilarity matrix between the observations from the data set and sorted by minimal distance (Kassambara, 2017). The resulting data, known as Ordered Dissimilarity Matrix (ODM) is displayed through a heat map. If the data contains a cluster structure, then the visual representation of the ODM must have a discernible pattern.

Figure B.1 shows a pattern in the ODM, where the top and left sides show a cluster of blue values (i.e. high dissimilarity), while the rest of the Figure shows a cluster of red values (i.e. small dissimilarity).

Figure B.1: Visual Representation of the Ordered Dissimilarity Matrix
B.2 Estimation of Number of Clusters

The dendrogram in Figure B.2 shows the results of the hierarchical cluster analysis. This dendrogram colors the six clusters upon which I based my initial qualitative interpretation looking for meaningful clusters.

Figure B.2: Hierarchical Clustering of the Crowdsourcing Initiatives

Once there is evidence that the data set contains a cluster structure, it is useful to estimate
Figure B.3: Elbow Method to Estimate an Optimal Number of Clusters

statistics indicating the number of clusters that the data might have. Identifying the number of clusters, however, is not an objective or statistical procedure; the best approach is a blend of statistical insights and researchers’ expertise in the topic and a careful qualitative appraisal of the data.

To assist my decision in defining the clusters in the analysis, I used the Elbow and the Silhouette methods. The Elbow method identifies the number of clusters that minimize the total within-cluster sum of squares (WSS). Every additional cluster will decrease the total WSS, therefore, the criterion for selecting an optimal number of clusters is to keep adding clusters until the next cluster does not substantially decrease the total WSS. Figure B.3 shows that the total WSS decreases substantially until the fourth cluster; then, the slope between the fourth and the fifth clusters—and the subsequent slopes—becomes less sharp. Following the Elbow method’s statistics, the optimal number of clusters is four.

The Average Silhouette method measures the width of the cluster’s silhouette. In this
Figure B.4: Silhouette Method to Estimate an Optimal Number of Clusters

Combined, the Elbow and Average Silhouette techniques suggest that the relevant and meaningful clusters that the data might have may be between two and four clusters.

B.3 Cluster Validation Statistics

To assess the goodness of clustering results is important to perform an internal cluster validation of the clustering algorithms. Good clustering results must reflect compactness (the closeness among the observations within the same cluster), connectivity (whether the observations are placed in the same cluster as their nearest neighbor), and separation (the separation among clusters).

One of the most widely used clustering validation techniques is the Silhouette Anal-
ysis (Romesburg, 2004; Kassambara, 2017). The Silhouette Analysis estimates for each observation (i.e. each crowdsourcing initiative), first, the average dissimilarity between the observation and the rest of initiatives within the same cluster, represented the parameter $a_i$ (see Equation B.2). The resulting value in $a_i$ is compared with the average dissimilarity between the observation and all the observations contained in the nearest neighbor cluster—represented by the parameter $b_i$. A resulting value close to 1 means that the observation is highly similar with the rest of the cluster, whereas a resulting value of -1 reflects a poor similarity to the cluster. The result of the calculation is an average Silhouette width of 0.22, which is closer to 1 than to -1 and therefore indicates a good fit of every observation to their cluster.

$$S_i = \frac{(b_i - a_i)}{\max(a_i, b_i)}$$  \hspace{1cm} (B.2)
C. Descriptive Statistics by Cluster

In this Appendix, I present the distribution of the citizen participation goals, and the categories from the coding scheme corresponding to the crowdsourcing features (see Table 3.1). Table C.1 represents the average score assigned by the researchers. Tables C.2 to C.5 show the distribution of the coding schemes across all six clusters referenced in the hierarchical clustering results (see Figure B.2). Each cell in these tables shows the percentage of initiatives found in each cell with respect to the total number of initiatives analyzed (see Table A.1).

Table C.1 shows the average score for each citizen participation goal across the six clusters. Overall, the results show that each cluster privileges certain participation goals. For example, the Cluster 1 emphasizes resource mobilization and evaluation. The Cluster 3 specializes in goal selection and decision making.

<table>
<thead>
<tr>
<th>Goal selection</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
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<td>Decision-making</td>
<td>3.50</td>
<td>6.50</td>
<td>6.17</td>
<td>1.67</td>
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<td>Resource mobilization</td>
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<td>2.13</td>
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<td>2.50</td>
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<td>3.73</td>
<td>6.42</td>
<td>3.28</td>
<td>2.00</td>
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</table>

Table C.1: Average Score for Citizen Participation Goals, by Cluster

Table C.2 shows the distribution of the coding scheme corresponding to the variable Task. Overall, the results show that the three types of tasks from the coding scheme are present across all clusters, except Clusters 5 and 6. Some clusters show a particular dominance from one of the three types of tasks. For example, Cluster 1 is dominated by the task assessment, Clusters 3 and 5 are dominated by the task creation, and Cluster 4 is dominated by the task collection.

<table>
<thead>
<tr>
<th>Task</th>
<th>1</th>
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<th>4</th>
<th>5</th>
<th>6</th>
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<td>1.92</td>
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<td>Collection</td>
<td>1.92</td>
<td>0.00</td>
<td>3.85</td>
<td>11.54</td>
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<td>0.00</td>
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<tr>
<td>Creation</td>
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<td>1.92</td>
<td>23.08</td>
<td>0.00</td>
<td>26.92</td>
<td>1.92</td>
</tr>
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</table>

Table C.2: Type of Task, by Cluster
Table C.3 shows the presence of the categories corresponding to the variable Motivation. Overall, the results show that the main drivers for contributing to government crowdsourcing initiatives are the three external motivators. The *introjected* motivation is of particular relevance, being present in 65% of the crowdsourcing initiatives across all six clusters.

<table>
<thead>
<tr>
<th></th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
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<th>6</th>
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<tr>
<td>EM - external</td>
<td>0.00</td>
<td>0.00</td>
<td>5.77</td>
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<td>0.00</td>
<td>0.00</td>
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<td>1.92</td>
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<td>0.00</td>
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Table C.3: Type of Motivation, by Cluster

Table C.4 shows the distribution of the coding scheme corresponding to the variable Intelligence Sought. Overall, the results show that each cluster specializes in one or two clusters, being the rest absent. It is also noticeable that *expert knowledge* and *problem solving* are categories that appear with considerably less frequency than the rest. On the other hand, the category *ideas* has a dominating presence in the initiatives analyzed, being present in 58% of the initiatives across all six clusters.

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<th></th>
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Table C.4: Intelligence, by Cluster

Table C.5 shows the presence of the categories corresponding to the variable Contents. Overall, the results show that the three types of contents are present in Clusters 1, 3, and 4, whereas Clusters 2, 5, and 6 present only one or two of the types of contents.
<table>
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<th>Type</th>
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<td>1.92</td>
<td>1.92</td>
<td>3.85</td>
<td>1.92</td>
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</table>

Table C.5: Type of Contents, by Cluster
D. Intercoder Reliability Analysis

The percentage agreement and the chance-corrected agreement coefficients indicate the degree of reliability of the coding process. To accept findings as similarly interpretable by two or more coders, it is customary to require a percent agreement of $\geq 0.90$, and a Krippendorff’s $\alpha \geq 0.70$ (Krippendorff, 2018). Table D.1 shows that the percent agreement for all the categories is very high, scoring above 80% (except for three categories). The Krippendorff’s $\alpha$ shows an acceptable coefficient ($\alpha \geq 0.70$) for the all the categories in the variables task and interaction. On average, $\alpha$ is high for the variable crowd, but low for the variables motivation, intelligence sought and contents. In particular, the categories in the variable motivation show all the chance-corrected agreement coefficients close to zero, which means that the multiple descriptions are chance events or that the coders are statistically independent of each other. The results in the variable motivation, however, occurred as expected, since it is a concept difficult to interpret from the data available.

The second set of evidence on the intercoder reliability is the comparison between $\kappa$ and $\pi$. When the coders agree on their use of the categories, $\kappa = \pi$, but in disagreement $\kappa > \pi$ (Krippendorff, 2018). The results show that Cohen’s $\kappa$ and Scott’s $\pi$ are either equal or barely different, suggesting that the coders do not exhibit considerable differences.

Finally, coding the variable motivation was the process with the highest subjective interpretation from the coders. No initiative explicitly describes the way the government intends to motivate the crowds to contribute, therefore it was difficult to identify the motivation behind the crowd’s contributions and it was also difficult to fit them within a six-category motivation framework—thus, representing a limitation of this study. In addition, both independent researchers coded, in many cases, multiple motivations within the same crowdsourcing initiative (although the final code was assigned to one perceived as the dominant motivation). This elusiveness in the motivation factors driving the contributions was reflected in the measurements of inter-coder reliability. Table D.1 shows that, although the six categories composing the variable motivation have a high degree of agreement (averag-
<table>
<thead>
<tr>
<th>Variable</th>
<th>Agreement (%)</th>
<th>Krippendorff’s $\alpha$</th>
<th>Cohen’s $\kappa$</th>
<th>Scott’s $\pi$</th>
</tr>
</thead>
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<td>Access</td>
<td>92.2</td>
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<td>0.67</td>
<td>0.67</td>
</tr>
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<td>0.54</td>
</tr>
<tr>
<td>Task - creation</td>
<td>88.2</td>
<td>0.77</td>
<td>0.77</td>
<td>0.76</td>
</tr>
<tr>
<td>Task - collection</td>
<td>92.2</td>
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<td>0.70</td>
<td>0.70</td>
</tr>
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Table D.1: Intercoder Reliability Statistics for All Variables

ing 87.2% of agreement), their agreement coefficients are the lowest among all categories measured (i.e. an average Krippendorff’s $\alpha$ of 0.16, Cohen’s $\kappa$ of 0.18, and Scott’s $\pi$ of 0.15).
E. Interview Protocol for Chapter 4

Rapport

1. I would like to know about you. Tell me about you. Where are you originally from? How old are you? What do you study? (if so, what are your more passionate about your studies?) or where do you work? (If so, what do you do in your work?)

2. Did you have previous experiences in political activism before joining Wikipolitica?

3. When did you first heard about Wikipolitica? and how did you get to know Wikipolitica?

4. Could you tell me what you do at Wikipolitica?

Tasks in the unit

1. Describe your team. How was your unit of work composed? Who was in it?

2. Can you tell me a little bit about what did you do during [the elections]?

3. Describe to me with as much detail as possible one day in your everyday work.

Interdependence, accountability, predictability and common understanding

1. How much freedom did you have in determining the product of your work?

2. What are the inputs so your team can work? Who provides it?

3. What are the products of your team’s work? Who depends on it?

4. How did you know if you were successful in your job?

5. How do you obtain feedback about what you are doing?

6. Did you have people you rely upon? In what way?

7. Do you feel a sense of purpose in your work? When? How does it help?
8. How did you know what you had to do? How did you know what you had to deliver?

9. What happens when somebody does not fulfill their commitments?

10. Who decides what is being done or what is approved?

Conflict

1. In a typical organization, people do not necessarily agree in the meetings. Can you describe what happens when a disagreement happens in the meetings?

2. Who is in charge of enforcing the rules? How was this person in charge of rule enforcement? Was there a process to appoint this person? Tell me how is that process like?