

Reexamining E-participation: Systematic Literature Review on Citizen Participation in E-government Service Delivery

Full Paper

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Abstract

E-government is becoming a mature research field thanks to the proliferation of papers about this changing paradigm. Among this research, the participation of citizens in e-government is a topic that has particularly stimulated numerous discussions. This participation (referred to as “e-participation”) is often reduced to the democratic participation of citizens in decision-making and policy design (or “e-democracy”). However, this paper aims at reexamining the scope of e-participation by considering the under-investigated field of citizen participation in e-government service delivery. This participation can take place as the co-design and co-execution of these services. In order to examine the existing body of knowledge of the field, we conduct a Systematic Literature Review followed by a template analysis of the selected papers. This analysis allows us determining avenues for further research in this area about the following research themes: stakeholders involved, organizational and motivational pre-conditions, participation methods and outcomes of participation.

Keywords : *Citizen, e-participation, e-government, service delivery*

Introduction

E-government refers to the use of information and communication technologies (ICT) by governments to improve the delivery of information and services to citizens, business partners, employees and other government entities (Andersen and Henriksen, 2006; Layne and Lee, 2001). Researchers, agencies and supra-national organizations have always focused on the role of citizens in e-government: their intention to use the e-government services, the impact of ICT on their trust in government as well as their participation in e-government. In the seminal article of Layne and Lee (2001), the citizens were already at the center of the maturity model they described for e-government as the citizens’ higher expectations drive the evolution. Even though participation is not the main focus of the article, Layne and Lee (2001) also advocate for an increased participation of citizens in democratic processes through ICT means. However, other seminal articles examine in more depth the participatory approaches by insisting on e-democracy and by advocating for a web-based participatory governance, more accountable and transparent government and enhanced communication (Andersen and Henriksen, 2006; West, 2004). Furthermore, the “Open Government” movement advocates for increased openness, participation and collaboration in government (Lee and Kwak, 2012). The proactive role of citizens is often characterized as “e-participation” in the scientific literature but is often assimilated the democratic participation of citizens in decision-making or policy design through ICT means, or “e-democracy” (Sæbø et al., 2008).

However the goal of this paper is to examine an under-investigated field of e-participation: the participation of citizens in e-government service delivery that is defined as all possibilities for citizens to

influence and improve the design and execution of an e-government service. In that regard, the government entities discussed in this article befalls in the executive and administrative branch and not in the legislative and political one. In order to examine the existing body of knowledge, we perform a Systematic Literature Review (SLR) with the help of the guidelines of Kitchenham and Charters (2007). The goal of a SLR is to summarize all existing information about a phenomenon of interest and is particularly relevant in this case since there is a profusion of terms that prevents researchers from having a structured view on the existing body of knowledge. The remaining of the paper is structured as follows. First, the “Background” section explains the rationale behind this paper as well as the need for a SLR. Then, the “Methodology” section describes the relevant steps of the SLR process. In the “Analysis” section, we take a quantitative and qualitative look on the selected papers. The “Discussion and Research Directions” section presents possible avenues for further research in the main identified themes of this field: the stakeholders involved, the organizational and motivational pre-conditions for participation, the participation methods applied and the outcomes of participation. Finally, the “Conclusion” section presents the limitations of the paper as well as some closing comments.

Background

Before conducting the SLR, it was necessary to better grasp the multi-dimensional concept of e-government and the role of the citizens in this paradigm. A preliminary analysis of the literature allows a better understanding of the relation between citizens and e-government. This background helps to identify research gaps and evaluate the need to conduct a SLR.

Role of the citizens within e-government

As Lawson-Body et al. (2014) already nicely expressed it, there are two streams of research in e-government. On one hand, the electronic democratization theorists link e-government to e-participation, and the electronic democratic process. On the other hand, the economics theorists focus on efficient and effective service delivery through electronic means. This tension between these two streams can be found in other seminal articles on e-government. Ho (2002) criticizes the external focus of public governance by considering the citizen as a customer and recommends an empowerment of the citizens through information technology to consider them as “owners” of services. Welch et al. (2005) state that, even though citizens have higher expectations regarding interactivity, governments often reduce citizens to a passive customer instead of stimulating their participation in public affairs. In his review of the e-government literature, Yildiz (2007) suggests to examine more deeply the processes of participation in e-government projects instead of the outputs of the projects. He also suggests to link the research to mainstream public administration research to examine to appropriate role of the citizens in e-governance. In their empirical evaluation of government-to-citizen relationship, Tolbert and Mossberger (2006) identify two paradigms for government-to-citizen relationship: entrepreneurial (which is customer and service oriented) and participatory (which focuses on accountability, transparency, responsiveness). Chadwick and May (2003) identify three models of interaction between states and citizens. First, the managerial model focuses on the improvement of service delivery. Second, the consultative model facilitates the communication of citizens’ opinion to government. Third, the participatory model focuses on the interaction between citizens and government with participation in decision-making. They conclude that the democratic possibilities of the Internet are likely to be marginalized if the managerial model becomes dominant.

Research Gaps

The background reveals two conceptions of the citizens in e-government through the different streams: some authors consider **citizens as customers** and some authors consider **citizens as participants**. This refinement is necessary to understand that participation is not only possible through the *democratic process* but also in the *delivery process* of e-government services. In this paper, we adapt the formalization of service delivery by Linders (2011) for e-government services. We combined the monitoring and design phases as the evaluation of an e-government service can be considered as part of its development lifecycle. The categories are also related to the Citizen Ideation for Service Co-Design and Citizen Sourcing for Service Co-Execution of Wijnhoven et al.(2015). Table 1 summarizes these steps to

better illustrate the service delivery concept and the impact of the participation of citizens on the two delivery steps.

	For traditional e-government service	With the participation of citizens	Example of participation in e-gov service
Service Design	Ideation and development of the e-government service	Co-design : from generation of new ideas and analysis of citizens' requirements to evaluation of the service	Focus groups with citizens to gather requirements, survey to evaluate the service
Service Execution	Day-to-day transactions of an existing service	Co-execution : citizens assist government in their core tasks	Crowdsourcing platform for citizens to co- deliver e-gov services

Table 1. E-government Service Delivery

In this paper, we focus on the participation in service delivery, decomposed in Service Design and Execution. Service Co-Design relates to all activities performed by citizens to improve the design of the e-government service whereas Service Co-Execution relates to all citizens' actions to assist governments in their daily tasks. This view of citizens as participants in the delivery process of e-government services can be analyzed from several perspectives. From an IT perspective, this view relates to the consideration of end-user involvement in the design, development and evaluation stage of an IT project as discussed by Gil-García and Pardo (2005). In public administration research, this view of citizens as participants in the delivery process of government services relates to the co-creation and coproduction concepts (Galvagno et al., 2014). In recent political trends, this view relates to the participation and collaboration concepts of the "Open Government" movement (Lee and Kwak, 2012). The research gap resides in the application of these different perspectives in e-government. Another gap resides in the relations between the two types of participation (democratic and in service delivery) in order to have a unified e-participation field. Finally, the specific participation of citizens in service delivery could ultimately lead to more efficient services whereas this improved delivery could multiply the opportunities for (democratic) participation.

In order to justify the need for an SLR to tackle these research gaps, influential (systematic) literature reviews in the field of e-government have been studied. These articles were evaluated based on the guidance of the CRD criteria (Centre for Reviews and Dissemination, 2009): presence of inclusion criteria, databases searched, assessment of quality and validity and basic studies description. We found 5 relevant literature reviews and their analysis validates the conclusions of the background review. Even though Sæbø et al. (2008) characterize e-participation as the inclusion of citizens in the planning and/or development stages of e-government services, they only focus on democratic participation of citizens when discussing the concept of e-participation. Medaglia (2012) continues this characterization but clearly states in the limitations that he focuses on issues of ICT for democratic decision-making and not on all participatory processes. In another contribution to the systematization of the e-participation field, Susha and Grönlund (2012) try to enlarge the scope of this research field by clearly distinguishing politic e-participation (that is closely linked to e-democracy) and other forms of participation. In their SLR about citizens' trust in e-government, Alzahrani et al. (2016) focus on the adoption of e-government services by citizens and conclude that government agencies should design strategies to empower their citizens and even involve them in the development of e-government. The article of Linders (2011) describes the re-emergence of citizen-coproduction thanks to the introduction of new ICT possibilities.

The conclusion from this review is that the e-participation research field is often confused with the e-democracy research field although both fields do not entirely share the same theoretical background. In this paper, we advocate for a reconsideration of other forms of under-investigated participation in the e-participation field such as the participation in e-government service delivery.

Methodology

We follow the guidelines of Kitchenham and Charters (2007) by describing the research protocol that guided us through the review process. In this section, we present our methodology for planning, conducting and reporting the SLR.

Planning the review

Research Questions: This SLR aims at identifying the pre-conditions, methods and outcomes of the participation of citizens in the service delivery process of e-government. We choose to frame the research questions around the pre-conditions/methods/outcomes of participation to be consistent with the analysis themes of the agenda-setting article of Axelsson et al. (2010) : What are the motivations and barriers to participate in e-government service delivery from the citizens' perspective? What are the most fitting methods to include the citizens in e-government service delivery? What is the impact of citizen participation in e-government service delivery and what dimensions are impacted ?

Search terms: The guidelines of Kitchenham and Charters (2007) to frame the research questions suggest to use the PICOC (Population, Intervention, Comparison, Outcome, Context) criteria to generate search terms. However, as the PICOC Criteria are tailored to the software engineering domain, they do not optimally produce keywords for e-government. After several tests in relevant digital libraries, we decided to combine keywords about "e-government" and "participation" in two groups through an "AND" conjunction. For the final search terms, we decided to focus on the "Population" and "Intervention" criteria from PICOC to narrow the scope of reviewed articles. The following search terms were used in the three digital libraries : ("Electronic government" OR "e government" OR "egovernment" OR "digital government" OR "Open Government" OR "Public e-service") AND ("Participation" OR "Involvement" OR "Engagement" OR "Inclusion" OR "Collaborative" OR "Co Creation" OR "Coproductio" OR "Participatory" OR "Cooperative" OR "Co-Design" OR "Centric" OR "Centered" OR "Requirements" OR "Sourcing" OR "Crowdsourcing" OR "Agile" OR "Smart" OR "Open Data" OR "Social Media")

Search for primary studies: In order to search for relevant papers, we applied the keyword search in the titles of the papers for the different libraries. First, we searched the Web of Science library. This search yielded 197 hits for the search in title. Second, we searched Scopus, which returned 386 articles. The combination of these two libraries allows obtaining a complete view on Journal articles and Conference Proceedings with relevant e-government tracks such as ICIS, AMCIS, HICCS or ECIS. We completed the search with a final study of the Google Scholar library and by applying forward/backward citation analysis on the selected articles. This search yielded another set of 253 articles.

Study selection criteria: All selected articles are published in English and contain relevant discussions about the participation of citizens in e-government service delivery. We basically decided to leave out all articles that do not document participatory approaches. As a result, even though they perform participatory research (through surveys with citizens for instance), we left out publications that focus on citizen's trust in e-services or intention to use e-services in order to focus on participation. We also excluded the grey literature to focus on Journal and Conference papers exclusively.

Study quality assessment checklists and procedures: The inclusion or exclusion of the articles was based on reading the abstract. But in case of doubt, the entire paper was reviewed.

Conducting the review

The initial review yielded 50 articles. Given the relatively large set of papers, the detailed analysis of the papers is conducted in two steps. The total set of papers was divided in a set of 19 core articles and a remaining set of 31 articles that introduce additional methods to include citizens in e-government service delivery. These papers are closely related to research fields that would require a separate detailed analysis. We focus on this first set to keep a coherent high-level view in this SLR. In further research, we will expand the study and examine how e-government could gain insight from these research fields. These 31 articles consist of 3 articles that introduce the crowdsourcing paradigm for e-service delivery, 4 articles that detail the inclusion of disabled citizens in service design, 3 articles that explain the use of Geographical Information Systems (GIS) to enable participation, 7 articles that detail the use of Open Data by citizens, 7 articles that focus on Web 2.0, and 7 articles that detail customized ad-hoc methods.

Data reporting

In order to structure the analysis of the 19 core articles, we use the template analysis technique from King et al. (2004), which allows analyzing the occurrence of themes in textual materials. This template analysis also helps us modelling the research field visually. A brief description of these articles as well as the main

analysis themes are summarized in Table 2. These themes are the research design of the article, the stakeholders that the article discusses as well as the pre-conditions, participation methods, and outcomes of participation. For concision reasons, the “insights” column simply lists the themes that the article discusses but the detailed findings from the analysis of the table are presented in the “Analysis” section.

Reference	Description	Research Design	Insights
Anthopoulos et al.,2007	Discuss benefits of “bottom-up” design of e-services with publics servants and citizens.	Case Study	Methods, Outcomes
Axelsson and Melin,2008	Explore focus groups as participation methods for e-government service design.	Action Research	Methods
Axelsson et al.,2010	Application of concepts and theories from user participation in Information Systems (IS) research to e-government	Action Research	Methods
Axelsson,2013	Applying an ethical perspective on stakeholder participation in e-government	Action Research	Pre-conditions
Billestrup and Stage,2014	Analyze how software providers are developing e-services that should be usable for all citizens.	Interviews	Stakeholders, Pre-conditions
Chan and Pan,2008	Examine the current strategies of user engagement in e-government	Case Study	Pre-conditions, Methods
De Róiste,2013	Examine the benchmarking literature to include users in e-government evaluation	Case study	Methods
Følstad et al.,2004	Adapt human-computer interaction methods for e-government	Interviews	Pre-Conditions, Methods
Holgersson and Karlsson,2012	Explore how business employees can fulfil the goals of three user participation schools in public e-service development	Interviews	Methods
Holgersson and Karlsson,2014	Explore how citizens are willing and able to fulfill the user-related goals of the three user participation schools in context of public e-service development	Interviews	Pre-conditions, Methods
Karlsson et al.,2012	Identify objectives, benefits and challenges when applying existing participation approaches for e-service development.	Literature review	Pre-conditions, Methods
Lindblad-Gidlund,2008	Analyze civil servants’ view on relation between citizens and e-government.	Survey	Stakeholders
Linders,2011	Provide a typology to analyze the ICT-facilitated citizen coproduction initiatives	Literature review	Pre-conditions, Methods, Outcomes
Lindgren,2014	Advocate for a broadening in participation from users to stakeholders	Literature review	Stakeholders
Olphert and Damodaran,2007	Consider e-government as a socio-technical system and explore the conditions, processes and benefits of a participatory approach for e-government development.	Case study	Pre-conditions, Methods, Outcomes
Oostveen and Van Den Besselaar,2004	Use participatory design principles to involve users in the design of a prototype of an infrastructural system.	Case Study	Stakeholders
Sørnum,2011	Analyze the impact of user testing on website quality and user satisfaction.	Survey	Methods, Outcomes
van Velsen et al.,2009	Describe a user-centered requirement engineering method for the design of e-government services	Case Study	Pre-conditions, Methods, Outcomes
Wijnhoven et al.,2015	Analyze the citizens’ motivation to participate in open government initiatives that range from participation in the political to the administrative domain.	Survey	Pre-Conditions

Table 2. Summary of the selected articles

Analysis

The template analysis of the selected articles yields the representation of the research domain in Figure 1. The insights gained from analyzing the 19 papers selected by the SLR are detailed in the following sub-

sections (structured by the categories of the template). This analysis allows structuring the research field of citizen participation in e-government service delivery as represented in Figure 1. The figure shows that stakeholders have several pre-conditions regarding participation, that these pre-conditions have an impact on the participation methods applied, and that these methods have different outcomes.

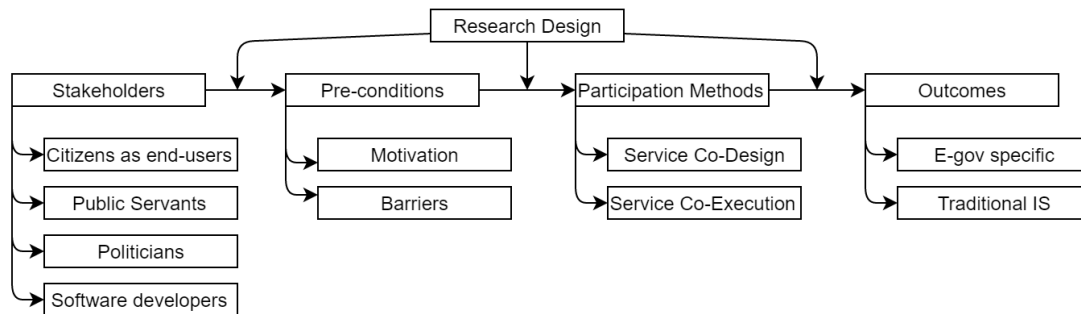


Figure 1. Template of the participation in e-government service delivery research field

Research design

Regarding the research design of the selected articles, **case study** research is the most represented (6), followed by **interviews** (4), **literature review** (3), **survey** (3) and **action research** (3). These different research designs are used to examine stakeholder’s pre-conditions for participation and their respective drivers and barriers, the different participation methods as well as the outcomes of participation.

Stakeholders

Even though, according to the selection criteria, we selected articles that contain relevant discussions about the participation of citizens in e-government service delivery, the existing body of knowledge sometimes expands this conception by talking about the important role of other stakeholders such as political representatives, software developers or public servants. We will use the term “stakeholders” to describe this extended group. This is consistent with the article of Lindgren (2014) that advocates for a broadening of the scope from people using the system to people being affected by the system. In line with this stakeholders approach, Oostveen and Van Den Besselaar (2004) try to extend the concept of users into several categories in e-government: citizens as end-user, citizens with a political agenda, public servants, administrative management, technical management and politicians. It is interesting to see that 8 articles focus on “citizens” whereas 7 focus on abstract “users”, and 3 on “stakeholders”. All these 18 articles have an extended consideration of “**citizens as end-users**”. Only two articles discuss participation from the perspective of the “**public servants**” (Lindblad-Gidlund, 2008) and “**software developers**” (Billestrup and Stage, 2014) and none on the “**political representatives**”.

Pre-Conditions

Two of the 19 selected papers address **motivation**. Wijnhoven et al. (2015) identify 8 motivational factors (pro-social behavior, pastime, career, change, aims, leaning, reciprocity, reputation, fun, ideology, money), and find that motivations of citizens to participate differ depending on the nature of the project. Motivations for participation in co-design are thus different than for co-execution. Holgersson and Karlsson (2014) conclude that the citizens’ willingness to participate is determined by their use of public e-services, satisfaction with public e-services, personal incentives, available time, social commitment and earlier experience of systems’ development. Industrial democracy is another key driver because it empowers citizens as well as public servants in e-government projects (Følstad et al., 2004). Several papers also discuss **barriers** that prevent the participation of citizens from being effective. However, the barriers differ depending on the participation method (Karlsson et al., 2012). Some authors underline traditional Information System (IS) participation barriers such the lack of ICT skills of citizens but also of public servants (Anthopoulos et al., 2007; Karlsson et al., 2012) whereas others state that there is a need to convince citizens that they can add value in service delivery even though the project seem complicated to them (Olphert and Damodaran, 2007; Wijnhoven et al., 2015). There are also barriers that are specific

to the e-government context such as the large, dispersed and heterogeneous user base that constitutes the citizens and their potential lack of trust in government (Chan and Pan, 2008; van Velsen et al., 2009). The risk of not including all groups of citizens, especially disadvantaged ones, is particularly underlined (Axelsson, 2013; Linders, 2011). Furthermore, the absence of competition for e-government services does not provide any incentives for software developers and public servants to focus on the user-friendliness or inclusion of users. The lack of knowledge the processes and regulations of the public domain also prevents the effective participation of citizens (Holgersson and Karlsson, 2014).

Participation Methods

We adapt the typology of Linders (2011) to decompose the participation methods into service co-design and service co-execution. Regarding **service co-design**, an emerging Scandinavian body of research applies three user participation methods for e-government service design (Axelsson et al., 2010; Holgersson and Karlsson, 2012, 2014; Karlsson et al., 2012; Lindgren, 2014). This promising body of research sets the agenda and distinguishes three methods: participatory design, user-centered design and user innovation. Some authors also apply these methods more independently (Olphert and Damodaran, 2007; van Velsen et al., 2009). These three schools of participation have differences but are concretely implemented through in-depth interviews, focus groups, online surveys or prototyping (Følstad et al., 2004; Oostveen and Van Den Besselaar, 2004). The issue of selection of citizens is tackled by Chan and Pan (2008) who advocate for the identification of intermediaries representing the users and for sustained participation in all development stages. Billestrup and Stage (2014) follow this guideline by interviewing public servants as representatives of citizens while working in an Agile way. Regarding the improvement of design of existing services, only two articles provide insights about evaluation of e-government services (and websites) by citizens (De Róiste, 2013; Sørnum, 2011). This evaluation is also done through traditional methods such as online surveys, phone or in person surveys, focus groups, interviews, eye-tracking, use of representative users ... Regarding **service co-execution**, some authors have detailed existing e-government services that facilitate co-execution (such as an e-government groupware (Anthopoulos et al., 2007)). However, most of the insights about such e-government services seem to be discussed in the second set of articles, the analysis of which has been postponed to the second phase of the research. The methods that they describe range from Crowdsourcing, Open Data and GIS to Web 2.0 and Social Media. On a general note, the question of “who to include?” is not really tackled in the papers even though some authors discuss traditional choices about user participation in IS for e-government: use of representatives, consultation of randomly selected citizens, consensus among all citizens (Axelsson et al., 2010).

Outcomes

The reviewed articles identify mainly positive outcomes to the participation of citizens in e-government service delivery. Some outcomes are related to **traditional IS** school of user participation in system design: improved intention to use of e-government services (Anthopoulos et al., 2007), better alignment between system and requirements (Olphert and Damodaran, 2007), gain in accuracy, usability, usefulness (van Velsen et al., 2009), capacity building (Olphert and Damodaran, 2007), industrial democracy (Axelsson et al., 2010; Karlsson et al., 2012), improved user interface (Karlsson et al., 2012), user satisfaction (Sørnum, 2011). However, some articles state that participation has other **e-gov specific** outcomes. However, these outcomes are never at the core of the articles and the relation with participation is still a black box: trust of e-government services (Anthopoulos et al., 2007), enabler of civic and democratic participation (Karlsson et al., 2012; Linders, 2011; Olphert and Damodaran, 2007; Oostveen and Van Den Besselaar, 2004), and promotion of innovation in society (Linders, 2011).

Discussion and Research Directions

After analyzing the selected articles according to the themes of research designs, stakeholders, pre-conditions, participation methods and outcomes, we suggest some research challenges that will need validation by means of future research in this domain.

Towards a better understanding of “the citizens”: We adopt the point of view that there are four main groups of stakeholders in this research field: public servants, political representatives, software developers and citizens. However, the term “citizens” is often used without a proper definition. We

suggest to investigate this abstract term in future research. A taxonomy of the profiles of citizens, their motivation and their relevancy for participation in service delivery is necessary. When the term “citizen” is used, it is often linked to the “end-user” concept. Regarding the participation of citizens as end users, the question of “Who to include ?” is crucial : their profile, their digital literacy, their skills or their representativeness are all issues that will impact the implementation of participation.

Towards a more participatory research on participation: The research designs of the reviewed articles show that researchers include citizens in their research. However, we think that future research could go further in that direction. A good start could be to determine at larger scale how citizens would like to be considered in e-government (e.g.: Do they care about participation or are they satisfied with an effective and efficient service delivery ?). However, this participatory research should be applied to all stakeholders. As we stated above, citizens are the end-users of the services but public servants, software developers, and political representatives are also impacted by these services. As little is known about their drivers, opinions and operational barriers for participation, an extension of the research domain to all stakeholders would be beneficial. The evaluation of e-government services would particularly benefit from this extension to all stakeholders: a lot of papers document evaluations performed by researchers but few analyze if the evaluation is performed by the public organizations themselves or by their citizens.

Towards an extension of the participation methods: Regarding the participation methods, a striking observation is that almost all methods detailed in this first set of papers focus on small scale participation with methods such as participatory design, user-centered design and user innovation. This finding has two implications. Firstly, regarding small scale participation, we advocate for the consideration of other innovative methods to realize citizen's participation in the e-government domain: creativity in requirements engineering, agile software development methods tailored to e-government, gamification, etc... Secondly, even though small scale participation is necessary to define the emerging research field, it is essential to enable large scale participation due to the large heterogeneous user group in e-government. We suggest to research the application of additional methods coming from e-commerce literature for the private sector (from companies with large user bases) to assess their applicability in a public setting. Future research could achieve that goal by studying the implications of methods that emerge in the Open Government movement (Open Data, Social Media, Web 2.0 technologies, Crowdsourcing) to improve service delivery. The papers addressing these innovative methods were left out of scope for this first step of the analysis but present research ideas that constitutes a good start for further research. However, these methods are too often applied to gather political opinions of citizens and, as a result, have a blurred impact on e-government service delivery. With these extended scope of methods, an assessment of the pre-conditions and outcomes could be researched for each of the specifically applied method of participation.

Towards a more integrated outcome evaluation: The selected articles mainly focus on praising the benefits of citizen participation without mentioning the possible negative effects of this participation if not implemented properly. Pre-conditions for participation are, in that respect, essential to tackle. Even though the lack of ICT skills is a recognized barrier for participation, we found little research on the ideal setting to enable participation. As the collaboration in the public sector is a research field in itself, it will help understand the technical and organizational pre-conditions for participation more extensively. Even though most of the studies focus on traditional IS research outcomes, the e-government domain enables different outcomes. Linking the participatory body of research to well-established theoretical constructs of the public administration research such as “democratic participation” or “trust in government” is an interesting lead. Even though the analysis of the outcomes shows an emerging link with these constructs, we suggest to open the black box and perform a large-scale study to validate this link.

Towards a unified e-participation research field: A major problem with the research field of “citizen participation in e-government service delivery” is its lack of identify. E-participation refers to the participation of citizens in all forms but is often reduced to democratic participation. We advocate for a consideration of citizen participation in e-service delivery as part of the e-participation field. To be consistent with other articles, it could be referred to as “citizen coproduction” linked to “e-participation” in the same way “e-democracy” is. A potential way to unify the two aspects of e-participation is to link the democratic participation of citizens with their participation in service delivery. However, this link will only be possible once these practices are more mature in order to have a satisfying sample to analyze.

Conclusion

In this paper, we examined the body of knowledge about citizen participation in e-government service delivery through a SLR. This review allows structuring this under-researched field that is too often in the shadow of the e-participation. This paper has also some limitations inherent to a SLR: potential interesting articles may have been left out due to an incomplete set of keywords or by the choice of only considering English papers. The analysis of the selected papers allows identifying the main analysis themes of this field: the stakeholders, their pre-conditions for participation as well as the different methods and outcomes of participation in e-government service delivery. We hope that these possible directions will help qualify the research field of citizen participation in e-government service delivery (or “Citizen Coproduction”) in e-government and stimulate authors to perform research in that field in the future.

REFERENCES

- Alzahrani, L., Al-Karaghoul, W., and Weerakkody, V. 2016. “Analysing the critical factors influencing trust in e-government adoption from citizens’ perspective: A systematic review and a conceptual framework,” *International Business Review*, p.
- Andersen, K. V., and Henriksen, H. Z. 2006. “E-government maturity models: Extension of the Layne and Lee model,” *Government Information Quarterly* (23:2), pp. 236–248
- Anthopoulos, L. G., Siozos, P., and Tsoukalas, I. A. 2007. “Applying participatory design and collaboration in digital public services for discovering and re-designing e-Government services,” *Government Information Quarterly* (24:2), pp. 353–376
- Axelsson, K. 2013. “Applying an Ethical Perspective on Stakeholder Participation in Public e-Service Development,” *Electronic Government and Electronic Participation: Joint Proceedings of Ongoing Research and Projects of IFIP EGOV and IFIP ePart 2013* (September), pp. 150–159
- Axelsson, K., and Melin, U. 2008. “Citizen participation and involvement in eGovernment projects: An emergent framework,” *Lecture Notes in Computer Science (including subseries Lecture Notes in Artificial Intelligence and Lecture Notes in Bioinformatics)* (5184 LNCS), pp. 207–218
- Axelsson, K., Melin, U., and Lindgren, I. 2010. “Exploring the importance of citizen participation and involvement in e-government projects,” *Transforming Government: People, Process and Policy* (4:4), pp. 299–321
- Billestrup, J., and Stage, J. 2014. “E-government and the Digital Agenda for Europe A Study of the User Involvement in the Digitalisation of Citizen Services in Denmark,” pp. 71–80
- Centre for Reviews and Dissemination. 2009. *Systematic reviews: CRD’s guidance for undertaking reviews in health care for Reviews and Dissemination, University of York, 2008*
- Chadwick, A., and May, C. 2003. “Interaction between States and Citizens in the Age of the Internet: ‘e-Government’ in the United States, Britain, and the European Union.,” *Governance* (16:2), pp. 271–300
- Chan, C. M. L., and Pan, S. L. 2008. “User engagement in e-government systems implementation: A comparative case study of two Singaporean e-government initiatives,” *Journal of Strategic Information Systems* (17:2), pp. 124–139
- Følstad, A., Jørgensen, H. D., and Krogstie, J. 2004. “User involvement in e-government development projects,” *third Nordic conference on Human-computer interaction* (82), pp. 217–224
- Galvagno, M., Dalli, D., and Galvagno, M. 2014. “Theory of value co-creation: a systematic literature review,” *Marketing Service Quality* (24:6), pp. 643–683
- Gil-García, J. R., and Pardo, T. A. 2005. “E-government success factors: Mapping practical tools to theoretical foundations,” *Government Information Quarterly* (22:2), pp. 187–216
- Ho, A. T.-K. 2002. “Reinventing Local Governments and the E-Government Initiative,” *Public Administration Review* (62:4), pp. 434–444
- Holgersson, J., and Karlsson, F. 2012. “Understanding Business Employees’ Conditions for Participating in Public E-Service Development,” *Ecis* (2012)
- Holgersson, J., and Karlsson, F. 2014. “Public e-service development: Understanding citizens’ conditions for participation,” *Government Information Quarterly* (31:3), Elsevier Inc., pp. 396–410
- Karlsson, F., Holgersson, J., Söderström, E., and Hedström, K. 2012. “Exploring user participation approaches in public e-service development,” *Government Information Quarterly* (29:2), Elsevier

- Inc., pp. 158–168
- King, N., Cassell, C., and Symon, G. 2004. “Using templates in the thematic analysis of texts,” *Essential guide to qualitative methods in organizational research*, pp. 256–270
- Kitchenham, B., and Charters, S. 2007. “Guidelines for performing Systematic Literature Reviews in Software Engineering,” *Engineering* (2), p. 1051
- Lawson-Body, A., Willoughby, L., Illia, A., and Lee, S. 2014. “Innovation Characteristics Influencing Veterans’ Adoption of E-Government Services,” *The Journal of Computer Information Systems* (54:3), pp. 34–44
- Layne, K., and Lee, J. 2001. “Developing fully functional E-government: A four stage model,” *Government Information Quarterly* (18:2), pp. 122–136
- Lee, G., and Kwak, Y. H. 2012. “An Open Government Maturity Model for social media-based public engagement,” *Government Information Quarterly* (29:4), Elsevier Inc., pp. 492–503
- Lindblad-Gidlund, K. 2008. “Driver or passenger? An analysis of citizen-driven eGovernment,” *Lecture Notes in Computer Science (including subseries Lecture Notes in Artificial Intelligence and Lecture Notes in Bioinformatics)* (5184 LNCS), pp. 267–278
- Linders, D. 2011. “We-Government: an anatomy of citizen coproduction in the information age,” *Proceedings of the 12th Annual International Digital Government Research Conference*, pp. 167–176
- Lindgren, I. 2014. “Stakeholder Involvement in Public e-Service Development – Broadening the Scope of User Involvement,” *Electronic Government and Electronic Participation: Joint Proceedings of Ongoing Research and Projects of IFIP WG 8.5 EGOV and ePart 2014* (21), pp. 84–92
- Medaglia, R. 2012. “eParticipation research : Moving characterization forward (2006 – 2011),” *Government Information Quarterly* (29:3), Elsevier Inc., pp. 346–360
- Olphert, W., and Damodaran, L. 2007. “Citizen Participation and Engagement in the Design of e-Government Services: The Missing Link in Effective ICT Design and Delivery,” *Journal of the Association for Information Systems* (8:9), pp. 491–507
- Oostveen, A.-M., and Van Den Besselaar, P. 2004. “From small scale to large scale user participation: A case study of participatory design in e-government systems,” *Proceedings of the eighth conference on Participatory design Artful integration interweaving media materials and practices PDC 04*, pp. 173–182
- De Róiste, M. 2013. “Bringing in the users: The role for usability evaluation in eGovernment,” *Government Information Quarterly* (30:4), Elsevier Inc., pp. 441–449
- Sæbø, Ø., Rose, J., and Skiftenes, L. 2008. “The shape of eParticipation : Characterizing an emerging research area,” (25), pp. 400–428
- Sørum, H. 2011. “An empirical investigation of user involvement, website quality and perceived user satisfaction in eGovernment environments,” *Lecture Notes in Computer Science (including subseries Lecture Notes in Artificial Intelligence and Lecture Notes in Bioinformatics)* (6866 LNCS), pp. 122–134
- Susha, I., and Grönlund, Å. 2012. “EParticipation research: Systematizing the field,” *Government Information Quarterly* (29:3), pp. 373–382
- Tolbert, C. J., and Mossberger, K. 2006. “The effects of E-government on trust and confidence in government,” *Public Administration Review* (66:3), pp. 354–369
- van Velsen, L., van der Geest, T., ter Hedde, M., and Derks, W. 2009. “Requirements engineering for e-Government services: A citizen-centric approach and case study,” *Government Information Quarterly* (26:3), Elsevier Inc., pp. 477–486
- Welch, E. W., Hinnant, C. C., and Moon, M. J. 2005. “Linking citizen satisfaction with e-government and trust in government,” *Journal of Public Administration Research and Theory* (15:3), pp. 371–391
- West, D. M. 2004. “E-Government and the Transformation of Service Delivery and Citizen Attitudes,” *Public Administration Review* review (64:1), pp. 15–27
- Wijnhoven, F., Ehrenhard, M., and Kuhn, J. 2015. “Open government objectives and participation motivations,” *Government Information Quarterly* (32:1), Elsevier Inc., pp. 30–42
- Yildiz, M. 2007. “E-government research : Reviewing the literature , limitations , and ways forward,” (24), pp. 646–665